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AND INVESTIGATION MECHANISM**

PN-MICI001-2010

COMPLIANCE REVIEW REPORT

“THE PANDO-MONTE LIRIO HYDROELECTRIC POWER PROJECT”

(2266/OC-PN)

PANAMA

This document was prepared by the Compliance Review Panel team conformed by Werner Kiene as Panel Chairperson, Mario Epstein and Gilberto Amaya. The Report is based on information the Compliance Review Panel obtained up to July 29th, 2012

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COMPLIANCE REVIEW PHASE

TO: Board of Executive Directors of the Inter-American Development Bank

CC: Mr. Luis Alberto Moreno - President of the Inter-American Development Bank

FROM: Werner Kiene, Compliance Review Panel Chairperson

REFERENCE: PN-MICI001-2010, Case “Pando-Monte Lirio Hydroelectric Power Project”

PROJECT: Pando-Monte Lirio Hydroelectric Power (2266/OC-PN)

COUNTRY: Panama

DATE: August 27th, 2012

I am pleased to submit the Panel’s Report on the Compliance Review of the “Pando-Monte Lirio Hydroelectric Power Project” based on information the Panel obtained up to July 29th, 2012.

The Panel is prepared to meet with you for a follow-up discussion of our Final Report as per Section 69 of the ICIM Policy and to learn about your final decisions regarding any actions that may be deemed appropriate or necessary in light of our findings, as well as any action plan resulting from such decisions. As per Section 72 of the ICIM policy, the Panel stands ready to be engaged in the monitoring of any remedial or correctional actions agreed upon as a result of this Compliance Review.

With our kind regards,

Werner Kiene

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ABOUT THE COMPLIANCE REVIEW PANEL

The Compliance Review Panel is part of the Independent Consultation and Investigation Mechanism (ICIM) of the Inter-American Development Bank (IDB). A Panel Chairperson and four Panel Members were appointed by the Board of Executive Directors of the IDB. The Panel took up its functions in October 2010.

The Chairperson and the Panel Members exercise their duties in an independent manner. They are not entitled to work for the IDB for a period of five years after their terms expire.

The role of the Panel is to carry out independent investigations of complaints by Requesters who assert that their rights or interests have been or could be expected to be directly, materially adversely affected by the failure of the IDB to follow its operational policies.

All requests addressed to the ICIM are routinely first processed through the Mechanism's Consultation Phase led by the ICIM's Project Ombudsperson. Requests proceed from the Consultation Phase to consideration under the Compliance Review Phase if the Requesters express a desire for a Compliance Review, and if the Consultation Phase has been terminated or concluded for any reason or when the Request was deemed ineligible under the Consultation Phase.

Detailed information on the ICIM is available at www.iadb.org/icim

ACKNOWLEDGEMENTS

The preparation of this report benefited from the support and valuable contributions of many individuals who provided information and shared their experience. The Panel wishes to thank the Requesters for their considerable insights into the complexities of this Project, and to the staff in charge of the Project in Panama City and in the construction site for providing important information about the design and implementation of this operation.

The Panel also wishes to express its appreciation to government officials in Panama City, in the city of David, and in the Project region for providing valuable views, information, and analysis. The Panel is also grateful to the IDB's Country Office in Panama for assisting with logistical arrangements, providing transportation, and for its support in identifying contacts and documents.

Finally the Panel wishes to express its gratitude to the IDB staff in Washington, D.C. for their assistance in providing background information and documentation, and to the ICIM Executive Secretariat.

ACRONYMS AND TERMS

ANAM	Autoridad Nacional del Ambiente (National Environmental Authority)
ASEP	Autoridad Nacional de los Servicios Públicos (National Authority for Public Services)
BOARD	IDB Board of Executive Directors
CAO	Compliance Advisor/Ombudsman
CVR	Chiriquí Viejo River
DEG	Deutsche Investitions-und Entwicklungsgesellschaft
EHS	Environment, Health and Safety
EIA	Environmental Impact Assessment
EIS	Environmental and Social Impact Studies
EISA	Electron Investment S.A.
EMP	Environmental Management Plan
EPC	Engineering, Procurement and Construction
ERM	Environmental Resources Management
ESAP	Environmental and Social Action Plan
ESG	Environmental and Social Safeguards Unit
ESMP	Environmental and Social Management Plan
ESMR	Environmental and Social Management Report
ESR	Environment and Social Review
GoP	Government of Panama
ICIM	Independent Consultation and Investigation Mechanism
IDB	Inter-American Development Bank
IFC	International Finance Corporation
NGO	Non-Governmental Organization
SIEPAC	Sistema de Interconexión Eléctrica de los Países de América Central (Interconnection System of the Central American Countries)
The Project	Pando-Monte Lirio Hydroelectric Power Project
URS	URS Corporation

EXECUTIVE SUMMARY

- i. The “Pando-Monte Lirio Hydroelectric Power Project” reflects the Bank’s commitment to investments in “clean energy” in Central America. Funding for this Project goes to the construction of two hydroelectric dams and associated structures. The two dams are part of a series of 19 hydro-electric installations planned and partially constructed along the Chiriquí Viejo River (CVR) in Western Panama. The Borrower is Electron Investment S.A. (EISA). The other major external funding partners are the International Finance Corporation (IFC) and the German development financing agency Deutsche Entwicklungs Gesellschaft (DEG).
- ii. On March 12, 2010, the Independent Consultation and Investigation Mechanism (ICIM) received a complaint about the Project from a number of organizations of farmers, environmentalists, producers, religious and social welfare groups residing in the Province of Chiriquí. They expressed their fears of being negatively affected by potentially harmful and cumulative environmental and social impacts of the Project through its diversion of most of the river’s flow over a stretch of around 26 km. They alleged that standard procedures and IDB Operational Policies were not followed in analyzing potentially harmful impacts and that necessary mitigation measures were not agreed upon.
- iii. The Panel fully recognizes the importance of the Project for the development of Central America’s energy sector. However, the Panel found that in order to meet the schedules of the Project’s co-financiers, the Bank may have rushed through several of the standard procedures that apply to the Bank’s approval of this Project. This seems evident given that, **in spite of conflicting internal opinions about the correct way to proceed, Board approval of the loan and the first disbursement were sought and granted, even though some of the necessary requirements of the Bank’s usual precautionary approach to ensure that IDB financing does not result in harm to individuals and the environment had not been fully met. (Details in paragraphs 124-133 of the Report.)**
- iv. **The Panel concludes that several decisions leading to the Board’s loan approval did not comply with crucial aspects of the Bank’s Operational Policies. While not all the allegations of harm can be attributed to the Bank’s financing, the Panel found non-compliance with provisions of IDB’s Environmental and Safeguards Compliance Policy (OP-703), i.e. with its Directives B, B.1, B.3, B.5, B.6, and B.9, as well as with OP-304 on Operations Administration for enforcement of contractual obligations. It is the Panel’s view that adherence to these Directives would likely have helped to avoid or mitigate the harm feared by the Requesters. It also could have helped to minimize the reputational issues now faced by the Project and by the Bank. The Panel recommends that resulting compliance issues be addressed as quickly as possible (paragraphs 33-74).**
- v. Beyond the need for immediate and continued correction of some of the existing non-compliance, the Panel recommends that, given the Bank’s increased focus on infrastructure

development and the related higher reputational risk, the Panel believes that the Bank could benefit from focusing on several important aspects of this case that provide important feedback. **The Panel believes that there exists an opportunity to develop a strategy for better exploiting synergies that should and can exist between its public and private sector portfolios. Instead of relying on an opportunistic approach for financing private sector Projects, the IDB might consider a more targeted sequencing strategy, whereby public sector investments would help to create more appropriate conditions by strengthening national capacities for safeguards management and related technical expertise. Subsequently, the Bank's private sector investments could be targeted to those investment opportunities where an institutional readiness conducive to IDB-specific investments could be expected to more likely exist (paragraphs 75-76).**

vi. Structure of the Report:

Part A deals with background, findings, and recommendations. Chapter I presents some background about the Request. **Chapter II** describes ICIM's involvement in this case and details of the approach taken by the Panel for this Compliance Review. In **Chapter III**, the Panel reports on findings of compliance with the Bank's Operational Policies considered relevant to the Panel's Mandate. The compliance analysis is divided into: a) key compliance issues derived from the Requesters' main concern about ecological flow and cumulative impact; b) the Requesters' concerns linked to design flaws of watershed management and ecological flow; c) the Requesters' concerns arising from the implementation of the Project; and d) the Requester's concerns not subjected to a detailed compliance review. **Chapter IV** offers project-specific recommendations as well as recommendations for a more systemic approach to the Bank's private sector engagement.

Part B provides information about the Project, stakeholders, and decision making. Chapter V has details about the Project. **Chapter VI** reports on the Bank's decision making at crucial steps of approving this project and the first disbursement. **Annex A** contains additional technical observations on the Requesters' complaints. **Annexes B and C** include the written submissions of the Requester and IDB Management as per paragraph 68 of the ICIM Policy.

PART A: BACKGROUND, FINDINGS, RECOMMENDATIONS

CHAPTER 1: THE REQUEST AND THE COMPLIANCE REVIEW

1. This Compliance Review and the resulting report deal with the Pando-Monte Lirio Hydroelectric Power Project, a Project located in Western Panama, which is being partially funded by an IDB loan (2266/OC-PN). The Borrower is Electron Investment S.A. (EISA). The other major funding partners are the IFC and DEG.
2. **The Project** consists of the construction of two hydroelectric dams (i.e. “Pando” and “Monte Lirio”) on the Chiriquí Viejo River, associated tunnels and canals, power stations, and transmission lines. To date, a total of 19 water concessions for energy production on the CVR basin have been granted to various private sector developers. Nine installations, similar to the two for Pando and Monte Lirio, are either under construction or have their Environmental Impact Assessments (EIAs) approved. The IDB-financed dams affect around 21 percent of the total length of the river of around 128 km.
3. The Project makes an important contribution to Central America’s energy sector but has caused a number of residents and citizen organizations of Panama’s CVR region to raise issues about possible harm to their livelihoods and way of life. On March 12, 2010, the ICIM received a complaint about the Pando-Monte Lirio Hydroelectric Power Project (“the Project”) from a number of organizations of environmentalists, producers, and religious and social welfare groups residing in the Province of Chiriquí, in Panama. They voiced concerns about the potentially harmful and cumulative environmental and social consequences of the Project through its diversion of most of the river’s flow over a stretch of around 26 km.
4. When the consultations (jointly organized by the Project Ombudspersons of the ICIM and The Compliance Advisor Ombudsman (CAO), the IFC’s accountability mechanism) did not lead to agreed solutions, the case was transferred to the Compliance Review Panel. After careful examination, the Panel determined the Request to be eligible for a Compliance Review.
5. In preparing for the Review, the Panel coordinated its activities with IFC’s independent accountability mechanism, CAO, and made plans for a joint compliance review mission. These plans were cancelled, when CAO decided that its determination could be made without a field mission. After desk reviews and preliminary interviews, the ICIM Panel came to the conclusion that a field mission was essential. The mission took place between November 29, 2011 and December 7, 2011.
6. **Focus on the Bank’s Decision Making:** It is the mandate of the Panel to concentrate on decisions made or influenced by the Bank. In contrast, as part of the Consultation Phase, the Project Ombudsperson mediates among relevant stakeholders as part of a problem-solving approach. A Compliance Review focuses on whether the Bank’s processes meet relevant policy requirements.

7. **The Bank's Responsibilities:** IDB's Operational Policies require that the Bank ensures that its financial resources are made available only within a context that is conducive to adherence to the Bank's principles and policies and, once assigned and disbursed, are used in line with agreed upon IDB norms. The Requesters claim that the Bank went ahead with the approval of the loan prior to having undertaken adequate due diligence and all conditions were fulfilled. They allege that crucial disbursement decisions were made before it was clear whether such an investment might aggravate the harm they had feared from this and similar projects along the river and before potential mitigating measures were defined and agreed upon.
8. They also fault the Bank for not properly supervising Project-induced damage during the current implementation phase. The Panel's Review focused on both the watershed-wide and the Project-vicinity concerns of the Requesters.
9. The Panel observed that the Bank's Project Team correctly categorized the Project as an environmental Category "A" operation, signaling early on in the design process that the Project was considered "likely to cause significant negative environmental and social impacts" or might have profound implications affecting natural resources. In contrast to this awareness at the outset, the Panel found that the Bank's application of Relevant Operational Policies did not always measure up to this initial categorization.
10. **Allegations of Harm and Non-Compliance Voiced by the Requesters:** While the immediate vicinity of the two dams and related installations is sparsely populated, the Panel confirmed that Requesters are affected by decisions, actions, and omissions in the narrowly defined Project area as well as by the additional impact this Project will have on the total watershed and the citizens living in it. The Sponsor and the Bank together have a responsibility to deal with the former. The Bank, under its policies, is responsible for dealing with the system-wide issues brought forth by the Request. Given its mandate, the Panel does not deal with the fact that the co-financiers and Government institutions also played an important role in the configuration of the overall watershed and its impacts.
11. The Requesters report that they are worried about profound changes in the flow of the river they consider central to the history, the ecology, and the socio-economic fabric of the region. In spite of the creation of employment and related value added by this and similar projects, the Requesters fear that these changes will adversely affect their lives and those of their families and children.
12. The Requesters point to several adverse impacts that they allege are directly and exclusively caused by the IDB-funded Project under review. In addition, they also allege that this Project and the decisions leading to it exacerbate the negative impacts of the totality of hydro-electric investments made along the river.
13. The Requesters' concerns deal with the alleged impact they fear as well as with allegations of flaws in design and implementation. They realize that the Project Sponsor is responsible for a limited set of impacts that emanate directly from the construction activities of the two dams. However, they hold the Bank responsible for agreeing to the co-financing of this Project and for agreeing to an overall design of this Project as part of several additional projects that they consider harmful to them and their families.

14. The complaint contains the Requesters' concerns about: a) potential damage to the environment; b) the quality of water for human consumption and local agriculture; c) possibility of flooding to communities downstream; d) endangering of fish and other species; e) over-exploitation of water resources and the river; f) limited community access to water; g) high levels of sedimentation that affect water quality and downstream water treatment facilities; h) negative impacts on the natural landscape and on mangroves located near the mouth of the river in the Gulf of Chiriquí; i) an imbalance of the river's flow to satisfy ecological, social, and economic needs of those that depend on the river. They also express their fear of flooding and volcano-related disaster-risks. They complain about an unsatisfactory consultation process with affected communities.
15. **Management Comments on the Allegations:** Management acknowledges the importance of addressing the concerns of individuals or community groups who could potentially be affected by projects financed by the IDB. Management believes that the key issues mentioned by the Requesters are being resolved in a favorable manner. A preliminary revised ecological flow study was delivered in December 2011 and finalized in March 2012. The first draft of the Ecological Flow Management Plan (EFMP) was scheduled to be delivered in June 2012, confirming that technically and financially feasible solutions exist and are achievable.
16. On the other hand, Management also informed the Panel that it recognized that the Project may not have been in compliance with Bank Operational Policy OP-703, in particular with the fulfillment of the environmental requirements related to the ecological flow study and management plan of the Project. In making its decisions to approve the loan and initiate disbursement, the Bank's Management was guided by a strategy to engage with the client over the long term to ensure that the ultimate objectives of the Bank's environmental and social policies would be achieved.
17. **Core Issues of the Request:** In its analysis of this case, the Panel came to the conclusion that most of the Requesters' claims derive from the Bank's handling of design issues on "cumulative impact on the total Chiriquí Viejo River basin" and "ecological flow." These two issues are dealt with extensively in this report. There is some overlap with and among the other issues listed in paragraphs 14, 22, and 73. The Panel decided not to deal with all of them at the same level of detail.

CHAPTER 2: ICIM'S INVOLVEMENT AND THE COMPLIANCE REVIEW PROCESS

2.1 THE CONSULTATION PHASE

18. On March 12, 2010, ICIM received a complaint about the Pando-Monte Lirio Hydroelectric Power Project ("the Project") from 16 organizations of farmers, environmentalists, producers, religious and social welfare groups from the Province of Chiriquí. The Requesters voiced a number of concerns about the potentially harmful and cumulative environmental and social consequences of the Project, a Non -Sovereign Loan of 40 million dollars approved by the IDB Board on December 9, 2009. The Project is also financed, among others, by the IFC; thus, the Request was submitted to both the IFC's CAO and to IDB's ICIM.

19. The Request was declared eligible for the Consultation Phase by the ICIM's Project Ombudsperson on October 8, 2010. The Borrower, EISA, communicated to CAO on December 27, 2010, its decision to refrain from participating in the process. After some discussion, the Borrower changed his mind. This led the ICIM and the CAO to enter into an Agreement on February 15th, 2011, to conduct a joint consultation process.
20. The Consultation Phase exercise yielded important results in terms of structuring and clarifying the issues that needed to be considered at the various levels of decision making (Government, IDB and Co-lenders, Borrower). However, when the Borrower reiterated the decision to opt out of the Consultation Phase process, the ICIM's Project Ombudsperson and the CAO's Ombudsman decided to terminate the Consultation Phase.

2.2 THE COMPLIANCE REVIEW PROCESS

21. On March 29, 2011, Alianza Ambiental Pro Desarrollo Integral Unidos de Panama-AAPRODIUPA, in representation of now 19 associated organizations, communicated to the CAO and to ICIM's Project Ombudsperson that they wished to pursue their case through a Compliance Review. The complainants represent their own members and constituencies, including community members living in the project area and neighboring communities. They are individuals (primarily environmentalists, and producers) and religious and social welfare groups from the Province of Chiriquí. They state that 80 percent of Panama's agricultural output comes from one watershed: the Chiriquí Viejo River watershed, "Cuenca # 102". Agriculture (coffee, vegetables, livestock, dairy, beans, grains, etc.) is the primary source of livelihood for many local residents. As one complainants said, "soil and water are our most important resources – our lives depend on them?"
22. **Alleged Harm that triggered the Complaint:** At the start of the process, the Requesters stated in various submissions that they feared to be harmed by the implementation of the Project as designed and its alleged negative impact on: agricultural production; damage to roadways; employment for rural laborers; as well as potential damage to the quality of water for human consumption and local agriculture; endangering of fish and other species; over-exploitation of water resources and the river; limited community access to water; high levels of sedimentation that affect water quality and downstream water treatment facilities (such as Baru); negative impacts on the natural landscape and on mangroves located near the mouth of the river in the Gulf of Chiriquí; flooding and volcano-related disaster-risks given the presence of the Baru Volcano and the possibility of earthquakes; unsatisfactory consultation processes with affected communities and other stakeholders; significant reductions and changes of the river's natural flow impacting the ecological, social, and economic affairs of those that depend on the river; lack of participation by affected citizens in the environmental impact assessment; lack of disclosure about the Project; absence of a study on the cumulative impacts of the planned investments in the watershed.
23. The Panel realized early on in its work that most aspects of the complaints were related to the way Project preparation and approval dealt with the issues of "Ecological Flow" and "Watershed Management and Cumulative Impact."

24. Based on a review of the information available, the Panel Chairman, in line with the Policies of the ICIM and without any judgment on the merits of the Complaint, determined that the Request was eligible for a Compliance Review by the Panel. Since existing documentation pointed to conflicting assertions about some of the design aspects of the Project, it was necessary for the Panel to engage in detailed discussions with the Requesters, the Borrower, and local institutions, as well as with the Bank's Management, and the Project team both in the Country Office and at IDB Headquarters.
25. On October 17, 2011, Werner Kiene, Chairman of the Compliance Review Panel, presented a recommendation to conduct a Compliance Review of Loan 2266/OC-PN, which was approved by the Board on November 7, 2011. The plan for a compliance review was coordinated with CAO's Compliance Officer. It foresaw that technical information would be shared or collected jointly, but that resulting determinations and compliance findings would be handled independently and separately by the two institutions. Eventually, CAO decided that it would not require a field mission to make its determination.
26. On December 3, 2011, Panel Members met with representatives of 11 NGOs in the Church of Concepcion in Bugaba in the province of Chiriquí, Panama. The Requesters informed the Panel that they were knowledgeable about the river but had not dealt with international organizations before. **They stated that they chose to file their claim before ICIM because of IDB's importance and visibility in development financing in Panama and because of their trust in IDB's leadership in contributing to sustainable and equitable development.**
27. **Purpose of the Compliance Review Process:** The purpose of the Compliance Review Phase is to establish a process that enables one or more project-affected citizens to request an investigation of a Bank-Financed Operation, by a Compliance Review Panel, if the Requesters reasonably assert that their rights or interests have been, or could be expected to be directly, materially adversely affected by the failure of the IDB, by action or omission, to follow its Relevant Operational Policies (and if so, how and why) in a Bank-financed Operation.
28. The investigation was guided by the following objectives: (a) to clarify the alleged harm that the Project may have caused and/or may cause in the future; (b) within the framework of ICIM's current mandate, to examine whether the Project's design and implementation complied with the relevant Bank Operational Policies and whether the guidance and supervision provided for these steps by the Bank were in compliance with applicable Relevant Operational Policies; (c) to determine whether there are plausible causes for the alleged harm due to the Project design and implementation and whether and how decisions or omissions by the IDB might have impacted on the Requesters' concerns and alleged harms; and (d) to provide suggestions on how the risk of re-occurrence of similar issues in other Bank projects could be reduced.
29. Information provided and reported about the decisions made by the Project's implementing agencies, related Government offices, and partner institutions was essential for understanding the case. However, the Panel notes that such decisions were not subject to this investigation. The Panel did not, in any way, investigate the Borrower, local institutions, and other organizations involved in this Project.

30. **Investigative Tools:** To achieve the set objectives, the Panel worked at IDB's Headquarters (Washington D.C.), in the Project area (Chiriquí Province in Panama), and in the Country Office (Panama City), and conducted the following activities:
- i) Desk review: Panel Members reviewed available documentation provided by IDB, ICIM Project Ombudsperson, Requesters, EISA, supervision consultants hired by the Borrower, Panamanian Government Agencies, and obtained through internet research;
 - ii) Reconstruction of decision making steps leading to the final design of the Project: File research and information from IDB staff and other sources, particularly environmental and social assessment reports and records of the Consultation Phase exercise;
 - iii) Interviews with IDB's Project team members responsible for the various stages of this Project;
 - iv) Establishing a clear understanding of the legal dimensions, as well as the conditions, responsibilities and possible assumptions embodied in the project documents is relevant in assessing the allegations that the Bank failed to ensure adherence to agreements listed in project documents and/or the relevant Operational Policies. One important question asked by the Panel was "have there been waivers or amendments to the legal documents that relate to compliance with the relevant Operational Policies?" If so, has this impacted compliance?
 - v) Field mission: The Panel visited Panama for eight days to inspect the Project site, meet with Panamanian authorities responsible for licensing the Project and with representatives and staff of the Bank in Panama City. In the Project area, the Panel was involved in meeting Requesters, field checking of the Requesters' observations and facts underlying their complaint, cross-checking of observations and facts from selected individuals and/or communities who live in the Project area of influence but are not part of the Request, verifying the implementation of the construction, and assessing EISA's progress against the Environmental and Social Action Plan (ESAP) during construction. Additional meetings and interviews were held with EISA staff, contractors and local authorities. Throughout this stage, the Panel established a sense of priority that could guide the Compliance Review in the face of existing resource and time constraints. Priorities on dealing with the various areas of harm were established jointly with the Requesters.
 - vi) Preparation of the Compliance Review Report.
31. **Applicable Bank Relevant Operational Policies:** The Panel considered allegations of non-compliance with the Operational Policies applicable at the time the Project was approved (December of 2009). The issues raised by the Requesters are related to the following Bank Operational Policies: Environment and Safeguards Compliance Policy (OP-703, 2006); Disclosure of Information (OP-102, 2006; the 2011 version "Access to Information" is not applicable to this Review); Disaster Risk Management (OP-704, 2007); Involuntary Resettlement (OP-710, 2007); and Indigenous Peoples (OP-765, 2006). Since issues of

supervision and follow-up permeated some of the concerns, the Panel also examined its observations with respect to compliance with OP-304 on Operations Administration.

32. **Compliance Review Team:** The Compliance Review Team was composed of Mr. Werner Kiene (Chair of the **Compliance Review Panel**), **Mr. Mario Epstein, Mr. Gilberto Amaya, and Ms. Mary Rose Brusewitz**. Because of scheduling conflicts, Mr. Amaya and Ms. Brusewitz shared responsibilities as the third member on the team.

CHAPTER 3: COMPLIANCE REVIEW FINDINGS

33. The Panel recognizes that this Project is evidence of the Bank's strong commitment to supporting the development of "clean energy" in Central America. The Project makes an important contribution to the development of Panama's energy sector and to the overall development of the country.
34. **IDB decision making during the approval process:** The Panel is aware of the existence of different opinions within the IDB on how best to proceed when some of the approval decisions for this Project were made. During intense debates, discussions focused on the fact that the co-financiers (IFC, DEG) were going ahead with their financing decisions in spite of some existing concerns and remaining uncertainties. Management's recommendation was to follow the lead of the co-financiers and get engaged in this Project. The Panel is also aware that there existed voices within the Bank that recommended that it would be more prudent to insist on complete adherence to IDB's Operational Procedures before going through with the approval process, even if it risked being unable to participate in the financing consortium. Facts about these views and about the early recognition of risks associated with proceeding with this loan are documented in **paragraphs 124-133** of this Report.
35. **The Panel's mandate** is to report facts on IDB's compliance with its own Operational Policies and not to judge the merits of corporate expediency or the rationale behind decisions by the co-financiers. This Compliance Review Report is concerned only with the assessment of actions and omissions in light of IDB Operational Policies in force at the time.
36. In the following segments, the Panel addresses the key issues of the Requesters' complaints in light of the Bank's relevant Operational Policies as per the ICIM mandate. The analysis is divided into the following sections: a) Key compliance issues derived from the Requesters' main concern about ecological flow and cumulative impact, b) Requester concerns linked to design flaws of watershed management and ecological flow, c) Requester concerns arising from construction activities of the Project, and d) Requester concerns not subjected to a detailed compliance review.

3.1 KEY COMPLIANCE ISSUES: Ecological Flow and Cumulative Impact

3.1.1 ECOLOGICAL FLOW

37. Major socio-environmental impacts of the Project are related to the flow reduction in the river, where over a stretch of 26km most of the water is diverted into tunnels that lead to power stations to generate electricity. By Panamanian law, the quantity left in the river must be kept above 10 percent of the annual average flow. Whether 10 percent of “ecological flow” is indeed sufficient to maintain biological and social needs in the area has become intensely debated and contested throughout the course of the Project.
38. The Requesters alleged that the remaining 10 percent ecological flow will reduce depth of the river by 78 percent to 92 percent in the case of Pando, and by up to 92.2 percent in the case of Monte Lirio. They fear that during some months in the year, there will be no hydraulic connectivity between many parts of CVR, transforming the river bed into isolated pools.
39. The Bank’s Environmental and Social Safeguards Unit (ESG) raised concerns about ecological flow throughout the process of designing the Project. ESG’s opinion was that, in line with prevailing Policies, the Bank should request an ecological flow analysis. This requirement was then introduced as a condition for final approval. Consequently, the Project was presented to and approved by the IDB Board in December, 2009, with the condition that the ecological flow study would be completed prior to signing for the loan agreement, as outlined in paragraph 54 of the Environmental and Social Management Report (ESMR).
40. When signing of the loan agreement was scheduled, the ecological flow study had not yet been initiated. Therefore ESG, advised to delay the signing until the completion of the study. However, after considerable debates, a decision was made not to hold up the signing of the loan agreement, but make the signing conditional to the provision that a flow study would be required as a condition precedent to the first disbursement.
41. While such a study became available at the time of the first disbursement, it was not found technically and methodologically acceptable by ESG to warrant the release of funds. Of particular concern was that the study did not properly analyze and propose any mitigating measures.
42. In spite of these concerns and contrary to the agreement reached at the signing of the loan, the Bank decided to proceed with the first disbursement without having obtained a satisfactory ecological flow study and mitigation measures (**paragraphs 124 -133**).

Non-Compliance Findings Related to Ecological Flow

43. The Panel examined the procedures undertaken for supporting the Board’s approval of this loan and the related first disbursement and observed that in the context of this operation:
 - a) The Bank, contrary to the opinion of its own specialists, approved financing and disbursement for a project that may degrade natural habitats;
 - b) Board approval was sought and granted without sufficient information on technical and biological conditions in the Project area of influence. There exist plausible doubts about

the assumption that the 10 percent ecological flow will be enough to preserve the biota in the area of the Project;

- c) The approval was granted without specifications about appropriate mitigation and compensation measures. A complete Environmental Impact Analysis for the Bank's decision making is expected to be ready only in August 2012.

44. **The Panel finds that with respect to the issues of ecological flow, the Bank did not comply with crucial provisions of IDB's Environment Safeguards Compliance Policy (OP-703). Deviating from its tradition of sustainable development practice, the Bank did not take the usual precautionary approach to dealing with potential environmental impacts.**

45. **Obtaining Board approval of the operation, signing of the loan agreement, and moving ahead with the first disbursement in the absence of an accepted and agreed-upon mitigation plan for an operation impacting on a natural habitat is in non-compliance with:**

- a) **OP-703, B**, which states under *"Safeguarding the Environment: Managing environmental impacts and risks. The Bank applies safeguards throughout the project cycle to ensure the environmental sustainability of all Bank-financed operations. In line with sustainable development practices, the Bank takes a general precautionary approach to environmental impacts. ... Where in the opinion of the Bank the environmental risks are deemed to be too great, the Bank would support the proposed investment only once the plan for mitigation of the risks is agreed."*
- b) **OP-703, B9**, which establishes that *"[t]he Bank will not support operations involving the significant conversion or degradation of natural habitats.; unless: (i) there are no feasible alternatives acceptable to the Bank; (ii) comprehensive analysis demonstrates that overall benefits from the operation substantially outweigh the environmental costs; and (iii) [there exist] mitigation and compensation measures acceptable to the Bank ..."*
- c) **OP-304 on Operations Administration**, which prescribes that Projects are to be implemented *"... in accordance with the covenants of the respective financing agreement and with the Bank's policies, rules, and procedures."* OP-304 was not complied with since the decisions on first disbursement stipulated that the Borrower should submit *a preliminary design of a passage system or other solution that would be able to preserve the ecological integrity of the river and that such a design would be acceptable to the IDB.*

46. **The approval of the loan and the first disbursement without an Environmental Impact Assessment with accepted agreements on mitigation measures constitute non-compliance with:**

- a) **OP-703, B5**, which stipulates that *"[t]he Bank will require compliance with specified standards for Environmental Impact Assessments (EIAs), Strategic Environmental Assessments (SEAs), Environmental and Social Management Plan (ESMP), and environmental analyses, as defined in this Policy and detailed in the Guidelines."*

b) **OP-703, B5**, which additionally states that “[t]he ESMP must include: a presentation of the key direct and indirect impacts and risks of the proposed operation; the design of the proposed social/environmental measures to avoid, minimize, compensate and/or mitigate the key direct and indirect impacts and risks; the institutional responsibilities to implement these measures, including, where necessary, institutional development, capacity building and training; the schedule and budget allocated for the implementation and management of such measures; the consultation or participation program agreed for the operation; and the framework for the monitoring of social and environmental impacts and risks throughout the execution of the operation, including clearly defined indicators, monitoring schedules, responsibilities and costs. The ESMP should be ready for, and reviewed during, the analysis/due diligence mission.”

47. **Seeking and obtaining Board approval for an operation that has not followed the necessary procedures is in non-compliance with:**

OP-703, B.1, which states that “[t]he Bank will only finance operations and activities that comply with the directives of this policy, and are consistent with the relevant provisions of other Bank policies.”

3.1.2 WATERSHED MANAGEMENT AND CUMULATIVE IMPACT

48. The Requesters are concerned about the recent expansions of interventions along the river. They claim that in addition to the ecological flow problem, the absence of a watershed management approach dealing with the cumulative impacts on the Chiriqui Viejo River is one of the two most serious flaws of the Project related to the harm they fear to experience.
49. They fear that the IDB-funded Project together with similar other projects will cause them harm because of (a) potential cumulative impacts on aquatic ecosystems and adjacent terrestrial habitats related to changes in hydrology and disruption of river continuity; (b) potential cumulative impacts on water use, including ecotourism and rafting activities, due to changes in hydrology and barrier effects of the dams; (c) potential cumulative impact on estuary habitat due to sediment deposits related to the erosion caused by the Project; (d) potential changes in water quality due to sediments and residues from the drilling process; (e) absence of an understanding of the cumulative impact among those making decisions about the IDB-funded Project.
50. They point out that they are concerned that those making decisions about the IDB-funded Project do not have a clear understanding of the issues of cumulative impact and that the decisions leading to the funding of this Project were not based on sufficient information on the river basin’s capacity to cope with the many uses now contemplated both downstream and upstream from the location of the two IDB-funded installations.

Non-Compliance Findings Related to Cumulative Impact:

51. The Panel finds that the Bank’s environmental team correctly pleaded for a study of cumulative impacts and a watershed management plan for the CVR basin as a condition for funding a

project that can only be responsibly designed and implemented within a systemic context. On the other hand, Management's submission of the loan to the Board for approval and initial disbursement without an integrated CVR basin management plan raises several compliance concerns. In its Review the Panel observed:

- a) The Bank approved this loan without taking the necessary precautionary approach to environmental impacts, while preliminary studies had shown that there was a high residual risk that the cumulative impacts of extensive installation of hydropower projects on the CVR may not be adequately mitigated; and
- b) The Bank approved this loan without cumulative impact studies and adequate baseline data necessary to monitor the preservation of the ecological integrity and continuity of the river.

52. The Panel finds that with respect to cumulative impact, the Bank did not comply with crucial provisions of IDB's Operational Policies. Obtaining Board approval of the loan and the disbursement in the absence of sufficient information on cumulative impact and a CVR basin management plan to preserve the ecological integrity of the river is in non-compliance with:

- a) **OP-703, B**, because preliminary studies have shown that there is a high residual risk that the cumulative impacts of extensive hydropower projects on the CVR may not be adequately mitigated: OP-703, B, states in this context under *"Safeguarding the Environment: Managing environmental impacts and risks: The Bank applies safeguards throughout the project cycle ...the Bank takes a general precautionary approach to environmental impacts. The Bank favors avoiding negative environmental impacts; when impacts are unavoidable, Bank-financed operations require mitigation measures; and for impacts that cannot be fully mitigated, compensation or offsets should be implemented. ... Where in the opinion of the Bank the environmental risks are deemed to be too great, the Bank would support the proposed investment only once the plan for mitigation of the risks is agreed."*
- b) **OP-703, B.5**, because of approving a loan to a project without a cumulative impact study where such a study should have been conducted: OP-703, B.5, states that *"[t]he EIA should be supported by economic analysis of project alternatives and, as applicable by economic cost-benefit assessments of the project's environmental impacts and/or the associated protection measures. Also, due consideration will be given to analyzing compliance with relevant legal requirements; direct, indirect, regional or cumulative impacts, using adequate baseline data as necessary; impact mitigation and management plans presented in an ESMP; the incorporation of EA findings into project design; measures for adequate follow-up of the ESMP's implementation."*

3.2 REQUESTER CONCERNS LINKED TO DESIGN FLAWS OF "WATERSHED MANAGEMENT" AND "ECOLOGICAL FLOW"

3.2.1 LACK OF PARTICIPATIVE CONSULTATION

53. Related to the Requesters' concerns about ecological flow, cumulative impact, and other aspects of their complaint is their dissatisfaction with the overall consultation process, the lack

of a participative environmental impact assessment, sufficient inclusion, and geographic representation in consultations that took place in 2010.

Non-Compliance Findings related to Consultation

54. The Panel observed that public hearings conducted in September, 2009, included only a few selected and specifically invited individuals. The Requesters stated that the lack of knowledge about the anticipated projects impacted negatively on their ability to make sound personal decisions. In the discussions with the Panel, the Requesters expressed their belief that a number of their issues could have been resolved differently if they had been properly included and received timely invitations.
55. The Panel compared the consultation process with the following Directives of the relevant Bank Policy:
- a) **OP-703, B.5**, states under *“Preparation of Environmental Assessments (EA) ...The EIA process includes, as a minimum: timely and **adequate consultation and information dissemination** process;... An EIA report must be prepared with its ESMP and disclosed to the public prior to the analysis mission, consistent with the Disclosure of Information Policy (OP-102).”* [emphasis added by the Panel]
 - b) **OP-703, B.6**, prescribes under *“Consultations: As part of the environmental assessment process, Category “A” and “B” operations will **require consultations with affected parties and consideration of their views**. ... **Consultations with other interested parties may also be undertaken in order to consider a broader range of expertise and perspectives.....** During execution, affected parties should be kept informed...**Category “A” operations will be consulted at least twice during project preparation**, during the scoping phase of the environmental assessment or due diligence processes, and during the review of the assessment reports.”* [emphasis added by the Panel]
56. **The Panel finds that by proceeding with loan approval and disbursement without confirming that adequate consultation had taken place, the Bank was in non-compliance with OP-703, B.6.**

3.2.2 SAFETY ISSUES RELATED TO VOLCANO, EARTHQUAKE, FLOODING RISKS

57. The Request alleges the following: (a) the area’s proximity to the Baru Volcano and the possibility of earthquakes and other natural phenomena present structural risks to the dams and related infrastructure; (b) there is a possibility of flooding of communities downstream due to the 19 dams proposed in the river basin; (c) this is an area of high rainfall and steep slopes; (d) the Chiriquí Viejo watershed is located in a highly seismic and rainy area; (e) the communities don’t know the Project’s plans for the prevention or reduction of risks and threats from natural disasters to which particularly the down-stream communities are exposed, i.e. the municipalities of Bugaba, Renacimiento, Baru, Alanje; (f) there is no information available to the communities whether these issues have been addressed in a comprehensive way before approval was granted for the financing and construction of the dams in an area with so many risky characteristics.

Non-Compliance Findings Related to Safety Issues

58. The Panel observed that initially the Project lacked the necessary measures to reduce disaster risk to levels that are in line with generally accepted standards and practices. There were no natural hazard risk assessments and no prevention and mitigation measures. At the time of Project appraisal, the Borrower had not established management plans for dam safety, community risk awareness, or emergency preparedness. Subsequently, Management specified that prior to first disbursement there should be a documentation of the implementation of an Early Warning and Emergency Response Plan and an Information and Community Relations Plan to manage these issues during the construction phase. A draft of the Early Warning System was released only in October 2011, after the first disbursement.
59. The relevant Operational Policy prescribing Bank actions is found in **Section A-2 of the Disaster Risk Management Policy (OP-704)**. It requires that Bank-financed public and private sector projects *“include the necessary measures to reduce disaster risk to acceptable levels as determined by the Bank on the basis of generally accepted standards and practices... During the project preparation process project teams will identify if the projects have high exposure to natural hazards or show high potential to exacerbate risk.”* **The Panel finds that, while there was non-compliance with OP 704, A.2, during the period between the loan approval (2009) and October 2011, the Bank had brought the Project into compliance only after October 2011.**

3.2.3 THREAT TO WILDLIFE: FISH AND RIVER OTTER

60. This concern is intimately linked to the issue of “ecological flow.” The Panel confirmed the Requesters’ concerns that the two dams have a high likelihood to significantly convert or degrade natural habitats of the river bed. In their present configuration, the dams will prevent fish from going up-river to complete their life cycle and to serve as food for river otters that live upstream.

Non-Compliance Findings Related to the Threat to Wildlife

61. Policy Directive B.9 of OP-703, B, defines “natural habitats” in various ways. Important for this case is that they are defined as *“biophysical environments...and...sites... that are vital to ensure the functional integrity of ecosystems...”*. The Panel found that the Project has not yet validated potential mitigation measures to ensure fish migration and survival of otters.
62. **Since the effectiveness of the proposed mitigation measures to allow fish migration and survival of otters has not been validated till today, the Project may adversely affect the biota in the region. The Panel examined this in light of the Bank’s decision to release the first disbursement and finds that the Project is not in compliance with:**
 - a) **OP-703, B, because the Bank did not insist that the sponsor present a mitigation plan based on real data about the local fauna to comply with the principles of a precautionary approach to minimizing environmental impacts. The relevant passage of**

OP-703, B, states under “*Safeguarding the Environment: Managing environmental impacts and risks. In line with sustainable development practices, **the Bank takes a general precautionary approach** to environmental impacts. ... Where in the opinion of the Bank the environmental risks are deemed to be too great, **the Bank would support the proposed investment only once the plan for mitigation of the risks is agreed.***” [Emphasis added by the Panel.]

- b) **OP-703, B.9**, due to the fact that the dams will most likely significantly hurt the fish and otter fauna in the Chiriqui Viejo River. The relevant policy provision states that *[t]he Bank will not support operations that, in its opinion, significantly convert or degrade natural habitatsunless... mitigation and compensation measures acceptable to the Bank*“are assured. [Emphasis added by the Panel.]

3.3 REQUESTER CONCERNS ARISING FROM THE IMPLEMENTATION OF THE PROJECT

63. The Project’s Environmental and Social Management Report ESMR specifies the Borrower’s and the Bank’s obligations in monitoring and reporting on Project-related issues.
64. Paragraph 49 of the ESMR states that “[t]he Bank (IDB) will require as part of the Loan Agreement that EISA and all portions of the Project shall, at all times during the life of the Loan Agreement, comply with each of the following: ... (7) Send written notice of any and all noncompliance with any environmental, health and safety, social and labor requirement of the loan agreement and any significant environmental, social, labor, health and safety accident, impact, event, claim or material complaint.”
65. Paragraph 59 of the ESMR states that “[t]he Bank will monitor the Project’s environmental, health and safety, social and labor aspects via internal Bank supervision actions (e.g., site visits, review of documentation, etc.) and will contract an external independent environmental consultant to perform more detailed supervision/monitoring actions during Project’s construction and first year of operation. In addition, the Bank will have the right, as part of the Loan Agreement, to contract for the performance of an independent environmental, health, and safety audit, if needed”.

3.3.1 POTENTIAL HEALTH IMPACT OF PROJECT-INDUCED EROSION AND WATER IMPURITIES

66. The Requesters alleged that Project activities cause high levels of water impurities from the Project’s drilling and construction activities. This, they assert, is affecting the quality of water in the river and allegedly contaminates the water taken by the Paso Canoa water-treatment plant which provides drinking water for a large population.
67. EISA’s internal supervision process provides ongoing supervision and recommendations to increase the Project’s compliance with the Environmental Management Plan (EMP).

Recommendations are made by the Project's Safety and Security Advisor, the Environmental Advisor and EISA's supervision monitoring protocol.

68. According to the Requesters, the contractors' compliance with EISA's Environmental, Social, Health and Safety Protocol continues to be inadequate in the areas of erosion control, water quality monitoring, sediment filtration, and management. During its field visit, the Panel was informed that a recent supervision mission by EISA had looked into this and confirmed some of the problems mentioned by the Requesters.

Non-Compliance Findings Related to Project-induced Impact on Drinking Water

69. The Panel recognizes that there is an apparently competent supervision process in place and has not examined all the technical aspects of the alleged health hazard. On the other hand, the Panel noted lags in the Bank's resolve to enforce a consistent follow-up to recommendations by supervision missions. **If not corrected on time, the issues noted by the Requesters and documented in reports could lead to non-compliance with Directive B.7 of the Environment Safeguards Compliance Policy (OP-703) which stipulates that "[t]he Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement..."**

3.3.2 PROJECT-INDUCED DAMAGE TO ROADS

70. The Requesters expressed concerns about the deterioration of the Project area's road infrastructure due to the heavy loads that need to be moved during the construction period. The Panel interviewed community officials and citizens and observed that the deterioration of roads has been going on for over a year and has been reported in the national and local press and in project-internal supervision reports.
71. The Panel also saw supervision reports noting these issues but could not find evidence that Management had sufficiently enforced the recommendations of supervision missions to instruct the Borrower to take corresponding precautionary or mitigating actions.

Non-Compliance Findings Related to Project-induced Damage to Road

72. The Panel finds that there exist deficiencies in Management's follow-up and enforcement of recommendations of supervision findings. **If not corrected, this might lead to non-compliance at some later point with the following Operational Policies:**
- a) **Directive B.7 of the Environment Safeguards Compliance Policy (OP-703)**, establishes that *"[t]he Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations..."*
 - b) **OP-304 on Operations Administration** requires the Bank to *"verify compliance by borrowers/beneficiaries/executing agencies with the contractual covenants and general rules established by the Bank" and to "maintain an effective and efficient information system on loan operations."*

3.4 REQUESTER CONCERNS NOT SUBJECTED TO A DETAILED COMPLIANCE REVIEW

73. In discussions with the Requesters, the Panel reviewed their concerns and worked with them to prioritize the issues. Based on these exchanges and subsequent examination, the Panel determined that **some of the concerns raised were either related to other issues that would be more efficiently and more effectively reviewed elsewhere in its Report or had only a low probability of being attributable to non-compliance by the IDB.** The most important concerns raised by the Requesters are:
- Impact on protected areas of parks and wetlands
 - Impact on the agricultural production
 - Impact on indigenous communities
 - Impact on rafting
 - Impact on involuntary resettlement
 - Impact on the social network
 - EISA's human resources capacity to deal with environmental issues.
74. The Panel examined these issues without passing judgment on their seriousness and their impact on the Requesters. They are reported in Annex A, and are also partially dealt with in other sections of this Report.

CHAPTER 4: RECOMMENDATIONS TO THE IDB BOARD OF EXECUTIVE DIRECTORS

4.1 RECOMMENDATIONS FOR THE PANDO-MONTE-LIRIO HYDROELECTRIC POWER PROJECT

75. If the Bank decides to bring the Project into compliance and continue with the loan for this project, it will be essential to correct the identified areas of non-compliance as quickly as possible.
- a) **Solving the ecological flow issues:** Of particular concern and urgency is to arrive at a Policy-conform management of the ecological flow, establish realistic flow data, install the corresponding flow-valves, and commence with appropriate mitigation measures.
 - b) **Enforcing consistency of follow-up to supervision findings:** The Panel noted that a competent supervision structure is in place. However, the follow-up to the supervision reports appeared to be not consistent. There is a need for Management to develop a culture of more stringent follow-up to the findings of supervision missions and the Project's internal monitoring. With respect to the immediate concerns of the region's citizens, it will be necessary to devote specific attention to their worries about Project-induced road damage, erosion, water impurity, and related water quality.
 - c) **Capacity enhancement:** It might be necessary to consider additional support to the Borrower and Panamanian environmental authorities to find technological and institutional solutions that minimize the environmental impacts of the Project. Similarly,

there is a need for continued strengthening of the environmental authorities in their responsibilities for appropriate watershed management elsewhere in the country.

4.2 RECOMMENDATIONS FOR A MORE SYSTEMIC APPROACH TO THE BANK'S PRIVATE SECTOR ENGAGEMENT

76. It is important to look at the difficulties and failures that this project experienced as an incentive for learning for the Bank as a whole. In particular, the Panel recommends to take the present case as an opportunity to augment the Bank's strategic programming for IDB's private sector engagement:

- a) **Enhancing the synergies between the Bank's public and private sector investments:** This Review shows that the IDB has still some ways to go to utilize the potential synergies between public sector investments and those in the private sector.

In the case examined, such an approach, if purposefully implemented, could have worked and might have led to different outcomes: The Panel observed that before this Project was considered by the Bank's private sector arm; there existed a long-standing support by the IDB to Panama's Autoridad Nacional del Ambiente (ANAM) for a total of US\$4 million since 2001. Through this assistance, the Bank supported the agency in the development of various environmental programs. Therefore, it would have been a reasonable expectation that the institutional strengthening of ANAM would have laid the foundation for solid national norms and processes, and that once the Private Sector Project came on stream, there would have been considerable capacity and tools at ANAM to guide the implementation of the Projects. This was not the case and the Panel finds that this absence of complementarities between public and private sector development efforts is partially responsible for the observed flaws.

- b) **Strategic sequencing:** Private sector operations take place under increasingly complex social and environmental conditions. Safeguards have a high and often underrated potential to dramatically enhance the sustainability and overall development effectiveness of the Bank's financing.

Demand for projects, such as the one reviewed in this report, will most likely be the norm and not the exception. These projects need to have an assured success rate also with respect to their adherence to often complicated safeguard policies. To achieve this objective, the IDB might need to develop a more consistent strategy for sequencing its financial engagements and better exploit synergies between its public and private sector portfolios.

Instead of relying too much on an opportunistic approach for financing private sector Projects, the IDB could consider a more targeted strategy with the following features for sequencing the Bank's funding decisions: Public sector investments would strengthen national capacities for safeguards management and related technical expertise. Subsequently, the Bank's private sector support could concentrate on those investment

opportunities where an institutional readiness conducive to IDB-specific private sector funding could have a higher likelihood to be in place.

4.3 FOLLOW-UP AND MONITORING

77. As a result of this Compliance Review, the Panel envisages that, as per Section 71 of the ICIM Policy, the Board shall make the final decision regarding any remedial or corrective actions that may be deemed necessary in light of the Panel's findings and instruct IDB Management to carry out such actions. As per Section 72 of the Policy, the Panel would carry out the monitoring of the activities contained in an Action Plan to be prepared and updated by Management as agreed upon by the concerned parties.
78. The Management Action Plan would propose actions that can be tracked by Management and monitored by the Panel following the request from the Board. For this purpose, the Panel would develop a Monitoring Plan, which would consist of periodic reviews of the tracking system and reports prepared by Management and carry out spot checks or field verifications in consultation with the Project's stakeholders, as appropriate. The Panel would report periodically to the Board on the status and progress on the actions proposed in the Action Plan.
79. The effective implementation of the Management Action Plan with a follow-up by the Panel would strengthen any elements considered as actual or potential weaknesses in the design and implementation of the Project, which triggered the concerns and eventual Complaint from the Requesters. These actions would reaffirm the Bank's commitment to development effectiveness and prevent reputational risk.

PART B: PROJECT DETAILS, STAKEHOLDERS AND DECISION MAKING

CHAPTER 5: DETAILS ABOUT THE PROJECT

5.1 THE CHIRIQUI VIEJO WATERSHED

80. **Location of the Project:** The Project is located in the Province of Chiriqui, Panama, along the border with Costa Rica, near the city of Volcan.
81. **Chiriqui Viejo's Watershed:** The watershed which feeds the CVR is an area of 1,376 km² bordered in the north by the Talamanca Mountains (which constitute Panama's continental divide), and in the south by the Gulf of Chiriquí in the Pacific Ocean. The watershed is located in its entirety within Panama. The Chiriquí Viejo River originates on the Panama side of the Parque Internacional La Amistad.
82. The middle reach of the CVR, where the Monte Lirio dam is located, extends for about 51.5 km. In the Project's area of influence, the CVR runs into deep canyons. The lower reach of the river extends for about 41.8 km through alluvial plains, before reaching the Gulf of Chiriquí on the Pacific Ocean. There are mangroves in the mouth of the river.

83. According to the Requesters, the CVR basin produces 80 percent of the food consumed in Panama City. This fact is important to many of them and partially explains their strong interest in a clearer vision for the various future uses of the river's available water.

5.2 THE TWO HYDROPOWER DAMS AND THEIR ASSOCIATED STRUCTURES

84. The Project is a hydropower development that plans to use the water of the CVR in the Chiriquí Province in Western Panama. The project involves the construction of two run-of-river power schemes with an aggregate capacity of approximately 84 MW split into the 32 MW installations at the Pando power station and 52 MW at Monte Lirio.
85. The project has been developed by EISA, a Special Purpose Company formed by Spanish and Panamanian investors, pursuant to two fifty-year electricity generation concession contracts. The Project cost is estimated to be US\$291.7 million, and includes a US\$40 million loan from the IDB.
86. **Pando** is in the upper part of the CVR catchment area (an area of approximately 184 km²). The main dam of the project is located about 4 km downstream and west from the city of Volcan. The development includes: the construction of a 28 m high dam, 150 m long at the crest and 90 m long at its foundation, with a reservoir of 900,000 m³; a tunnel of 3.0 m in diameter and 5.1 km length to divert the Chiriquí Viejo water; and a power station with 32 MW of installed capacity. The dam will have water-regulating equipment including an ecological flow release valve (that has yet to be properly dimensioned) and an overflow fixed-crest spillway structure. Gross head of the scheme is estimated at 280 m (i.e. the height difference between the dam location and the power station location).
87. Monte Lirio is immediately downstream of Pando and includes: a 15 m high by 46 m long dam; an ecological flow release valve that also has yet to be properly dimensioned; a reservoir of 90,000 m³; a tunnel with a 3.2 m diameter and 8.2 km length; and a power station with 52 MW of installed capacity split in two units. Gross head of the scheme is estimated at 314 m. This analysis discusses: a) Key compliance issues derived from the Requesters' main concern about ecological flow and cumulative impact; b) Requester concerns linked to design flaws of watershed management and ecological flow; c) Requester concerns arising from the implementation of the Project, and d) Requester concerns not subjected to a detailed compliance review.
88. The average annual flow is 11.7m³/s at Pando and 17.9 m³/s at Monte Lirio, with significant seasonal fluctuations. Additionally, the Project also involves the construction of a 19 km of 230 Kv transmission line from the plant to an interconnection substation with the Sistema de Interconexión Eléctrica de los Países de América Central ("SIEPAC").

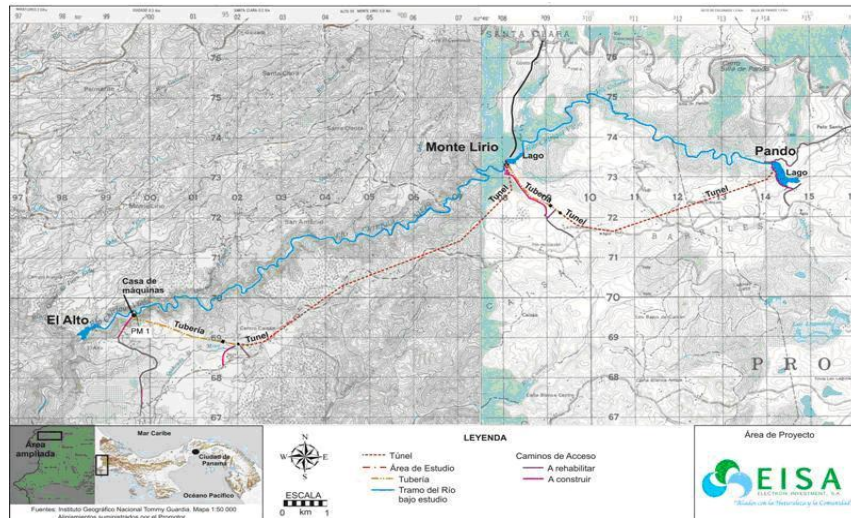


Figure 1 – Pando and Monte Lirio Hydro Power Plants.

89. The labels “Pando” and “Monte Lirio” on the map indicate the site of the IDB-supported dams. Also shown are the tunnels that carry water from the dams to the power stations. They divert around 90 percent of the river’s water for a length of around 26 kilometers. “El Alto” is the site of the next dam further downstream. It is being constructed by another company and financed through other sources. The three contiguous dams are an example of the density of construction along the river that has given rise to the concerns expressed by the Requesters. A total of 19 structures of this kind have been licensed throughout the river’s total length of around 128 kilometers.
90. **The Construction Phase:** Early works and construction of the Project started in 2009. The excavation of the Monte Lirio tunnel proved to be more complicated than anticipated and caused delays of a year. The Project is still expected to be completed by December 2012. The total workforce for peak construction is around 700 full time workers. The work force composition is approximately 75 percent construction labor, and 25 percent qualified/specialized professionals. All of the construction labor force is reported to come from nearby towns and cities.



Figure 2 - Outlet of the tunnel of Pando



Figure 3 - Tubing used for the construction of tunnels.

91. **Other Projects on the River:** The Project resulted from an initiative of the Government of Panama (GoP) to develop the hydroelectric potential on the CVR. The GoP has awarded electricity generation and water use concessions to 19 hydropower projects that are in different

phases of development or under construction on the CVR. The projects are part of the country's strategy to diversify its energy matrix by promoting the use of renewable energy sources and thereby reducing the dependence on imported hydrocarbon-based fuels.

92. To date, a total of nineteen water concessions for energy production on the CVR basin have been granted to various private sector developers. In addition to Pando and Monte Lirio, seven other hydropower projects on the CVR main stem have their EIAs approved, including Paso Ancho, Tizingal, El Alto, Bajo de Mina, Baitun, Bajo Frio, and Burica. Construction has begun on the El Alto project (located directly downstream from the Monte Lirio Project; developed by Hydro Caisán), the Bajo de Mina and Baitun Projects (located 12 kilometers downstream of the Monte Lirio tailrace; developed by Ideal Panama), and the Bajo Frio Project (located downstream of the Baitun Project; developed by Fountain Intertrade Corporation).

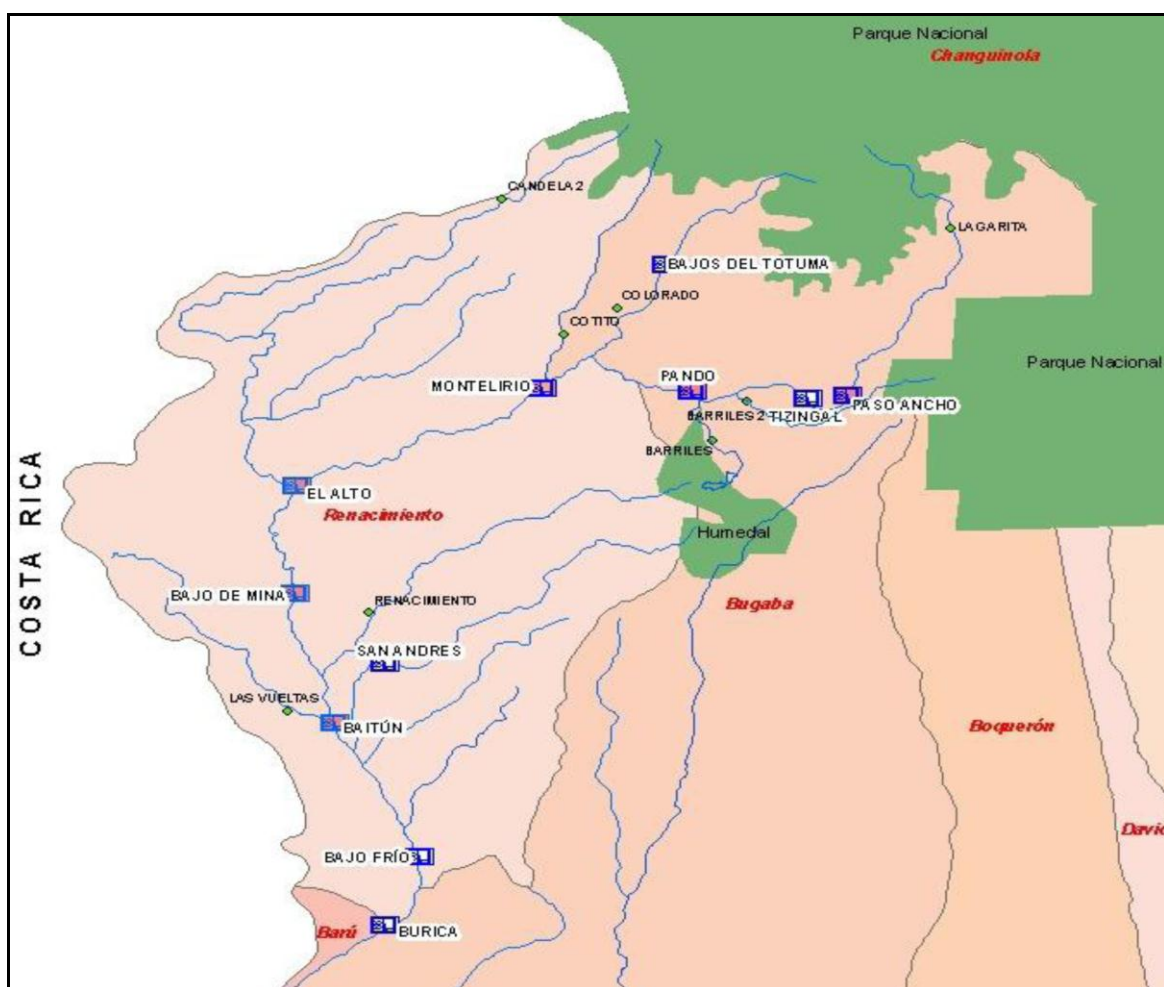


Figure 4 - Hydropower Projects on the Chiriqui Viejo Watershed

Environmental License for the Pando-Monte Lirio Project

93. During 2002-03, two separate Environmental and Social Impacts Studies (EISs) for Pando and Monte Lirio were developed. These studies were presented to the local environmental authority, ANAM. In July, 2004, after several iterations and the submission of two additional documents with additional information, the Projects obtained their respective Environmental Licenses. These EISs were elaborated at a very early stage of the development and essentially identified the main environmental and social impacts associated with the projects, outlining the environmental and social mitigation measures and plans that would have to be developed as the project advanced. In July, 2008, ANAM determined that additional authorizations to be obtained by EISA (such as concessions for water use and power generation) could be granted during Project implementation.
94. Besides the typical impacts and risks associated with a new construction and related civil works (e.g. air and noise emission, wastewater and solid and hazardous waste generation, etc), the EIS identified the main environmental and social impacts: (a) modification of the hydrological and sediment load dynamics of the CVR; (b) potential negative impacts on aquatic ecosystem (e.g. spawning, migration, etc.), or the invasion of exotic species; (c) potential increase in erosion processes; (d) potential impacts on socio-economic dynamics; (d) potential impacts on touristic activities; (e) potential impacts and risk associated with the construction of the tunnels and the operation of heavy equipment and machinery; (f) socio-economic impacts associated with land acquisition and land-use changes thereof; (g) potential indirect impacts to indigenous peoples and migrant crop workers; (h) dam safety and emergency and community preparedness downstream.
95. This EIS was criticized by Bank specialists for its poor professional quality, lack of accuracy, and in some places for simply copying text from other studies without proper adaptation.

5.3 KEY PROJECT STAKEHOLDERS CONTACTED BY THE PANEL

96. **Requesters:** On December 3, 2011, Panel members met with representatives of 11 NGOs in the town of Bugaba, in the province of Chiriquí. Details of their concerns are reported elsewhere in this report.
97. **ANAM:** La Autoridad Nacional del Ambiente (The National Environmental Authority) is an autonomous State entity created in 1998. ANAM's main role is to guide, facilitate, supervise, and provide environmental management for sustainable development with the objective of conserving, protecting, restoring, recovering, and improving the environment and the basis for natural resources in Panama.
98. ANAM issues environmental licenses to projects after approving studies of environmental viability and environmental impact. It is also responsible for confirming the water concession issued by the Autoridad Nacional de los Servicios Públicos (ASEP). Once companies or promoters have obtained both an environmental license and a corresponding concession for water use, they are given a certain time period within which they have to initiate the construction or installation of their projects. In addition, the promoter must secure in the respective municipalities the applicable construction permits.

99. In December 2007, ANAM issued new regulations for hydropower projects (Resolution AG-842-2007), in particular mandating that Environmental Impact Statements for future projects include specific hydrological information, for instance regarding impacts on downstream flows. The Panel learned that these new regulations are not retroactively enforced in the case of the dams at Pando and Monte Lirio since the EIS reports were already approved by ANAM in 2004.
100. **ANAM's work on Watersheds Management and Cumulative Impacts:** ANAM does not yet have the capacity to conduct integrated river basin studies, cannot assess the hydrological capacity of affected basins, and thus cannot evaluate cumulative impacts of multiple projects on a given river.
101. Recently, ANAM initiated a program to enhance its capacity for getting engaged in watersheds management issues and proposes to elaborate a plan for the CVR. Previously no such plan has existed. ANAM is looking for funding to train its staff in water balance analysis, hydrological modeling, groundwater analysis, piezometric network monitoring, and aquifer recharge. In addition, ANAM reports funding shortages for planning and supporting projects and for establishing and enforcing environmental quality standards.
102. The projects in the CVR river basin (also labeled "Cuenca/Watershed 102") have not been subjected to an analysis of cumulative impacts, a standard requirement for these type of investments. In light of further hydropower investments in Panama, ANAM wants from now on to conduct these analyses and elaborate ecological flow studies, including on the Chiriqui Viejo.
103. During their mission, Panel Members visited ANAM twice and noted much good will among its technicians and leadership for solving the problems of Cuenca 102. ANAM technicians confirmed that the governmental specification of a minimum of "10 percent" as sufficient Ecological Flow for all of Panama's rivers was not based on scientific evidence. The value was apparently adopted from studies applied to some rivers in Spain. ANAM plans to apply a methodology specifically for the humid tropics with a different value for each stretch of river and is looking for external support to conduct these analyses.
104. **IDB Strengthening of ANAM through earlier Projects:** The Bank has supported the agency since 2001 in the development of various environmental programs. The Panel learned that an IDB-funded project of US\$ 4 million was developed for control, surveillance, and monitoring of protected areas including watersheds, and hiring of consultants specializing in protected areas or watersheds. It was not clear to the Panel why said project failed to result in the development of an institutional base needed for making sounder decisions on the hydropower development on Panama's many rivers. It was also not clear to the Panel whether there existed evaluations of IDB's contributions to ANAM's institutional development.
105. The Panel was surprised to learn that in 2004 the IDB, in addition to its institutional support to ANAM, financed a study on the hydrological balance of the CVR, but completely failed to take into account the potential cumulative impacts of developing the river's water resources.

106. Most of the EISs for the hydropower projects planned or under construction on the CRV were approved several years ago, at a time when the regulatory framework and the capacity of the public regulators were still under development. While ANAM has recently strengthened its technical capacity and the regulatory framework applicable to hydropower projects, much remains to be done, for instance regarding the definition of ecological flow or the establishment of an appropriate institutional framework at the basin level. This situation appears to be a significant third party risk for the Project. The Bank and other financiers need to consider additional support to ANAM's efforts to develop and implement an appropriate framework for the assessment and management of cumulative impacts of hydropower development. At the same time, it seems critical that EISA, the sponsor of the two IDB-supported dams, engages with the other private sector developers of hydropower projects on the CRV, and initiates a dialogue on how to best deal with the environmental and social aspects throughout the whole watershed.
107. **ASEP:** The National Authority for Public Services (Autoridad Nacional de los Servicios Públicos – ASEP) is an autonomous State entity created in 1996 to regulate public services in Panama. ASEP grants concessions, licenses, and authorizations for the provision of public services, including electricity. For dam projects, ASEP ensures that projects do not interfere with each other within the overall parameters of available water calculated by ANAM. ASEP is also an arbiter of disputes between public service providers and customers and provides support to relevant authorities regarding possible monopolistic, anticompetitive, or discriminatory conduct by companies and entities providing public services.
108. Whenever a company wants to build a hydro power plant, an EIS is submitted to ANAM, which refers to ASEP. The latter determines whether the new project will interfere with another project that already has a concession. Although ASEP has an environmental unit, the final environmental permit is issued by ANAM. In the case of the CVR, ASEP recognizes that 19 concessions have been granted, without reference to a cumulative impact study of this river as should have been the norm for such decisions.
109. Consistent with the Government's overall energy policy and international agreements, all government representatives interviewed by the Panel confirmed that their goal was to ensure a sufficient, reliable, and predictable energy supply for the Panamanian economy and society while protecting ecosystems and promoting sustainable development.
110. The Panel interviewed the heads of ANAM and ASEP, as well as several staff members. All government representatives interviewed noted that the Pando-Monte Lirio projects have consistently complied with Panamanian law and regulations.
111. **Municipalities:** Representatives of local government authorities in the Renacimiento and Bugaba Districts (the locations of Pando and Monte Lirio) reported that they have regular interaction with the Project and see themselves as primary stakeholders. Their direct role in the Project includes providing construction permits and setting local tax rates. They also assist in addressing residents' concerns and questions related to the Project and support EISA in establishing and convening the Community Development Committees (CDCs). They also noted that while they support the Pando-Monte Lirio project, they did share the Requesters' concerns about limiting the overall hydroelectric development on the CVR.

112. The Deputy Mayor of Bugaba said he had received numerous complaints about the damage to roads. The Mayor of Bugaba had apparently asked the builders to fix the roads. The Panel was informed that the reaction to these requests had not been satisfactory. For instance, a road paved by the Project was supposed to last 25 years. The Panel was told that it lasted just one year. Recently, some citizens apparently demonstrated against the damage caused by the trucks and erected road blocks for two days.
113. **EISA:** According to EISA, it is now necessary to accept the reality: no matter what happens with the Project, the CVR basin will no longer comprise the watershed in its previous natural state. It will be a watershed with several hydroelectric projects that impact it. By this, EISA contends that even if Pando and Monte Lirio were not to be built, the CVR basin will contain a number of hydroelectric dams. This reality should be considered in the analysis of ecological flow management and solutions proposed.
114. EISA noted that it is now one of the most criticized companies among those involved in the construction of power plants along the river, because it receives funding from multilateral institutions, particularly the IDB and the IFC. It has therefore set up a communication office, a communication program and an office to receive complaints. EISA is concerned that in spite of these efforts, complaints will go directly to the financiers.
115. EISA stated that the Cumulative Impact Study should not have been required from them. In EISA's view, issues of cumulative impact, while of significance to the Government and the financiers, should be considered outside the scope of an EIS for an individual project. It should not be the responsibility of individual electric utilities, but of the licensing agency. EISA noted that three years ago, the IDB had allocated funds for a study to prepare the ToR for a cumulative impact analysis on the CVR. According to EISA, the study has not yet been developed although the Banks have already agreed to financing of the Project.
116. EISA stated that it is rigorously following the laws of Panama in ensuring the release of 10 percent of the average annual flow into the river. But EISA also confirms that there is no assurance that 10 percent will be sufficient to maintain the flora and fauna of the river. EISA recognizes that there is a lack of an overall watershed management plan, cumulative impact studies, and a reliable value for a minimum ecological flow. According to EISA, bringing order into these matters is a function of the Government and not that of any particular company that has a contract to fulfill for building two dams and related infrastructures. On the other hand, EISA recognizes that there are problems that require the company's cooperation in finding at least some of the necessary solutions.
117. In the interview with EISA, the Panel learned that in the opinion of the Borrower the IDB seems to have a concept of environmental flow and how to deal with it that is different than that of other lenders of the Project.
118. Further probing by the Panel revealed, however, that while IFC did not impose this requirement from the beginning, it subsequently changed its opinion. Important for a full understanding of the institutional base of decision making is that the ESAP requiring the ecological flow study as

part of the loan agreement was negotiated with all Lenders – and eventually the Borrower who also signed off on this requirement.

119. **Co-Lenders:** The Panel has no mandate to interpret the rationale and validity of the decisions by the co-financiers. It seems that differences in the texts and interpretation of the Safeguards Policies might explain the difference in decision making. Also, there might be a more profound difference of opinion on how to approach this type of project. For instance, one of such differences emerged early on in the course of project preparation, when one of the co-lenders originally categorized the project as “B”, while IDB listed it under category “A” right from the outset. Although the categorization was subsequently harmonized, it may point to some fundamental differences of perception of sustainability and development impact among the funding partners.

CHAPTER 6: IDB’S DECISION MAKING FOR BOARD APPROVAL

6.1 IDB IN THE EARLY STAGES OF PROJECT PREPARATION

120. The proposal for Loan 2266/OC-PN, Project PN-L1054, The Pando-Monte Lirio Hydroelectric Power Project, was approved by IDB’s Board on December 9, 2009 (Resolution DE-214/09). The amount of this private sector loan (PSL) is US\$ 40,000,000. The Borrower is Electron Investment S.A. (EISA), a special purpose company incorporated in the Republic of Panama.
121. Project financing was approved faster than has been the case with similar projects of this kind. The Project entered the Bank’s pipeline in June 2009 and was approved by the Board in December 2009. IDB documents show that the Bank’s safeguards experts had numerous serious concerns about unresolved environmental issues.
122. In response to concerns raised by several Directors, Management reported in detail about the cumulative environmental impact assessment of hydroelectric projects on the CVR and noted the Bank’s attention to this issue. The Board supported the loan proposal in light of its high impact on development in Panama, particularly on the country’s energy matrix.
123. **Social and Environmental Classification of the Project:** Considering the nature of the Project and adhering to the precautionary principle, the Project team stated that the construction of the proposed dams could have potentially significant direct cumulative impacts on the aquatic ecosystem, water uses, and local communities. Also of concern was the fact that the magnitude and intensity of these impacts had not yet been determined due to the lack of a Project-specific baseline.
124. The Project was screened and classified as a Category “A” operation, according to Directive B.3 of the Environment and Safeguards Compliance Policy (OP-703), signaling early on in the design process that the Project was considered “likely to cause significant negative environmental and social impacts” or might have profound implications affecting natural resources.
125. **Residual Risk:** On November 17, 2009, an Environment and Social Review (ESR), requested additional studies to identify the minimum ecological flow that would ensure the ecological

viability of the river parallel to the tunnels that would carry most of the water and compare the adequacy of the minimal flow currently designed with the scientifically established requirements. The study was to be completed to the satisfaction of the IDB prior to financial close/first disbursement. Additionally the ESR stipulated that the final design information and key environmental management plans should be made available to the satisfaction of the IDB before commencement of major construction works. The approach proposed was for the IDB and the sponsor to effectively engage and support ANAM with technical assistance to develop a cumulative impact assessment.

126. In spite of these measures, it was stressed that in the absence of an agreement with ANAM as well as in light of the apparent time constraints suggested by Management and the absence of clearly identified activities and related budgets on the part of IDB, there existed a high level of residual risk for the Bank. Of major concern was the realization that in the absence of an overall watershed management plan, the cumulative impacts of the totality of hydropower projects on the CVR could not be adequately mitigated, even if the IDB and the developer were committed to doing their best.

6.2 THE LOAN AND THE FIRST DISBURSEMENT PROCESS¹

127. The major socio-environmental impact of the Project, as of all the other dams along the river, is the flow reduction in the river, in those sections where the water is channeled into tunnels leading to the generator stations. By Panamanian law, the flow in the river must be kept above 10 percent of the annual average flow. The question that has been debated intensely among the various offices of the Bank is whether a 10 percent “ecological flow” is sufficient to maintain biological and social needs in the riverbed and its surroundings.
128. Based on the importance of ecological flow for an appropriate design and an implementation that is in compliance with IDB policy, ESG determined that an ecological flow study was needed. Already in November, 2009, the Borrower had been asked to conduct an analysis in line with IDB Operational Policies; however, this study was not ready at the time of the signing of the loan agreement. A proposal was discussed internally at IDB to postpone the completion of a minimum ecological flow study from being a condition to the signing of the loan to becoming a condition precedent to the first disbursement of the loan.
129. The Panel learned that a justification for this approach was that the proposed change, which had the support of all other co-lenders, would allow the Bank to remain involved in the Project until the results of the study were known and an action plan to ensure environmental sustainability was developed. The key consideration was that the Bank would be entitled to deny a disbursement if the study or any resulting action plan were not completed or were not acceptable to the Bank. It seemed important to Bank Management that this loan enabled the Bank to deepen its dialogue on important issues of Panama’s development. Thus, proceeding with the loan agreement would ensure that the Bank would stay engaged and finally lead the other lenders and the Borrower to a positive outcome with respect to the requirements for ensuring an appropriate ecological flow.

¹ This section provides additional details to the discussion in paragraphs 42.

130. On the other hand, Management seems also to have been aware of the risks associated with this approach, i.e. that the results of the ecological flow study were key to determining the appropriate residual flow of the river, and ultimately to ensure the consistency of this loan with the Bank's Environment and Safeguards Compliance Policy. The Panel's research and interviews in Panama and elsewhere confirmed that Management was concerned that postponing the fulfillment of this crucial condition to first disbursement could result in several risks: a) in the event that the results of the study should indicate that the planned water flow would not be sufficient to preserve the ecological integrity of the river, the sponsor may not be able or willing at that point to adjust the water release requirements to avoid the significant conversion or degradation of the river's natural habitat; b) such a scenario would prevent the Bank from ensuring that the Project would meet the conditions set out in the Bank's environmental policy; c) a reputational risk for the Bank due to the uncertainty about the Government's capacity to develop and implement a plan to manage cumulative impacts. In addition, the uncertain outcome of a complaint on neglect of cumulative impacts that at that time had just been submitted to the Bank's newly established ICIM was seen as a strong argument for ensuring that the Bank engaged the Government to develop and implement a management plan for the CVR basin.
131. The final decision about the best way forward resulted in a tightening of the conditions regarding the completion of the ecological flow study and corresponding mitigation measures before approving the first disbursement of the loan to comply with the Bank's Environmental and Safeguards Compliance Policy. To this effect, paragraph 39 of the Environmental and Social Environmental Report states that "*precedent to financial closure, a preliminary design of a passage system and ecological flow should be designed.*" This decision eventually led to a binding agreement regarding the above mentioned study and measures to ensure the preservation of the ecological integrity of the river to the satisfaction of the IDB.
132. The ecological flow study was finally presented on May 31, 2011. Thus, by the time the first disbursement had to be decided on, a study did indeed exist, but it was determined to be technically insufficient by the Bank's Safeguards specialists because of the limited empirical basis (eight cross sections) upon which it had been made. Even more significant for this determination of incompleteness seems to have been the fact that the study did not provide information on any mitigating measures that would have given the IDB a base for authorizing the disbursement.
133. **The Bank approved the first disbursement, despite non-completion of relevant environmental and social conditions discussed above. As of September 28, 2011, approximately 10.44 percent of the loan disbursement had been authorized.** Arguments in support of this decision centered on the likelihood that the investors would be prompted to look for other lenders, that they had a good chance to obtain additional funding from other sources, and on the realization that the Bank had already invested considerable resources in preparing the loan.
134. The Panel finds that approval of the first disbursement under such conditions does not correspond to the terms agreed for the postponement of the studies on ecological flow and the

management of cumulative impacts. More significantly, such an approval constitutes non-compliance with crucial provisions of IDB's Environment Safeguards Compliance Policy (OP-703) and OP-304. Details of this non-compliance are documented in **paragraphs 43-47** of this Report.

135. **Observation on Rushing Approvals:** The Panel recognizes the need to make project decisions in synchronization with other partners. On the other hand, the Panel is also conscious of the concerns of Bank experts from environmental as well as other technical areas about ever shorter time periods available for thinking creatively through project concepts, paying attention to details, and addressing complex sustainability issues. There exists unease about the fact that this diminishes the Bank's comparative advantage as a development lending institution. There is also a belief among some whom the Panel interviewed that by succumbing to the pressure for shorter preparatory time, the Bank and its clients are often merely postponing costs that will have to be borne later during implementation. This could sometimes represent higher costs for all parties concerned and could involve significant reputational risk for the Bank.

INSTITUTIONS CONTACTED DURING THE FIELD MISSION

IDB Country Office in Panama	Representative and various IDB staff members
EISA and Subcontractors	Leadership in Panama City and in the Project Area
ANAM, Panama City	Leadership of ANAM and various offices in Panama City
ANAM, David, Province of Chiriquí	Regional leadership of ANAM
ASEP	Leadership in Panama City
In the Project's area of influence	Mayor's Office in Bugaba, leadership of school in Caisan
In Bugaba with the Requesters	Representatives from 12 Requester organizations

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This Report was based on: IDB Project documentation; Visit to the Project site; interviews with the Requesters and Panamanian authorities; EISA, IDB and IFC documents; exchange of emails between ICIM and the Requesters; and internet reviews. The Panel is grateful to CAO (IFC) and EISA for having made available the following documents:

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ANNEX A: DESCRIPTION AND ANALYSIS OF THE REQUESTERS' CONCERNS

A. THE ECOLOGICAL FLOW ISSUE

Panama's Ecological Flow Law: The ecological flow problem is one of the two most serious problems found in this Compliance Review.

- In 2004, the hydropower projects sponsors proposed a law allowing them to use up to 90 percent of the mean annual water flow of the rivers in Panama to generate energy. As this water flows in tunnels from the dams to the power stations, stretches of the river would carry only 10 percent of the mean annual flow ("10 percent ecological flow"). The national regulator had just been created and there was no applicable regulation in place. Without proving that 10 percent was really justified, in 2006, the regulator passed a law including the 10 percent rule to reduce uncertainty in the market faced by interested licensees. When the Bank got involved with the Project, in 2009, the law was already in force.
- Most of the flow of the CVR on its 26-km section between the Pando dam and the Monte Lirio tailrace will be diverted by the Project. The Project is currently planning to release in this section a minimum flow corresponding to at least 10 percent of the annual average flow, i.e. 1.17 m³/s downstream of the Pando dam and 1.79 m³/s downstream of the Monte Lirio dam. With the tributaries providing additional flow, it is estimated that the river flow would vary from 10 percent to 41 percent of annual average flow in the section between Pando and Monte Lirio dams, and from 10 percent to 21 percent of annual average flow in the longer section between Monte Lirio dam and tailrace². The impact of such reduction of flow still needs to be thoroughly assessed, using appropriate methodology. It is likely that the reduction of flow will reduce abundance of fish and crustaceans, which constitute the prey base for the neo-tropical river otter.

The Complaints from the Requesters: The Requesters allege that: (a) new data show that the remaining 10 percent ecological flow will reduce depth of the river by 78 percent to 92 percent in the case of Pando and up to 92.2 percent in the case of Monte Lirio; (b) during some months in the year, there will be no hydraulic connectivity between many parts of Chiriqui Viejo River, transforming them into isolated pools, impeding reproduction and migration of species; (c) there will be an imbalance of the river's flow to satisfy ecological, social, and economic needs of those that depend on the river; (d) the Project sponsor, EISA, did not consider the environmental impact of leaving 10 percent of the ecological flow of the river for several kilometers; (e) there are no policies for resource management and there has never been a comprehensive study of the Chiriqui Viejo River to establish its ability to supply water to hydroelectric plants and communities; (f) they were not adequately informed about the Project's impact on the residual flow in the old river bed and its consequences.

- As an example, they mentioned an irrigation project that will not be able to continue to function because a power company would divert the water that had been granted to the irrigation scheme.

² A watercourse that carries water away from a mill or water wheel or turbine.



Figure 1: Example of an existing dam shown by the Requesters to the Panel and demonstrating the difference between full flow up-stream and 10 percent flow down-stream from a dam (Source: Damaris Sanchez, Requester).

- The NGOs argue that the value of 10 percent was approved because it is the law in Spain, where the ecological conditions of the rivers are very different from those of Panama. They want the value of ecological flow to be determined on a case by case basis, for each river, and for each part of it.
- **ANAM's Position:** Following its own regulations and Panama's law, ANAM approved the Pando Monte Lirio EIA with the 10 percent ecological flow. However, in an interview with members of the Panel, they recognized that there is no certainty that 10 percent is a sufficient flow to keep the biota in the rivers. They asked for support to carry out ecological flow studies and cumulative impact studies of dams on the entire Chiriqui Viejo watershed.
- **The Borrower's Position:** According to EISA, in the case of the CVR basin, the future scenario (without the Pando and Monte Lirio project) is not a pristine watershed, but a watershed with several hydroelectric projects that will be installed. It means that if Pando and Monte Lirio are not built, the CVR basin would anyway contain a number of hydroelectric dams. This would need to be considered in the analysis of ecological flow management and solutions proposed.
- **IDB and the 10 percent Ecological Flow Rule:** This 10 percent ecological flow is a governmental regulation and the IDB does not interfere with national regulations. But even before the complaints

by local dwellers, some sectors of the Bank had expressed concerns about the potential impact of this law when applied to Pando and Monte Lirio Hydroelectric Power Project without knowing its consequences. According to IDB environmental specialists, the effects of reducing the ecological flow of the river to 10 percent are still unknown. The project will divert the river and it is likely that the remaining 10 percent ecological flow will significantly reduce the depth of the river. The Project has been intensively debated within Management. There have also been discussions with the Board.

- **Time line of Ecological Flow Discussions Prior to Financial Closure:** Prior to the date of financial closure, the IDB demanded that EISA presented in form and substance satisfactory to the Bank the following documents: (a) final results of the additional study of the effects of reduced flow on the integrity of the aquatic ecosystem in the Project's area of influence, including the population of neo-tropical otter and migratory fish; (b) a preliminary design of a passage system for migratory fish species and neo-tropical river otter expected to sustain viable populations along the CVR section directly impacted by the Project; (c) a preliminary Ecological Flow Management Plan, including a definition of a minimum flow reasonably expected to sustain the ecological integrity of the CVR corridor within the Project's area of influence, including the population of otter and migratory fish, and a strategy for properly managing ecological releases during operation.
- The completion of an ecological flow study and management plan was initially a condition to be met prior to the signing of the loan (financial closure), as stated in the documents presented to the Board for approval (December 2009).
- December 2009: EISA agreed to undertake an ecological flow study to verify that the proposed 10 percent left in the dewatered section will be sufficient to maintain life in this section of the river as condition to closing.
- January 2010: In light of little progress achieved by the Borrower to address this issue, the Bank's Project Management approved the signing of the loan agreement with the provision that the completion of the "minimum ecological flow study and management plan" become a condition prior to the first disbursement of the loan.
- June 2010: The IDB Operations Policy Committee approved the postponement of the required closing of the completion of the ecological flow study and a plan to manage the various cumulative environmental impacts to become conditions prior to the first disbursement of the loan.
- July 2010: ESG mission to Panama to engage Government of Panama to address cumulative impacts, and to agree with client on next steps regarding the completion of the ecological flow study.
- November 2010: Lender's supervision mission found no progress on the ecological flow study. A Request was sent to client asking them to start working immediately.
- December 2010: Client started the additional survey (river cross section, bathymetry, habitat mapping).
- December 2010: An Environmental Assessment Report by an EISA consultant informed the funding partners that EISA completed a 12-month baseline update of the water flow, water quality,

aquatic biota, flora, and fauna in the Project's area of influence prior to construction start. The baseline update was conducted between September 2009 and February 2010 and from March through August 2010.

- However, IDB experts considered the resulting documents as incomplete in terms of providing an understanding of the physical, chemical, and biological characteristics of the CVR since the data collected were inconsistent and difficult to compare. For aquatic biota, ten sampling sites had been established along the CVR and its tributaries in September 2009, but from October 2009 through August 2010 only five sites were monitored and no data were provided for the remaining five sites, neither was there an explanation for removing them. Water flow data were collected at 11 sites. Water quality data were collected only at four sites. On fauna, and more specifically with respect to the river otter (*Lontra longicaudis*), sampling was conducted only at 2 sites. In addition, the methodologies for data collection were not always identical resulting in a high probability for statistical error. Following the monitoring site visit, EISA explained to the Lenders that the original 10 sampling sites were reduced to five due to difficult access and costs, but that the methodology had remained the same.
- May 31, 2011: An ecological flow study was completed, with only eight cross-sections of the river, which appeared to be insufficient. Independent experts hired by the Borrower at the Lenders' request, indicated that the proposed 10 percent minimum flow would not be sufficient to preserve the ecological integrity of the river section directly affected by the Project. Despite this finding, no adjustment to the minimum flow, ecological flow management plan or to the roadmap for developing such plan seemed to have been submitted.
- June 4, 2011: IFC confirmed conditions prior to the first disbursement had been met. The IDB found that the independent expert's opinion did not support the conclusion that conditions had been met and requested EISA to provide a brief roadmap with the key actions to be undertaken in the next months to solve the ecological flow issue (further assessment and development of mitigation/compensation measures).
- June 10, 2011: EISA refused to prepare a roadmap on the ecological flow prior to the first disbursement.
- June 30, 2011: EISA delivered a letter stating their commitment to develop the Final Ecological Flow Management Plan by June 2012, as previously agreed, and in line with the expert's recommendations, to: (i) assess and expand the Ecological Flow Study performed by Hatch; and (ii) provide all required data and analyses to establish a functional Ecological Flow Management Plan.
- Among the conditions established by the IDB, a revised Ecological Flow Study was to be completed by February 15, 2012, a Draft Final Ecological Flow Management Plan by June 30, 2012, and a Final Ecological Flow Management Plan acceptable to the Lenders by August 30, 2012. The IDB accepted EISA commitment in lieu of a waiver request.
- August 2011: Management accepted a written commitment by the Borrower to develop the management plan at a later date in lieu of a waiver request, and proceeded with the first disbursement, which took place in August 2011.

B. CUMULATIVE IMPACTS AND WATERSHED MANAGEMENT

- **The Complaints from the Requesters:** The Requesters allege that along with the ecological flow problem, the lack of a watershed management system that deals with the cumulative impacts on the CVR is one of the two most serious problems of the Project. They fear that the IDB-funded Project together with similar other projects will cause them harm because of: (a) potential cumulative impacts on aquatic ecosystems and adjacent terrestrial habitats related to changes in hydrology and disruption of river continuity; (b) potential cumulative impacts on water use, including ecotourism and rafting activities, due to changes in hydrology and barrier effects of the dams; (c) potential cumulative impact on estuary habitat due to sediment deposits related to the erosion caused by the Project; (d) potential changes in water quality due to sediments and residues from the drilling process; and (e) absence of an understanding of the cumulative impact among those making decisions about the IDB-funded Project.
- **Cumulative Impacts of Investments along the Chiriqui Viejo River:** Many of the concerns raised by various interviewees relate to the way in which the overall watershed is managed, especially integrated and coordinated management and development of water and other natural resources in the area (including coordination by the regulators and between all the private sector CVR hydroelectric developers). The Requesters expressed a desire for significant public participation in overall watershed governance and decision-making.



Figure 2 – Hydroelectric power plants in the Chiriquí Province.

- **Responsibility for Cumulative Impact Analysis:** There are no cumulative impact studies or a watershed management program for the CVR. While assessing cumulative impacts poses its own methodological problems, assigning responsibility for addressing those impacts may be equally difficult. This is particularly true in cases where the IDB is lending to only one of several similar projects whereby all have or will contribute to the overall impact of the totality of investments. One would expect a government agency to have taken responsibility for assessing and addressing the overall, cumulative impacts. However, this seldom happens and the burden too often falls on individual projects which often do not have the capacity to mitigate impacts beyond the area of influence of their specific projects.
- **Position and Actions of the IDB:** In the context of a loan from the IDB to support the Panamanian Government in the Development of Renewable Power Generation Initiatives, the IDB commissioned a preliminary study to develop a framework to assess the potential cumulative

impact associated with the hydroelectric developments in the CVR basin. The study, dated November 2009, was shared with ANAM in January 2010, received no feedback, and was posted on the IDB's website in May 2010.

- The main findings and recommendations of this study on the CVR are: (a) the environmental conditions for the development and operation of the hydropower projects (e.g. ecological flow and fish passes) need to be reviewed and adjusted in order to preserve the ecological integrity and continuity of the river; (b) effectiveness of the mitigation measures implemented by one hydropower project to preserve the ecological integrity of the river will ultimately depend on the implementation of similar mitigation measures by all the hydropower projects developed on the river, which requires a strong coordination by the public regulator and between private sector developers; (c) hydropower projects will result in disruptions, due to the barrier effect of upstream dams, to the breeding of migratory fish which pass part of their life cycle in the river and part in the estuary. The magnitude of these primary impacts is yet to be determined. The likelihood and extent of potential secondary effects, such as a reduction in the ecologic and economic productivity of the Gulf of Chiriquí, are not yet understood; (d) the establishment of a CVR Basin Hydroelectric Power Generators Committee (Comite de Desarrolladores Hidroelectricos del Rio Chiriqui Viejo) for project sponsors in the river. The Basin Management and Regulation Committee should be comprised of all stakeholders (public authorities, private sector developers, local communities, civil society organizations). The IDB and the sponsor should effectively engage and support ANAM with technical assistance to share the results of the cumulative impact assessment, and to require necessary adjustments from the license holders and upcoming licensees; (e) the Government should use the Pando-Monte Lirio Hydroelectric Power Project as a benchmark of good environmental practice for hydropower projects in Panama; (f) before deciding on new projects and issuing new permits, ANAM should obtain more robust hydrobiology and socioeconomic data to adequately assess the magnitude and reversibility of the cumulative impacts and risks and design corresponding mitigation measures.
- There is, however, a high residual risk that the cumulative impacts of extensive hydropower projects on the Chiriquí Viejo River may not be adequately mitigated, despite the IDB and the developer's efforts due to the absence of an overall basic management framework. This is considered to be a significant third party risk for the Project.
- The development of a new Watershed Management Plan will reportedly be financed by the IDB and at the time of the field work, the plan was scheduled to initiate in June 2012.
- **Position of the Lender Consortium:** The Panel learned that by November 2011, the lenders were continuing to assess how to promote the establishment of an integrated watershed management strategy within the CVR basin and the coordinated implementation of measures to mitigate cumulative impacts. The overall objective of the proposed initiative is the organization and implementation of a series of events (fora and workshops) with CVR hydropower project sponsors, ANAM, and other stakeholders to jointly coordinate the implementation of measures to mitigate cumulative impacts and sustainably manage the CVR watershed.
- **EISA's Position:** EISA requested a refocusing of the requirement for a "Chiriqui River Management Plan" included as a mitigation measure in the original EMP of the EIA. The interest of EISA was to request that the proposed "Chiriqui River Management Plan" apply only to the

portion of the Chiriqui River within the Project area of influence rather than to the entire CVR basin. The Sponsor claims that the elaboration of a global watershed management is outside the direct purview of EISA because it involves the entire-basin, not just the Pando-Monte Lirio area.

- EISA has received confirmation from ANAM regarding a request for the refocusing of the EIA's requirement to establish and implement a "Chiriqui River Management Plan." ANAM has indicated that the creation and implementation of such a Watershed Management Plan is the responsibility of ANAM and is outside the responsibility of any individual project. EISA therefore plans to request an addendum to the EIA's EMP stating that EISA will respond to and comply with the requirements of the Watershed Management Plan once it is established by ANAM.
- **ANAM's Position:** ANAM recognized that there is no management plan for Basin 102 (Chiriqui Viejo River watershed) and is working on it. The development of a management plan costs from 300,000 to 400,000 dollars.
- **Position of Municipalities in the Area:** On June 9, 2010, the Renacimiento City Council banned by decree the further construction of dams in the rivers Candela, Caña Blanca, Caisán, Cotito, Pavón, Sereno, Guisado, and Chevón. The purpose of the rule is to ensure food security because the rivers are viewed essential for the region's agricultural production, and also a tourist attraction. The measure does not apply to projects already approved and under construction.

C. THREAT TO WILDLIFE: FISH AND RIVER OTTER

- **The Complaints from the Requesters:** The Requesters allege that the dams will prevent fish from going up the river to complete their cycle of life and serve as food for otters that live upstream. Field samples have recorded the presence of several species that will require customized mitigation or management strategies; two species of migratory fish and the neo-tropical river otter.
- **Facts about Migratory Fish:** The migratory fish species include the Chompipe (*Brachyrhaphis terrabensis*) and the mountain mullet "Lisa" (*Agnostomus monticola*), which are known to migrate along the river as part of their life cycles. The mountain mullets live their adult life in freshwater. The young migrate down to estuarine environment in the Pacific Ocean. They usually spawn during the rainy season, and are oviparous, producing pelagic non adhesive eggs. The Lisa as well as the other migratory fish species will require (a) the construction of migratory pass-ways that would allow adults to reach their reproductive and spawning grounds upstream and juveniles to swim downstream to the estuary, and (b) a monitoring program to assure the effectiveness of such pass-ways.
- The two dams that will be erected downstream of the Monte-Lirio site will impede any potential fish passage upstream. EISA has proposed the installation of pilot fish pass-ways based on similar structures used in other hydroelectric projects in Panama. They should be tested during the three years of construction.
- Reduced flow volumes can also potentially impact benthic organisms, affecting the foraging capabilities of the mullet and other fish species. Benthic organisms adapted to higher velocity streams may be partially lost due to lack of preferred habitat and replaced with organisms more

tolerant of slower flowing conditions. The reduced top width and depth of the channel can also cause warming of water, affecting the composition and presence of particular benthic species. Moreover, decreased depth and top width throughout the river will increase fish density, which increases competition between fish species, and increases predation on benthic macroinvertebrates.

- **River Otter:** The otter is classified on the 2009 IUCN Red List as “data deficient” and suspected as threatened, but too little is known of the species.
- Evidence of the presence of neotropical river otters was recorded in all monitoring sites. Mitigation measures are focused on the principle of no net loss to this species, and on the declaration of the project area as an “otter sanctuary.” Additionally, EISA promised to use best efforts to coordinate with the Smithsonian Institution and other scientific and environmental organizations, to further research the range of this species in Panama and to help design a conservation strategy, which would include a community education / awareness component.
- The barrier effect of the dams if left unmitigated, may threaten the species’ survival in the Project’s area of influence. Young male neotropical otters need to disperse throughout the river system (upstream, downstream, and tributaries) in order to establish their territories. The dams and associated project works may block this dispersal, effectively fragmenting the otter habitat in the Project’s area of influence. Habitat fragmentation is considered to be one of the main threats to the neo-tropical otter (along with water pollution and illegal hunting). These impacts can be mitigated through implementation of passage systems (e.g. canals, terrestrial habitat corridors) between the upstream and downstream sections of each dam.

D. DAMAGE TO ROADWAYS

- **The Complaints from the Requesters:** The Requesters allege that the construction traffic is destroying the newly paved roads in the region. They expressed concern about the impact on local access roads from construction traffic related to the Project. Some local residents perceive that promises made regarding local road repairs and improvements related to other projects in the area were not fulfilled. Thus, there is a desire for specific commitments and guarantees for any road damage related to Pando-Monte Lirio. In other projects under construction in the province, structures like bridges have been damaged by heavy equipment exceeding the load capacity.



Figure 3.a – Roads Affected by Heavy Equipment



Figure 3.b – Roads Affected by Heavy Equipment

- **EISA's Reaction:** EISA informed the Panel that road maintenance and repairs are the responsibility of the contractors and are handled as stated in their contract with EISA.

- **Panel's Observations:** The Panel identified brand new paved roads in poor state. As a result of a protest and road blockade carried out by residents of Volcan and Caizan on October 31, and November 7, 2011, EISA has agreed to participate in a road improvement and maintenance initiative coordinated by the Ministry of Public Works. The initiative will be led by the Ministry of Public Works with the support of the hydropower project developers which utilize the road in question (CILSA, Hidrocaizan, and EISA).

E. EROSION, SEDIMENTATION, AND RESULTING IMPACTS

- **The Complaints from the Requesters:** The Requesters allege the following: (a) during the construction phase, the project causes high levels of sedimentation, affecting the water quality; (b) the river could even disappear entirely due to sedimentation; (c) sedimentation affects the aquatic life of the river in the mangrove swamps in the gulf of Chiriquí; (d) projects are located above the water intake which serves water to more than 50,000 people, contaminating the water taken by the Paso Canoa water-treatment plant for the area of Baru.
- **Potential Impact on Mangroves at the Mouth of the River:** The Panel visited the area at the mouth of CVR and found an impressive river, as seen in the picture. This is to be expected, because in its last part there are no hydro-electric installations and most water has been returned into the river. The mangroves show no visible sign of being affected by the hydropower projects.

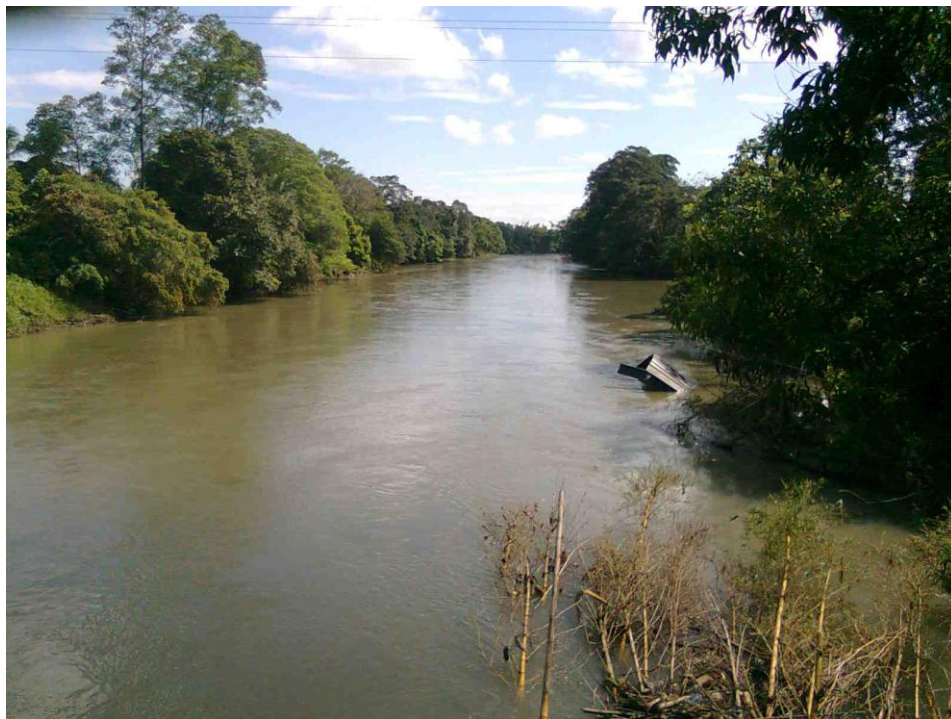


Figure 4 - The Chiriqui Viejo River near its mouth in the Chiriqui Gulf

- **Potential Impact on the Paso Canoa Water Treatment Plant:** The Panel visited the water treatment plant of Paso Canoa. According to the station operator, the river water was crystal clear when he began working at the plant 10 years ago. Today, the water is turbid and the equipment needs to be replaced periodically due to wear by abrasion. A partial cause is that the water intake is very close to the margin of the river, bringing many types of sediment with the water. To resolve the problem, the water intake will be transferred to the middle of the river.
- He reported that the quantity of water fluctuates with the season, but he did not associate any fluctuations with the implementation of hydropower plants. As to the quality, he reported that in recent years there has been a need to use more chemicals than before. He also reported that the treatment plant had incidents and was forced to shut down when by accident or carelessness construction, projects upstream spilled concrete into the water preventing the operation of the treatment plant.
- **Sedimentation Control by Contractors:** During 2011, ANAM issued a work stoppage at the Monte Lirio dam site on one occasion due to insufficient management of erosion and sedimentation in the CVR and tributaries. According to ANAM, employees had not been aware of the need for environmental care, neither were they motivated to adhere to safe practices. EISA improved management measures and was subsequently granted permission to continue with its construction works.
- EISA's internal supervision process provides ongoing supervision and recommendations to increase the Project's compliance with the EMP. Recommendations are made by the Project's Safety and Security Advisor, the Environmental Advisor, and EISA's supervision monitoring protocol.



Figure 5 – Erosion control during construction of PML

- EISA issued a written warning to one of its contractors on October 10, 2011 describing areas of non-compliance and requesting immediate implementation of corrective actions. A Certificate of Non-Compliance was issued to another contractor stating that water quality discharged from tunnel construction sites continues to be non-compliant with water quality standards established by Reglamento Tecnico DGNTI-COPANIT 35-2000, despite implementation of additional physical and chemical filtration tanks at both the Pando and Monte Lirio sites. EISA informed the Panel that corrective measures were being planned, including: (a) re-initiation of the erosion management program such as including re-planting grasses along access roads and the use of geotextiles on embankments; (b) construction of sediment filtration pools in tunnel work areas and installation of an oil and grease extractor unit in the first filtration pool; (c) construction of protective walls and lining around hazardous materials storage areas; (d) improved and increased erosion control measures, control of pluvial drainage and river bank protection at all project areas; (e) verification of compliance with Reglamento Tecnico DGNTI-COPANIT 35-2000) through biological and bacteriological monitoring and testing at laboratories authorized by ANAM; (f) re-vegetation techniques for soil/material deposit areas; and (g) lining floors of storage areas and workshops with impermeable material to avoid leaching of hazardous substances into the soil.
- It should be noted that EISA's EHS Protocol has been instrumental in identifying, monitoring and raising concerns regarding continued instances of non-compliance with environmental performance standards. Warning letters sent by EISA were signed by both Itza Perez, Director of the Department of Sustainability and Human Resources and Kevin Taylor, EISA's General Manager, indicating that the implementation of the EHS Protocol is supported by the highest level of EISA's operating administration. However, it remains to be seen whether the enforcement procedures implemented by EISA will be sufficient to ensure compliance by Engineering, procurement and Construction (EPC) contractors.

F. SAFETY ISSUES DUE TO VOLCANO ACTIVITY AND EARTHQUAKES AND THE RISK OF FLOODING

- **The Complaints from Requesters:** The Request points to the following: (a) presence of the Baru Volcano and the possibility of earthquakes and other natural phenomena present structural risks to the dams and associated infrastructure; (b) possibility of flooding of communities downstream; (c) this is an area of high rainfall and steep slopes; (d) the communities are not aware of any project plans for the prevention or reduction of risks and threats from natural disasters; and (e) there is no guarantee or security for the communities that these issues have been addressed in a comprehensive manner given the number of planned and already implemented projects.
- **Earthquakes:** Volcan Baru is a potentially active volcano in western Panama, about 35 km east of the Costa Rican border. The volcano has had four eruptive episodes during the past 1,600 years, including its most recent eruption about 400–500 years ago. Several other eruptions occurred in the prior 10,000 years. Volcan Baru can be expected to erupt again.
- The river basin is located upon ash sediments from previous eruptions in Panama's most seismically active zone. Earthquakes, like the one of 1991, aside from being felt with much intensity, caused large landslides in the mountainous part of the river basin.

- It is estimated that in case of a dam failure at Pando, the reservoir volume (900,000 m³) would be released within 10 minutes. However, this volume is relatively small. At the Monte Lirio plant outlet, the maximum increased elevation of the water level due to dam failure at Pando would be in the order of three meters. With a domino effect failure of the Monte Lirio dam, the total stored volume released is assumed to be 1,400,000 m³, resulting in an increased elevation at the Monte Lirio plant outlet of about four meters.
- The dams, each with a central spillway, were designed for passing a 10,000-year-return period flood without overtopping and were specified to be designed for the Maximum Credible Earthquake, equivalent to the 1/2500 year ground motion. Other safety risks for communities include changes in river flows downstream of each dam in specific operational circumstances (for instance: commencement of spilling, sediments flushing). These risks will be addressed in the Emergency Preparedness and Response Plan yet to be developed.
- **Floods:** The higher part of the basin is influenced by natural phenomena like cold fronts, storms that could produce sudden floods like the one registered in November 2008. Recently, one of the dams opened its gates during a flood which brought down an iron bridge on the Pan American highway.



Figure 6 – Bridge collapsed on the Pan-American Highway due to floods (Foto Telemetro.com)

- In another nearby river, a dam has broken, isolating the population. The great fear of the population in the region is that in case of floods, the companies will open the floodgates in order not to put their infrastructures at risk.
- **Warning Systems:** The state National System of Civil Defense has identified the zones of flooding. Risk management plans developed by Civil Defense are in existence both for the high and lower river basins where even before the construction of hydroelectric dams there had been numerous landslides and floods.

- EISA has established a draft Early Warning System (Plan de Alerta Temprana Ante Emergencias en las Comunidades Colindantes de los Proyectos Hidroelectricos Pando y Monte Lirio, October 2011) applicable to both project sites and the adjacent communities. The Early Warning System includes monitoring and surveillance of the risks to nearby communities. A clear communication protocol is to be established with the Caisán meteorological station. A detailed action plan is to be established to organize the response of local communities, government, EISA, et al. in the event of an emergency.
- EISA has also initiated a series of activities to increase communication and collaboration between local communities, government authorities and the Company with respect to emergency action planning. Information gathering during an internal risk mapping and management activity was carried out between September 14 and 16, 2011.

G. LACK OF CONSULTATION

- **The Complaints from the Requesters:** The Request alleges the following: (a) an unsatisfactory consultation process with affected communities; (b) the environmental impact assessment was not sufficiently participative or geographically inclusive; (c) environmental impact studies have been approved without the participation of communities; (d) the Pando part of the Project was approved with the participation of 10 persons in the public forum, half of them being civil servants; (e) the community was not aware of these projects until work began with land acquisition, river studies, and other steps; (f) NGOs do not receive the environmental inspection reports issued by ANAM, URS and the Environmental Resources Management (ERM).
- **Facts on Consultation:** The complainants state that the Pando-Monte Lirio project community engagement and consultation efforts conducted to date have been limited, inadequate, and largely symbolic. The government and EISA dispute that claim and EISA is confident that they have conducted more public informational fora and community outreach than required and more than any other hydroelectric project in Panama (with the possible exception of Changuinola).
- CAO interviewed approximately 20 local community members living near the CVR and project area, collecting a range of opinions and knowledge about the Project, including strong support as well as strong opposition. Residents were generally less informed about the project than the complainants, and shared some (but not all) of the same concerns. Those who were less informed explained that either they learned about public meetings (or even the project itself) at the last minute (e.g. when they observed surveyors already making preparations for construction), or the meetings were held too far away making it difficult for them to attend, or they were not informed at all. These concerns were largely shared by both supporters and opponents of the projects.
- Regarding the public hearings, no announcements had appeared in local newspapers. The announcements were published in small print in the newspapers in Panama City, along with other announcements and advertising. After having been informed about the public hearing, citizens had only three days to read the EIA. Apparently there exists a new rule that such announcements must from now on be published at the “Corregedoria” (similar to an office of the Justice of the Peace) in the area where projects are being proposed.

H. IMPACT ON PROTECTED AREAS

- **The Complaints from the Requesters:** The Requesters allege that the Project will have a damaging impact on protected areas in the region.
- **Facts about the Protected Areas in the Region:** The Project's area of influence is not located within or close to a protected area. There are two national parks located more than 10 km upstream of the Pando dam: the Parque Internacional La Amistad and the Parque Nacional Volcan Barú. They are both outside of the Project's direct area of influence. There are also nationally protected wetlands, Lagunas de Volcan, located about 5 km south from the Pando dam. These wetlands are found at an elevation 80 m higher than the Pando reservoir, and they do not connect to the CVR or its tributaries. The Project is not expected to directly impact those wetlands.
- As required by the EIA, the Sponsors promised to develop a reforestation program and a management plan for the upper CVR basin that will mitigate any potential impact of the Project on the upper CVR watershed.
- Furthermore, during the development process, the company has found that within the area of influence of Pando there is a forested area that - even though is a secondary forest - seems to host quite a wide diversity of birds and mammals. Due to its difficult access and steep cliffs, this area has managed to remain a fairly undisturbed environment. The area will not be flooded by the reservoir, and therefore the company had originally no intentions of acquiring it. However, EISA is currently considering purchasing this plot of land, to protect it and include it as part of the Tourist Development Plan as a potential ecotourism site.

I. IMPACTS ON AGRICULTURAL PRODUCTION

- **The Complaints from the Requesters:** The Requesters allege the following: (a) negative impact on agricultural production; (b) Basin 102 is ranked as the country's dairy area, supplies 80 percent of vegetables consumed in all the country and more than 80 percent of the grains (beans) in the area Caizan (the location of the Monte Lirio Project); (c) the construction of the hydropower dams has reduced the supply of agricultural labor because it pays more, i.e. \$20 per day compared with \$10 per day in agriculture. Some producers have abandoned their farms to work for the construction companies of the hydroelectric projects; (d) in small farms, the owners have a hard time finding laborers.
- **Panel Observations:** The local population seems to currently benefit economically from the construction of hydroelectric plants. Limited resources prevented the Panel from analyzing in greater detail the potential impact of the construction of all 19 dams.

J. IMPACT ON INDIGENOUS COMMUNITIES

- **The Complaints from the Requesters:** The Requesters allege that the Project will have an impact on indigenous communities.

- **Panel's Review:** All available information, including the EIA documentation, third party reports, and site visit, confirm that there are no permanent indigenous settlements such as Comarcas (indigenous territory officially recognized, physically demarcated and legally regulated by the Panamanian Government) located within the direct area of influence of the Project.
- The impact on indigenous communities is indirect. Indigenous groups (ethnic Ngobe Bugle) depend on agricultural activities in the Province, where production of coffee beans generates up to 30,000 jobs for this population (at harvest) each year. And more than 10,000 permanent jobs for unskilled laborers. Indians move from their home region (about 150 km away) to these areas where they remain for up to six months and then return to their communities.
- Small farmers who customarily employ indigenous manpower for farming are going to work on the projects and have abandoned their crops. This is therefore, a case of indirect economic impact on indigenous populations. According to EISA, special procedures are being put in place during the Project's construction and operational phase in order to ensure that indigenous migrant workers are not discriminated in the recruitment process, and that employment options culturally and socially acceptable to them are developed. EISA informed the Panel that no conflicts of any kind have been reported by the Company, contractors and/or the few indigenous peoples briefly interviewed by ERM.

K. RAFTING

- **The Complaints from the Requesters:** The Requesters allege the following: The 10 percent flow law will affect tourism and rafting in CVR.
- **Facts about Rafting in Chiriquí Viejo River:** The CVR is considered to be one of the best rivers in the world in the arena of whitewater rafting, and there are three tour operators in Boquete that propose rafting activities on the CVR. Most of the trips take place in one section of the river 12 km downstream of Monte Lirio tailrace, between the Bajo de Mina and Burica proposed dams. Due to the on-going construction of Bajo de Mina hydropower project, the original 28-km rafting section has been reduced to an 18-km section between Baitun and Paso Canoas.
- **EISA's Position on Rafting:** The Cumulative Impacts Assessment and the Proposed Tourism Development Plan suggest that rafting activities on the CVR, outside the project area of influence, will be negatively impacted and likely discontinued due to the cumulative impacts associated with use of the river for several hydropower projects. While these impacts are not uniquely associated with the Project, the Sponsor has stated his willingness to participate in regional mitigation, management and development initiatives related to tourism, as evidenced by the Proposed Tourism Development Plan. The Sponsor indicated that the elements of the Proposed Tourism Development Plan would be used to establish a final plan prior to June 30, 2012.
- **Panel's Remarks:** During the Panel's visit, no organized recreational or touristic uses of the CVR in the Project area of direct influence were identified. The Project itself is not expected to cause significant direct impacts on rafting activities since most of these activities take place downstream of the Project's area of influence, between the proposed dams for Bajo de Mina and Burica.

L. IMPACTS ON WATER QUALITY AND WATER QUANTITY

- **The Complaints from the Requesters:** The Requesters allege the following: (a) over-exploitation of the river's water resources; (b) limited community access to water; (c) population growth and future demand for water are not considered; (d) there is a risk of future conflicts between the companies and other water users. The companies will defend their water concessions to the detriment of the needs of other uses, (e.g rural water supply, agro-agriculture, agro-industry).
- **Facts about Water Quality Issues:** As per the Project's Social Action Plan, the Sponsor is required to fully identify and assess water uses along the CVR in the direct area of influence, in riverside farms located between the Monte Lirio reservoir and the power station, and in areas potentially affected by associated Project facilities. Appropriate mitigation and management measures, including potential improvements of existing rural water systems, are considered part of the Sponsor's responsibility.
- An Initial Water Users Study (Estudio de Usuarios de Agua) was conducted by Fast Ecological Services in 2003 as part of the original Category III Environment Impact Assessment. The study identified 31 agricultural or cattle producers who, at that time, utilized water from the CVR within the Project's area of direct influence.
- An Expanded and Updated Water and land Users Study (Ampliación y Verificación del Estudio de Usuarios de Agua y Tierra) was conducted by Stratego Consultores in October, 2009 to update the initial water users study conducted in 2003. The inventory identified 88 water and land users within the Project's direct area of influence. Of the 88 affected parties, 45 were identified as water users, 30 were identified as land users and 13 were identified as land and water users. Interviews with 63 individuals (72 percent of all affected land and water users) were carried out.
- The water use studies highlighted the possibility of improving the Caisan rural water aqueduct to compensate for water reduction downstream of the Monte Lirio dam. Community needs assessments in the affected communities (Monte Lirio, Caizan, Santa Clara – Rio Sereno and Volcan) also identified the need for improved water distribution, which were included in the Social Investment Plan under EISA's Corporate Social Responsibility framework.
- Sub-committees (Comité de Vecinos Colindantes) within the CDCs have been formed to jointly develop and propose solutions to the potential impacts on water availability and access, particularly during summer months. As a result of this process, alternative water sources have been identified and projects for improving rural water supply have been designed and implemented in Santa Clara, Bajo Cerron, and Alto Cerron within the framework of the EISA-Community Social Agreement signed in June 2010. Improvement of the Plaza Caisan rural aqueduct is currently underway.
- A Water Users Study was completed on behalf of EISA. A total of 71 properties owned by 58 different property owners were identified in areas adjacent to the Chiriquí River in the Project's area of influence.
- The report estimates that the total daily use of water for cattle is 1.03 liters/second, which, if achieved, would be within the proposed ecological flow during the Project's construction and operational phase. Affected water users suggested the following mitigation measures to ensure their

continued access to water sources: (i) guarantee access to water; (ii) provide piped water; (iii) install wells; and (iv) increase the capacity of existing community water mains.

M. POLLUTION CONTROL

- **The Complaints from the Requesters:** The Requesters allege that they will suffer the following impacts: (a) air, dust emissions, vibration and noise from earth movements, and the operation of vehicles and heavy equipment, (b) hazardous waste generation, (c) domestic wastewater and solid waste from construction camps, and (d) increase erosion and sediment runoff from access roads.
- **Facts about Pollution and its Control:** Environmental pollution and control measures associated with the Project are most relevant during the construction phase. According to the supervision reports of November 2011, the contractors' compliance with EISA's EHS Protocol continues to be inadequate in the areas of spilling, waste disposal, and managing rock crushing and the cement plants. There also exist reports of contaminated effluents from tunnel construction sites.
- The most complicated aspect of pollution management and control is associated with the disposal and treatment of the solid and liquid waste from the excavation of the tunnels. An estimate of 212,372 m³ of sediments will be excavated, and the amount of liquid waste is uncertain, as it depends on geological and soil characteristics and on how much water is found in the excavation process.
- Gas/oil leaks were noted in several instances. The monitoring process pointed to apparent leakage from heavy machinery, lack of impermeable surfaces for hydrocarbon storage areas, and the presence of gas/oil in sedimentation and filtration pools.
- In November 2011 EISA has established and is now implementing its Pollution Prevention and Abatement Plans and an Environmental, Social, Health and Safety Protocol to monitor and enforce compliance with EISA's EHS procedures. According to the supervision reports, the following areas continue to require immediate corrective action: (i) sediment filtration and management, particularly in rock crushing and cement plants; (ii) safety and caution signage in hazardous materials storage areas; (iii) hazardous substance inventories and controls; (iv) appropriate management and disposal of hazardous waste; and (v) discharge of contaminated water from tunnel construction sites.
- As a result of instances of non-compliance in the contractors' activities, EISA has initiated a series of enforcement procedures established by the EHS Protocol. First, daily and monthly monitoring reports have been shared with EPC contractors to alert them of areas on non-compliance and facilitate on-going improvements. Second, EISA has issued written warnings to the contractors and requested immediate corrective action towards ensuring full compliance with the EHS Protocol.
- At the Panel's meeting with NGOs, there were additional complaints against the Project: (a) during tunnel construction, there is a hose that leads effluents straight into the river. The requesters maintain that when ANAM arrives for an inspection, the construction company quickly changes procedures and leads the water to a sedimentation basin, (b) many tunnels have groundwater that is removed with crushed material, and (c) The contractors use an accelerator to speed up the

hardening of cement. A lot of it gets into the river and is causing weight loss of cattle drinking river water. The Panel was not in a position to verify these allegations and recommended to the Requesters to address them to the Sponsor.

N. INVOLUNTARY RESETTLEMENT

- **The Complaints from the Requesters:** The Requesters allege the following: (a) companies are acquiring land rights along the river. For some farmers, this means that they will be left without sufficient access to water sources and this will limit their future agricultural activities; (b) when landlords refuse to negotiate the sale of land, compulsory acquisition is invoked by the authorities.
- **Facts About this Issue:** The Borrower had the obligation to secure title (either through purchase of land or of rights-of-way) prior to first disbursement. The Company has acquired all properties required for the Pando and Monte Lirio sites. The Project required the acquisition of a total of 67.2 hectares of land, and the lease and/or right of way of approximately an additional 96.6 hectares for the transmission line, roads, and other ancillary facilities. All the land acquisition processes seem to have been carried out smoothly. Although the Sponsors could have resorted to expropriation, they sought to achieve negotiated settlements based on prevailing land prices. Two properties needed for the Pando dam and reservoir site were negotiated according to the land acquisition procedures established by the National Public Service Regulator (Autoridad Nacional de los Servicios Públicos - ASEP). For this process, ASEP established the appropriate transaction value and allowed the company to acquire the land according to established rules. Landowners have reportedly been compensated above the market value for the acquired property.
- The price of the land increased from US\$5,000/hectare to up to US\$20,000/ha, which means that with the revenue from the land sale, land owners have a possibility to buy a larger parcel outside the Project region.
- To obtain the right of way for the transmission line, negotiations took place with a total of 44 landowners. Either verbal or written authorization was granted. No issues are expected, and not a single property will be impacted in its totality by the construction of the dams or the transmission lines, and thus, the project is not expected to economically displace any peasant or seasonal crop workers. No physical displacement or relocation of homes or dwellings or any construction is expected.

O. IMPACT ON SOCIAL RELATIONS IN THE AREA

- **The Complaints of the Requesters:** The Request alleges the following: (a) the projects have created division in the communities; (b) they are causing a subtle transformation of the customs and lifestyle of the traditionally agricultural communities; (c) local governments feel forced to give their approval for the construction of projects. The mechanisms used to convince local authorities, municipalities and communities to approve projects are not transparent; (d) companies often provide “help” to communities which they not always need instead of insuring integrated development and participatory management of water resources. There is a lack of analysis of long-term project impact on the lives of the population.

- **Facts about Social Relations:** The Renacimiento district witnessed an economic boom in the area since the construction of large hydropower projects started. Local residents realize that the job they have today is not forever and take advantage of the boom, building better homes, saving, and investing in their farms. A mayor in the Renacimiento contacted by the Panel stressed that EISA is actually committed to social work. The company has apparently disbursed \$90,000 to community committees in the districts of Monte Lirio, Santa Clara and Cais.
- Local stakeholders make a clear distinction between the social and environmental performance of EISA as opposed to the sponsors of other hydroelectric projects in the CVR watershed. They confirm that EISA is the first hydroelectric developer to carry out any form of social investment.

P. EISA'S LACK OF ENVIRONMENTAL PERSONNEL

- **The Complaints from the Requesters:** The Requesters allege that: (a) EISA utilizes a person in charge of human resources to work also on environmental issues; (b) with some exceptions (e.g., Energy Savings Plan, Fauna Rescue Plan), many of the plans and procedures remain at a general level (i.e., are still EIA ToR's rather than fully developed plans).
- **Panel Observations:** EISA is still in the process of development of its organizational structure. The Division of Sustainable Development and Human Resources is responsible for managing EHS and human resources issues, and reports directly to EISA's General Manager. This Division is in charge of developing all the EHS policies and procedures, assure training and appropriate implementation by EPC and other sub-contractors, and execute corrective measure and sanctions in case of non-compliance.
- During discussions with EISA in Panama City, the Panel met with Eng. Itza Perez Polo, Manager of Sustainable Development and Human Resources. She helped the Panel to get the technical information needed to perform the Panel's Review.
- The Company was required to prepare an EMP in compliance with the Environmental License, prior to the start of the construction phase. EISA has developed an Environmental, Social, Health & Safety Compliance Protocol (Protocolo de Cumplimiento de Normas y Estándares Ambientales, de Salud, Seguridad y Social), approved by EISA's management on May 17, 2011. It was rolled-out for implementation by EISA and the contractors HCH and SELI as of June 1, 2011.
- Consulting companies (ERM, URS) were contracted to perform social and environmental inspection and supervision. Daily monitoring and monthly reports from EISA, HCH, and SELI are being completed. As a result of ongoing internal monitoring EISA has identified several gaps in the performance of both HCH and SELI and has begun to enforce corrective actions by issuing written warnings, Certificates of Non-Compliance, and threats of fines to contractors responsible for any non-compliance.

**ANNEX B: MANAGEMENT’S RESPONSE TO THE COMPLIANCE REVIEW PANEL’S
DRAFT REPORT**

Inter-American Development Bank

**MANAGEMENT RESPONSE TO THE
INDEPENDENT CONSULTATION AND INVESTIGATION MECHANISM DRAFT
COMPLIANCE REPORT DATED FEBRUARY 29, 2012**

PANAMA

PN-MICI001-2010, Case “Pando-Monte Lirio Hydroelectric Power”

Loan 2266/OC-PN

May 21, 2012

Pursuant to paragraph 68 of the Policy Establishing the Independent consultation and Investigation Mechanism, attached for consideration is Management’s Response to the findings set out in the Compliance Review Phase Draft Report, Reference PN-MICI001-2010, Case “Pando-Monte Lirio Hydroelectric Power” dated March 21, 2012 (Pando-Monte Lirio Hydroelectric Energy Project, Loan 2266/OC-PN).

**MANAGEMENT RESPONSE TO THE
INDEPENDENT CONSULTATION AND INVESTIGATION MECHANISM DRAFT
COMPLIANCE REPORT DATED FEBRUARY 29, 2012
(LOAN 2266/OC-PN)**

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I. Introduction

1. Management acknowledges the value and importance of listening to and addressing the concerns of individuals or community groups who could potentially be affected by projects financed by the IDB. One of the main objectives of the IDB's policies is precisely to protect local communities from potential adverse impacts. Compliance with Bank's policies is key to securing the quality and developmental effectiveness of the Bank's operations. In this sense, Management fully supports consultation and investigation mechanisms that secure accountability in the design and execution of the IDB's operations.
2. Management also recognizes the importance the Bank grants to civil society as a key partner in the process of development. Dialogue with civil society, and its active participation, is essential for both, project design and execution. Being receptive and responsive to claims from civil society is key to improving the positive impact of the IDB's operations.

II. Background: ICIM's Involvement

3. The proposal for Loan 2266/OC-PN, Project PN-L1054, The Pando-Monte Lirio Hydroelectric Energy Project, was approved by the IDB's Board on December 9, 2009 (Resolution DE-214/09). The amount of the IDB loan is US\$ 40,000,000, as part of a consortium of six banks including the International Finance Corporation (IFC) and others totaling US\$183,000,000.
4. Soon after the Independent Consultation and Investigation Mechanism (ICIM) was approved by the Bank's Board of Executive Directors in February 2010, the ICIM and the Compliance Advisor/Ombudsman (CAO) of the IFC received a complaint about the Pando-Monte Lirio Hydroelectric Energy Project ("the Project") from a number of organizations of farmers, environmentalists, producers, religious and social welfare groups residing in the Province of Chiriquí, in Panama.
5. The ICIM immediately informed the IDB's Management about the complaint received. During the transition period establishing the IDB's new mechanism, the ICIM was able to accept but not process cases. The complainants were advised to contact the IDB Management as the first step under the ICIM.
6. Management engaged with the requesters and the Request was declared eligible for the Consultation Phase by the ICIM's Ombudsperson on October 8, 2010.
7. In the Consultation Phase, the Parties did not reach an agreement. On March 29, 2011, Alianza Ambiental Pro Desarrollo Integral Unidos de Panama-AAPRODIUPA, in representation of now 19 associated organizations, communicated to the CAO Ombudsman of the IFC and to the ICIM's Ombudsperson that they wish to pursue their case through a Compliance Review.
8. On October 17, 2011, Werner Kiene, Chair of the Compliance Review Panel, made a recommendation to conduct a Compliance Review of Loan PN-L1054/2266/OC-PN. It was approved by the Board on November 7, 2011.

9. The CAO Compliance of the IFC finalized an appraisal report during the compliance review phase dated February 8, 2012, concluding that this case does not merit a compliance audit and closed the case. The report states that “(...) IFC made a judgment call that the information available in November 2009, including the preliminary cumulative impact assessment, the draft EIA for the transmission lines, and the studies on aquatic baseline data and archeological sites, gave them confidence that the environmental and social impacts of the Project, as well as its contribution to potentially cumulative impacts on the CVR basin, were manageable and defensible given the IFC’s policy provisions.”

III. Management’s Comments

10. Management recognizes that there were significant difficulties in achieving the expected sequencing of environmental requirements related to the ecological flow study and management plan. Nevertheless, the Bank decided to continue constructive engagement with the client in order to ensure these issues would be resolved. Following is an explanation (see III, III.1., III.2.) of the significant efforts made to work through these issues, over a period of time and as part of a complex process.

11. During the time between the signing of the transaction and first disbursement in particular, Management’s decisions were based on weighing the ecological benefits of the IDB’s continuing involvement versus the costs associated with the IDB potentially abandoning the Project and those who relied on the Bank and its policies. Consideration was given to the view that continuing the IDB’s involvement in the transaction would help improve the ecological flow study that had been prepared prior to first disbursement which was deemed by the IDB alone among the lenders to be insufficient and ensure that an adequate Environmental Flow Management Plan (EFMP) would be developed and used to guide the Borrower to ultimately meet the mitigation measures required by the Directive B.9 of OP-703.

12. Currently, key issues are being resolved in a favorable manner. In particular, a preliminary revised ecological flow study was delivered in December 2011 and finalized in March 2012, and the first draft of the EFMP is to be delivered in June 2012, confirming that technically and financially feasible solutions exist and are achievable.

13. With respect to the negative environmental and social impacts which have occurred during the Project’s construction, it is important to note that in projects with private sector counterparties the contractual arrangements provide the IDB with negotiation leverage beyond first disbursement, and even after all funds approved are disbursed. Borrowers are required to comply with ongoing environmental requirements, as well as with financial and reporting covenants.

14. Management recognizes that while the Project may not have been in compliance at times with Bank policy OP-703, in particular with the sequencing of the environmental requirements related to the ecological flow study and management plan of the Project, the Bank was guided by a strategy to engage with the client over the long term to ensure that the ultimate objectives of the Bank’s environmental and social policies would be achieved.

III.1. SUMMARY OF FINDINGS

5. Management summarizes below its understanding of the Bank compliance with its policies and procedures in relation to the findings of the ICIM by addressing each policy and finding pointed out by ICIM.

Table I

Ecological Flow		
ICIM observation		Management Response
Obtaining Board approval of the operation, signing of the loan agreement, and moving ahead with the disbursement in the absence of an accepted and agreed-upon mitigation plan for an operation impacting on a natural habitat is in non-compliance of:		
OP 703 B	<i>The Bank did not take the usual precautionary approach to dealing with potential environmental impacts. Management supported the investment without an agreed plan for mitigation of the risks.</i>	<p><i>The Bank did take steps to ensure the best possible outcome by obtaining a legally binding contractual commitment from the Borrower that certain steps would be undertaken to ensure that the risks could be timely and properly mitigated.</i></p> <p><i>The ESMR identified the ecological flow issue as the Project's key potential environmental impact and recommended that a preliminary Ecological Flow Management Plan, including mitigation measures such as establishing a design for a passage system to preserve the migratory fish and the neo-tropical river otters be presented prior to signing of the loan. Considering the dynamics of a private infrastructure undertaking of this nature, the requirement was for practical reason incorporated into the loan agreement as a condition prior to first disbursement. At first disbursement, the IDB obtained a formal confirmation from the Borrower that it was still committed to address the issue. The ecological flow study has now been completed thanks to the Bank's efforts and continued involvement, demonstrating its commitment to address both the needs of a private sector operation and the achievement of the Bank's ultimate goal.</i></p>
OP 703 B9	<i>The Bank supported an operation that may involve the significant conversion or degradation of natural habitats without the three conditions spelled out in OP-703, Directive B.9 being met, i.e. "(i) there are no feasible alternatives acceptable to the Bank; (ii) comprehensive analysis demonstrates that overall benefits from the operation substantially outweigh the environmental costs; and (iii) [there exist] mitigation and compensation measures acceptable to the Bank"</i>	<i>Results of the revised ecological flow study delivered in March 2012 indicate that 10 % of the annual average flow should be sufficient most of the time to preserve the dewatered stretch's ecological connectivity, with small adjustments to the released flow in dry season when additional flows coming from tributaries are low. The revised ecological flow study clearly demonstrates that this issue can be resolved through a managed release flow program.</i>

OP 304	OP-304 was not complied with since the decisions on first disbursement did not correspond to the Loan Contract, Article IV, Section 4.01, which stipulates under "Conditions of First Disbursement. ... the Borrower has submitted ... preliminary design of a passage system or other solution expected to preserve the ecological integrity of the river acceptable to the Lenders for migratory fish species and neo-tropical river otters expected to sustain viable populations along the Chiriquí Viejo River section directly impacted by the Project..."	A preliminary ecological flow study and two independent experts' opinion were submitted prior to first disbursement as required under the loan contract. One of the experts noted that: the proposed EFMP was not sufficient to mitigate the impacts as was currently outlined in the report. Co-lenders and the Borrower believed that all CPs were met, and the Borrower vowed for the benefit of the IDB to commit more resources to bring the mitigation measures to an acceptable level. [REDACTED] [REDACTED] [REDACTED] Management obtained from the Borrower a formal letter restating their commitment to develop and implement appropriate mitigation measures consistent with the recommendations of the independent
		experts. As a result, preliminary results show that a new, stronger, Ecological Flow Management Plan will drive the Project.
The approval of the loan and the first disbursement without an Environmental Impact Assessment with accepted agreements on mitigation measures constitute non-compliance with:		
OP 703 B5	Management did not require compliance with specified standards for Environmental Impact Assessments (EIAs), Strategic Environmental Assessments (SEAs), Environmental and Social Management Plan (ESMP), and environmental analyses, as defined in this Policy and detailed in the Guidelines." "[t]he ESMP must include: a presentation of the key direct and indirect impacts and risks of the proposed operation; the design of the proposed social/environmental measures to avoid, minimize, compensate and/or mitigate the key direct and indirect impacts and risks; the institutional responsibilities to implement these measures, including, where necessary, institutional development, capacity building and training; the schedule and budget allocated for the implementation and management of such measures; the consultation or participation program agreed for the operation; and the framework for the monitoring of social and environmental impacts and risks throughout the execution of the operation, including clearly defined indicators, monitoring schedules, responsibilities and costs. The ESMP should be ready for, and reviewed during, the analysis/due diligence mission."	As first submitted and based on one of the Independent Expert's opinion, the IDB was not fully satisfied with the EFMP, however Management considered that with the continued IDB's presence and insistence on the changes required in the EFMP, a better ecological output would result. A first draft Ecological Flow Management Plan is expected to be delivered in June 2012 and the IDB Management will ensure that this plan is correctly implemented, including through appropriate design and construction of the ecological flow gate and discharge structure. It is therefore expected that this issue can be and will be effectively resolved.
Seeking and obtaining Board approvals for an operation that has not followed the necessary procedures is in non-compliance with:		
OP 703 B1	Management supported the finance of operations and activities that did not comply with the directives of this policy, and are consistent with the relevant provisions of other Bank policies.	The Project is expected to meet compliance requirements of OP-703 through inter alia implementation of the ecological flow management plan during operation.
Cumulative Impacts		
Obtaining Board approval of the loan and the disbursement in the absence of sufficient information on cumulative impact and a CVR basin management plan to preserve the ecological integrity of the river is in non-compliance with:		
OP 703 B	Preliminary studies have shown that there is a high residual risk that the cumulative impacts of extensive hydropower projects on the Chiriquí Viejo River may not be adequately mitigated.	The IDB has engaged with relevant authorities in Panama, including ANAM, to try and address cumulative impacts of hydropower development in the Chiriquí Viejo River (CVR) basin. Specifically the study and subsequent development of the pilot Watershed Management Plan for the CVR through an on-going TC of USD490.000 with ANAM is expected to start in June 2012 and be completed by July 2013.

OP 703 B5	Management did not require compliance with specified standards for Environmental Impact Assessments (EIAs), Strategic Environmental Assessments (SEAs), Environmental and Social Management Plan (ESMP), and environmental analyses, as defined in this Policy and detailed in the Guidelines. EIA should be supported by economic analysis of project alternatives and, as applicable by economic cost-benefit assessments of the project's environmental impacts and/or the associated protection measures. Also, due consideration will be given to analyzing compliance with relevant legal requirements; direct, indirect, regional or cumulative impacts, using adequate baseline data as necessary; impact mitigation and management plans presented in an ESMP; the incorporation of EA findings into project design; measures for adequate follow-up of the ESMP's implementation."	Thanks to the Bank's involvement in the operation, a preliminary cumulative impact assessment financed through an IDB's TC was completed prior to Board's approval and main results of this assessment were presented in the Project's ESMR.
Consultation		
Proceeding with loan approval and disbursement without confirming that adequate consultation had taken place, the Bank was in non-compliance with:		
OP 703 B6	Management did not confirm that: consultations with affected parties and consideration of their views; affected parties were kept informed; operations were consulted at least twice during project preparation, during the scoping phase of the environmental assessment or due diligence processes, and during the review of the assessment reports.	Draft Panel's report statement that: "public hearings conducted in September, 2009, included only a few selected and specifically invited individuals" may not provide a complete picture on the Project's public consultation and stakeholders engagement activities. The Borrower reports having carried out a total of 54 stakeholder engagement meetings or events between September 22, 2009, and November 18, 2010, including with the Municipal Administration and Mayor of Bugaba and Renacimiento, NGOs (such as FUNDICEP, AMISCONDE, AMIPILA and ADATA), educational institutions, rural water committees, and public meetings open to all community members. The Company has also established a Community Relations Field Office in Caisán to facilitate ongoing communication between the Company and surrounding communities, and a functioning Grievance Mechanism.
Potential for Project Construction Impacts		
Non-Compliance Findings Related to Project-induced Impact on Drinking Water: The Panel recognizes that there is an apparently competent supervision process in place (...). On the other hand, the Panel noted lags in the Bank's resolve to enforce the follow-up to recommendations by supervision missions. If not corrected on time, the issues noted by requesters and documented in reports could lead to non-compliance with		
OP 703 B7	Management may not have monitored the executing borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations	As noted in the draft Panel's report, the issues brought by the complainants (road damage, contaminated wastewater discharge, erosion) have been adequately identified through both the Borrower and Lenders supervision process. Key findings of supervision reports by the Lenders' Independent Environmental and Social Consultants and Lenders environmental specialists have been communicated to Management according to normal procedures. Following the latest Lenders environmental and social supervision mission in January 2012 a corrective action plan has been agreed with EISA. Discharge of contaminated wastewater in communities' stream has now stopped.
Non-Compliance Findings Related to Project-induced Damage to Road: The Panel finds that there exist deficiencies in Management's follow-up and enforcement of recommendations of supervision findings. If not corrected, this might lead to non-compliance at some later point with the following Operational Policies		

OP 703 B7	Management may not have monitored the executing borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations...	As noted in the draft Panel's report, the issues brought by the complainants (road damage, contaminated wastewater discharge, erosion) have been adequately identified through both the Borrower and Lenders supervision process. Key findings of supervision reports by the Lenders' Independent Environmental and Social Consultants and Lenders environmental specialists have been communicated to Management according to normal procedures.
OP 304	Management may not have verified compliance by borrowers agencies with the contractual covenants and general rules established by the Bank" and to "maintain an effective and efficient information system on loan operations	Following latest Lenders environmental and social supervision mission in January 2012 a corrective action plan has been agreed with ESIA. The IDB will continue supervising closely implementation of the agreed corrective actions to ensure a proper closure of all outstanding issues

III.2. MANAGEMENT EXPANDED COMMENTS ON ICIM's FINDINGS

16. This section provides further information related to the four key issues at the center of the ICIM's report: (i) Ecological Flow; (ii) Cumulative Impacts; (iii) Consultation; and (iv) the Potential for Project Construction Impacts.

Ecological flow:

17. The Environmental and Social Management Report (ESMR) identified the ecological flow issue as the Project's key potential environmental impact and recommended that a preliminary Ecological Flow Management Plan, including mitigation measures such as establishing a design for a passage system to preserve the migratory fish and the neo-tropical river otters be presented prior to signing of the loan. Considering the dynamics of an infrastructure undertaking of this nature, the requirement was incorporated into the loan agreement as a condition prior to first disbursement in order to support environmental sustainability. At first disbursement, the IDB obtained a formal confirmation from the Borrower that they were still committed to address the issue. The ecological flow study has now been completed thanks to the Bank's efforts and continued involvement, demonstrating its commitment to address both the needs of a private sector operation and the achievement of the Bank's ultimate environmental goal.

18. An ecological flow study was prepared prior to first disbursement as required under the Common Terms Agreement (CTA). Results of this study indicated that the 10 % of the annual average flow was unlikely to be sufficient to preserve the ecological integrity in the 26-km section of the river to be dewatered. Development of mitigation measures was therefore needed to ensure compliance with Directive B.9 of OP-703. The ecological flow study recommended a generic mitigation approach, but no actual EFMP was submitted prior to first disbursement as required under the Action Plan attached to the CTA.

19. As there were differences of opinion among the Lenders whether to proceed with first

disbursement given the information provided on the ecological flow, the Bank, again weighing the benefits of maintaining the IDB's involvement, requested the Borrower to provide a formal letter restating their commitment to develop the Final Ecological Flow Management Plan in line with the experts' recommendations within the previously agreed timeframe (scheduled to be delivered by June 2012) and accepted such letter (Commitment Letter) to allow for the First Disbursement.

20. Once the funds for the first disbursement were released, the Bank urged the Borrower to contract one of the independent experts (Dr. Juan Manuel Diez Hernández, University of Valladolid, Spain) to "fine tune" the ecological flow study following internationally recognized tools and methods, and to develop a robust ecological flow management plan. The Bank informed the Borrower that the IDB would not proceed to second disbursement until the contract with Dr. Diez Hernandez was signed. The contract with Dr. Diez Hernandez was signed at the end of October 2011 and the second disbursement was funded. Management saw this as a demonstration from the Borrower that real efforts were being made and Management's decision started to generate the desired outcome.

21. In December 2011, a preliminary revised ecological flow study was delivered, which was finalized in March 2012. Results of the revised study demonstrate that 10 % of the annual average flow should be sufficient most of the time to preserve the dewatered stretch's ecological connectivity, with small adjustments to the released flow in dry season (March – April) when additional flows coming from tributaries are low. Furthermore, the first draft of the EFMP is expected in June 2012. Once this plan is received and implemented, the Project will be in compliance with OP-703's Directive B9 on natural habitats. Management will ensure that this plan is correctly implemented, including through appropriate design and construction of the ecological flow gate and discharge structure. It is therefore expected that this issue can be and will be effectively resolved.

Cumulative impact:

22. Thanks to the Bank's involvement in the operation, a preliminary cumulative impact assessment financed through an IDB's Technical Cooperation has been completed prior to Board's approval and the main results of this assessment were presented in the Project's ESMR.

23. The IDB has been consistently engaging with relevant authorities in Panama, including ANAM, to try and address cumulative impacts of hydropower development in the Chiriquí Viejo River (CVR) basin. Specifically the development of the pilot Watershed Management Plan for the CVR through an on-going TC with ANAM is expected to start in July 2012 and be completed by July 2013. The Watershed Management Plan will include: a comprehensive baseline survey of the physical, biological, economic and social aspects (among others) of the CVR basin; assessment of vulnerability to climate change; identification and prioritization of mitigation and adaptation measures; and recommended actions to facilitate sustainable management of the CVR basin with respect to climate adaptation and mitigation.

24. The Lenders and their consultants have continued to request the Borrower's proactive involvement in collaborative management effort with other project developers within the Chiriquí Viejo River; however, as confirmed through supervision by the Lenders' independent environmental and social consultant, such efforts have been met so far with lack of interest and/or opposition from other project developers which continue to demonstrate less concern for

environmental and social performance for their respective projects.

Consultation:

25. Draft Panel's report statement that: "public hearings conducted in September, 2009, included only a few selected and specifically invited individuals" may not provide a complete picture on the Project's public consultation and stakeholders engagement activities. EISA reports having carried out a total of 54 stakeholder engagement meetings or events between September 22, 2009, and November 18, 2010, including with the Municipal Administration and Mayor of Bugaba and Renacimiento, NGOs (such as FUNDICEP, AMISCONDE, AMIPILA and ADATA), educational institutions, rural water committees, and public meetings open to all community members.

26. Due to the timing of the EIA process (2002-2003) vis-a-vis the IDB's preparation phase (June – December 2009), it could not be documented that affected parties have been consulted at least twice during project preparation, including during the review of the assessment reports, as required by the letter of OP-703 (Directive B.6). The Project has subsequently made good efforts to engage with the local communities considered to be in the Project's area of direct influence.

27. The Company has also established a Community Relations Field Office in Caisán to facilitate ongoing communication between the Company and surrounding communities, and a functioning Grievance Mechanism.

28. As it was noted during the approval process, there is a general opposition of local communities, not specifically against the Project but against rapid hydropower development in the area. According to local stakeholders, and as confirmed by the Lender's Independent Environmental and Social Consultant, EISA is perceived to be a more responsible project developer with respect to environmental and social performance during the feasibility and construction phase compared to other projects operating within the CVR watershed.

Potential for Project Construction Impacts

29. Due to the nature of any large scale construction activities, proactive ongoing monitoring through borrowers and lenders is necessary as well as respective corrective actions. This project is no exception. As noted in the draft Panel's report, the issues brought by the complainants (road damage, contaminated wastewater discharge, erosion) have been adequately identified through both the Borrower and Lenders supervision process, and corrective action has been taken.

30. Following latest Lenders environmental and social supervision mission in January 2012 a corrective action plan has been agreed with ESIA. Discharge of contaminated wastewater in communities' stream has now stopped. The IDB will continue to supervise closely the implementation of the agreed corrective actions to ensure a proper closure of all outstanding issues.

IV. Conclusion

31. The Bank followed a strategy to engage with the Borrower over a period of time to ensure that the ecological flow assessment was completed and would be properly implemented. The Bank's continued involvement, as opposed to its withdrawal, is facilitating the achievement of these ultimate objectives and key issues are starting to be resolved in a favorable manner. The process, although not optimal, is paving the way both for a satisfactory resolution of the ecological flow issue and for the development of river basin management for the Chiriquí Viejo River taking into account the results of a cumulative impact analysis.

32. The Bank has continuously applied pressure to get the Borrower into compliance and foster its delivery on the requirements. During the life of the Loan, the Borrower is required to continue meeting specific requirements of the Environmental and Social Action Plan and where appropriate Corrective Action Plan. In areas with issues still outstanding, the Bank's continued involvement continues to create a positive environment. We are working to attract other parties to actively engage in the resolution of such issues.

V. Lessons Learned and Next Steps

33. Management will look for opportunities to create synchronization among co-lender agencies to ensure early on that common approaches are taken to matters related to compliance of borrowers with requirements set out in loan conditions. In addition, the Bank is collaborating with other international financial institutions and developers of hydropower projects to develop common good practice standards with respect to assessing and managing the environmental and social impacts of hydropower projects.

34. As discussed above, in NSG projects, Management continuously monitors the progress and performance of a project throughout its life. Management believes that the actions underway as detailed below will broadly address the concerns raised by the Respondent. Some of these activities form part of the contractual arrangements and are monitored.

Actions	Outcomes
Ecological flow study completed on March 30, 2012. First draft Ecological Flow Management Plan (EMFP) to be available in June 2012. Design of the ecological flow discharge structure adequate to manage ecological flow consistently with the EMP. (prior to initiating construction of the structure)	Solving the ecological flow issues raised by ICIM

Implementation of the Corrective Action Plan agreed between ESIA and Senior Lenders (as confirmed by the Lenders' Independent and Social Consultant prior to next disbursement)	Enforcing consistency of follow-up to supervision findings raised by ICIM
Through INE/ENE and VPC, the development of the pilot Watershed Management Plan for the Chiriquí Viejo River through an on-going TC with ANAM is expected to start in July 2012 and be completed by July 2013	Capacity enhancement raised by ICIM
Better upstream coordination among agencies, in particular with the IFC to avoid split positions	Avoiding differences among lenders and supporting timely compliance with policies.

ANNEX C: REQUESTERS' RESPONSE TO THE COMPLIANCE REVIEW PANEL'S DRAFT REPORT

Cerro Punta, 17 May 2012

Victoria Márquez-Mees
Executive Secretariat
Independent Consultation and Investigation Mechanism (ICIM)
1300 New York Avenue, NW, Washington, DC 20577 USA
Tel: (202) 623-2712 Fax: (202) 312-4057

Dear Ms. Márquez-Mees,

The organizations comprising the Alianza Ambiental Pro Desarrollo Integral Unidos por Panamá (AAPRODIUPA) hereby formally present our comments on the **Compliance Review Report on the Pando-Monte Lirio Hydroelectric Power Project (PN-MICI001-2010)**.

To begin with, we wish to express our thanks for the reception, focus, and value given to this investigation and, above all, to the way in which the investigation's findings were presented. It reflects the work of a team of professionals that took all sides into account in preparing the report.

We are first interested in how the concerns expressed in our complaint were classified, by virtue of the Relevant Operational Policies of the Bank pursuant to the ICIM mandate: ecological flow and cumulative impact; design flaws of watershed management and ecological flow; project construction activities; and those concerns not subjected to a detailed compliance review.

We support the Panel's strong findings of the IDB's failure to comply with the Environment and Safeguards Compliance Policy (OP-703) and with the Operations Administration Policy (OP-304) for enforcement of contractual obligations.

With respect to the issues regarding the ecological flow, the Panel reached the conclusion that the Bank had failed to comply with critical provisions of the IDB's Environment and Safeguards Compliance Policy (OP-703). The Bank, deviating from its traditional practice of sustainable development, did not take the normal precautions to deal with potential impacts on the environment.

Although we largely agree with the content, above all with the analysis and summary of our concerns as requesters, we consider it advisable to indicate some areas where we differ and perhaps broaden our explanations in order to have them considered in the final version of the report to be submitted.

I. The IDB is, in our opinion, the multilateral bank most involved in developing investment-related public policy initiatives; this is why we are presenting some of our thoughts about the report's conclusions.

1. The IDB should impose more conditions on the investment support it provides to the country, above all in the area of energy development—where there would necessarily be an impact on the stability of communities and the environmental balance—so that its

safeguard policies can be guaranteed in the investments and the objective of investing in a better environment of sustainable development.

2. The investigation has produced a series of valuable inputs that confirm non-compliance with the Bank's operational policies. Equally relevant is the point that despite the fact that investments were made to strengthen the public sector, laws, and standards with the Autoridad Nacional del Ambiente [National Environmental Authority] (ANAM), such investments were not sufficient to prepare the country for the massive interest and the investment boom in the electricity sector in such a way as to guarantee the stability of the investments, taking into account watershed plans, current and future uses of the water by the communities, and the conditions necessary for achieving environmental stability for the habitats that exist around the rivers.
3. The environmental, social, and cultural impacts of the Pando and Monte Lirio and other projects within the watershed we are seeing today and that will increase in the future were foreseeable even without major studies. This is why we believe the IDB, in its role as a provider of multilateral support to countries like ours, should have ensured and predicted scenarios in order to prevent private investment from occurring regardless of the country's environmental and social interests.
4. The IDB has not only recognized the country's energy potential, it has also supported the State in developing that plan. The IDB has also gotten involved in different ways to develop and strengthen environmental regulations since the time ANAM was created in 1998. The report acknowledges that this has not been enough in practice to ensure the effective planning and management of the watersheds and linkage to compliance with its own operational standards.
5. In December 2009, prior to the decision to approve the loan for investors, the Bank was aware of the community's concerns, as demonstrated during the visit by the company, together with representatives of the IDB and World Bank, to FUNDICCEP. This was also demonstrated in the execution of the preliminary study of cumulative impact, during which we were consulted and the need to evaluate the situation was reiterated, in an effort to prevent scenarios that are, in fact, already occurring today with the construction of these and other projects on the river.
6. From the beginning, there has been insistence on addressing the situation with a comprehensive watershed management approach with the relevant implications on national legislation and the commitments of the parties (including all hydroelectric project developers) to adjust the respective environmental measures that will guarantee the ecological functioning of the river.
7. The IDB's decision to invest in a project involving other financial institutions—with different policies and interests and even a larger share in the project—should have been an extremely important aspect to keep in mind since conflicts then arise when it comes to enforcement of the Bank's operational safeguards and compliance policies. The perception is that only interest in making the loan prevailed while compliance with its own policies was neglected.
8. With regard to point 95 where ANAM discusses establishing a flow adjusted to tropical rivers, it is important to note that since the adoption of this resolution in 2006, the need for this to be reviewed has been pointed out. Now, as it is the rule, strict compliance to it

should be required for all projects, and the construction of such projects should be adapted to the new provision. In addition, there should be guarantees that the flow will be functional. In this case, the provisions of the Large Dams Manual should be evaluated.

9. To be able to ensure that 10% of the flow is actually maintained, such that the caudal flow through the device cannot be manipulated and that it furthermore includes the construction of passages for the migration of species of fauna to the upper and lower parts of the river.
10. It is important that the data used to calculate the average year-on-year flow, as well as the volume of water that the company was to let flow, be made public. The preliminary cumulative impact study identified and indicated ecological flows for both projects below the 10% stipulated by the resolution (3.93% for Pando and 4.34% for Monte Lirio).
11. With regard to the fact that the Panamanian authorities are justifying concessions on the river based on the pretext of producing energy for development, the IDB, as a multinational entity that has financed energy-related studies and plans and national environmental policies, should have assumed a more decisive position with regard to compliance with its operational policies. In the current situation, not only is the stability of the communities located in the watershed at risk, the economic and financial sustainability of the investments is also at risk because of how vulnerable the watershed is.
12. With regard to point 103 where a good relationship between the company and the municipalities is mentioned, the truth is that for the communities the information on the joint programs is not transparent. Proof of this is the fact that in order to obtain information on the investments, programs, and agreements between Electron Investment S.A. (EISA) and the Municipality of Renacimiento, it was necessary to resort to the justice system and file a *habeas data* petition so the judiciary would require Mayor Onelio Miranda to turn over the information to the claimants.

II. We disagree with the Panel's conclusions as follows:

With regard to point 68 on page 28, which states that the compliance mechanism could not be determined and the term “**DECEITFULLY**” was used, we wish to make clear that the definition of such term—“**lie, deceptive information**”—left behind a distasteful and bitter uneasiness for the requester organizations that are representing the communities since it makes one think that what we have pointed out regarding the issues is not true or is misleading. Whether or not you think these elements are irrelevant or not directly related to compliance, for those of us who live in the watersheds, they are directly related to the hydroelectric projects and we repeat them once again:

- **Impacts on protected areas:** The rivers that originate in these areas constitute a connective biological corridor; the studies were limited to envisioning the impact within the project area and failed to include the complexity of the ecological relationship and of the connectivity of a watershed as a territorial unit to the areas where rivers originate, in this case, the Parque Internacional La Amistad and the Parque Nacional Volcán Barú.

The Lagunas de Volcán wetlands are natural reservoirs that interconnect with the feeders through underground currents. They are located three kilometers away from the Pando dam, but the company failed to conduct intensive studies, indicating only that there are no water connections between the wetlands and the Chiriquí Viejo

River. However, the watershed will be affected by the management of the ecological flow resolution, which sets aside 90% of the flow for transfer through waterproof tunnels and pipes over several kilometers; this will have an effect on water table levels, which has not been calculated or studied adequately.

The projects are located within the buffer and transition zones of these protected areas, which are themselves core areas of the La Amistad Biosphere Reserve as so declared by UNESCO. See the websites: <http://biota.wordpress.com/2011/12/19/reserva-de-la-biosfera-la-amistad-panama-en-imagenes/> and <http://ongacdpanama.blogspot.com/>.

The Costa Rican sector of the park was registered on the list of World Heritage Sites in 1983, and the Panamanian sector, in 1990. This Transnational World Heritage Site is listed as the Talamanca Range – La Amistad Reserves/La Amistad National Park and is considered to be the first binational biosphere reserve in the world because it is located between Panama and Costa Rica.

- **Impacts on agricultural production:** The water concessions granted have ignored the existence of other productive activities in the upper watershed as well as communities' use of water, some of which do in fact occur and appear in the databases of the responsible entities. The increase in demand for water was also not taken into consideration, which will result in fights over water use wherein the companies will invoke legal certainty and the communities will become defenseless, all of which will unleash social conflicts, of which there are already cases in watersheds very close to 102.
- **Impacts on indigenous communities:** Even though there is no permanent indigenous settlement in the zone, the area neighboring the hydroelectric projects relies on indigenous labor from the Ngöbe Buglé people for its productive activities. For the Ngöbe Buglé, this is a way of bringing in income for their families in the region. The promotion of an industrial activity like hydroelectricity generation has had a direct impact on the economies of neighboring communities. This new “development opportunity” has led to a gradual decrease in agricultural productive activities since the owners of small tracts of land have abandoned farming to get involved in the building of the hydroelectric projects. In the area directly impacted by the Pando and Monte Lirio projects, Caizán is a bean-growing region; bean production has fallen by 50% over the past two years and this has had a direct impact on the hiring of laborers for these activities.

In addition, by not taking into account productive activities and irrigation systems in the upper area of the watershed (Renacimiento and Cerro Punta) going forward, the sustainability thereof will be impacted and as a result there will be a direct impact on the migrant indigenous communities that rely on these activities.

- **Impact on rafting:** Rafting is an activity that has grown over the past decade and was becoming an opportunity for tourism activities in the area because of the impressive conditions the river offered for this sport. It has practically ceased to exist because of how the river has been segmented thanks to the different hydroelectric projects. Before the Pando hydroelectric project, rafting activities used to begin in Paso Ancho.
- **Impact on involuntary resettlement:** Although the company has limited the impact to the areas of the infrastructure and transmission lines, the truth is that none of these

projects took into account any other alternative than the acquisition of property along the banks of the river. This resulted in producers having to negotiate their lands and in some cases this was even done under ASEP's law "6", which provides for the compulsory purchase of easements. The reality is that once the projects have purchased the land, producers would have to relocate or be subjected to whatever the company does or does not allow them to do.

- **Impact on the roads network:** The measures needed to ensure the maintenance and good condition of the roads were not taken. Because of this, over the past year, conflicts have arisen due to the deplorable state of the streets, pedestrian safety, heavy traffic of machinery and articulated trucks and the hours they are on the road, and the excessive weight of the materials. The following question remains: Who will take responsibility for building our roads after construction of all the hydroelectric projects has concluded? One example of the conflicts is a protest last week by the residents of Caizán who closed down the street for more than 18 hours demanding that the projects assume responsibility for rebuilding the roads.
- **Weak institutional capacity of ANAM:** As to the ability to address the environment-related problems arising out of these projects, EISA may have the staff to do so, but ANAM is the agency in charge of oversight and enforcement in this regard. The weak institutional capacity of ANAM and lack of personnel have been clear, which is why there is a lack of trust that the mitigation measures and rules included in its operations will be enforced or implemented.

III. Recommendations for remedying the areas of non-compliance and systemic problems

The IDB must act to remedy the areas of non-compliance in this project as well as the systemic problems identified in the report. The systemic problems detected via this investigation have been pointed out previously by the claimants and we have been key and proactive actors in the search for solutions. For this reason we have taken the liberty to recommend the following:

a. Recommendations for the Pando and Monte Lirio Projects

- Create an Independent Monitoring Committee for the project construction and operation phase that includes the participation of representatives of the community and of the claimants in order to verify compliance with environmental operational policies not only for the IDB, but also for the communities. (Verification of issues such as water flows, water quality, species flows, and project impact on the watershed).
- Make changes to the current design of the construction in order to ensure ecological flow based on a scientific study and not on the current regulation, which is inadequate. The design must ensure the use of the passages or ladders needed by species of fauna to complete their migration cycles.
- Establishment of a Civil Safety Bond that is proportional to the [sic] on the communities downstream. This comes out of the concern that the watershed is located in a flood- and earthquake-prone area, thereby increasing the risk of flooding and damage in localities and public infrastructure and to private property in downstream communities.

b. Recommendations for ANAM

There is a real issue with institutional capacity: little staff, vulnerability to political change, and a weak institutional framework. All of this exerts pressure and limits technical and impartial actions by the entity, for which reason we recommend:

- The appointment of suitable independent personnel to implement monitoring plans in the watershed (ecological flow, sedimentation, flow of species, wastewater, flora and fauna).
- Conduct the necessary studies within the watershed (i.e., cumulative impact study for the hydroelectric projects, watershed suitability studies, socioeconomic study of the watershed, ecosystem behavior and valuation studies in the watershed, water capacity study, etc.) and prepare a Comprehensive Watershed Management Plan with the participation of all stakeholders.
- Halt processes for granting water concessions for hydroelectric projects and cancel all concessions already granted that have not yet entered the construction phase until the Watershed Management Plan indicates the water capacity for such use.
- Implement the Watershed Management Plan, ensuring sufficient and necessary resources, suitable staff who can inspire trust, and the enforcement of related laws (Water Law and Watershed Law).

c. Recommendations for the IDB

Included in the Bank's program of multilateral support for the Government of Panama is the development of a Management Plan for watershed 102, with ANAM as the counterpart. The IDB must ensure not only that the Management Plan is developed (presentation processes for this began in May 2012), but also that participatory workshops for its design continue to be held. However, key information is lacking as to: How? When? Who? And with what resources will this plan be executed? Therefore there is no certainty that this investment will have a genuine impact.

On the other hand, the effectiveness of a management plan that will be developed without having conducted other essential studies is questionable (i.e., cumulative impact study of the hydroelectric projects, watershed suitability studies, socioeconomic study of the watershed, watershed ecosystem behavior and valuation studies, water capacity study); in the meantime, concessions continue to be processed in the watershed, which is creating more conflict and aggravating the Chiriquí Viejo River situation. We therefore recommend that:

- The Management Plan be developed by an independent entity that takes all stakeholders into consideration and that the outcome be the product of a consensus-based effort and not be used merely as a theoretical tool for justification.
- The IDB provide support for other studies to be conducted in the watershed.
- The IDB ensure that the funds exist so that the Watershed Management Plan can be implemented.

In addition, in order to correct the systemic problems, the following are necessary:

- Approval of the loan by the Board of Executive Directors, while overlooking compliance with operational policies and downplaying the opinion of the IDB's Safeguards Unit, set a bad precedent; the mechanism for verifying compliance with the

IDB's safeguards needs to be strengthened. This would ensure compliance with the Bank's role of supporting the sustainable development of communities and eliminate the perception of a tendency to invest privately without taking into account the interests of or impact on the communities.

- When controversial projects like this one arise, the IDB must have a minimum space for direct and independent consultation with the communities so its decision may be transparent.

d. Recommendations for the ICIM

The report prepared by the ICIM acknowledges multiple examples of non-compliance with IDB safeguards; we have therefore taken the liberty to make the following recommendations for the report:

- Given that the report highlights non-compliance in critical areas such as ecological flow and the cumulative impact study, we would like to see ICIM's recommendations with regard to how compliance ought to be achieved in the case of Pando and Monte Lirio.
- The ICIM has conducted an objective investigation and we recognize the value of this mechanism, which offers a forum for the participation of communities directly affected. It is for this reason that the ICIM should be strengthened and it should in some way ensure that the beneficiaries of IDB investments not only comply with the safeguards, but also take part in processes geared toward creating opportunities for dialogue, like the one proposed by the ICIM-OMBUDSPERSON. EISA withdrew from the process and the IDB, as the lender, failed to make a pronouncement regarding this evident lack of commitment to the situation generated by the project in the community and for the Bank itself.

IV. The window of opportunity for having a positive impact on this project is closing

It is important for the IDB to act now to remedy the areas of non-compliance. For example, the matter of the ecological flow, a mechanism that guarantees the ecological flow, including elements of the project's physical design.

During the initial phase, this was a shared Ombudsman and Ombudsperson process between the CAO and the ICIM, because "we understood" that for both agencies it is key to ensure compliance with the Banks' safeguard measures. However, the CAO unfortunately concluded that "in this case, an audit of the process of due diligence on the part of the IFC regarding its participation in the Pando-Monte Lirio project is not justified. The CAO shall close this case and shall not adopt further measures." On the other hand, the ICIM has found clear evidence of non-compliance with the safeguards.

As a stakeholder and always in pursuit of alternatives and solutions, we, the requesters, believe it is important that relevant measures be taken so that these projects can truly be a model for applying good practices in large dam management by enforcing with the measures and also by being concerned with the adverse impact they cause in the area of the watershed where they are being developed. If not, the current and future responsibility of the IDB in the social, environmental, and economic conflicts occurring in our communities will be inevitable.

Thank you for your attention to our comments.

Sincerely,

David Samudio
AAPRODIUPA

Damaris Sánchez
AAPRODIUPA

cc: Werner Kiene, Chairman, Panel of Independent Experts