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INVESTIGATION MECHANISM**

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**COMPLIANCE REVIEW REPORT
PANAMA CANAL EXPANSION PROGRAM**

PN-L1032

This document was prepared by the Compliance Review Panel consisting of Mary Rose Brusewitz, Panel Chairperson, Mario Epstein and Korinna Horta, Panel Members, with the support of Ashley Morse and Julio Patiño, Compliance Review Phase Case Officers (MEC/MEC)

Under the Access to Information Policy, this document is subject to Public Disclosure.

INFORMATIVE NOTE

As per the *Transition Plan* (MI-48-1 and MI-48-2) approved on February 4, 2015, the Compliance Review for the Panama Canal Expansion Program (PN-L1032) would be managed in accordance with the *Policy establishing the Independent Consultation and Investigation Mechanism* (GN-1830-49) approved in February 2010 by the Board of Executive Directors of the Inter-American Development Bank.

In accordance to this, and pursuant to section 70 of such Policy, this Compliance Review Report, along with the comments from the Requesters and Management to the draft version of the Compliance Review Report, will be posted on the ICIM Public Registry (www.iadb.org/mici) and delivered to the Requesters within twenty (20) calendar days from the date of its distribution to the Board of Executive Directors.

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We also wish to convey our gratitude and appreciation to the ACP for providing extensive information to the Panel during and following its missions to Panama.

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The Panel is grateful for the excellent cooperation from our partner accountability mechanisms at the European Investment Bank, the Japanese Bank for International Cooperation and the International Finance Corporation.

Finally, the Panel wishes to convey its gratitude to the ICIM Secretariat for its resourceful support of this investigation.

GLOSSARY

Terms used in this Compliance Review Report that are not otherwise defined herein are used as defined in the ICIM Policy (GN-1830-49) approved in February 2010 by the Board of Executive Directors of the Inter-American Development Bank.

ACP	The Panama Canal Authority
ANAM	The Panamanian National Environmental Authority
Bank	The Inter-American Development Bank
Board	The Inter-American Development Bank's Board of Executive Directors
Borrower	The ACP
CICH	The Inter-Institutional Commission for the Panama Canal Watershed
December Mission	The mission undertaken by a Panel member and a Case Officer to Panama on December 28-29, 2013
Development Benefits	Specific objectives of OP-703 include "to enhance long-term <i>development benefits</i> to its members countries by integrating environmental sustainability outcomes in all Bank operations and activities and strengthening environmental management capacities in its borrowing member countries." Public programs funded by revenues generated by the Panama Canal, which are of stated importance to the Requesters and in general of benefit the Panamanian people, can be considered one such "development benefit"
Directive A.2	Directive A.2 of OP-704
Directive B.4	Directive B.4 of OP-703
Directive B.6	Directive B.6 of OP-703
Eastern Watershed	The Gatún, Alajuela and Miraflores Lakes
EIA	The Environmental Impact Assessment of the Project
EIB	The European Investment Bank
EIB-CM	The European Investment Bank's Complaints Mechanism
ENSO	El Niño-Southern Oscillation
ERM	Environmental Resources Management
ESMR	The Environmental and Social Management Report of the Panama Canal Expansion Program - PN-L1032
ESS	The Environmental and Social Strategy of the Panama Canal Expansion Program - PN-L1032
Executing Agency	The Panama Canal Authority

Expanded Panama Canal	(i) The construction of two new, larger locks for the Panama Canal, (ii) the excavation of 6.1 km of the Pacific access channel, (iii) the deepening of navigation channels and (iv) the elevation of Lake Gatún
Expansion Alternatives	The alternatives for expansion and modernization of the existing set of locks of the Panama Canal
Guidelines	The Disaster Risk Management Policy Guidelines of OP-704
GUPC	The consortium <i>Grupos Unidos por el Canal S.A.</i>
IAMs	Independent Accountability Mechanisms
ICIM	The Independent Consultation and Investigation Mechanism
ICIM Policy	The Policy Establishing the Independent Consultation and Investigation Mechanism (GN-1830-49), approved on February 17, 2010
IDB	The Inter-American Development Bank
IFC	The International Finance Corporation
JBIC	The Japanese Bank for International Cooperation
JBIC-OE	The Office of the Examiner for Environmental Guidelines of the Japanese Bank for International Cooperation
Law 19	Law 19 of 1997 passed by the National Assembly of Panama that established that the ACP is responsible for the management, maintenance, use and conservation of water resources in the Panama Canal Watershed
Law 28	Law 28 of 2006 passed by the National Assembly of Panama that expressly prohibits the construction of dams for the operation of the Expanded Panama Canal
Law 44	Law 44 passed on August 30, 1999 by the Panamanian Legislative Assembly that expanded the jurisdiction of the ACP by more than 2000km ²
LBG	The Louis Berger Group
LBG Report	The Louis Berger Group's Independent Engineer Report
Loan	The Non-Sovereign Guaranteed Loan of US\$ 400 million provided by the Bank to the ACP
Management	Management of the Inter-American Development Bank
Master Plan Safety Margin	The projected excess of water available from relevant resources after satisfying requirements for both operation of the Expanded Panama Canal and for human consumption (3.2 lockages/day in 2025)
Master Plan	The ACP's Panama Canal Master Plan
Missions	The September 2013 Mission and the December 2013 Mission
NGO	Non-governmental organization
OP-703	The Environmental and Safeguards Compliance Policy

OP-704	The Disaster Risk Management Policy
OP-765	The Indigenous Peoples Policy
Panama Canal Watershed	“The superficial and underground waters of a certain geographical area, which flow towards the Canal or are discharged into it, including its reservoirs and lakes.”
Policy Filter	The Social and Environmental Safeguard Policy Filter
Priority Project	The Priority Activities Hydrographic Basin Panama Canal Project
Project	The Panama Canal Expansion Program - PN-L1032
Project Lenders	The Inter-American Development Bank, the Japanese Bank for International Cooperation, the European Investment Bank, the International Finance Corporation, and the Andean Development Corporation of CAF- the Development Bank of Latin America
Project Team	The Inter-American Development Bank team in charge of the Panama Canal Expansion Program - PN-L1032
Projected Water Availability	The amount of water projected to be available in the Panama Canal Watershed with the Water Alternatives that were ultimately chosen for the expansion of the Panama Canal
Reconnaissance Study	A hydrological study conducted in 1999 by the United States Army Corp of Engineers to identify alternative water resources for potential use in Panama Canal operations
Representative Requesters	Ms. Leila Shelton, as the representative of <i>Alianza Pro-Panamá</i> Ms. Shelton, <i>Colectivo Voces Ecológicas</i> , the Gatún Lake Defense Committee and <i>Alianza Pro-Panamá</i>
ROPs	Relevant Operational Policies of the Inter-American Development Bank
Safety Margin	The relationship between water supply and demand from the Expanded Panama Canal and human consumption
Screening Form	The Social and Environmental Safeguard Screening Form
September Mission	The mission undertaken by the Panel to Panama from September 15-21, 2013
Strategy	The Strategy for Sustainable Development of the Panama Canal Watershed approved by the Bank in 2000
TORs	The Recommendation to Conduct a Compliance Review and the Terms of Reference for the Investigation
Water Alternatives	The alternatives to supply the water needs for the Expansion Alternatives
Water for human consumption	Includes any use by the population of water resources, including drinking, industrial and agricultural use and other uses, but excluding water necessary for the operation of the Canal
Western Watershed	The Coclé del Norte, Toabré, Caño Sucio and Indio Rivers and their watersheds

I. EXECUTIVE SUMMARY

- 1.1 The Inter-American Development Bank's Board of Directors (the "Board") approved a Compliance Review investigation of the Panama Canal Expansion Program PN-L1032 (the "Project") on September 12, 2013. This Compliance Review Report (the "Report") is the result of the investigation and was prepared in accordance with the ICIM Policy approved on February 17, 2010.¹ The Compliance Review was undertaken by a Panel comprised of the Panel Chairperson and two other Panel Members and was supported by other ICIM staff.² A Compliance Review is a fact-finding exercise. It is designed to evaluate compliance by the Inter-American Development Bank (the "Bank" or the "IDB") with its Relevant Operational Policies ("ROPs"). In carrying out a Compliance Review and preparing a Compliance Review Report, the Panel does not reach judgments about the actions of any other party other than the Bank. The objective of a Compliance Review is to establish whether, and if so, how, any Bank action or omission in respect of the Project resulted in non-compliance with ROPs and whether there has been or could be direct, material adverse effects, potential or actual, to the Requesters. The Recommendation to Conduct a Compliance Review and Terms of Reference for the Investigation (collectively, the "TORs") in the form approved by the Board specified a specific scope for this Compliance Review. The TORs provided that the Panel was to assess the Requesters' concerns about seismic and water availability risks, and not concerns about salt water intrusion, which were to be analyzed by the European Investment Bank's Complaints Mechanism ("EIB-CM"). For information about the Independent Consultation and Investigation Mechanism (the "ICIM") and the Compliance Review Process in general see Appendix I of this Report. For information about the Compliance Review process for this investigation; the scope of the Compliance Review; the Missions; the methodology for the Compliance Review; and the Panel's collaboration with other Independent Accountability Mechanisms ("IAMs") see Appendix II of this Report.

Key Findings related to Seismic Risk

- 1.2 In connection with potential seismic risk related to the Project, the Panel finds that the Bank did not comply with the Disaster Risk Management Policy ("OP-704"). The Panel finds that OP-704 was applicable to the Project but despite extensive searches and inquiries could not find evidence that the Bank applied OP-704. The Panel found ample information indicating that, at the time of Project preparation, seismic risk was a known risk factor in the Project area. The Panel's research indicates that the Bank received reports from experts regarding this risk

¹ This Report was prepared in accordance with the ICIM Policy. The Request was filed under and is subject to the ICIM Policy. A glossary of certain defined terms is included with this Report.

² The Panel Chairperson is Mary Rose Brusewitz, and the other two Panel members are Korinna Horta and Mario Epstein.

factor. Nonetheless, the Panel could not find evidence that the Bank itself, based on expert advice or otherwise, assessed this risk and documented it for the benefit of the Board and the public, including the Requesters, the steps taken, if any, by the Bank to meet the requirements of OP-704 in relation to seismic risk.³ The Panel has not investigated and reaches no conclusion as to whether the Project itself is vulnerable to or exacerbates seismic risk as designed or constructed.

- 1.3 The Bank's omission to take steps to comply with OP-704 caused harm to the Requesters in the form of fear that the Project may be vulnerable to and/or exacerbate seismic risk. The harm is caused by the lack of information describing the Bank's assessments and conclusions regarding seismic risk and what if any disaster risk management and mitigation measures or contingency plans are or would be in place in the event seismic activity were to threaten the Project.⁴

Recommendation related to Seismic Risk

- 1.4 The Panel recommends that the Board require Management to conduct an assessment of seismic risk (and perhaps other possible natural disasters) in the Project area, make a conclusion as to the Project's vulnerability to seismic risk and assign a classification in accordance with OP-704. If the classification so warrants, the Bank should either require the Borrower to develop specific response plans and/or mitigation measures for the Project or analyze any such measures the Panama Canal Authority (the "ACP") may have in place to determine if they comply with OP-704. Such steps should be duly documented and publicly disclosed so that Requesters and the public are aware of the Bank's assessments and any relevant actions related to seismic risk in the Project.

Water Availability Risk

- 1.5 The analysis of water availability risk involved two main sets of issues. The first deals with the Requesters' concerns about water sufficiency for operation of the Expanded Panama Canal (defined in Section II, Part B) and human consumption, and is related to the Bank's compliance with its Environmental and Safeguards Compliance Policy ("OP-703") and its long-term sustainability objective. The second deals with the Requesters' concerns related to an area known as the Western Watershed (defined in Section V, Part B) and the Bank's compliance with OP-703 and the Indigenous Peoples Policy ("OP-765") regarding the need for consultation with affected parties.

³ Key environmental reports prepared by the Bank contain no assessment as to the disaster risk classification of the Project in accordance with OP-704. Nor do these reports contain evidence that any mitigation measures have been or will be developed with respect to this risk.

⁴ Potential harm or adverse material effects to the Requesters could also be experienced in the event that seismic activity impacts the Project without the Bank having thoroughly ensured and documented that mitigation measures and contingency plans have been developed for the operation of the Project. The Panel considers that delaying the production of contingency plans until just prior to the operation of a project, when the project is close to or at completion could possibly lead to a scenario in which the parties could discover too late that the implementation of a suitable contingency plan is not feasible.

Key Findings related to Water Projections and Long-Term Sustainability

- 1.6 The Panel finds that the Bank identified water availability as the principal Project risk, and cited other key risk factors that could affect water availability. Nonetheless, the Bank did not undertake a sufficiently rigorous analysis of the water projections to substantiate its conclusion that there would be sufficient water for the operation of the Expanded Panama Canal and human consumption.
- 1.7 Specifically, the Panel could not find evidence that the Bank applied an appropriate level of analysis of the adequacy of the “Safety Margin” (the relationship between water supply and demand from the Expanded Panama Canal and human consumption) projected by the ACP nor that it analyzed whether the ACP’s choice in the Master Plan (defined in Section V, Part B) to provide water projections only up to the year 2025 was sufficient. The Panel found that the Master Plan and the Environmental Impact Assessment of the Project (the “EIA”) contained differing water supply and demand scenarios but could not find evidence the Bank noted these differences or analyzed and ultimately agreed with the appropriateness of either. As such, the Panel finds the Bank’s conclusions as to water availability were not properly supported and thus the Board received inadequate information regarding a significant Project risk.
- 1.8 In sum, the Panel finds that the Bank did not comply with OP-703, as it did not demonstrate that the Project was reasonably likely to meet OP-703’s overall objective of long-term sustainability. The Bank’s non-compliance with OP-703 could cause potential harm to the Requesters if shortcomings in water availability were to cause the Panama Canal to face slowdowns or halt operations. Such an event might result in a loss of the Project’s intended Development Benefits (defined in Section IV, Part A). In addition, if other water resources are eventually needed to meet the demand of the Expanded Panama Canal, further degradation to the environment could be caused if not adequately mitigated.

Recommendation related to Water Projections and Long-Term Sustainability

- 1.9 The Panel recommends that the Board require the Project Team to review the water supply and demand projections, including consideration of time horizons beyond 2025 in a way that reasonably meets the standards of OP-703 and takes into account identified risks. The Bank’s assessment or measures taken to carry out this recommendation should be duly documented and publicly disclosed so that Requesters and the public are made aware of the Bank’s compliance with OP-703 related to water availability. Additionally, the Panel recommends that the Bank closely monitor the Project to ensure that applicable ROPs are followed, particularly if water resources prove insufficient in the future.

Assessment of the Situation in the Western Watershed

- 1.10 As required by the TORs, the Panel reviewed whether (i) in order to comply with its ROPs, the Bank should have required the ACP to consult with Western

Watershed communities and (ii) a link can be established between Bank actions or omissions and potential or actual harm alleged by the Requesters. After assessing these issues in the context of the final design of the Project as approved by the Board, which came after the 2006 removal of the Western Watershed from ACP's jurisdiction and subsequent passage of Law 28 of 2006 expressly prohibiting the construction of dams for the operations of the Expanded Panama Canal, the Panel did not reach a non-compliance finding with either OP-703 or OP-765 regarding consultations.

- 1.11 Notwithstanding that no non-compliance finding in this area was made, the Panel has strong evidence that the social problems in the Western Watershed described in Section V, Part A, remain. Between 1999 and 2006, the Western Watershed was under the ACP's jurisdiction and preparatory activities (such as the placement of markers where dams would be built) were undertaken.⁵ The Panel was informed that the markers for the dams are still in place and observed that, partly as a result of the continued existence of those markers, the Requesters from the Western Watershed remain anxious about their future. Though these issues of concern may not relate to Bank actions or omissions in respect of the Project, the Board may wish to consider whether, particularly given the historical involvement of the Bank in events affecting the Western Watershed, the Bank could engage with the ACP and other stakeholders to develop a concrete communication strategy for the Western Watershed communities to share Project information, including providing an explanation of the removal of the Western Watershed as a source of water for the operation of the Expanded Panama Canal. A specific measure that could have a great symbolic impact would be for the Bank to support the removal of the hydrological markers.⁶ The Panel also recommends that the Bank ensure that the ROPs will be fully applied, at least until the repayment of the Loan, should access to water resources of the Western Watershed or elsewhere be required in the future.

II. THE PROJECT

A. Background: The IDB's Involvement in Panama Prior to the Project

- 2.1 For more than 100 years the Panama Canal has allowed the transit of vessels between the Atlantic and Pacific Oceans (the "Panama Canal" or the "Canal"). The Project supports an expansion of the Canal. The Bank has long been involved in the evaluation and development of alternatives for an expansion of the Canal. In 1993, an IDB Technical Cooperation Project provided financing for

⁵ The purpose of those activities was to make preparations so that the ACP could access water resources of that area to supply an expanded Panama Canal. Documentation relating to past IDB projects in the Western Watershed clearly identified significant social issues, including anxieties experienced by communities in the region about involuntary displacement.

⁶ This measure could assuage the extensive anxiety felt even now by members of local communities who live in constant fear of being up-rooted.

environmental and social studies related to watershed resource conservation related to the Panama Canal and its surrounding areas.⁷ In 1999, the IDB assisted with the creation of the National Environmental Authority (“ANAM”) and in 2000 supported the Inter-Institutional Commission for the Panama Canal Watershed (“CICH”).⁸ In 2000, the Bank assisted the ACP with the preparation of a sustainable development strategy for the Panama Canal Watershed, which at the time included a region known as the Western Watershed.⁹ The strategy included a wide community outreach program in preparation for the expansion of the Canal.¹⁰ In 2005, the Bank approved the Priority Activities Hydrographic Basin Panama Canal project (the “Priority Project”) supporting the integrated management of the Panama Canal Watershed, which at the time still included the Western Watershed. In 2007, the Bank made a US\$10 million loan to support capacity building of ANAM and local governments to address environmental management challenges.¹¹

B. The Project

2.2 In mid-2007, the IDB began concrete preparations to participate in the co-financing of the proposed expansion of the Panama Canal. On October 12, 2007, the IDB Management team for the Project (the “Project Team” or “Management”) presented the Environmental and Social Strategy (“ESS”) to the Environmental and Social Review Group at the Bank. The Project was classified as “Category A” under the IDB’s Environmental and Safeguards Compliance Policy (OP-703), indicating high risk.¹² After further due diligence, on September 23, 2008, the Bank finalized the Project’s Environmental and Social Management Report (the “ESMR”). On October 8, 2008, the Board approved the Panama Canal Expansion Program-PN-L1032, a Non-Sovereign Guaranteed Loan of US\$ 400 million to the ACP (the “Loan”), roughly 7.6 % of the total amount of the US\$ 5.25 billion then estimated to be required for the Canal’s expansion.¹³

⁷ Loan Proposal PN-0066, Studies of the Interoceanic Region (778/OC-PN).

⁸ Environmental and Social Management Report (ESMR) Panama Canal Expansion Program (PN-L1032), September 2008, accessible [here](#).

⁹ The “Panama Canal Watershed” is defined below in Section V, Part B.

¹⁰ Operations Plan, Strategy for Sustainable Development of the Panama Canal Watershed (ATN/JF-7196-PN), accessible [here](#). For further information on this strategy, see Section V, Part B.

¹¹ Loan Proposal, Modernization of Environmental Management for Competitiveness (PN-L1013), accessible [here](#).

¹² The stated rationale for this classification was that “the magnitude of the Expansion Program has the potential to cause significant negative environmental and associated social impacts.” See: Environmental and Social Strategy (ESS), Panama Canal Expansion Program (PN-L1032), paragraph 4.37, accessible [here](#).

¹³ According to the Bank’s Access to Information Policy (OP-102), exceptions apply limiting the Bank’s ability to disclose information about the Project. Information related to NSG operations shall not be disclosed except: Initial Project Abstracts, Environmental and Social Strategies, Environmental Impact Assessments, Strategic Environmental Analyses, Environmental Analyses, Environmental and Social Management Reports, Abstracts of Approved Projects and information which the respective borrower has expressly consented to disclosure. See: Access to Information Policy (OP-102), Paragraph 4.1 (j), 2010. The confidentiality requirements for NSG operations apply equally to all documents produced by the Panel.

- 2.3 In addition to the IDB, the Development Bank of Latin America (“CAF”, formerly known as the Andean Development Corporation), the Japanese Bank for International Cooperation (“JBIC”), the European Investment Bank (the “EIB”) and the International Finance Corporation (the “IFC”), collectively the “Project Lenders”, also provided funding to the ACP for the expansion of the Canal.
- 2.4 The ACP (the “Borrower,” the “Executing Agency,” or the “Client”) is an autonomous legal entity established in Panama in 1997 by a constitutional mandate and Law Number 19 of June 11, 1997 (“Law 19”). The ACP is wholly-owned by the Panamanian government and has exclusive responsibility for the operation, administration, management, preservation, maintenance and modernization of the Canal,¹⁴ as well as for the management of water resources of the Panama Canal Watershed to provide water for human consumption, energy generation and operation of the Canal.¹⁵
- 2.5 The proceeds of the Loan were to support four components: the construction of two new, larger locks; the excavation of 6.1 km of a new Pacific access channel; the widening and deepening of navigation channels; and the elevation of Lake Gatún. Collectively these components are referred to in this Report as the “Expanded Panama Canal.”¹⁶
- 2.6 As of July 30, 2013, the Loan was fully disbursed and by February 2014, the loans of all the Project Lenders were fully disbursed. The construction of the Expanded Panama Canal suffered delays caused, among other things, by a contractual dispute between the ACP and the Main Contractor.¹⁷ As of May 31, 2015, the Project was 89% complete according to the ACP website.¹⁸

III. THE REQUEST

A. The Request

- 3.1 On October 10, 2011, Ms. Leila Shelton, Director of the Gatún Lake Defense Committee (a group including scientists and other citizens), submitted a Request to the ICIM about the Project.
- 3.2 On October 20, 2011, the ICIM received a written communication from representatives of a Panamanian umbrella NGO, *Colectivo Voces Ecológicas*,

¹⁴ The Panama Canal was managed by the Panama Canal Company until 1979. From 1979 to 1999, the Panama Canal Commission was in charge of the Canal. The Panama Canal Authority has managed the Canal from 1999 to the present.

¹⁵ Article 4 of Law No. 19 of June 11, 1997, Panama Legislative Assembly.

¹⁶ The ACP conducted an international competitive bidding process for the design and construction of the locks, gates and valves for the Expanded Panama Canal. The consortium *Grupos Unidos por el Canal S.A.* (the “Main Contractor”) won the bid in January 2012.

¹⁷ Panama Canal Authority Press Release, January 19, 2014 accessible [here](#).

¹⁸ The Panama Canal Expansion website is accessible [here](#).

acknowledging Ms. Shelton as the representative of *Alianza Pro-Panamá*¹⁹ (the “Representative”) and reiterating the concerns described in the Request.²⁰ The term “Requesters” in this Report refers to Ms. Shelton, as well as the members of the non-governmental organizations *Colectivo Voces Ecológicas*, the Gatún Lake Defense Committee and *Alianza Pro-Panamá*.

- 3.3 On January 18, 2013, the Representative submitted complementary information describing direct material harm suffered or likely to be suffered by the Requesters and alleging that such harm could be caused by non-compliance by the Bank with certain ROPs.

B. Alleged Harms

- 3.4 The Requesters expressed four broad areas of concern related to the Project and its potential impacts:
- a) seismic risk and its potential impact on the Panama Canal and surrounding areas;
 - b) high levels of salt water intrusion in Gatún Lake that might impact the population’s access to potable water;
 - c) impacts on biodiversity due to additional salt water intrusion and enhanced species migration between the Atlantic and the Pacific; and
 - d) whether there would be sufficient water to run the locks and whether during operation of the Project, there was a risk of water shortages for other needs. Related to this was a concern that if water was in short supply, the Panama Canal Watershed might once again be expanded to include the Western Watershed, which would threaten the livelihoods of local communities.
- 3.5 The TORs provided that the Panel was only to assess the Requesters’ concerns about seismic and water availability risks, and not concerns about salt water intrusion, which were to be analyzed by EIB-CM.
- 3.6 The Requesters’ allegations principally relate to the Environmental and Safeguards Compliance Policy (“OP-703”), the Disaster Risk Management Policy (“OP-704”) and the Indigenous Peoples Policy (“OP-765”).

¹⁹ Alianza Pro-Panamá is a coalition including individual Panamanians, Panamanian organizations and organizations forming part of the non-Panamanian international community, and specifically includes: Unión Campesina Panameña; Frente Campesino contra los Embalses y la Minería de Coclé y Colón; Frente Campesino Colonense; Organización Campesina Coclesana 15 de Mayo; Unión Indígena Campesina; Coordinadora para la Defensa de Tierras y Aguas; Asociación Pro Defensa de las Cuencas Hidrográficas; Frente de Resistencia Coclesano; and Coordinadora Campesina por la Vida.

²⁰ Part B, Section 30 of the ICIM Policy states that “[a] Request may be presented by a representative located in the project host country or elsewhere, but any such Request must identify the persons(s) on whose behalf the representative is acting and provide evidence of the representative’s authority to represent them.” “Request” is defined in Part A, Section 27 of the ICIM Policy as “any communication relating to this Policy from a Requester”. At the time of eligibility, the Project Ombudsperson and the Panel Chair determined that Ms. Shelton’s status as a “representative” of Requesters was adequately established.

IV. SEISMIC RISK

A. Alleged Harm and Link to ROPs

Context and Alleged Harms

- 4.1 As of 2008, when the Board approved the Project, many reliable sources highlighted the history of earthquakes in Panama, including reports prepared by or for the ACP, as well as a report prepared for the Project Lenders by an independent expert, all of which highlighted this risk.²¹ Thus earthquake risk was (and is) a factor to be taken into account for the Project area.²²
- 4.2 The Requesters' concerns related to seismic risk raise the question of whether the Bank adequately identified risks related to the Expanded Panama Canal due to seismic activity, such as earthquakes; and whether the Bank required the Executing Agency to adopt appropriate mitigation and contingency measures in connection with the operation of the Project to reduce risks from earthquakes to acceptable levels.²³
- 4.3 The potential or actual harms alleged by the Requesters include potential damage to life and property, and the fear that, in a zone known for earthquakes, the new infrastructure elements could exacerbate the already-present risk of such harms. The Requesters also allege they could potentially be affected if seismic activity negatively impacts the operation of the Expanded Panama Canal and as a result, the operations of the Canal might be reduced or suspended. The Canal's revenues are important to Panama, and the Requesters fear that a reduction in revenues could have many adverse consequences, including reducing funds available to the government for public programs, among other important uses of funds that benefit the Panamanian people. If the result of a significant reduction in these revenues negatively impacted spending on public programs, this could also negatively affect the Requesters, and prevent them from fully receiving some of the development benefits of the Project (the "Development Benefits").

²¹ Environmental Resources Management ("ERM") and the Louis Berger Group ("LBG") were experts retained on behalf of the Project Lenders by the ACP to corroborate that the Project met applicable social and environmental standards. The 3rd Preliminary Report related to the Technical Consulting Services for the Panama Canal Expansion Program issued by LBG (the "Independent Engineer Report") identified earthquake risk in the Project area as "medium low."

²² Among some of the studies available at the time were: the "Earth Consultants International, Inc. Report" of 2005; the "Design Earthquakes for the East Area of Canal Basin" (Hugh Cowan, August 1999); the "Design Earthquakes for the evaluation of seismic hazard - Gatun Dam" (Hugh Cowan, August 1999); and the "Preliminary Report on the Seismic Adequacy of the Gatun Spillway" (ACP, July 2001).

²³ In line with the ICIM Policy and the TORs, the Panel focused only on concerns that could be directly attributable to actions or omissions by the Bank. The TORs further limited the inquiry regarding seismic risk to actions or omissions by the Bank that could relate to OP-704.

Link to Relevant Operational Policies

- 4.4 The Requesters' concerns are linked to the Disaster Risk Management Policy (OP-704). Directive A-2 ("Directive A2") of OP-704 requires the Bank to identify and reduce risks due to natural disasters in Bank-Financed Operations.

B. Applicability, Requirements, and Framework of OP-704

- 4.5 OP-704 is applicable to both public and private sector projects²⁴ incorporated into the Bank's lending pipeline after May 2007.²⁵ Therefore, OP-704 applies to the Project.²⁶ OP-704 requires the Bank conduct an assessment as to the likelihood of possible natural disasters in the context of a project and assign a classification based on the parameters established in OP-704. If the classification so warrants, the design, construction and operation of the project is required to incorporate measures to reduce or mitigate disaster risk to acceptable levels.²⁷ The Panel acknowledges that at the time Management began formal Project preparation, OP-704 was new and the formal structures and procedures now in place were nascent but sufficient guidance was available at that time.²⁸

C. Analysis and Findings on Seismic Risk

- 4.6 Based on consideration of the ESS, the ESMR, other (frequently non-publicly available) Bank documents for the Project and interviews with the Project Team, the Panel finds that concerning potential seismic risk related to the Project, the Bank did not comply with OP-704, and in particular, with its Directive A.2. Specifically, the Panel found no evidence that:

²⁴ Disaster Risk Management Policy OP-704, February 23, 2007, Section III.

²⁵ Disaster Risk Management Policy OP-704, February 23, 2007, Section V.

²⁶ For NSG operations, a project is considered to be in the Bank's pipeline after a mandate letter has been signed between the Bank and the executing agency. According to the Project Team, a mandate letter was not executed for the Project because ACP's procurement regulations did not allow it. Instead, a confidentiality agreement was signed on December 14, 2007 meaning, per the rationale above, OP-704 was in effect and applicable to the Project. In addition, paragraph 3.36 of the ESS, states the Bank will assess compliance with applicable Bank policies, including OP-704. The NSG Operational Guidelines in place at the time the Project was prepared clearly establish that NSG projects should conform to the Bank's policies and procedures. See: Operational Guidelines for Non-Sovereign Guaranteed Operations, GN-2400-11; August 1, 2006, paragraph 5.6

²⁷ Further details on the requirements established in Directive A.2 can be found in Appendix III of this Report.

²⁸ See: Appendix III for summary of the Bank's framework and sources of guidance regarding OP-704.

- 1) the Bank analyzed or took the necessary steps to apply OP-704 as it prepared the Project.²⁹ In particular, the ESS and the ESMR contain no assessment as to the classification of the Project in accordance with OP-704;
- 2) factors such as the distribution in frequency, duration and intensity of seismic hazard events in the geographic area potentially affecting the Project were analyzed and taken into account by the Bank; and
- 3) the Bank's social and environmental project screening and classification process included identification and analysis of seismic natural hazards or any consideration as to how potential risks stemming from seismic activity could be reduced or mitigated or how such risk might affect the achievement of the Project's development outcomes.

4.7 As noted in Appendix III of this Report (Background of OP-704, Guidance and Requirements), the Disaster Risk Management Policy Guidelines (the "Guidelines") and other instructional tools relating to the application of OP-704 were not yet fully developed at the time the Bank was preparing the ESS, though a draft version of the Guidelines was available. By the time the ESMR was finalized and the Project was submitted for Board approval, the Guidelines were already in effect. Furthermore, OP-704 provides that disaster risk management can be incorporated into the project cycle on the basis of generally accepted standards and practices. The Panel believes that the Bank could have utilized guidance regarding the Bank's new disaster risk management approach from multiple external sources. The Panel located no evidence that any such standards or practices were taken into consideration by the Bank in the screening and classification process for the Project.³⁰

4.8 OP-704 requires project teams to "identify if the projects have high exposure to natural hazards or show high potential to exacerbate risk and take into account the projected distribution in frequency, duration and intensity of hazard events in

²⁹ In its research, the Panel reviewed whether there is evidence that, during the classification and screening process, the Project Team considered whether OP-704 was applicable to the Project. The Panel found no such evidence in the documents generated by the Bank's Environmental Safeguards Group System (the "System"). The Panel recognizes that the System was not yet active at the time the Project was prepared and approved, but the Panel understands that the Bank has retroactively populated the System with information for past projects. As such, the Panel considers the System relevant. Indeed, the System includes information relating the Project, providing access to a number of Project documents, including the Policy Filter and the Screening Form (defined in Appendix III of this Report), which are required by the Guidelines. The Policy Filter and the Screening Form for the Project contain assessments of which ROPs were applicable to the Project, but do not mention anything related to natural disaster risk, disaster risk management, or OP-704. Other examples demonstrating that the Bank did not consider OP-704 to apply can be found in Chapters III and VIII of the ESMR. The Loan Proposal contains no reference at all to seismic risk, earthquakes or other natural hazards, as required by OP-704.

³⁰ As an example, in January 2007, the *Provention Consortium* (a global coalition of governments, international organizations, academic institutions, the private sector, and civil society organizations aimed at reducing disaster impacts in developing countries) published the research paper "Tools for Mainstreaming Disaster Risk Reduction: Guidance Notes for Development Organizations" which is an extensive analysis on how to incorporate disaster risk management into project cycles. Document accessible [here](#). Therefore, during the due diligence of the Project, the Project Team could have considered such "generally accepted standards and practices" on how to apply policies like OP-704 and incorporate disaster risk management into the project cycle.

the geographic area affecting the project.”³¹ OP-704 also requires the Bank to *analyze* relevant data (even if provided by the Executing Agency or independent experts), *independently identify relevant risks* and *reach a conclusion*, including categorization of risk(s). Steps taken in this respect, including the categorization, would be described in Bank documents such as the ESMR or the ESS.³²

- 4.9 The Panel could not find evidence that the Bank undertook and reported its analysis and conclusion regarding seismic risk in its own documentation on its social and environmental project screening and classification as required by OP-704. The ESS and the ESMR for the Project contain language referring to natural disasters, but they do not include an assessment by the Bank of possible natural hazards that could affect the Project, as required by OP-704. There are references to the ACP’s contingency plans in the event of the occurrence of natural disasters in paragraphs 6.18 and 6.20 of the ESMR, but these contingency plans relate to the then existing Panama Canal and the *construction phase* of the Expanded Panama Canal. Thus implicitly it was recognized that natural disaster risks were relevant to the process of preparing the Project. However, there is no evidence of contingency planning for natural disasters *for the operation of the Expanded Panama Canal*. Even if a reference as to the appropriate contingency plan(s) had been included, solely making reference to a contingency plan does not meet the standards of OP-704, which requires that the contingency plan(s) and any necessary mitigation measures to reduce disaster risk to acceptable levels be independently analyzed and validated as they relate to the future operation of a project. The Panel considers delaying the production of contingency plans until just prior to the operation of a project is a risky practice as it could possibly lead to a scenario in which the parties could discover too late that the implementation of a suitable contingency plan is not feasible.
- 4.10 In Management’s comments to the draft Report, the Project Team states that “the Bank has complied with the policy in substance but recognizes that documentation of the application of OP-704 could have been improved.” The Project Team also noted that “the assessment of potential natural disasters, including seismic risk, has already been extensively reviewed by highly qualified and internationally recognized experts, and confirmed by the Bank’s Independent Engineer (“IE”). The risk was identified and adequately incorporated into the design specifications of the Panama Canal Expansion Program by ACP.”³³ Management referred to: (i) a chart that contained the chronology of the seismic hazard characterization; (ii) the list of experts on the ACP’s advisory board for seismic issues; and (iii) a list of seismic studies, reports, design specification and

³¹ OP-704, Section IV, Directive A2, paragraph 2.

³² OP-704, Section IV, Directive A2, paragraph 5.

³³ In Management’s comments to the draft Report the Project Team stated that the Independent Engineer’s Report had considered the seismic risk to be “medium to low”. In this case, the Panel notes that the actual conclusion of the Independent Engineer’s Report was that the seismic risk was “medium low” which would be a higher risk classification than a range between medium and low.

plans that had been reviewed by the Louis Berger Group as the Bank's Independent Engineer. Nonetheless, the Panel located no contemporaneous support for steps taken by Management in this respect, as noted above.

- 4.11 The Panel is aware that experts were retained and may have undertaken relevant work and reached conclusions in the area of seismic risk. A classification or assessment by the Bank under OP-704 could be made *based on* independent expert opinions and any other evidence the Bank reasonably deemed credible. But OP-704 requires the Bank to make its own conclusions and assessments based on its due diligence, which might include the Bank's review and analysis of reports or assessments of experts it deems qualified. The Bank might adopt an expert's views, but should provide evidence of its own analysis and conclusions in a document authored by the Project Team. In fact, the expert reports reveal that the experts had different views regarding seismic risk. The Louis Berger Group as the Bank's Independent Engineer classified seismic risk to be "medium low" while the EIA and the independent review of the EIA considered it to be "low". The existence of differing opinions as to the classification of seismic risk underscores the need for the Bank to make its own analysis of expert opinions and to reach its own conclusion. This is especially true in private sector operations, where frequently the documents and reports containing expert conclusions are not publicly available, as in this case. The ESS and ESMR are intended in part to provide publicly available information documenting that the Bank is complying with its ROPs in a given project. If the publicly available documents do not reflect this, the public (including Requesters) have no assurances that any of this analysis has taken place or ability to see whether the Bank complied with its own ROPs.
- 4.12 Given that Management made reference in comments to the draft Report to both mitigation measures and contingency plans for the Project and that the independent expert reports did classify this risk, this would indicate at least a certain degree of seismic risk needed to have been and perhaps was considered by the Bank when preparing the Project, but as stated, the Panel could not find evidence of the Bank's analysis or conclusions. One could describe the lack of evidence as "merely" a procedural matter or that perhaps this was simply an oversight or lack of documentation of the process. But given that the public and affected peoples can only know what is done through a review of publicly available documents, this explanation seems inconsistent with the Bank's strong interest in risk management, transparency and accountability.
- 4.13 The Panel emphasizes that it has made no conclusion as to whether the Project itself is vulnerable to or exacerbates seismic risk as designed or constructed and the Panel is aware that it is possible that the Project may have incorporated into its design findings of independent experts regarding seismic risk. However, the Panel is not tasked with evaluating compliance by the ACP (or any party other than the Bank) with ROPs. This section of the Report deals only with whether the Bank properly applied OP-704. In this case, as noted in the above analysis, the

Panel did not find that that the Bank carried out assessments or otherwise took steps to meaningfully apply OP-704 in the context of the Project.

- 4.14 As such, the Panel finds that the Bank did not comply with OP-704 in connection with the Project and finds that the Board received incomplete information with respect to risks of natural hazard events possible in the Project area, which include seismic risk (as well as risks relating to other types of natural disasters, such as hurricanes, floods and droughts).
- 4.15 The Panel wishes to highlight that failure to comply with ROPs or to communicate to stakeholders how the Bank is complying with them may raise project costs, induce delays in execution and/or cause reputational harm to the Bank and other stakeholders. Compliance with ROPs and appropriate public documentation thereof is essential for the Board, the Bank's shareholders and affected people and is a vital part of the Bank's risk management function.

D. Material Adverse Effects to the Requesters

- 4.16 The Panel finds that the Bank's omission to take steps necessary to comply with OP-704 caused harm to the Requesters in the form of fear that the Project may be vulnerable to seismic risk due to its location or exacerbate such risk. The harm is caused by the Bank's omission to conduct the necessary assessments and carry out other steps related to disaster risk management as required by OP-704 and make such information publicly available. Potential harm or adverse material effects to the Requesters could also be experienced in the event that seismic activity negatively impacts the Project without the bank having thoroughly ensured and documented that mitigations measures and contingency plans have been developed for the operation of the Project. If operations of the Canal were reduced or suspended, due to a disaster such as an earthquake, the Requesters fear that the ACP's revenues could be negatively affected and funding passed by the ACP to the Panamanian government for Development Benefits could potentially be reduced.

E. Recommendations related to Seismic Issues

- 4.17 Given its findings, the Panel recommends that Board request that Management undertake a review and analysis of the information gathered during the due diligence of the Project (including expert reports as deemed appropriate by Bank), and reach a conclusion as to the Project's vulnerability to seismic risk (and possibly other potential natural disasters). The Bank should then, following the steps of OP-704, assign the Bank's disaster risk classification. If the classification so warrants, the Bank should either require the Borrower to develop specific response plans and/or mitigation measures for the operation of the Expanded Panama Canal or analyze any such measures that the ACP may have

in place, to determine whether such measures comply with OP-704.³⁴ The Bank's assessment, classification, mitigation measures and contingency plans for the operation of the Project should then be duly documented and disclosed in a public document so that Requesters and the public are aware of the Bank's assessment and any relevant actions related to seismic risk for the Project.

V. WATER AVAILABILITY RISK

A. Alleged Harms and Links to ROPs

Alleged Harms

- 5.1 The Requesters have concerns about whether the Panama Canal Watershed will be able to provide sufficient fresh water for the operation of the Expanded Panama Canal and human consumption over time.³⁵ The Requesters are concerned that risk factors such as climate change, El Niño-Southern Oscillation ("ENSO") events and increased human consumption could negatively impact the viability of water availability scenarios projected by the ACP, on which the Bank relied when approving the Project. The Requesters say that furthermore, the water supply and demand projections for the Expanded Panama Canal reveal a Safety Margin they consider too "slim," and they fear this signals a dangerous risk of water insufficiency under some possible scenarios. They are concerned that if water is in short supply, the Canal might have to slow or halt its operations, or the ACP would need to consider accessing alternative water resources. The Requesters fear that it is likely that water resources might be taken from a region known as the Western Watershed. These resources were for many years considered to be strategic for the Canal and they have at times been under jurisdiction of the ACP.³⁶ The Requesters say accessing water resources from the Western Watershed would impact Panama as a whole, but would most directly affect communities in that area, including indigenous communities. The majority of residents of that area are subsistence farmers and fishermen and depend on the watershed and nearby land for their livelihoods. The Requesters allege that if the Western Watershed's water resources were accessed, negative environmental and social impacts, including displacement, could be caused.
- 5.2 The alleged potential or actual harms related to the Requesters' concerns include potential economic harm to the citizens of Panama from possible slowdowns or halts to the operation of the Canal. This could adversely impact Panama's spending on public programs and consequently harm the Requesters' enjoyment

³⁴ Bank practice is that the executing agency must comply with ROPs during the life of the Loan.

³⁵ When in this Report reference is made to the term "water" it should be understood to mean fresh water. Reference to the term "water for human consumption" is intended to include any use by the population of water resources, including drinking, industrial and agricultural use and other uses, but excluding water necessary for the operation of the Canal, whether before, during or after the implementation of the Project.

³⁶ The Requesters commented on the draft TORs for the investigation: "Panama cannot afford a loss of revenues of the magnitude provided by the Panama Canal, nor the loss of our major freshwater reserve."

of the Project's intended Development Benefits. Other alleged potential harms relate specifically to the Western Watershed and include fear of land expropriation to build reservoirs and other infrastructure and the consequent loss of livelihoods, homes, and culture; and lack of access to information and consultation about the future of the Western Watershed and its role in strategic planning for the Expanded Panama Canal. The Requesters are aware that the Western Watershed is not currently under the jurisdiction of the ACP and that a legal change would be needed to re-annex the area, but they say they have been living amid the reminders of prior efforts to access the water in their region, and therefore are mistrustful and insecure.

Links to Relevant Operational Policies

- 5.3 The Requesters' concerns about long-term water availability relate to OP-703, which requires that benefits of development activities, including goals of environmental sustainability in all Bank operations, be sustainable over the long term.³⁷ Given that sufficient water availability is critical to the Expanded Panama Canal's success, OP-703's sustainability requirements are of paramount importance to the Project.
- 5.4 The Requesters' concerns are also linked to Directive B.4 of OP-703 ("Directive B.4"), which requires the Bank to identify and require the implementation of mitigation measures to address other environmental risks that may affect the environmental sustainability of an operation. The possible impacts of climate change, ENSO events and urban growth rates constitute such "other risks."
- 5.5 Some of the Requesters' concerns relate to the ACP's prior involvement in the Western Watershed. Decisions affecting that region's future could be linked to Directive B.6 of OP-703 ("Directive B.6"), which requires the Bank to ensure that affected parties are consulted and that their views are appropriately considered in connection with Bank-Financed Operations. Similarly, these concerns could relate to OP-765, which requires consultation with affected indigenous peoples.

B. Background

- 5.6 The ACP is responsible for the management, maintenance, use and conservation of water resources in the Panama Canal Watershed. Relevant Panamanian law defines the "Panama Canal Watershed" as "the superficial and underground waters of a certain geographical area, which flow towards the Canal or are discharged into it, including its reservoirs and lakes."³⁸ Panamanian law requires the ACP to adopt regulations to manage water resources to ensure the operation of the Panama Canal and the supply of water for neighboring towns.³⁹ At the time of the Project's preparation, the Panama Canal Watershed was

³⁷ It is important to note that OP-703 does not contain a definition of "long-term"; it is to be interpreted in the context in which OP-703 is applied.

³⁸ Law 19 of 1997 passed by the National Assembly of Panama.

³⁹ Articles 6 and 120 of Law 19 of 1997.

estimated to supply the water for human consumption for more than 50% of the population in the country.⁴⁰

- 5.7 Two different geographic areas are relevant to water availability issues. One is the area that has been the historical source of water for the operation of the Panama Canal, comprised of the Gatún, Alajuela and Miraflores Lakes (the “Eastern Watershed”), long under the jurisdiction of the ACP.⁴¹ Another is comprised of the Coclé del Norte, Toabré, Caño Sucio and Indio Rivers, among other water sources (the “Western Watershed”), which has not always been subject to ACP jurisdiction.⁴²
- 5.8 During 1997 and 1998, severe droughts in Panama affected the operation of the Panama Canal. It was during this period that the ACP began considering alternatives for expansion and modernization of the existing set of locks (the “Expansion Alternatives”). At the time, the ACP believed that additional water resources beyond those from the Eastern Watershed would be needed.
- 5.9 In 1999, the United States Army Corps of Engineers was commissioned by the Panama Canal Commission to prepare a hydrological study to identify potential alternative water resources for the Panama Canal (the “Reconnaissance Study”).⁴³ The Reconnaissance Study identified nineteen water resource alternatives within the Eastern and Western Watersheds. The Reconnaissance Study ranked the resources located in Western Watershed the best in terms of water yield and from a cost-benefit perspective.⁴⁴ The Reconnaissance Study noted that access to the Western Watershed’s water resources would require the construction of a combination of dams, lakes, tunnels and hydropower plants to channel such resources into the Panama Canal Watershed.⁴⁵
- 5.10 The ACP proposed changes to its jurisdiction to be able to access water resources from the Western Watershed. This proposal was enacted into law on August 30, 1999, when Panama’s Legislative Assembly passed “Law 44,” expanding the ACP’s jurisdiction by more than 2000km² to include the Western Watershed.⁴⁶
- 5.11 During 2000-2005, additional technical and feasibility studies on Expansion Alternatives were undertaken, including research into water supply alternatives to meet the potential water needs of the Expansion Alternatives (“Water Alternatives”). The ACP also began to carry out technical studies in the Western Watershed including land surveys for future dam sites and potential expropriations. Some of this work was supported by IDB projects. During

⁴⁰ See: Environmental Social Strategy, Panama Canal Expansion Program, paragraph 3.3.

⁴¹ Panama Canal Master Plan, Chapter 7, page 2, accessible [here](#).

⁴² Ibid, page 2.

⁴³ The Panama Canal Commission was the governing body of the Panama Canal between 1979 and 1999.

⁴⁴ Panama Canal Reconnaissance Study, Identification, Definition and Evaluation of Water Supply Projects, accessible [here](#). Page 4.

⁴⁵ Ibid, page 3, accessible [here](#).

⁴⁶ Further details about geographical boundaries can be accessed [here](#).

topographic investigations, physical markers were placed in several areas to define the boundaries of the expanded watershed which included areas inhabited and utilized by local communities, whose community organizations are represented in the Request. Western Watershed residents staged numerous protests against ACP's advancement into their region between 2001 and 2004, including a march to Panama City.

Bank Involvement in the Region prior to the Project

- 5.12 From 1993-2005, the Bank was involved in several projects in the region that are relevant to issues raised by the Requesters. In 1993, an IDB Technical Cooperation Project provided financing for environmental and social studies on watershed resource conservation for the Panama Canal and surrounding areas.⁴⁷ In July 1999, the IDB supported "Pre-Feasibility Studies and Environmental Instruments for Natural Resources Management in the Inter-Oceanic Region." These studies reported that in 1999, 75% of the water produced in the Eastern Watershed was used for Panama Canal operations and that the expansion of the Canal would require access to other water resources.⁴⁸
- 5.13 In 2000, the Bank approved the "Strategy for Sustainable Development of the Panama Canal Watershed" (the "Strategy"). The Strategy was designed to support the government of Panama in promoting a participatory approach to ensure that water projects would take into account the opinions and interests of the residents of the Western Watershed and ensure that future water projects would conform to internationally-accepted practices for managing environmental and social issues.⁴⁹
- 5.14 The Priority Project (defined in Section II, Part A) was approved in 2005. This project was designed to strengthen communication and dialogue with communities residing in the Eastern and Western Watersheds. It focused especially on residents of the Western Watershed, who were thought to be the most vulnerable, because activities to access water resources there would likely entail resettlement and negatively affect the socio-cultural and economic conditions of inhabitants of the area.⁵⁰ It took note of the fact that only 9% of the households in the Western Watershed had legal title to the land on which they lived. The Priority Project found that the extension of the ACP's jurisdiction into the Western Watershed, and the preliminary studies conducted by the ACP in the area, had generated uncertainty among the local communities about the ACP's

⁴⁷ Loan Proposal PN-0066. Studies of the Interoceanic Region (778/OC-PN).

⁴⁸ Project Profile, Pre-Feasibility Studies and Environmental Instruments for Natural Resources Management in the Inter-oceanic Region, TC-9806483, July 1999.

⁴⁹ Plan of Operations, Strategy for Sustainable Development of the Panama Canal Watershed, page 2. Accessible [here](#).

⁵⁰ Project Profile, Priority Activities Hydrographic Basin Panama Canal, PN-0139, page 1-2. Accessible [here](#).

objectives.⁵¹ This uncertainty erupted into large-scale demonstrations evidencing opposition to the plans to access water resources of the Western Watershed.

Water Alternatives in Connection with the Expanded Panama Canal

- 5.15 On June 7, 2006, the ACP finalized the Panama Canal Master Plan (the “Master Plan”), which contains an analysis of Expansion Alternatives as well as twenty-nine Water Alternatives.⁵² The Water Alternatives initially identified by the ACP were located in both the Eastern and Western Watersheds. However, given that implementation of some Water Alternatives in the Western Watershed were shown to involve the risk of negative social and environmental impacts, the ACP ultimately decided not to implement Water Alternatives located in the Western Watershed.⁵³ The Master Plan selected a combination of the following alternatives: to deepen the navigation channels of the Panama Canal to 9.2 meters; to raise the level of Lake Gatún to 27.1 meters; and to construct nine water conservation basins per each new lock.⁵⁴ The Master Plan intended to maximize the usage of water resources from the Eastern Watershed without accessing water resources from the Western Watershed.
- 5.16 On June 12, 2006, in the aftermath of social unrest due to opposition⁵⁵ to the construction of dams in the Western Watershed, Law 44 was repealed by the National Assembly.⁵⁶ The Western Watershed was removed from the ACP’s jurisdiction and the ACP’s activities in that area ceased. On June 17, 2006, the National Assembly of Panama passed Law 28 of 2006 (“Law 28”), which expressly prohibits the construction of any dams for the operation of the Panama Canal’s third set of locks.⁵⁷
- 5.17 On June 26, 2006, Panama’s Executive Branch approved construction of a third set of locks for the Panama Canal; on July 17, 2006, the Panamanian National Assembly passed a similar resolution. On October 22, 2006, Panama held a national referendum on the proposed expansion of the Panama Canal. According to Panama’s Elections Tribunal 43% of registered voters participated and of those, 77% approved building the third set of locks. Construction of the Expanded Panama Canal began on September 3, 2007. Appendix IV of this Report presents a timetable with further milestones related to the expansion of the Panama Canal.

⁵¹ Ibid, page, 3, paragraph 1.9.

⁵² Panama Canal Master Plan, Chapter 7, page 21, accessible [here](#).

⁵³ Panama Canal Master Plan, Chapter 7, page 27 stated: “*La creación del embalse del Río Indio tendría impactos ambientales y sociales negativos, entre los que se incluye la necesidad de reubicar a los habitantes del área, por lo cual ha sido descartada.*”

⁵⁴ Panama Canal Master Plan, chapter 7, page 31.

⁵⁵ Reports accessible [here](#) and [here](#).

⁵⁶ Law 20 of 2006 repealed Law 44 of 1999, accessible [here](#).

⁵⁷ Article 2, Section 4 of Law 28 accessible [here](#) states: “No dams will be constructed to operate the third set of locks”.

C. Organization of the Investigation regarding Water Availability

- 5.18 The Compliance Review of water availability risk is divided in two parts. Part D deals with concerns about whether there will be sufficient fresh water to operate the Expanded Panama Canal and provide for human consumption needs. Part E deals with the Requesters' concerns related specifically to the Western Watershed.
- 5.19 Among the key factors that the Panel considered in reviewing the Requesters' allegations and the Bank's compliance with regard to water availability are the following: (i) water availability for both human consumption and operation of the Expanded Panama Canal is of paramount importance to the long-term sustainability of the Project; (ii) in view of several Bank-Financed Operations relating to water management in Panama, the level of involvement by the Bank was extensive throughout many years and thus at the time the Bank prepared the Project the Project Team had access to ample information regarding water availability; and (iii) the Bank's awareness of the impact of relevant events and circumstances affecting the Western Watershed, including the initial importance of those resources to the expansion of the Canal, preliminary activities undertaken in the Western Watershed to be able to access its resources and subsequent exclusion of those resources from the ACP's ambit.

D. Analysis and Findings on Water Projections and Long-Term Sustainability

- 5.20 This section analyzes water availability concerns raised by the Requesters that relate to Bank compliance with OP-703. The Panel has analyzed whether the Bank appropriately and adequately identified Project risks (relative to requirements established in Directive B.4) and whether sufficient information and facts to support conclusions about the Project's long-term sustainability were sought and appropriately analyzed and reported by the Bank as required by OP-703.
- 5.21 The Panel organized its analysis around three main issues. The first is whether the Bank identified potential risk factors that could change the water supply and demand scenarios – primarily climate change, ENSO events or greater-than-anticipated human consumption. The second relates to the Bank's conclusion that sufficient water resources are likely to be available over the long-term for operation of the Expanded Panama Canal and that the Safety Margin was adequate. The third is whether the Bank appropriately analyzed and deemed adequate the facts and analysis provided by the ACP to establish the time horizon for water forecasts included in the Master Plan.
- 5.22 Each of the three issues is important in the context of the long-term sustainability of the Project. OP-703 requires the Bank to analyze information supplied by an executing agency in order to reach a conclusion as to a given project's long-term sustainability. Regarding the first issue, the Panel found that the Bank identified water availability as the main Project risk and listed some specific risk factors that

could affect water availability. As for the second and third issues, through its document review and interviews with Management, the Panel found that sufficient evidence to indicate that the Bank's analysis was properly undertaken did not exist. The Panel concludes that the lack of support for the Bank's conclusions as to these matters casts serious doubts regarding the Bank's analysis of the long-term sustainability of the Project and thus in this respect the Bank did not comply fully with OP-703.

Water Availability Risk Factors

- 5.23 This section assesses the Requesters' concerns that various risk factors, including climate change, ENSO events and/or greater human consumption over time could affect the water availability for the operation of the Expanded Panama Canal and human consumption. The Requesters allege such risks were not adequately taken into account by the Bank.
- 5.24 The Panel has analyzed the Bank's approach to these risk factors through the lens of OP-703's Directive B.4 "Other Risk Factors". Directive B.4 is designed to take into account additional risk factors, beyond environmental impact, that may affect the environmental sustainability of Bank operations. Directive B.4 requires the Bank to identify other risk factors and, depending on the nature and severity of the risks, engage with the executing agency to develop appropriate measures for managing such risks.
- 5.25 The Panel's research revealed that during the due diligence phase of the Project the Bank identified climate change and ENSO events as environmental risks to the Project, even though some of this analysis was not provided directly by the ACP. But the Panel could find no evidence, that the Bank identified the risk that human consumption could be greater than anticipated due to urban growth rates.
- 5.26 Evidence of the Bank's identification of the risks associated with climate change and ENSO events is found in various Bank documents for the Project. For example, the ESS for the Project identified water availability risk as the principal environmental and social risk for the Project.⁵⁸ The ESS also recognized that global warming and ENSO events could pose risks that might potentially impact water availability for the operation of the Expanded Panama Canal and for human consumption. This risk was also cited in the ESMR and the Loan Proposal.⁵⁹ The ESMR also included an observation to the effect that if scenarios like this were to happen, "the main risk would be of a water shortage during an ENSO event of the kind that took place in 1982-1983 and 1997-1998."⁶⁰

⁵⁸ ESS, Panama Canal Expansion Program PN-L1032, paragraph 3.31, accessible [here](#).

⁵⁹ The ESMR underscored that the risk associated with global warming was not easily measurable, making reference to models that predicted that Panama would likely undergo trends towards warming (mean +1.16°C) and drying (mean -14.66 mm per month) and could be expected to experience more frequent heat waves and droughts, higher-intensity rainfall, and a rising sea level, predicting the same for the rest of Mesoamerica.

⁶⁰ ESMR, Panama Canal Expansion Program PN-L1032, paragraph 5.36 accessible [here](#).

Water Projections and Safety Margin

- 5.27 The Bank appears to have concluded in the ESMR, the final environmental document prepared by the Bank before a project is presented for Board approval, that the Expanded Panama Canal would have sufficient water to operate not only upon completion but also into the future. However, the Panel could not find evidence that the Bank completed a level of analysis necessary to support this conclusion. The Panel found that the EIA and the Master Plan projected different water supply and demand scenarios. But these scenarios do not appear to have been highlighted or analyzed by the Bank as part of the process through which it reached the conclusion that there would be sufficient water for the Expanded Panama Canal to be sustainable in the long term as required by OP-703. The Panel has not reached a conclusion as to whether these differing scenarios or missing analyses would have a material impact on the Project, but the lack of evidence indicating what the Bank analyzed to reach its conclusion, especially in publicly available Project documents, indicates that the Bank's conclusion was not robustly supported or documented in a way that might have demonstrated compliance with OP-703.
- 5.28 The ACP utilizes a measurement unit known as a "lockage", which represents the amount of water required to open and close the locks to allow ship passages through the Canal. The ACP estimates a lockage to be approximately 55 million gallons of water.⁶¹ This measurement unit is used to forecast water supply and demand quantities for the Panama Canal and lockages per day ("lockages/day") is the unit used to project water availability. In this Report, references to the term "Projected Water Availability" relates to the lockages/day predicted to be available in the Panama Canal Watershed utilizing the three Water Alternatives that were ultimately chosen for the Expanded Panama Canal.⁶²
- 5.29 In the Master Plan, the ACP projected an increase in water demand both for operation of the Expanded Panama Canal and human consumption, from 36.4 lockages/day in 2005 to 45.3 lockages/day in 2025. The ACP estimated that Projected Water Availability would be 48.5 lockages/day starting in 2015.⁶³ Based on these projections the ACP concluded there would be sufficient water resources to satisfy requirements for both the operation of the Expanded Panama Canal and for human consumption. When comparing the relationship between projected supply versus demand, these numbers appear to indicate a Safety Margin of 3.2 lockages/day in 2025 (the "Master Plan Safety Margin").
- 5.30 In contrast, the EIA indicated that the overall demand for the operation of the Expanded Panama Canal and human consumption would be 47 lockages/day in

⁶¹ 55 million gallons also represent 208,197 cubic meters, or 0.208 millions of cubic meters (MCM).

⁶² Such Water Alternatives were: (i) to deepen the navigation channels of the Panama Canal to 9.2 meters; (ii) to raise the level of Lake Gatún to 27.1 meters; and (iii) to construct nine water conservation basins per each new lock.

⁶³ Panama Canal Master Plan, chapter 7, pages 33- 34.

2020 and 47.6 lockages/day in 2030.⁶⁴ If these figures were taken as valid, and with the assumption that Projected Water Availability would be 48.5 lockages/day, as indicated in the Master Plan, then the Safety Margin might be only 1.5 lockages/day in 2020 and 0.9 lockages/day in 2030. This indicates significantly narrower margins than the Master Plan Safety Margin. Similarly, the EIA also reported a higher water demand scenario for human consumption than the one that was considered in the Master Plan, which would also indicate that the Safety Margin could be lower than that forecasted by the ACP.⁶⁵

- 5.31 According to internal Bank regulations and practice, during the project cycle, a borrower is responsible for preparing adequate environmental assessments while the Bank is responsible for reviewing such information to assess compliance with its ROPs. For the Project, the ACP commissioned the EIA and prepared the Master Plan. In connection with the Bank's review, experts were retained on behalf of the Project Lenders to assist in reviewing the EIA and the Master Plan.⁶⁶ After undertaking its due diligence review, the Bank prepared the ESMR.
- 5.32 The Master Plan and the EIA present different scenarios with respect to (i) Projected Water Availability; (ii) demand for the operation of the Expanded Panama Canal; and (iii) demand for human consumption (for a comparison see Appendix V of this Report). The Panel would have expected the Bank to clarify which forecasts it relied on to reach the conclusion that there would be sufficient water to operate the Expanded Panama Canal and satisfy human consumption needs in the years to come. Nonetheless, the Panel did not find any such evidence in Bank-authored Project documents.⁶⁷
- 5.33 The Panel originally considered that the Bank's conclusion about sufficient water availability to operate the Project had been reported in paragraph 4.9 of the ESMR. Nonetheless, when Management provided its comments to the draft Report it stated that "paragraph 4.9 does not describe the consequences of the Expansion Program on water availability, but rather presents the baseline scenario *without* the Expansion of the Canal (the Existing Canal)."⁶⁸ When the Panel sought evidence as to where the Bank's conclusion was documented, the Project Team pointed to paragraph 5.36 of the ESMR which states: "available freshwater for meeting the growing demand from the population and the Expansion Program should be sufficient with the deepening of the navigation channel in Lake Gatun and Culebra Cut..." However, this passage constitutes a

⁶⁴ The Panel notes that the EIA's Projected Water Availability was estimated to be 57 lockages/day while the Master Plan estimated it at 48.5 lockages/day. As with some of the other reported inconsistencies between the two reports, the Panel did not find evidence that the Bank considered this availability projection.

⁶⁵ The EIA reported that the demand for water for human consumption would be 7 lockages/day in 2020, 7.6 lockages/day in 2030 and 8.1 lockages in 2040; while the Master Plan considered that the demand would be 6.1 lockages/day in 2020 and 6.6 lockages/day in 2025.

⁶⁶ For more information on the Experts retained see footnote 21.

⁶⁷ A conclusion as to materiality of the differing scenarios would need to be made by a technical expert. According to the TOR, the Panel would not commission technical studies or retain experts.

⁶⁸ See Annex related to Management's comments to the draft Report, pages 12-13.

qualitative conclusion, rather than evidence of support for the same. As such, the Panel found no evidence in Bank Project documents (publicly available or otherwise) that reflects that the Bank reported an actual projected water scenario for the Project to support its conclusion.

- 5.34 Relatedly, the Panel located no analysis by the Bank as to the adequacy of the Safety Margin. The Panel was unable to determine whether the Bank considered possible alterations to the Safety Margin, such as those noted above, or whether the Bank could have in fact determined in a reasonable manner that the Master Plan Safety Margin or any other Safety Margin, was reasonably sufficient to ensure the long-term sustainability of the Project as required by OP-703. Management's comments to the draft Report stated that "since the impact of the Expansion Program on water availability is actually a net positive impact, the question of the adequacy of the 'safety margin' is not relevant in the context of OP-703 requirements." Management also noted that "water availability does not constitute a Project risk, as water is and will be available to operate the Canal under current and forecasted traffic volume." Such statements directly contradict official Bank Project documents. For example, Section B, paragraph 5.30 of the ESMR on the environmental impacts of the Project during operation states as the first of such impacts: "Increased demand for fresh water. The expansion of the Canal will increase the demand for fresh water from Lake Gatun, from which the ACP presently provides 95 percent of the potable water used in the Panama City-Colón corridor, where nearly half the country's population lives." The EMSR notes that the "principal social and environmental risk associated with an expanded Canal in operation, is that it could contribute to stresses in the future supply of fresh water for the domestic needs of the 1.4 million people living in the Panama City-Colón corridor and to allow for regular operation of all the locks in the Canal, particularly in the context of climate change scenarios."⁶⁹ Therefore, the Panel finds that contrary to what Management expressed in its comments to the draft Report, water availability was considered during a critical period of due diligence by the Bank to be one of the most relevant Project risks and the issue of the Safety Margin is entirely relevant as it relates to the long-term sustainability of the Project required by OP-703.
- 5.35 In its comments to the draft Report, Management mentioned that relevant legislation in Panama prioritizes human consumption of water from the Panama Canal Watershed over any other use. Nevertheless, the Panel suggests that relying on this type of general law is not sufficient when analyzing a project. If it came to pass that ACP needed to make tough decisions about allocating water resources, the political, social and practical pressures would be enormous and complex. What is most important for the Bank is to take steps to ensure that the Project can reasonably be expected to operate within water scenario projections that avoid critical stress scenarios. To comply with the OP-703, the Bank is

⁶⁹ ESMR paragraph 5.35.

required to undertake the analysis and ensure that safeguards required by OP-703 are in place to avoid a critical stress scenario in which the ACP would be forced to consider curtailing operation of the Expanded Canal in order to prioritize human consumption.

- 5.36 Given the existence of differing scenarios between the Master Plan and the EIA, as well as the lack of analysis of the Safety Margin which relates directly to assurances that the Project would be sustainable in the long term as required by OP-703, it was impossible for the Panel to determine whether the Bank undertook the necessary analysis to support that there would be sufficient water to operate the Expanded Panama Canal in a way that demonstrates compliance with the long-term sustainability goal of OP-703.

Time Horizon of Water Forecasts

- 5.37 After a review of relevant documents and interviews with Management, the Panel was unable to locate analysis or otherwise determine whether the Bank considered alternatives or analyzed and found adequate the ACP's choice of providing water projections in the Master Plan only up to the year 2025.⁷⁰ As a point of contrast, the time horizon of forecasts in the EIA goes up to the year 2050. The Panel has not found analysis by the Bank as to the rationale behind selecting any time horizon. Given that construction of the Expanded Panama Canal was scheduled to be completed by 2015, the time horizon presented in the Master Plan would only cover the first ten years of the Expanded Panama Canal's operation. In light of OP-703's requirements it would have been prudent to use a time horizon of more than ten years from completion of the new infrastructure components of the Expanded Panama Canal.
- 5.38 The Panel understands that forward projections of water availability are inherently uncertain, depend upon many variables and can be less reliable the further into the future they extend. But the Panel views that the Bank should have requested the ACP to demonstrate why 2025 was chosen or to run simulations further into the future to achieve a better understanding of what the water availability might be for a period of longer than ten years after the Project's then-projected completion. The Panel finds that providing the Board with projections further into the future could have given a more realistic picture of the long-term sustainability of the Project and at the same time complied with OP-703's overall objectives of sustainability and enhancement of long-term Development Benefits.

Findings

- 5.39 The success of the Project and its long-term sustainability depend greatly on maintaining sufficient levels of water to operate the Expanded Panama Canal

⁷⁰ The Panel notes that both the ESMR and the Master Plan make reference to a study commissioned by ACP in 2001 that contains a long-term forecast up to 2060 for municipal and industrial water demand and raw water consumption. However, the Panel was unable to find evidence of how its findings were analyzed by the Bank.

and provide for human consumption, as was noted by the Bank as early as 2008 in the ESS for the Project.⁷¹

- 5.40 The Panel finds that the Bank did identify water availability as the principal Project risk as well as some other risk factors such as climate change and ENSO events which could impact water availability. Nonetheless, though it did identify such risks, the Panel found no evidence that the Bank analyzed whether or how those risks could be factored into the ACP's water supply projections. As such the Panel views that the Bank did not undertake a sufficiently rigorous and independent analysis of the water supply and demand projections provided in the Master Plan and the EIA when it undertook its due diligence and ultimately concluded that the water resources available in the Panama Canal Watershed would be sufficient.
- 5.41 Similar problems concerning water availability were also identified in the World Bank's 2008 Panama Country Environmental Analysis. The World Bank noted that the water availability forecasts presented by the ACP in the Master Plan did not take into account possible variations due to climate change or ENSO events.⁷² The World Bank found that the population growth rate estimates and urban development projections used for predicting water demand for the Expanded Panama Canal were too conservative. The World Bank concluded that "if this trend continues, it may be possible that the current safety margin – offered by the canal water saving improvement – could become inadequate to provide for the additional water demand."⁷³ Though not available to the Bank at the time it prepared the Project, the World Bank analysis highlights the need to consider carefully the reliability of water projections, as important risk factors may not have been taken into account which could materially and negatively affect the long term sustainability of the Project.⁷⁴
- 5.42 In addition to the differing scenarios about the numbers reported in the Master Plan and the EIA, the lack of evidence of independent analysis about the adequacy of the Safety Margin and the lack of a rationale for providing water projections only through the year 2025, the Panel finds that the Bank's conclusions as to water availability were not properly supported and thus the Board was not provided with adequate information regarding a very significant Project risk.

⁷¹ The ESS stated in paragraph 3.31 "The principal environmental and social risk is the availability of fresh water for both the operation of the expansion of the Canal and to provide quality water for human consumption to the Panama City and Colon metropolitan area. The Expansion Program relies on maintaining the current precipitation patterns, which in the future could be affected sporadically by global warming and El Niño (ENSO) episodes."

⁷² The World Bank also considered at that time that water demand for human consumption was already higher than the 10-year average consumption level used by the ACP for balancing its water budget. See: World Bank Panama Country Environmental Analysis of 2008 page 68. Accessible [here](#).

⁷³ Ibid.

⁷⁴ The World Bank Panama Country Environmental Analysis of 2008 was only publicly disclosed on June 28, 2012.

- 5.43 Given that a level of uncertainty exists regarding the water projections and that under some reasonably probable scenarios there could be water shortages in the near term or beyond 2025, the Panel concludes that the Bank did not comply with OP-703 as it did not demonstrate adequate rigor in ensuring the Project was reasonably likely to meet OP-703's overall objectives to achieve long-term sustainability and enhance development benefits in Bank-Financed Operations.

Material Adverse Effects on the Requesters

- 5.44 The Panel finds that the Bank's non-compliance with OP-703 could cause potential harm to the Requesters in the case that insufficient water resources cause the Expanded Panama Canal to face slowdowns or halt its operations. Such an event might result in a consequent loss of the Project's intended Development Benefits. In addition, if other water resources are eventually needed to meet the demand of the Expanded Panama Canal, further degradation to the environment could be caused if not adequately mitigated.

Recommendation

- 5.45 The Panel recommends that the Board require the Project Team to review the water supply and demand projections, including consideration of time horizons beyond 2025 in a way that reasonably meets the standards of OP-703 and takes into account identified risks. Should such analysis reveal that the Safety Margin is too slim or that water projections are otherwise too uncertain, the Bank may need to consider, in order to ensure compliance with the long-term sustainability objective established in OP-703: (i) defining adequate and specific mitigation measures to reduce identified risks so that there is greater assurance of the water availability; and/or (ii) identification of where additional water might be sourced if resources within the Panama Canal Watershed may become insufficient to meet needs.⁷⁵ A clear undertaking of this nature may also serve to assuage some of the concerns related to the Western Watershed, elaborated upon in Part E. The Bank's assessment or measures taken to carry out the recommendation above should be duly documented and disclosed in a public document so that Requesters and the public are made aware of the Bank's compliance with OP-703 related to water availability.
- 5.46 Additionally, the Panel understands that it is Bank practice to require executing agencies to comply with all applicable Bank Operational Policies at least until the full repayment of a loan. Along the same lines, the Panel recommends that the Bank closely monitor the Project to ensure that the Bank's ROPs are followed if

⁷⁵ Regarding mitigation measures, according to Directive B.4, after the identification of risks, the second step required is that depending on the nature and severity of the risks, the Bank must engage with the executing agency to develop appropriate measures to manage such risks. The ESMR for the Project did list some mitigation measures regarding certain Project risks, such as the possibility to implement climate change adaptation strategies and systematic monitoring. The Panel did not evaluate such measures as it has found the primary analysis regarding water lacking. As such it could be the case that some of the mitigations measures listed in the ESMR or others that may have been developed by the Bank and/or the ACP would be relevant to manage identified risks.

water resources prove insufficient and/or ACP deems it necessary to seek additional water resources.

E. Assessment of the Situation in the Western Watershed

- 5.47 The TORs required the Panel to assess the Requesters' "fear that water needs for future operation [of the Expanded Panama Canal] will require the expansion of the watershed to the west and the building of additional dams." The Requesters' concerns and related alleged harms (described in Section V, Part A) arise from the Western Watershed's recent history. From 1999 to 2006, the Western Watershed was included in the ACP's jurisdiction. Water resources of that region were deemed important to the expansion of the Panama Canal. The Bank was supporting preparatory activities for the Project under the Strategy and the Priority Project. The Requesters' fears stem from preparatory actions taken by the ACP during these years.
- 5.48 The Panel assessed these concerns under OP-703 and OP-765.⁷⁶ The Panel reviewed (i) whether ROPs would have required that the ACP consult with the communities in the Western Watershed and (ii) whether a link can be established between Bank actions or omissions and the potential or actual harms alleged by the Requesters.
- 5.49 Although preparatory work was done in the Western Watershed with an eye to accessing its water resources, in 2006 Law 44, which had expanded the jurisdiction of the ACP to the Western Watershed, was repealed. The Western Watershed was and still is excluded from the ACP's jurisdiction. The Expanded Panama Canal's design, as approved by the Board and as presently being implemented, does not access water resources from the Western Watershed. Thus no finding of non-compliance by the Bank is made with OP-703 or OP-765 concerning allegations of harm with respect to the Western Watershed.
- 5.50 Nonetheless, during its investigation, the Panel observed evidence that the social problems in the Western Watershed described in Section V, Part A, continue to exist. Although these concerns may not be related to Bank actions or omissions given the configuration of the approved Project, the Board may wish to consider whether, given the historical involvement of the Bank in the Western Watershed and other factors noted below, it could support efforts to address these issues.

Background

- 5.51 During the September Mission (defined in Appendix II of this Report), the Panel met in large open-air "town-hall" style gatherings with large numbers of residents in two different areas of the Western Watershed, including many women and children. In these meetings the Western Watershed communities told the IAMs that they have been and continue be fearful because they believe that the

⁷⁶ OP-703 and OP-765 require consultations with affected parties and consideration of their views.

Expanded Panama Canal will ultimately require access to water resources in their region. They fear physical and economic displacement, a loss of cultural cohesion that sustains the communities, and an impediment of their access to culturally and spiritually meaningful resources. Participants referred to a lack of meaningful information and consultation about the future of their region, many expressed their frustration at never having met with any ACP officials, saying what information they had they learned from third-party sources.

- 5.52 The Panel was informed that hydrological markers put in place by the ACP as part of the preparatory work for damming the rivers in the area remain in place, even though Law 44 was repealed. This leads the communities to believe that expropriation may occur at any time, despite the law presently in effect in Panama, which excludes this possibility.
- 5.53 On September 13, 2013, the Panel met with senior ACP management and representatives of the other IAMs. At this meeting, the concerns of the communities in the Western Watershed were discussed with the ACP. The ACP noted that it undertook a widespread information dissemination program about the expansion of the Canal. The ACP said the program was carried out via radio, TV, email, having representatives speak at malls, and by establishing a hot line.⁷⁷ However, the Panel observed that access to these means of communication is largely, if not completely, absent in the communities of the Western Watershed. These communities have no access to electricity, venues such as malls, the internet or most of the other forms of communication used in the cited communication campaign.
- 5.54 At the same meeting, participants discussed whether the ACP might re-engage with the Western Watershed communities to share Project information including how the ACP plans to meet the water needs of the Expanded Panama Canal without requiring resources from the Western Watershed. [REDACTED]
- [REDACTED] To the Panel's knowledge no such initiative has been undertaken to date.

Assessment of the Need to Consult with the Western Watershed Communities

- 5.55 OP-703 and OP-765 require consultation with, and consideration of the views of, affected parties in connection with Bank-Financed Operations. However, in view of the final Project design and exclusion of the Western Watershed from the ACP's jurisdiction, the Western Watershed communities cannot be considered *affected parties* within the definition of that term in OP-703: "individuals, group[s] of individuals or communities who may be directly impacted by a Bank-Financed

⁷⁷ ACP dialogue with JBIC-OE (defined in Appendix II of this Report), EIB-CM and IDB-ICIM on September 18, 2013.

Operation.”⁷⁹ The Panel concludes that given the provisions of OP-703 and OP-765, the Bank was not obligated to require the ACP to consult the Western Watershed communities in connection with the Project.⁸⁰

- 5.56 This conclusion is based on several factors. First, the concerns related to the Western Watershed stem from activities that were carried out by the ACP during 1999 to 2006. During that time, the Bank was involved in activities that relate to some of the Requesters’ concerns, but that involvement was part of previous Bank-Financed Operations. Second, the repeal of Law 44 removed the Western Watershed from the ACP’s jurisdiction. Finally, according to Project documents, the Expanded Panama Canal will not require water resources from the Western Watershed.
- 5.57 Nonetheless, given (i) the Panel’s findings in Section V, Part D, highlighting the level of uncertainty with respect to the water availability scenario for the future operation of the Expanded Panama Canal and demand from the population in Panama; and (ii) the fact that the ACP once deemed the Western Watershed important for the then future expansion of the Panama Canal, it is possible that in the future the ACP may require additional water resources. In its 2008 Panama Country Environmental Analysis the World Bank argued that “it may be prudent to assume that [the Western Watershed] is important to meeting Panama’s long-term water supply and hydropower needs.” In paragraph 5.45 the Panel recommended that the Bank carry out an assessment of the water supply and demand projections including consideration of time horizons beyond 2025 in a way that reasonably meets the standards of OP-703. If such an assessment were to reveal that it is reasonably likely that additional water resources might be needed in the future, then a new analysis of potentially affected parties will be necessary. In such case, strict compliance with ROPs should be required.⁸¹

Assessment of Bank Actions or Omissions and Links to Alleged Potential or Actual Harm

- 5.58 The deep-seated fears of the Western Watershed communities were described in paragraphs 5.1 and 5.2. The Panel finds that these fears constitute harm, but such harm arose due to actions undertaken during the period of time when the water resources of Western Watershed were thought to be an important Water Alternative for the expansion of the Panama Canal. These actions took place

⁷⁹ OP-703 Section VI, paragraph 6.1.

⁸⁰ OP-765 does not provide a definition of affected indigenous peoples; however by analogy to the definition provided in OP-703, the Panel considers that the indigenous communities residing in the Western Watershed would not meet the standard to be considered *affected parties*.

⁸¹ In fact, in the 2008 Panama Country Environmental Analysis the World Bank argued that “it may be prudent to assume that [the Western Watershed] is important to meeting Panama’s long-term water supply and hydropower needs.” The World Bank also reported similar concerns about the water supply and demand projections for the Expanded Panama Canal that have been noted by the Panel in Section V Part D of this Report, and as a result posited that “this region’s [the Western Watershed] water resources might also become important to the long-term operation of the Canal.” See: World Bank Panama Country Environmental Analysis of 2008 page 73, accessible [here](#).

before the Project was incorporated in the Bank's pipeline and later approved by the Board and therefore are not covered by the Panel's mandate.

- 5.59 Nonetheless, previous IDB projects described in Section II, Part A, and Section V, Part B, clearly identified the Western Watershed communities' anxieties about involuntary displacement as a major issue that once was linked to the expansion of the Panama Canal. The Project Completion Report of the Priority Project expresses regret that the latent conflict had not been identified in the early stages of project design.⁸² The conflict then identified by the IDB continues to this day, as stated by the Requesters and observed during the September Mission. Although these outstanding issues of concern for communities in the Western Watershed may not relate to Bank actions or omissions in respect of the Project, the Bank's interests in long-term sustainable development in Panama and its commitment to environmental governance and social inclusion indicate that the situation in the Western Watershed should be addressed.

Recommendations

- 5.60 The Panel recommends that, given the Bank's historical involvement in the Western Watershed, the Bank consider engaging with the ACP to develop a concrete communication strategy with the Western Watershed communities to share Project information and explain the removal of the Western Watershed as a source of water for the operation of the Expanded Panama Canal. A specific measure that could have a great symbolic impact would be for the Bank to support the removal of the hydrological markers. This could assuage the extensive anxiety felt even now by members of local communities who live in constant fear of being up-rooted.
- 5.61 Finally, the Panel recommends that the Bank ensure that the IDB's ROPs will be fully applied, during a time period at least until repayment of the Loan, should access to water from any Water Alternative, including the Western Watershed, be required in the future.

⁸² Project Completion Report, Priority Activities Hydrographic Basin Panama Canal (PN-0139), published on May 23, 2011, accessible [here](#).

APPENDIX I: GENERAL OVERVIEW OF THE ICIM AND THE COMPLIANCE REVIEW

A. General Overview of the ICIM

- 1.1 The ICIM is the accountability mechanism for operations financed by the IDB and the Multilateral Investment Fund. The ICIM was created in response to an IDB Board of Governors' mandate to increase the transparency, accountability and effectiveness of the Bank. As a result in February 2010, the IDB Board of Executive Directors approved the Policy establishing the Independent Consultation and Investigation Mechanism of the Inter-American Development Bank (GN-1830-49) under which the present investigation has been undertaken.
- 1.2 The purpose of a Compliance Review is to allow a Requester to request an investigation of a Bank-Financed Operation by a Panel of independent experts if the Requester reasonably asserts that his or her rights or interests have been, or could be expected to be directly, materially adversely affected by the failure of the IDB to follow its ROPs in a Bank-Financed Operation. The objective of a Compliance Review is to establish whether (and if so, how and why) any Bank action or omission in respect of the Bank-Financed Operation has resulted in non-compliance with ROPs and whether there has been or could be direct, material adverse effects, potential or actual, to a Requester.¹

B. The Compliance Review Process

- 1.3 A Compliance Review is a fact-finding exercise. It is designed to address compliance by the Bank with ROPs in a given Bank-Financed Operation, and does not involve reaching any judgments about the actions of any party other than the Bank.
- 1.4 If authorized by the Board, a Compliance Review is carried out by the Panel, an investigative team comprised of the Panel Chairperson and two other Panel members.²
- 1.5 During a Compliance Review, the Panel carries out inquiries and fact-finding missions; independently, comprehensively, and objectively reviews the issues raised in the Request; and communicates with the Requester(s), IDB Management, and other parties. Once a Compliance Review is completed, the Panel distributes a draft Compliance Review Report to the Requesters and Management for comments and then presents a final Compliance Review Report to the Board. The Board determines whether any actions are necessary in light of the Panel's findings. If so requested by the Board, the Panel may monitor the implementation of actions agreed upon as a result of a Compliance Review.

¹ ICIM Policy, Section 53.

² According to a transition scheme approved by the Board, starting September 1, 2013, the Compliance Review Phase is currently composed by two Panel Members and a Panel Chairperson. See: IDB Organization, Human Resources, and Board Matters Committee, Meeting Minutes, June 24, 2013, approved on July 10, 2013.

APPENDIX II: THE COMPLIANCE REVIEW PROCESS FOR THE INVESTIGATION

A. Compliance Review Phase

- 2.1 On August 23, 2012, the Executive Secretary transferred the Request to the Compliance Review Phase in accordance with the wishes of the Requesters. The Request was declared eligible for a Compliance Review on September 20, 2012.
- 2.2 On February 24, 2013, the TORs were distributed to the Board. The TORs were modified at the request of the Board, and ultimately were approved by that body on September 13, 2013.
- 2.3 On March 23, 2015, according to section 68 of the ICIM Policy the draft Compliance Review Report was distributed to the Requesters and Management for them to provide their comments in writing to the draft Report. Comments were received on May 15, 2015.

B. General Scope of the Compliance Review

- 2.4 The approved TORs limited the Compliance Review to assessing seismic risk and water availability issues and provided that no new technical studies or additional technical due diligence were to be undertaken by outside experts.⁸⁵ The IAMs of the EIB and JBIC were also engaged in compliance investigations.⁸⁶ As provided in the ICIM Policy, the Board encouraged coordination with the other IAMs generally and in terms of which concerns raised by the Requesters would be dealt with by each IAM.⁸⁷ In that connection, the Board instructed the Panel not to assess concerns about salt water intrusion, as these were being evaluated by EIB-CM.

C. The Missions

- 2.5 The Panel went on a site visit to Panama from September 15-21, 2013 (the “September Mission”). The EIB-CM, as well as the Office of the Examiner for Environmental Guidelines of JBIC (“JBIC-OE”), also participated in the September Mission, the latter as observers.
- 2.6 The September Mission included meetings with the ACP, the Requesters and other parties in Panama City and field visits to two distinct regions of the Western Watershed. An estimated 100 members of the traditional and indigenous communities in the

⁸⁵ TORs, page 10, available [here](#).

⁸⁶ A complaint was submitted to the IFC’s Office of the Compliance Advisor/Ombudsman (“IFC-CAO”). In its Appraisal Report of June 26, 2013, IFC-CAO determined not to initiate a compliance investigation and decided to close the case at appraisal considering that potential project risks could appropriately be addressed during supervision. However, IFC-CAO has made it clear that closing a case does not mean dismissing a case. The IFC-CAO report expresses continued concern about whether the IFC adequately reviewed the availability of water for Canal operations in the medium to long-term, among other issues raised by the Requesters.

⁸⁷ For further information regarding this coordination, see: Appendix II of this Report, Part E.

Western Watershed participated in each of the meetings with the IAMs to express their concerns.

- 2.7 A Panel member and a Compliance Review Case Officer undertook a second mission to Panama on December 28-29, 2013 (the “December Mission”, and together with the September Mission, the “Missions”). The purpose of the December Mission was for the Panel to observe a dialogue among the ACP, representatives of the Requesters and the other two participating IAMs. This dialogue was organized by JBIC-OE with the technical support from EIB-CM.
- 2.8 During the Missions, the Panel gathered information regarding the Panama Canal Expansion Program, seismic risk, water availability and impact on local communities in the Western Watershed from a variety of sources including the ACP, the Requesters and other stakeholders. The Panel observed conditions at the Panama Canal Expansion Program construction sites and in the Western Watershed.

D. Methodology for the Compliance Review

- 2.9 The methodology employed by the Panel for the Compliance Review included:
- (a) Analysis of ROPs, in particular, OP-703, OP-704 and OP-765. Identification and analysis of directives related to these ROPs, including implementing guidelines and items such as the Companion Paper to the Disaster Risk Management Policy; the Bank’s Operational Guidelines and Operating Manuals; Board documents and deliberations; and Bank manuals;
 - (b) Desk review of more than 200 documents and reports relating to seismic risk and water availability from multiple sources, including the ACP, the Bank, the other Project Lenders, consulting firms and others;⁸⁸
 - (c) Travel to Panama for the September Mission and the December Mission;
 - (d) Analysis of the concerns expressed by the Requesters in meetings, telephone calls and email exchanges that were relevant to the issues approved for the Compliance Review in the TORs;
 - (e) Meetings and interviews (by phone and in-person) and written communications with Management, Executive Directors and representatives of the Requesters and other IAMs;
 - (f) Analysis of documents to ascertain compliance with OP-703, OP-704 and OP-765; and
 - (g) Analysis of whether allegations of harm in the Request are or could be caused by actions or omissions by the Bank constituting non-compliance with ROPs.

⁸⁸ The Panel did not commission technical studies or retain experts.

E. Cooperation with other IAMs and Status of Procedures

- 2.10 Coordination with representatives of the other IAMs allowed for sharing of technical analyses and a division of tasks, avoided duplication of efforts and permitted cost savings. Notwithstanding such coordination, each IAM has its own policy mandate, methodology and procedural requirements; therefore each IAM makes its independent determination as to compliance with its applicable policies or similar requirements.
- 2.11 On March 11, 2014, JBIC-OE released its Examination Report establishing that JBIC's confirmation procedures for environmental and social considerations were carried out in accordance with JBIC's Environmental Guidelines.⁸⁹
- 2.12 As of mid-January 2015, the EIB-CM was in the process of finalizing its report for internal discussions to be followed by a public release later in 2015.

⁸⁹ JBIC-OE's Examination Report is available [here](#). Given that JBIC-OE reviews compliance with JBIC's standards, compliance findings by JBIC-OE does not necessarily mean that the other IAMs will reach the same conclusions given that the standards they review are different.

APPENDIX III: BACKGROUND OF OP-704, GUIDANCE AND REQUIREMENTS

- 3.1 OP-704 was approved by the Board in February 2007 and became effective in May of that year. The passage of OP-704 and its implementing guidance constituted a shift in the Bank's approach to disaster risk from an essentially reactive to a more proactive and preventative approach.
- 3.2 Various sources of guidance were available to project teams to assist in the implementation of the then new OP-704. For example, a Companion Paper and the Disaster Risk Management Policy Guidelines were available in March 2007 and March 2008, respectively.⁹⁰ In this regard, even though the Guidelines had not yet been approved by Management in the earliest stages of Project preparation, they were in effect when the ESMR was completed and when the Project was submitted for Board approval. Additionally, OP-704 provided that disaster risk management could be integrated into projects "on the basis of generally accepted standards and practices."⁹¹ Guidance, both internal to the Bank and from external sources on the incorporation of disaster risk management were available to the Project Team as they prepared the Project. For example, discussion paper GN-2354-7, presented to the Board on February 8, 2007, (that is, at least eight months before the ESS was presented to the Environmental and Social Review Group by the Project Team), states that "the Operational Guidelines of OP-704 had [already] been prepared, internally reviewed by the Administration" and anticipated that the Guidelines⁹² would be approved by Management in February 2008.⁹³ The document also states that a disaster risk

⁹⁰ From Disaster Response to Prevention Companion Paper to the Disaster Risk Management Policy accessible [here](#).

⁹¹ Disaster Risk Management Policy OP-704, Section IV, Directive A2, paragraph 1.

⁹² The Guidelines detail how Directive A2 should be applied by the Bank. During the Bank's social and environmental project screening and classification process, if OP-704 applies to a project, the project team must classify the project as low, medium or high risk. Projects classified as *high risk* must include: (i) a Disaster Risk Assessment; (ii) a Disaster Risk Management Summary; and (iii) a Project Implementation, Monitoring and Evaluation [report]. The Guidelines establish that projects classified as *moderate risk* do not usually require a Disaster Risk Assessment; however, a limited Disaster Risk Assessment may be required depending on the complexity of the project and where an identified vulnerability could compromise the achievement of project outcomes. The *low risk* classification is reserved for projects in which natural hazards are not likely to occur during project construction and/or operational life, or are associated with low severity impact in the short-medium term. *Low risk* projects are those where the occurrence of a hazard event would not affect achievement of project outcomes; in that case, a Disaster Risk Assessment is not required. The Guidelines also establish that project screening and classification should determine which of two types of possible disaster risk scenarios are relevant for a project: Type 1 applies if "the project is likely to be exposed to natural hazard due to its geographic location"; and Type 2 applies if "the project itself has a potential to exacerbate hazard risk to human life, property, the environment or the project itself." The Guidelines also provide that the screening and classification must be reported in the Social and Environmental Safeguard Policy Filter (the "Policy Filter"), the Social and Environmental Safeguard Screening Form (the "Screening Form") and the Disaster Risk Profile in the ESS of a project.

⁹³ Discussion Paper on Integrated Disaster Risk Management and Finance Approach, February 8th, 2007; GN-2354-7; paragraph 2.8

management checklist⁹⁴ had been designed to assist project teams integrate disaster risk management in the project cycle.⁹⁵

OP-704 requirements related to Directive A.2

- Projects will 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 findings will be reported to the Bank through the social and environmental project screening and classification process.
- Project teams should consider the risk of exposure to natural hazards by taking into account the projected distribution in frequency, duration and intensity of hazard events in the geographic area affecting the project.
- Project teams will carry out a natural hazard risk assessment for projects that are found to be highly exposed to natural hazards or to have a high potential to exacerbate risk.
- In the analysis of risk and project viability, consideration should be given to both structural and non-structural mitigation measures.
- The Bank will require that, at the time of project preparation, the borrower establishes protocols to carry out periodic safety evaluations (during construction as well as during the operating life of the project) and appropriate maintenance of the project equipment and works, in accordance with generally accepted industry norms under the circumstances.
- The Bank's social and environmental project screening and classification process will evaluate the steps taken by project teams to identify and reduce natural hazard risk.
- Alternative prevention and mitigation measures that decrease vulnerability must be analyzed and included in project design and implementation as applicable

OP-704 Guidelines requirements related to Directive A.2

- Projects need to be classified depending on their exposure to natural disasters either as low, medium or high risk.
- Screening and classification is to be reported on the Social and Environmental Safeguard Policy Filter (SPF), the Social and Environmental Safeguard Screening Form,

⁹⁴ See: *Gestión de riesgo de amenazas naturales en proyectos de desarrollo. Lista de preguntas de verificación* accessible [here](#).

⁹⁵ OP-302 provides that the "project cycle" as to the Bank refers to the sequence of technical, socioeconomic, financial, legal, environmental, and ex-ante analysis and evaluation by which the Bank, acting through the relevant project team for the most part, examines and analyzes the need for and feasibility of a project from the time it is first considered by the Bank through its various phases (identification, development, negotiation and approval, and execution).

and the Disaster Risk Profile (DRP) in the Environment and Social Strategy (ESS) of a project.

- Projects that are found to be high risk should include a: (i) Disaster Risk Assessment, (ii) Disaster Risk Management Summary; and (iii) Project Implementation, Monitoring and Evaluation.
- Projects that are found to be of moderate risk don't require a Disaster Risk Assessment, however, it does provide that a more limited Disaster Risk Assessment may be required depending on the complexity of the project.
- Project screening and classification should determine 2 types of possible disaster risk scenarios: Type 1: Where the project is likely to be exposed to natural hazard due to its geographic location. Type 2: where the project itself has a potential to exacerbate hazard risk to human life, property, the environment or the project itself.

APPENDIX IV: TIMETABLE **1993**

October 27	The Board approved Technical Cooperation No. 778/OC-PN to support the preparation of environmental and social studies related to watershed resource conservation related to the Panama Canal and its surrounding areas.
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1997-1998

1997	The National Assembly of Panama passed Law 21 of 1997 which approved the Regional Development Plan for the Inter-Oceanic Region and the General Plan for the use, conservation and development of the Panama Canal area.
1997-1998	Severe droughts during 1997 and 1998 in Panama affected the operation of the Panama Canal.

1999

1999	The Panama Canal was transferred by the United States to the control of Panama, which accelerated the analysis of its expansion, as the Canal would be a very important source of revenue for Panama.
Starting in 1999	The Panama Canal Commission commissioned a hydrological study intended to identify alternative water resources for potential use in Panama Canal operations to be undertaken by the United States Army Corps of Engineers. The study was finished on December 30, 1999.
August 6	The profile of a Bank-Financed Operation entitled "Pre-Feasibility Studies and Environmental Instruments for Natural Resources Management in the Inter-Oceanic Region." (TC-98-06-48-3-PN) was presented to the Board's Programming Committee for information.
August 31	Panama's Legislative Assembly passed Law 44 of 1999 ("Law 44"), expanding the jurisdiction of the ACP by more than 2000km ² to include the water resources of the Western Watershed.

2000

November 1	The Board approved the Strategy for Sustainable Development of the Panama Canal Watershed (TC-9806483).
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2000-2005

2000-2005	Additional technical and feasibility studies regarding the Panama Canal Expansion were undertaken.
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2005

February 24	The Board approved the Priority Activities in the Panama Canal Watershed (PN-0139).
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2006

January 19	The IDB approved the Environment and Safeguards Compliance Policy OP-703 (GN-2208-18).
June 7	The ACP finalized the Panama Canal Master Plan.
June 12	In the aftermath of the social unrest due to opposition to the construction of dams in the Western Watershed to supply water for the expansion of the Panama Canal, Law 44 was repealed by the National Assembly.
June 26	By Cabinet Resolution Number 58, the Executive Branch of the Panamanian Government approved the construction of a third set of locks.

July 17	The National Assembly of Panama passed Law 28 of 2006 which expressly prohibits the construction of any dams for the operation of the Panama Canal's third set of locks, among other technical and financial conditions.
July 19	OP-703 became effective.
July 28	The Implementing Guidelines for OP-703 were presented to the Board (GN-2208-25).
October 22	Panama held a national referendum on the proposed expansion of the Panama Canal. According to Panama's Elections Tribunal 43.32% of registered voters participated and of those, 77% approved building the third set of locks.

2007

February 2	The companion paper to the draft of the disaster risk management policy (OP-704) was presented to the Board (GN-2354-4).
February 8	A discussion paper on integrated disaster risk management and finance approach was presented to the Board (GN-2354-7).
February 23	The Disaster Risk Management Policy (OP-704) was approved by the Board (GN-2354-5).
May 23	The Disaster Risk Management Policy OP-704 became effective.
July	The Environmental Impact Assessment of the Panama Canal Expansion Project – 3 rd Set of Locks was finalized by URS Holdings.
September 3	Construction of the Expanded Panama Canal began with the earthmoving activities on the Cartagena Hill.
October 12	The Environmental and Social Strategy of the Project (ESS) was presented to the Environment and Social Review Group.
November 7	The Board approved a US\$10 million loan to support capacity building of ANAM and local governments to address environmental management challenges (PN-L1013).

2008

March	The Disaster Risk Management Policy Guidelines were finalized (GN-2354-11).
Abril 24	The Disaster Risk Management Policy Guidelines were distributed to the Board (GN-2354-11).
May 9	The Independent Review of the Environmental Impact Study for the Third Set of Locks conducted by ERM was finalized.
June 23	The World Bank finalized the Republic of Panama's Country Environmental Analysis. However, it was only disclosed to the public until June 28, 2012.
June 27	The Louis Berger Group finalized the 3 rd Preliminary Report related to the Technical Consulting Services for the Panama Canal Expansion Program.
September 23	The Environmental and Social Management Report of the Project was finalized.
October 8	The Board approved the Panama Canal Expansion Program (PN-L1032).
December 12	Water Management Consultants, a Schlumberger Company finalized the Limited Assessment of the Effects of Climate Change on the Panama Canal Watershed.

2011

October 3	The Board approved the Program to Reduce Vulnerability to Natural Disasters and Climate Change in Panama (PN-L1070), a loan to address growing risks to Panama due to natural disasters and climate change.
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October 10	The Request was submitted to the ICIM expressing concern about the Project.
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2012

February 9	The Project Ombudsperson declared the Request eligible for the Consultation Phase.
June 27	The Project Ombudsperson issued an "Assessment and Consultation Phase Report," marking the formal termination of that Phase.
August 23	The Executive Secretary transferred the Request to the Compliance Review Phase.
September 20	The Request was declared eligible for a Compliance Review.

2013

February 24	A Recommendation to Conduct a Compliance Review and Terms of Reference for the Investigation was distributed to the Board.
April 26	The Panel met with representatives of the EIB-CM and JBIC-OE compliance teams to review the concerns of the Requesters.
July 30	The Non-Sovereign Guaranteed Loan made by the Bank was fully disbursed.
September 13	The TORs were modified at the request of the Board and approved by the Board.

2014

February	The loans made by the other Project Lenders were also fully disbursed.
March 11	JBIC-OE released its Examination Report.

2015

March 23	According to Section 68 of the ICIM Policy the draft Compliance Review Report was distributed to the Requesters and Management for their comments in writing.
May 15	Comments from Requesters and Management were received.
May 31	The Project was 89 percent complete according to the ACP website.

	Milestone of the Bank
	Milestone the Executing Agency, Panama or other
	Milestone of the ICIM

APPENDIX V: WATER AVAILABILITY AND DEMAND TABLES

Master Plan					
Year	Water Availability	Water Demand Population	Water Demand Canal	Water Demand Total	Safety Margin
2005	*	4.9	31.6	36.4	*
2010	*	5.3	34	39.8	*
2015	48.5	5.7	34.2	39.9	8.6
2020	48.5	6.1	36.8	42.9	5.6
2025	48.5	6.6	38.8	45.3	3.2

EIA					
Year	Water Availability	Water Demand Population	Water Demand Canal	Water Demand Total	Safety Margin
2000	57.7	4	35	39	18.7
2006	57.7	5	40	45	12.7
2010	57.7	6.4	40	46.4	11.3
2020	57.7	7	40	47	10.7
2030	57.7	7.6	40	47.6	10.1
2040	57.7	8.1	40	48.1	9.6
2050	57.7	8.4	40	48.4	9.3

ESMR					
Year	Water Availability	Water Demand Population	Water Demand Canal	Water Demand Total	Safety Margin
2005	*	*	*	*	*
2010	*	*	*	*	*
2015	*	*	*	*	*
2020	*	*	*	*	*
2025	*	*	*	*	*

All water availability and demand forecasts are in lockages/day

The Master Plan Safety Margins were calculated by the Panel when comparing availability versus demand.

* No information was provided

ANNEX I. MANAGEMENT'S COMMENTS TO THE DRAFT COMPLIANCE REVIEW REPORT

To: Mary Rose Brusewitz, Chairperson of the Compliance Review Panel
Subject: Management Response –Review PN-MICI002-2011 Panama Canal Expansion Program (the Project)
Date: 05/15/2015

IDB Management response to the draft Compliance Review report for the Panama Canal Expansion Program in Panama

Management would like to thank the ICIM Panel for sharing the draft compliance review report for the above mentioned Project.

In summary, Management responds as follows to the main findings and recommendations by the ICIM Panel:

- 1) The ICIM finds that the Bank did not comply with the Disaster Risk Management Policy OP-704 (OP-704) in relation to seismic risk. Management considers that the Bank has complied with the policy in substance but recognizes that documentation of the application of OP-704 could have been improved.

The ICIM recommends that Management carry out an assessment of seismic risk and assigns a disaster risk classification in accordance with OP-704. Management is not in agreement with this recommendation as the assessment of potential natural disasters, including seismic risks, has already been extensively reviewed by highly qualified and internationally recognized experts, and confirmed by the Bank's Independent Engineer (IE). The seismic risk was identified and adequately incorporated into the design specifications of the Panama Canal Expansion Program by ACP. Furthermore, the cost that would be incurred by an additional study would not be justifiable, as there is already a wealth of studies completed by highly qualified experts, which were peer reviewed by internationally renowned scientists, and reviewed by the IDB's IE.

- 2) The ICIM finds that the Bank did not comply with the Environmental and Social Safeguards Policy OP-703 (OP-703) in relation to water availability. Management considers that the Bank fully complied with OP-703 in assessing water availability risks and ensuring that adequate mitigation measures were implemented in the design of the project so that the Project decreases water use demand.

The ICIM recommends that the Project Team review water supply and demand projections and closely monitor the project. Management is not in agreement with the recommendation that the water supply and demand projections be reviewed again. Water availability was a critical component of the analysis of the Panama Canal Expansion Program. The impacts of the Project on water availability were studied extensively. Innovative measures were developed and incorporated into the design of the locks, which will actually reduce the demand for water. The Bank monitors the Expansion Program closely in coordination with the other multilateral financial institutions involved in the financing consistent with the requirements of OP-703.

- 3) The independent investigation mechanisms at the International Finance Corporation (IFC) and the Japan Bank of International Cooperation (JBIC) received similar claims of non-compliance with their respective operational policies from the same requesters, which they found without merit after due review and analysis. The IFC's compliance mechanism CAO decided to not initiate a compliance investigation after it concluded "that the identification and management of environmental and social risks and impacts around this project has generally been commensurate to its risks and impacts. {...} CAO decides to close this case at appraisal. This decision has been reached on the basis that: (a) the client has well-developed E&S management and monitoring systems; (b) the issues of concern relate significantly to future risks which may or may not eventuate; (c) these risks (should they manifest) could appropriately be addressed during supervision; and (d) IFC has undertaken to monitor these risks in supervision." The Examiner for Environmental Guidelines at JBIC concludes that "JBIC's entire confirmation procedures for environmental and social considerations were free of defects. {...} no specific environmental and social damage has occurred according to the scenario claimed by the Requesters, and it is considered that the probability of the occurrence of the alleged damage will be considerably low."

In the following section, please find Management's detailed responses to the specific findings and comments by the ICIM.

With regard to seismic risk

- Para 1.2 and 6.8: *The ICIM finds that "OP-704 was applicable to the Project but could not find evidence that the Bank applied OP-704".*

The Bank undertook all necessary analysis during its due diligence and thus ensured that disaster risks, including seismic risks, were adequately assessed and that the necessary mitigation measures were developed and implemented during the design, construction and operation of the Expansion Program consistent with OP-704. As is common practice among multilateral development banks MDBs working with complex construction projects, the IDB hired Louis Berger Group, a well-known international engineering firm, as IE to review and assess the numerous studies, reports, design specifications and plans

commissioned by the borrower to identify, assess and manage risks of natural disasters including seismic risks (see Annex, Figure 5). The IE considered the seismic risk to be medium to low. The findings of the IE were fully considered and taken into account by the Bank during the preparation of the project and continue to guide the Bank during its supervision of the Project.

Management recognizes that because of the proximity between adoption of OP-704⁹⁶ and the Bank's due diligence on the Project, its implementation had not yet been fully incorporated into the Bank's operational procedures when the Project became eligible in October 2007. As a result, the documentation of the assessment, classification and management of disaster risks for the Panama Canal Expansion Program in relevant Bank documents was incomplete. At the time, and after analyzing all the different risks, landslides were identified as the most salient risk in relation to the Expansion Program. As a result, the Environmental and Social Strategy (ESS) includes a specific reference to the risks of landslides (and thus addresses the applicability of OP-704), but not seismic risk. Management recognizes that the Environmental and Social Management Report (ESMR) did not make reference to OP-704, and that the ESS and the ESMR did not include a disaster risk classification. In substance, however, since the seismic risk was considered medium to low, at that point no further assessment of seismic risk as per OP-704 was necessary.

Since the approval of OP-704, Management has taken a series of systematic steps to implement OP-704 in a robust manner, including the documentation of classification, assessment, mitigation and management of natural disaster risks. These include the development of the Disaster Risk Management Policy Guidelines (2008), the disaster risk screening and classification tool (2013), and procedures to classify and address disaster risks in accordance with OP-704 (2014). As a result of these efforts there is now more systematic documentation of the application of OP-704 for IDB projects.

- Para 6.11: *The ICIM finds that "the Bank did not attempt to apply the standards or otherwise meet the requirements of OP-704 that were clearly applicable to the Project. The Bank did not carry out an adequate assessment of disaster risks despite ample information available indicating such risks were present in the Project area."*

Despite the imperfect documentation, the Bank as part of its due diligence undertook an adequate assessment of studies, reports, design specifications and

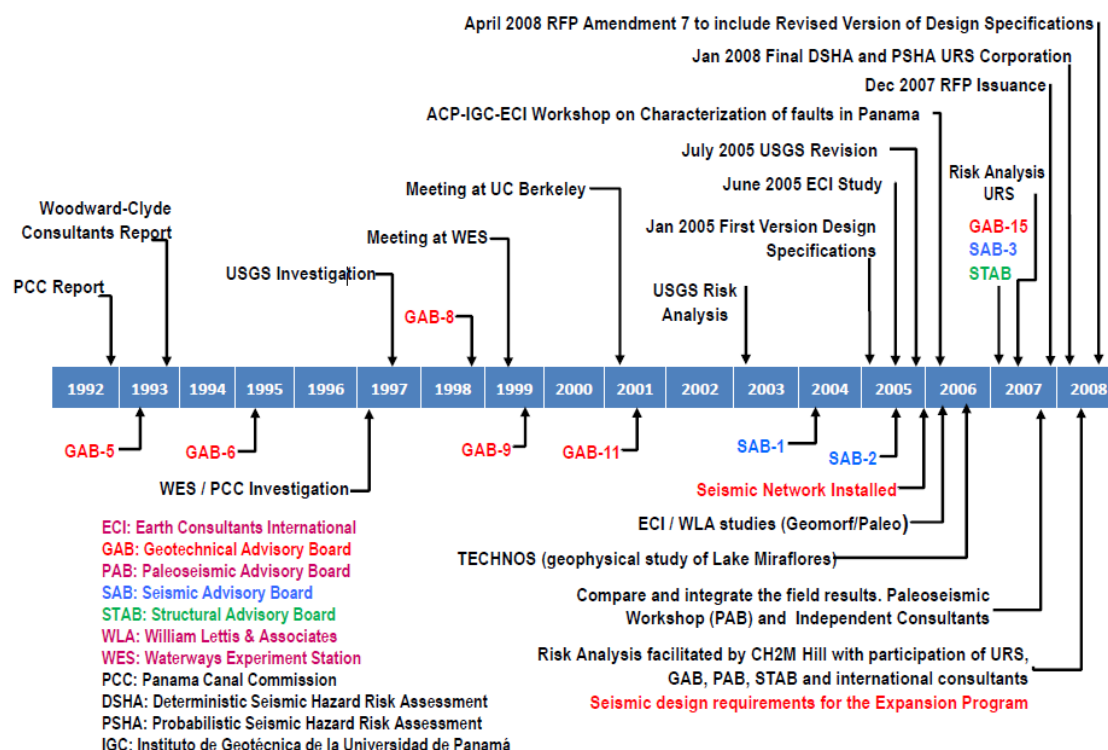
⁹⁶ OP-704 came into force in May 2007. The Project became eligible in October 2007.

management plans of the Borrower. The risks relevant to OP-704 were assessed to ensure that, consistent with this policy, the necessary measures were taken to reduce disaster risk to acceptable levels based on generally accepted standards and practices. While the ESMR does not make reference to seismic risks, it does analyze a series of other natural disaster risk hazards associated with the project. The main focus of review was the issue of landslides, which was considered the salient risk at the time.

As noted previously, the Borrower commissioned a series of extensive geotechnical, seismic and structural assessments. Figure 1 shows the most significant studies, reports, and reviews commissioned by the Borrower to identify, assess, prevent and mitigate seismic risks.

Figure 1

Chronology of the Seismic Hazard Characterization of the Canal Area and Expansion Program Design Specifications



In addition, and following international best practices, the Borrower established so-called “Advisory Boards”, which are independent panels of experts, to review and assess the technical information and analysis generated by the geotechnical and seismic studies and to review the adequacy of the prevention and mitigation measures proposed. These panels include the Seismic Advisory Board, the Geotechnical Advisory Board, and the Structural Advisory Board. Each board is composed of internationally renowned scientists and experts. Figure 3 identifies the members of each Advisory Board.

The IE reviewed all the analysis and studies on seismic risk and confirmed the risk classification of moderate to low. The IE also conducted a thorough review and assessment of the technical studies, assessments and design specifications, as well as of the reports of the three Advisory Boards to ensure that the Expansion Program of the Panama Canal had an adequate assessment and management of seismic risks. A thorough summary of the seismic risk assessment, including the list of all seismic studies reviewed, was included in the IE’s report.

During due diligence, it is common practice among the MDBs, including the IDB, to draw heavily and rely on the opinion of independent panels of experts and the IE for highly technical issues since the expertise to undertake analysis of such highly specialized technical matters is beyond the scope of knowledge normally available among MDB staff. The Bank accepted the findings of the Advisory Boards as well as findings and conclusions of the IE that:

- i. the mitigation measures and risk management process established by ACP in relation to the seismic matters were sufficiently robust;
- ii. the design of the Expansion of the Canal is strong enough to withstand: a) level-1 earthquakes (event probability of once every 475 years) without obstructing the operation of the Canal and causing damages to the structures holding water; and b) level-2 earthquakes (event probability of once every 1000 years) with repairs to the lock and pertinent facilities but with no interference in the structure’s ability to permanently hold water and
- iii. the ACP had assessed the potential seismic risks and impacts to the locks and the water retaining structures and had ensured adequacy of their corresponding mitigation measures in the design criteria.

In addition, an Independent Environmental Consultant, ERM, was also contracted by the Bank and reviewed seismic and other natural hazard risks. In

further confirming the IE's conclusion, in the section on natural hazards within the environmental and social due diligence report, ERM confirms that seismic activity in the region known as Central Panama, where the Panama Canal is located, is very low.

- Para 1.2 and 6.12: *The ICIM finds that “3.The Bank did not take steps to ensure that mitigation measures or contingency plans regarding seismic risk were in place for the period during which the Project would operate at the time it was approved”.*

The adequacy of the proposed mitigation measures was reviewed by the Advisory Boards and the Bank's Independent Engineer. The IE⁹⁷ and the Independent Environmental Consultant assessed and confirmed the robustness of ACP's contingency plans. The engineering firm URS, working on behalf of ACP, confirmed the adequacy of the seismic load included in the design specifications for the new locks. The IE confirmed that the design specifications proposed were adequate to manage seismic risks. These design specifications were included in the tender for the locks and dam and thus were incorporated in the design and construction contracts.

The ACP on its side has been supervising this process with the support of CH2M Hill, another international engineering firm highly regarded in the field.

The expanded Panama Canal will operate under the framework of the existing Canal, as much of its existing components will continue to operate. The management and emergency response framework will be updated prior to the time the Expanded Canal will begin operating and will be reviewed by the IDB to ensure it meets international standards and complies with Bank standards as well as the IFC Performance Standards. The Bank also reviewed ACP's "Rapid Response Program", its management program for natural disasters and found it to be adequate.

- Para 6.11: *The ICIM states that “The Board received incomplete information with respect to risks of natural hazard events possible in the Project area, which include seismic risk”.*

⁹⁷ The IE in his conclusion #0707 states that: “Based on the extensive typology of the events covered by the Contingency Plans, together with the comprehensive procedures already established in the Incident Management Systems provided, the IE assumes that no dissimilar emergency circumstances would arise from the operation of the Expanded Canal.”

Information about the risk of potential natural hazards in the project area, without explicit reference to seismic risks, was included in the ESMR and submitted to the Board. As mentioned in our comment on para 6.8 above, the IE concluded that the seismic risks were medium to low and were adequately addressed in project design, so at the time it was not considered a material risk to be reported to the Board.

Under current IDB practice today, the disaster risk classification is systematically reported to the Board in the ESMR.

- Para 6.12: *The ICIM alleges that “the Bank’s omission to take steps necessary to comply with OP-704 has caused harm to the Requesters in the form of fear that the Project may be vulnerable to seismic risk due to its location or exacerbate such risk”.*

Management’s view is that the Bank took the necessary steps to ensure that the project’s vulnerability to seismic risk was assessed in compliance with OP-704 and that thus the alleged “fear” is unfounded and not supported by the extensive scientific and technical studies undertaken over the past 20 years. As a result, Management considers that no harm has been caused to the requesters.

- Para 6.13: *The ICIM recommends based on its conclusions that the “Board require Management to conduct an assessment of seismic risk (and other possible natural disasters) in the Project area and assign a classification in accordance with OP-704. If the classification so warrants it, the Bank should either require the Borrower to develop specific response plans and/or mitigation measures for the Project or analyze any such measures the Panama Canal Authority (the “ACP”) may have in place to determine if they comply with OP-704.”*

Management is not in agreement with this recommendation. The assessment of potential natural disasters, including seismic risks, has already been carried out extensively by highly qualified and internationally recognized experts, and confirmed by the Bank’s IE. Adequate response plans are in place. The IE concluded that the seismic risk was medium to low, and confirmed that ACP had assessed the potential seismic risks and impacts to the locks and the water retaining structures and ensured the adequacy of their corresponding mitigation measures in the design criteria. The Bank agrees with the Panel that the ESMR should have more specifically summarized the findings of the IE regarding the assessment of seismic risk and the required mitigation measures. However, this was a shortcoming in the *documentation* in the ESMR and Loan Proposal; the assessments and recommended mitigation measures have all been carried out in a robust manner. The suggested additional analysis would be repeating what has already been done and would be very costly while not providing any additional technical value.

On water availability

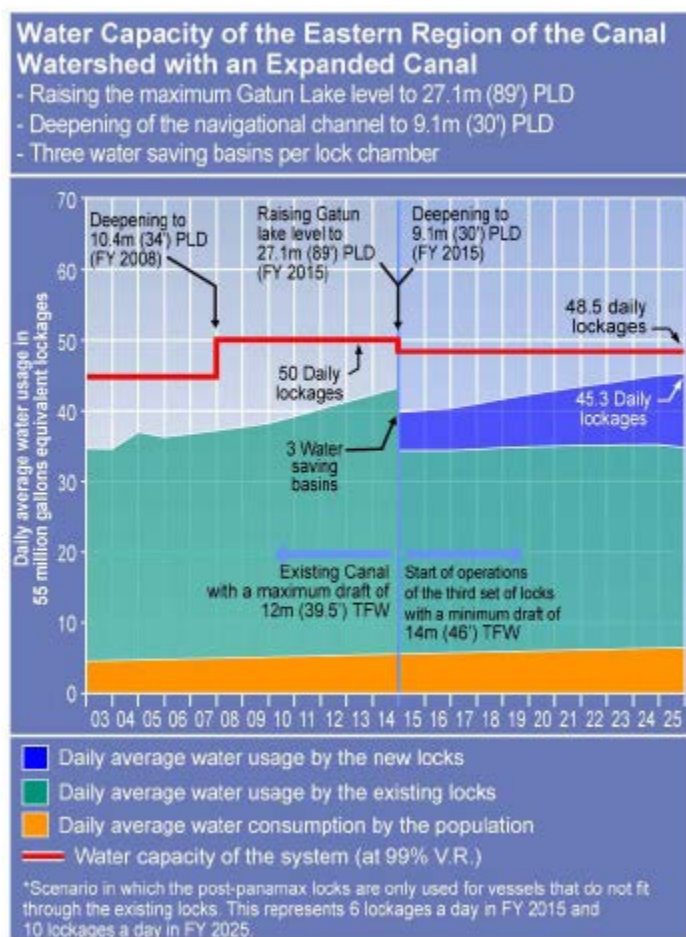
- Para 1.6 and 7.37: *The ICIM finds that “the Bank did not undertake a sufficiently rigorous and independent analysis of the water projections provided by the ACP and other experts when it carried out its due diligence and ultimately agreed with the ACP’s projections that water resources available in the Panama Canal Watershed would be sufficient at least through 2025.”*

Management is not in agreement with this conclusion. Concerns of the requestors regarding water availability are unfounded, since 1) the Expansion Program leads to a reduction of water usage (as shown in figure 2 below) and 2) Panamanian law prioritizes human consumption at all times. The conclusion of the review of the design of the Expansion Program and water availability projections by Bank’s consultants, including the Louis Berger Group as IE and ERM as Independent Environmental Consultant⁹⁸ was that the water saving measures designed into the project are sufficient to prevent the expansion of the Canal from being an increased burden on Panama’s water budget. In particular, the IE confirmed that the water saving design of the locks would actually decrease overall water usage by the Canal, thereby increasing water availability by 1,600 Mm3 (or 38%) in the average year, after accounting for all uses, and by about 50% when accounting only for potable water and transit (Figure 2 below). The IE also assessed water availability and states in his Conclusion #0306 that the proposed water management improvements would satisfy water demand beyond 2025 at the lockage level forecasted.

The Bank did undertake a rigorous and independent analysis of the water projections and found that the Bank-financed operation, namely the Expansion Program, would actually i) reduce water demand from the Canal vis-à-vis the baseline scenario, and ii) increase the availability of water for the population at least through 2025.

⁹⁸ The ACP conducted an extensive analysis of water supply and saving alternatives with the purpose of ensuring reliable, long-term water supplies. An HEC-5 Reservoir Simulation Model was developed with the assistance of the US Army Corps of Engineers (USACE) Hydrologic Engineering Center (HEC) to simulate existing operations and form the basis for evaluating alternative water use scenarios, including lock demands, municipal water supply, hydropower and flood spillway flows. Complementary to this, variations and trends in the spatial and temporal distribution of historical rainfall and runoff data were analyzed for the Gatun watershed. Also, the ACP contracted a study to develop long-term projections of municipal and industrial water demand (to the year 2060). These studies were subject to the review by the independent environmental consultant.

Figure 2



- Para 1.7 and 7.39: *The ICIM states that “the Bank did not apply an appropriate level of analysis about the adequacy of the safety margin (the relationship between water supply and demand) projected by the ACP nor did it analyze whether the ACP’s choice to provide water projections only up to the year 2025 was sufficient”.*

Management is not in agreement with this conclusion. As is required under the IDB’s Environment and Safeguards Compliance Policy (OP-703), the Bank’s focus during due diligence was on the potential adverse impact of the Project, namely the impact of the proposed Expansion Program on water supply and demand. Thus, the question examined was whether the expansion of the Canal would present greater demands for water than the current operation of the Canal.

The IE assessed water availability and confirmed that the proposed water management improvements under the expansion of the canal would actually reduce the water demand of the Canal and not create a net additional burden

on water demand. In addition, the Bank commissioned a specialized firm, Water Management Consultants, in 2008 to further assess the threat of climate change on water supplies. Water Management Consultants concluded in their report, to which the ICIM has been provided access, that the threat of climate change on water supplies is considered manageable by means of systematic measures to ensure the conservation and sustainable management of the watershed of the Canal.

Since the impact of the Expansion Program on water availability is actually a net positive impact, the question of the adequacy of the “safety margin” is not relevant in the context of OP-703 requirements. In addition, water availability does not constitute a Project risk, as water is and will be available to operate the Canal under current and forecasted traffic volume. Instead it constitutes a limiting factor to a continuous increase of traffic through the Canal in the long term. The question of how water availability may affect any potential continuous increase in traffic beyond 2025 levels though the Canal is an important question for ACP and Panama, but it is not inherently related to the Expansion Program.

- Para 7.27: *The ICIM states that it found “inconsistencies in facts cited by the Bank”. This paragraph includes a footnote 68 that states: “Paragraph 4.9 of the ESMR states: “The maximum freshwater supply for the watershed (after completion of the deepening of Lake Gatun to elevation 10.4 PLD) at 45 lockages/day, is more than adequate to meet the demand from the population and the existing Canal operating at its maximum capacity, while maintaining extremely high levels of reliability for guaranteeing maximum ship draft.” However, the Panel notes that this conclusion erroneously makes reference to the then **existing Panama Canal** rather than the **Expanded Panama Canal**.”*

The Panel's report reflects a misunderstanding of the data presented in paragraph 4.9 of the ESMR. Paragraph 4.9 does not describe the consequences of the Expansion Program on water availability, but rather presents the baseline scenario *without* the Expansion of the Canal (the Existing Canal). The ESMR does not present any data that is inconsistent with that of the Master Plan and other studies on projected water availability with the Expansion Program implemented.

- Para 7.38: *The ICIM states that “problems concerning water availability were also identified in the World Bank’s 2008 Panama Country Environmental Analysis.” The World Bank noted that the water availability forecasts presented by the ACP in the Master Plan did not take into account possible variations due to climate change or ENSO events and that population growth rates were too conservative, concluding that the current safety margin could become inadequate. This leads to the ICIM’s conclusion that “Though not available to the Bank at the time it prepared the Project, the World Bank analysis highlights the need to consider carefully the reliability of the water projections, as important risk factors may not*

have been taken into account in the Bank's calculations which could materially and negatively affect the assumed or projected safety margin".

The Canal Expansion Program itself will decrease the overall water demand from the Canal and does not contribute to increased water stress. Therefore the question of the adequacy of the "safety margin" is not relevant in the context of OP-703 requirements as they apply to the Bank-financed operation. Management agrees that in the larger context, long term water availability is an important issue for Panama.

In relation to the growth of water demand for human consumption, while the World Bank's 2008 Panama Country Environmental Analysis indicates that demand was already higher than the 10-year average consumption level used by the ACP for balancing its water budget, it also notes that per capita water consumption rates are quite high (158 gals/day). Around 35% of the high potable water consumption is due to spillage (wasted potable coming from obsolete pipes and systems), which is a central area of investment for the current government. The World Bank also states that "there are water and environmental management interventions (such as leak reductions and zoning) that could revert this trend; however they would require substantial strengthening of the implementing agencies' capacities". The Bank supports the Panamanian authorities on water management in general (sanitation, sewage networks, water treatment before release, refuse, conservation, bay conservation, etc.) and is prepared to further support the relevant agencies, including IDAAN - Institute for National Water Supply and Sewerage Systems (Instituto de Acueductos y Alcantarillados Nacionales) and the provinces in implementing measures for water management. Through the decrease in overall water usage by the Canal, the Expansion Program will make a positive contribution on this larger issue and will not increase water stress.

Lastly, it is important to note legal requirements in Panama prioritize water for human consumption over all other uses, including operation of the Panama Canal. If and when water shortages occur, the Canal generally does not lose any transits, but instead restricts drafts to below the maximum level, only permitting ships with less cargo to transit. Since toll rates are imposed based on the cargo carrying capacity of ships and not the volume of cargo aboard, transit income is not affected.

- Para 1.7 and 7.39: *The ICIM concludes that "The Bank's conclusions as to water availability were not properly supported and thus the Board received inadequate information regarding a significant Project risk".*

Management is not in agreement with this conclusion. The Bank's conclusions that the project would not present an additional burden on water demand but

rather would decrease water use demands of the Canal were based on analysis of the Project documentation and the opinions of the IE and the Independent Environmental Consultant. When compared to the existing Canal, the Expansion Program will require less water and increase the availability of water for the population in the short and medium term as the new locks are less water intensive than the existing system (see figure 2 above). In addition, according to the Panamanian regulations, in the event of water shortage, ACP has the obligation to follow the established priority to preserve the access of the population to fresh drinking water: 1) municipal and industrial use; 2) transit of ships; and 3) power generation.

Given that the selected design for the Canal Expansion Program decreases water demand from the Canal and increases accordingly the availability of water for the population in the short and medium term and given that water from the Canal watershed for human consumption is prioritized by law, water availability was not considered a material risk to be reported to the Board.

- Para 7.42: *The ICIM recommends “that the Board require the Project Team to review the water supply and demand projections, including an inquiry into whether a longer time horizon would have been prudent, and whether the projected safety margin reasonably met the standards of OP-703. Additionally, the Panel recommends that the Bank closely monitor the Project to ensure that applicable ROPs are followed, particularly if water resources prove insufficient”.*

Management is not in agreement with the recommendation. Water availability has been a critical component of the analysis of the Panama Canal Expansion Program and has been studied extensively for many years by the ACP and specialized consultants. The information that enough water would be available for the expansion of the Canal was confirmed by the IE and the Independent Environmental Consultant during the Bank’s due diligence. As mentioned before, the selected design for the Canal Expansion Program *reduces* overall water usage by the Canal. Moreover, Management considers that the ICIM’s recommendation in reference to water availability is irrelevant given the regulatory context where human water consumption takes precedence over commercial water use. Therefore, Management considers that there would be no added value in further reviewing water supply and demand projections in the context of the Canal Expansion Program.

Management agrees that the Bank should closely monitor the Program, and in fact the Bank as part of its supervision monitors the Project closely in coordination with the other MDBs involved in the financing and with the support of an independent environmental consultant. To the extent that any future events require additional specific monitoring, IDB and the other MDBs will do so.

Other comments:

- Para 3.4: Please change the word “Executing Agency” to “client”. In the NSG context, loans are given to clients not executing agencies.

Annex

Figure 3:


Board of Consultants		
Geotechnical Advisory Board	Seismic Advisory Board	Structural Advisory Board
 Dr. Norbert R. Morgenstern Professor of Geotechnical Eng, University of Alberta	 Dr. Robert L. Wesson Senior Geophysicist, USGS	 Dr. Robert Hall Retired Chief, Geosciences & Structures Division, WES, USACE
 Dr. James Michael Duncan Professor of Geotechnical Eng, Virginia Tech	 Dr. Paul Sommerville Principal Seismologist, URS Corporation, Pasadena, CA	 Dr. Anil Chopra Professor of Structural Dynamics, UC Berkeley
 Dr. Robert L. Schuster Retired Geotechnical Engineer & Geologist, USGS	 Dr. Julian Bommer Professor of Earthquake Risk Assessment, Imperial College, UK	 Dr. Sam X. Yao Chief Engineer, Ben C. Genwick, Inc., San Francisco, CA
 Dr. William F. Marcuson Retired Chief, Geotechnical Laboratory, WES	 Dr. Farrok Nadim Director, International Centre for Geohazards , Norwegian Geotechnical Institute	 Dr. Enrique Matheu Chief, Dams Sector Branch, Department of Homeland Security, Washington, DC
 Dr. Robert L. Wesson Senior Geophysicist, USGS	 Dr. Lloyd Cluff Director, Earthquake Risk Management, Pacific Gas and Electric Co., San Francisco, CA	 Dr. José Roesset Professor of Structural Mechanics & Dynamics, Texas A&M
	 Dr. Martin Wieland Structural Engineer, Pöyry Energy Ltd., Zurich, Switzerland	

Figure 4:

Chronology Due Diligence and Post-Closing

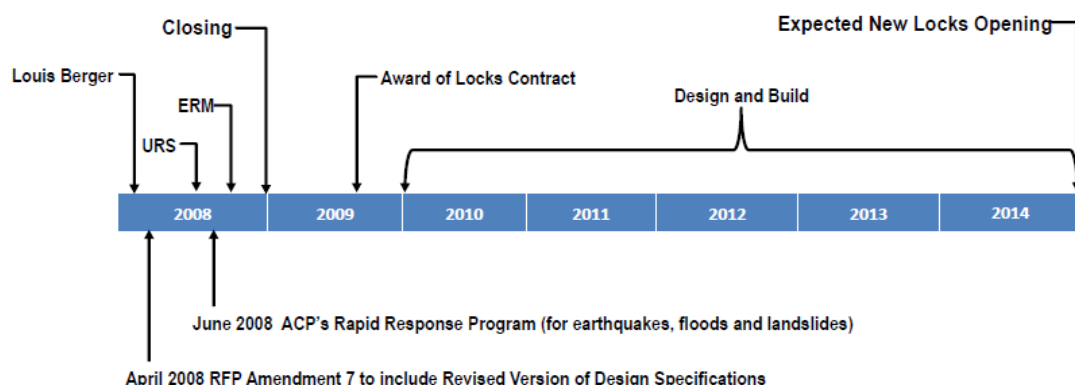


Figure 5:

Seismic studies, reports, design specifications and plans reviewed by the Independent Engineer

- Panama Canal Commission Report, 1992
- ACP Report, 1992
- Informe de los consultores Woodward-Clyde, 1993
- Waterways Experiment Station/ Panama Canal Commission Investigation, 1997
- US Geological Service, 1997, Study Investigation
- US Geological Service, 2003, Study Risk Analysis
- CPP, 2003, Conceptual Design Post Panamax Locks
- USACE, July, Panama Canal Concept Design – Atlantic Lock Structures- Third Lane Project
- ACP, 2003, Comparison of One 3-lift lock with one 1-lift Plus one 2 lift lock at the Pacific Side
- ACP, 2003, New Locks Alignment at the Pacific Side Alignment PMD
- Adequacy of Selected Lock Size Parameters for Expanded Panama Canal, Hans Payer, 2005
- Consorcio Post-Panamax, 2005, Alternative conceptual design of Pacific and Atlantic Post Panamax locks - 3x2 Water savings
- ACP Memorandum of Seismic Design Criteria, 2005
- Earth Consultants International, 2005

- Social Enterprise Consulting, 2005, Design value management, constructability dialogs, and risk assessment
- Informe Del Consultor-Campbell R Harvey, 2005
- Enterprise Risk Management, 2005, Panama Canal Risk Assessment Report
- CCP, 2005, Update the Pacific Locks Conceptual Design and Harmonization of the Atlantic Locks Conceptual Design
- US Geological Service, 2005
- Earth Consultants International, 2006, Geomorphic Evaluation of the Miraflores, Pedro Miguel, Azota and Caballo Faults
- TECHNOS Inc, 2006, Geophysical Investigation for the third Set of Locks Project
- ACP, 2006, Relevant Information on the Third Set of locks Project
- ACP, 2006, Plan Maestro del Canal de Panamá
- ACP, 2006, Proposal for the Expansion of the Panama Canal Third Set of Locks
- ACP Expert Technical Committee, 2006, Development and implementation of a risk model and contingency estimation for the Panama Canal Expansion Program
- ACP, 2006, Development and implementation of a risk model and contingency estimation for the Panama Canal Expansion Program,
- URS, 2007, Seismic Criteria Study
- Earth Consultants International, 2007, Paleoseismic Trenching of the Pedro Miguel Fault in the Cocoli
- Earth Consultants International, 2007, Quantitative Characterization of the Pedro Miguel Fault, Determination of Recency of Activity on the Miraflores Fault, and Detailed Mapping of the Faults through the Proposed Borinquen Dam Location
- William Lettis & Associates, 2007, Paleoseismic Evaluation of the Pedro Miguel, Rio Gatun and Limon Faults
- URS, 2008, Development of Design Earthquake Ground Motions
- URS, 2008, Characterization of Fault Displacement Hazards. Design of the Borinquen Dams
- Earth Consultants International, 2008, Quantitative Determination of the Pedro Miguel Fault slip displacement and slip kinematics for the design of the Panama Canal Expansion Project Borinquen Dam
- ACP, 2008, Technical Consulting Services for the Panama Canal Expansion Program
- ACP, 2008, Design and Construction of the Third Set of Locks
- ACP, 2008, Summary of the Excavation Design for the South End of the Pacific Approach Channel

ANNEX II. REQUESTERS' COMMENTS TO THE DRAFT COMPLIANCE REVIEW REPORT

Alianza ProPanamá Comments to Draft

“Panamá Canal Expansion Program Compliance Review Report ”

(PN-MICI002-2011 / PN-L1032)

15 May 2015

Preface

In the preparation of these comments to the draft “Informe de Verificación de la Observancia del Programa de Expansión del Canal de Panamá” (PN-MICI002-2011 / PN-L1032), members of our coalition, Alianza ProPanamá, retain the spirit of cooperation in which our original Requests for Review of were submitted to the InterAmerican Development Bank (IADB) in 2011, as well as to the International Finance Corporation (IFC-WorldBank), Japan Bank for International Cooperation (JBIC), and the European Investment Bank(EIB).

We wish to express appreciation for the work the Compliance Review Panel has done in order to prepare this draft Report and for the opportunity to submit our comments at this stage. We are conscious of some of the hurdles the Panel's members have had to overcome, along with pressures of varying kinds, in order to produce this document. We can imagine how having changes in both members and in leadership of the Panel – with Dr. Mary Rose Brusewitz replacing Dr. Werner Kiene – has not made the job easier, especially given that the original timeline envisioned its completion by May 2013.

Our collective comments have been grouped to reflect the various types of responses received. Editing has had to occur in order to limit the length of our response, but we believe the Panel can still benefit from feedback providing points-of-view different from the Promoters'.

General Observations

Over these years we have seen that accountability mechanisms that identify projects that have received public funding – based on, for example, insufficient study, incomplete plans, engineering errors, selective data or third-party pressures – need more independence and authority if they are meant to make a positive difference.

Today Promoters know that once a project has begun, virtually nothing will stop it. Mitigation of damage may be attempted – as is the case with this Project – expending additional resources that could have been spent up-front to avoid creating the problems in the first place. If no mitigation is possible, then those problems are left for others to

deal with. There appear to be no effective disincentives to taking shortcuts to construction and no consequences for the resulting damage.

Unfortunately, too much of what our coalition's members have experienced in Panama supports the perception that the bigger, richer or more connected a Promoter is, the less will be required to justify a loan and the more improvisation will be tolerated during the project's execution. Paradoxically, the better the marketing and the benefits promised sound, the more a Promoter is taken at face value, the less those questioning the project will be believed.

Fair or not, the negative effects on the IADB's reputation and of its counterparts, are real. We are now living the effects in Panama of what occurs when independently verifiable resolution of technical, financial, economic, social and environmental challenges is not done prior to loans being approved.

TRANSPARENCY and COMMUNICATION

Alianza ProPanamá's key concerns about the Project were identified by the Panel as relating to five Relevant Operational Policies of the six within the Panel's mandate near the end of 2012. They were:

- Environment and Safeguards Compliance Policy (OP-703)
- Access to Information (OP-102)
- Disaster Risk Management Policy (OP-704)
- Involuntary Resettlement Policy (OP-710)
- Indigenous Peoples (OP-765)

It surprised us to discover that in months that elapsed between 2012 and September 2013 in order for the Panel to gain approval to proceed with the Compliance Review, that list had been reduced.

Lack of access to information is at the root of all the issues Alianza ProPanamá has raised. Yet, Relevant Operational Policies, Access to Information (OP-102), was eliminated. Although it has not been considered in this draft, it is a fundamental reason why this Project is failing.

There can be no justification for concealing data obtained from studies – particularly data paid for by public funds for a public works project – which, like the earthquake data as an example, is relevant to other activities outside those related to the Project. All of the construction that has occurred, particularly in Panama City, should have been fully informed of the seismic risk and required to build accordingly. Equally, the high risk of establishing a saltwater passage between the Atlantic and Pacific Oceans is a matter requiring full disclosure given its potentially catastrophic impacts on a global basis.

Exceptions and Consequences

It cannot be argued that the Promoter's wishes in a case like this – with life-threatening future consequences even beyond the Project – should take precedence to public safety. The IADB's Access to Information (OP-102) certainly allows for exceptions that apply. The IADB's close relationship with the Promoter makes it difficult to accept that seismic risk information available as early as 2005 – understood to have created panic within the ACP – would have not been communicated between key players at the time. The saltwater intrusion study results were definitely known by all involved in the Project and awareness of the more worrying seismic scenario unveiled in 2007 would have been unavoidable, given its import.

Lack of access to information like this has caused inexcusable increases in danger to lives – from the multitude of massive high-rises subsequently built without incorporating this information in their designs, as well as public works projects such as the new subway system – to property and investments, not only in the existing canal watershed and Panama, but in countries and businesses around the world as well. Not being adequately informed about the real challenges the Project faced – decisions to invest in port expansions around the world (many now ready-and-waiting) have been taken, along with other costly preparations anticipating the timely completion of the expansion.

Once the IADB and/or its counterparts were made aware of such data – particularly the seismic threat data relevant to all of Panama to take preparative steps to protect life-and-limb – the provisions of OP-102 regarding exceptions would certainly apply, even if moral guidance was insufficient to elicit disclosure, the Promoters' wishes notwithstanding.

Although we note in the Panel draft report that assertions by the Promoters are repeated – that transparency has existed for this Project and that full information has always been made available to its stakeholders – the facts disavow those claims.

To-date lack of official action is perceived as a desire to continue concealing such information. If the IADB and its counterparts were aware of this data (confirmed in 2007) prior to the approval of the Project in October 2008, the problem is compounded.

Project Marketing Narrative

During the 6-month period of “disclosure” leading up to the Referendum, even in the four years preceding it, a narrative was created to market the expansion which focused on particular “selling points” while downplaying or denying known risks and ignoring ones to be created or exacerbated.

As noted above, that same narrative is present in parts of the draft even while the Panel is exposing some of the problems of the Project. Some of the core issues raised by Alianza ProPanamá have been re-framed or re-focused to fit the narrative created for promoting the Project, while one of the challenges we face is the reluctance of those entrusted with ensuring fair use of common resources to address the Project in its entirety.

Further in this document is a listing of events that could be added to the timeline in the Panel draft document (Annex II) which can help correct misperceptions and assist in understanding how today's situation came to be with respect to expanding the Panama Canal.

Information Control

Prior to the Referendum, as we have also reiterated throughout this process, technical and environmental discussions of any substance were never allowed. This is a matter of record. Crucial information was kept from the stakeholders, other decision-makers and the public.

The public was never told that the existing Panama Canal contains water-saving methodologies that make it capable of operating using 50%, less water and, if optimized, a larger version of today's Canal could save up to 75% of the water. We are still requesting information as to how these locks compared to the less advanced water-saving methodologies of the proposed locks. Given that this draft does not mention them, we must assume the comparative studies were not done. This adds to the perception of "improvisation" that the Promoter has been accused of frequently in the media in Panama, since problems with the Project have become very visible during this these years.

Among other Project components, issues and suppressed study results of which the Panamanian voters were inadequately informed, or not at all, prior to the Referendum are:

- Borinquen dam/dyke to be built across Fault – added cost and risk not disclosed
- Cost of new canal crossings – public access to either side of the Canal affected
- Removal of Bridge of the Americas – cost of removal/new bridge construction omitted
- Plans for 2nd lane -- only divulged in selected circles (not to Panama public)
- Salt-intrusion and risk to oceans – manipulated parameters, rejected discussion
- Realistic timeframes – construction, water availability, transits, etc.

Persisting Lack of Transparency

In addition to its stakeholders the Project's broader global zone of influence is affected by the ongoing lack of access to credible and transparent information regarding:

- engineering problems causing construction delays,
- increased shutdown risks to the Canal,
- expected operational problems – affecting future transit times and, therefore,
- potential reductions in capacity and revenues as a result,
- maneuverability concerns highlighted by specialists like the Canal Pilots,

- limitations from not using “mules” for positioning ships in the locks,
- lack of investment in reinforcement of the existing canal against seismic damage,
- risk of complete shutdown if Gatun Lake is lost, and
- insufficient saltwater intrusion mitigation measures, among other issues affecting the global community.

During the years spent by the IADB and its counterparts addressing our Request, information that should have been shared with stakeholders from the outset was never provided to the Panel.

During the same period, the Project has continued with engineering problems and cost overruns stemming from issues being investigated by the Panel for the IADB and its counterparts.

It appears that neither the IADB nor any of its counterparts has had the authority to extract information at the crux of this Project's current problems, or to determine whether the data exists or not, such as:

- specific criteria identified in advance of determining the configuration of the expanded Canal system,
- studies determining the lock design now under construction,
- comparative studies of designs, comparing the side-tank design with the present day canal.

GLOBAL AREA OF INFLUENCE

This Project has global impact. Its final costs ultimately fall upon its stakeholders – the people of Panama – and on consumers around the world, all taxpayers who contributed funds to its construction through the IADB and its counterparts. The IADB itself recognized its global influence stating in the Loan Proposal (*supra* note 5, par.1.7) approved in 2008 that the Project would “contribute to economic development around the world... job creation and the facilitation of worldwide trade, and promote private sector development”.

Limiting Zone

The Promoter has sought to confine the area of influence of this Project to the immediate area of the Canal, as if it were not risking marine life in both oceans the Panama Canal connects and as if it were not located in, effectively, a highly-populated urban environment. In varying degrees, the IADB and its counterparts have accepted that perspective.

Alianza ProPanamá continues to maintain that this Project's area of influence extends, effectively, around the world. Its success or failure – in varying degrees – will risk the oceans and its associated industries, food supplies for people, economies depending on its functioning, business, lifestyles and life itself.

The success or failure of expanding the Canal in the way that has been accepted without checking the premises of its design and the implications of that choice, has ramifications that cannot be equated to any “standard” project, such as a hydroelectric plant being built in the hills of Panama, for example. If such a plant is destroyed, electricity it provides can be compensated by other sources on the grid and other impacts are limited and confined to its surroundings. If the Panama Canal closes, no alternative can “pinch hit” for it within hours. And, the potential damage it can cause will not be containable, particularly in the case of biota transfer between the two oceans it connects. In the event of its closure, depending on the reason for closure, it could take years to resume operating. This is not a normal or standard project and it should not, and cannot, be addressed by “standard” policies alone or they must be very strictly applied, monitored and enforced.

Even if it were entirely located in some remote backwoods, sparsely populated area, home to a few “indigenous” tribes, the fact that it has potential to devastate marine life of the world's oceans means its area of influence is far beyond any localized limits.

Identifying Claimants

We note that some of our members have been left out of the listing of the draft. Alianza ProPanamá is a coalition of individual Panamanians and members of the non-Panamanian international community, including groups and base organizations identified to the IADB and its counterparts in 2011. They include:

- Unión Campesina Panameña (UCP),
- Frente Campesino Contra los Embalses y la Minería de Coclé y Colon (FCCM),
- Frente Campesino Colonense (FCC),
- Organización Campesina Coclesana 15 de Mayo (OCC-15 de Mayo),
- Unión Indígena y Campesina (UIC),
- Comité ProDefensa del Lago Gatún,
- Coordinadora para la Defensa de Tierras y Aguas (CODETIAGUAS),
- Asociación Pro Defensa de las Cuencas Hidrográficas,
- Frente de Resistencia Coclesano (Movimiento – área de Coclé del Norte),
- Coordinadora Campesina por la Vida

Excluding Claimants

All funds committed by the IADB and its counterparts have been disbursed during the years Alianza ProPanamá has been working with the mechanisms of the IADB and its counterparts. Disbursements continued despite investigations underway and the legitimacy of our claims, despite even a shutdown of the entire Project for several

months at the end of 2013 and the first quarter of 2014 and despite again being without funds at this writing in May 2015.

There is fully justified skepticism of actually being able to improve or stop a project that is going wrong. No consequences occur whether projects resolve problems they claim to address or if they create more of them. The illusion that inadequately developed projects will be dealt with is an illusion, but only those affected actually know it. Generally poor and disenfranchised people do not even know compliance processes like these exist and, if they do, are quickly discouraged or otherwise dissuaded from using them.

Limiting who can claim (the western watershed debate) is perceived as a tactic to minimize responsibilities. The extreme importance given to whether those requesting review of projects had the “right” to do so or not further deepens concerns within our coalition.

Alianza ProPanamá members are not clear how it is determined if they or others are affected or if they are “indigenous (enough)” to qualify should their homes and property be confiscated or damaged as a result of the Project. By limiting who can claim affectation to only those fitting a narrow definition of people who “count” continues to elicit suspicion. Those living within the existing watershed who will lose homes and property if measures are not taken to reinforce the existing Canal's weaknesses are added to the businesses affected and represent significant numbers were such a scenario develop.

The area of influence, the ramifications and size of this Project demand a different way of assessing its impacts.

SEISMIC-RELATED

Seismic alerts in Panama with respect to the Panama Canal were raised after Grupos Unidos por el Canal (GUPC) was announced in July 2009 as winner of the bid to build the locks. The two losing bidders warned the ACP of the seismic risks not being addressed by (GUPC). Nonetheless, in August 2009 GUPC received the backing it needed from Zurich American Insurance Company.

Given the presence of the IADB in Panama and its close involvement with the Panama Canal's administrators, later becoming the ACP (Autoridad del Canal de Panamá) as created by Law 19, it would have witnessed certain events that took place in the years preceding the Referendum.

The discovery by ECI in 2005, followed by even more worrying conclusions in 2007 regarding the far greater seismic threat existing in the canal area, shook up everyone involved with the Project. The perception is that it would have not been concealed from close partners working towards ensuring a successful Referendum and start of the Project. By the end of 2007, the expectation was that it would be made public, as would have been the responsible action to take, but that did not happen. In 2015 lack of transparency continues.

Even without an expansion effort, contingency plans would still have had to be made given that the threat to the Canal is not hypothetical. Reinforcement of the existing vulnerable points, as Alianza ProPanamá has noted before, would have been the logical investment to be required prior to initiating this costly Project and in order to protect the eventual expansion investment itself. Paradoxically, even with the information about the upcoming earthquake, the Promoter informed the IADB and Alianza ProPanamá in a meeting held on Dec.2011 that the new dyke (Borinquen) was built to withstand only 6.5 when a magnitude above 7 is expected.

WATER-RELATED

The Tripartite Commission concluded an extensive study in 1993 that recommended finding engineering solutions that optimized water-saving methodologies. No evidence was presented during the course of the various compliance reviews by the various development banks that such assessments of water-saving methodologies were taken.

How we arrived at a point where these water-related and sustainability objectives were clearly ignored by those parties acting on behalf of Panamanian society as well as the international community can be viewed from two different perspectives.

One, those charged with taking decisions were incompetent or, two, those charged with taking decisions only focused on immediate economic gains from moving the Project forward. Sustainability, both environmental and economic, was relevant only as a marketing concept used to “sell” the Project..

Aside from unsubstantiated claims in the Master Plan and in publicity for the Project supporting the side-tank methodology – designated as early as 1999, per information received from by the Promoter in 2004, by unidentified processes – as the “best and only” option, no comparative studies or other data has been presented to justify the system being incorporated into the expanded Panama Canal.

At no point in the years preceding Alianza ProPanamá's Request to the institutions financing the Project and at no point in the four years since has any evidence been produced by the Promoter to substantiate its claims of sufficient availability of water to ensure the continued reliable operation of the Panama Canal and to meet the promised increases in capacity on a consistent basis.

Water and the Referendum

During the 6-month period leading up to the Referendum, one event threatened to derail obtaining the “yes” vote needed to proceed with the Project. The Panamanian public expressed massive support for the people of the Western Watershed, including members of Alianza ProPanamá (“Solicitantes de la Cuenca Occidental” and others, in their rejection of inundating that area of Panama for use in expanding the Panama Canal.

Water and Operating Changes -- Time and Salt-intrusion

The time constraints of operating the water-saving tanks of the system being constructed was not revealed to the public. The ACP now proposes not use the tanks in order to save time in transits with the excuse that there is no need to save water when there is sufficient rainfall. What is left unsaid is that this will unbalance the already precarious relationship between allowing and preventing the intrusion of saltwater into the primarily freshwater system of the Canal. If this operating procedure is allowed, the creation of a saltwater passage between the Atlantic and Pacific Oceans is, for all intents and purposes, a foregone conclusion.

ADDITIONAL COMMENTS TO PANEL DRAFT SECTION “VII. WATER AVAILABILITY RISK”

Random. Approximately identified with the Section Subheadings of the Panel draft Report.

Included for completion, un-edited due to time limitations. Apologies.

(7.1 - 7.5)

Review of data and actions indicate that the plan to incorporate and use the western watershed has not changed. The maneuver – without technical substantiation and without changing the total cost of the Project, despite a 50% increase in costly tanks – that occurred in June 2006 was only to remove objections and obtain the vote needed in the Referendum in 2006.

The IADB – an acknowledged partner with the Canal, even before the ACP was created, and privy to inside information due a relationship of trust – has positioned itself to be perceived as “part” of the Promoter, rather than a protector of stakeholders and others affected by:

- choosing to ignore knowledge the IADB had from over a decade of direct experience working with the Canal and its water requirements and other challenges for expansion,
- approving a plan that included locks deemed inappropriate for the Canal over a century ago when the existing water-saving design was selected for the present Canal,
- accepting – without requiring verifiable proof – that the existing watershed would be sufficient to operate the proposed system,
- failing to question the sudden, last-minute modification to the Master Plan that conveniently “eliminated” the need for the western watershed, and
- ignoring the fact that an identical second lane (for which there is unquestionably insufficient water) was promised to others (but not revealed to the stakeholders) and is now being planned and advertised.

When it becomes a “choice” of continuing to operate the Canal or of suspending transits to use the available fluid for drinking, pressure will be brought to bear upon the population of Panama. The ensuing public pressure because of water insufficiency, will

be used as the justification for expropriating and expanding into the western watershed, while now – as before – those residing in the Western Watershed continue to be pressured to leave their homes and abandon their livelihoods.

Announcements of yet “another expansion” are in the news just as expected. It is difficult to see how this could be excluded from “area of influence” definitions of OP-703, even though many accept that the reliable provision of potable water to the population of Panama is considered a concept, rather than a priority, as supported by current and historical evidence. Likewise, it is perceived unfavorably to exclude from OP-765 those people who are arguably the poorest of the many people affected by this Project (were its extensive and actual “area of influence” to be accurately and honestly defined).

Had the sustainability requirements been upheld and had comparative assessments been performed of the water-saving methodologies of the current canal versus those being incorporated by the Project today, the expansion today could have avoided this and future conflicts. The immediacy of the need to use the western watershed could have been postponed, perhaps indefinitely, instead of what is happening now. No investigations would be needed.

(7.8 – 7.9)

Use of the western watershed was not the starting position recommended by innumerable studies and the ACP was aware of that. It is not accurate to give the impression that at the water shortages of 1997 and 1998 triggered an “urgent necessity” for expanding the Panama Canal.

That is the marketing story to justify the expansion rush & its locks, but not the truth.

The idea of expanding the Canal began almost as soon as it was inaugurated. As early as 1929 the US Congress authorized studying possible expansion alternatives. The first attempt begun in the 1930's was cut short by World War II and was not resumed due to subsequent changes in priorities.

The building of Madden Lake (known today as Alajuela) was created to ensure water availability during dry periods AND to avoid having to use the Canal's more time-consuming 50% water saving capability.

Many studies regarding various aspects of the Canal and its watershed occurred over the decades, including evaluating expansion alternatives, even sea-level (Anderson Study, 1970) options. This also included those by the Smithsonian and other institutions indicating the dangers of creating a saltwater passage between the Atlantic and Pacific Ocean.

Long before the water shortages of 1997 and 1998, the Trilateral Commission (1985-1993) also recommended that better use of existing water resources was essential to increase Canal capacity which meant evaluating how to best optimize the water-saving

methodologies present in today's Canal (which can save 50% of the water it uses per lockage) and make a larger set of locks which can save that much and more.

However, as described well by the Panel Draft report's following sections, time and resources were devoted instead to locating and defining sources of water, not to its more efficient use. No review or assessment or genuine engineering effort was made to develop a lock system using water more efficiently.

For this reason, the Promoter has been unable to justify how it transpired that around 1999-2000 the side-tank locks were designated to be the focus of the marketing campaign to promote the expansion. The Promoter has been unable to produce the studies Alianza ProPanamá, via the IADB and its counterparts have requested, such as how the side-tank locks compared to the more advanced water-saving locks of the Panama Canal. None were made.

The “best and only” story was created for the side-tank locks and, with the strict control on information experienced, particularly in the years leading up to the Referendum in 2006, no deviation from it has ever been allowed.

(7.10 – 7.14)

Legal changes in 1999 giving the ACP jurisdiction over the Western Watershed, along with time and resources spent from that date until 2006 as the Panel draft describes, emphasize where priorities centered. Close involvement by the IADB, through the work for which its funds were used, indicate that the IADB was fully aware that managing the acquisition of lands in order to expand the watershed was the sole focus of water-related efforts, not water-saving.

No serious efforts were made to follow the recommendations above. Instead, time and resources were spent preparing the western watershed for its eventual expropriation, which given the lack of intention to use water more efficiently, will be a foregone conclusion – if not soon after the new locks are put into operation – as soon as the equally inefficient second lane of that system is built.

(7.15 – 7.17)

These sections portray facts and events along the marketing story lines, omitting some key facts.

The Master Plan was presented to the people of Panama in April of 2006. Nothing changed except that in June of 2006, massive opposition to the use of the western watershed threatened to de-rail the Referendum scheduled for October 2006. Literally overnight, a “solution” – with all of the hallmarks of one that had been waiting in the wings should such opposition threaten the approval vote – was announced.

The Promoter declared that an extra tank added to each step (18 instead of the original 12) would “solve” the water shortage problem. It is not credible to suggest that major

additions to a construction project the size of this one would not generate increases in its cost. However, the announced cost of the Project never varied from what was announced on April 2006, despite this 50% increase in an expensive component.

Consequently, the Promoter declared the western watershed wasn't needed after all and the Legislature again obliged, as it had in 1999, removing it from the ACP's jurisdiction, making new water reserves "illegal" for this expansion by the rapid approval of Law 28. (The ACP, however, did not cease its activities in the area as residents in the western watershed have attested. Panamanians are also aware that Law 28 can be repealed, as quickly as it was passed.)

Understandably, all of this – seen for what it was by most Panamanians as another “improvisation” – is one of several reasons for the Referendum having one of, if not the, lowest voter turnouts in Panama's history. Only 30% of eligible voters approved the expansion.

As a guarantee against another derailment of the Referendum, Law 28 of July 2006 also declared that public presentations, forums, discussions or public debates about any aspect of the Project were illegal (Article 11) unless made by those specified in that law. Despite the communication strategies funded by the IADB and the Promoter's continuing claims about its extensive and successful campaigns, and the Project's transparency and complete access to information, Law 28 contradicts those assertions. It was crucial that none of the engineering and environmental questions – the real issues of this expansion – were discussed. Technical studies, for example to justify the changes in numbers of tanks, continue to be unavailable to stakeholders as is other information.

(7.21 –)

The potential transfer of biota between the seas is potentially the single most immediate damaging effect of what is being built by the Project today. Although evaluating it was assigned to the EIB when the IADB and its counterparts agreed to divide the work among their compliance teams, this concern should be noted.

Once operation of the expanded Canal is initiated – particularly now that operational methods are planned by the ACP which diverge from the parameters used to claim salt-intrusion would not be a problem for the side-tank lock system-- the risk of creating this passage will skyrocket.

The saltwater will not affect operations as the Canal can be operated regardless of its water quality. However, the impact on both oceans – based on decades of study – will be devastating and irreversible.

The area of influence of this Project in this regard extends to many shores, potentially destroying fishing industries and affecting our global food supplies.

The loss of drinking water, while an important side-effect of a salty Gatún Lake, can be mitigated by unaffected reserves like Alajuela(Madden) or by creating other reservoirs.

As this is an important aspect to water availability and at the core of our Request, appropriate inclusion by the Panel of the risk of salinization in its final report is essential.

All the strategies to increase available water in the existing watershed – deepening and raising, etc. – while they may work to postpone the need to create new reservoirs for operating the canal, they will not resolve the need with respect to potable water availability if Gatún Lake becomes an inland saltwater lake.

(7.34)

Projections and estimates, which were already questionable, are even more so now given the delays and problems occurring with the Project. Adding further concern to the scenario is that the Promoter has begun the process of publicizing the “second” expansion.

With the designated side-tank locks being built now, there is no question whatsoever that there is not enough water for a second, matching set to operate. For this reason, plans for the second lane were not revealed to the stakeholder or the public, although they were known to many including users (to deflect objections to the risks of only adding one lane) and those involved in the studies prior to presenting the Master Plan in April 2006.

(7.39 -7.40)

To the inconsistencies the Panel observed regarding the Promoter's projections and the question why they only extended until 2025, it may be useful to recall that data the ACP has from studies regarding water availability that within 15 years (2029, had the new locks begun operation in 2014) critical salt levels will be reached, and that, operating methods, water use/availability and salinization are inextricably linked. Every parameter change has an effect on the whole.

(7.47 – 7.63)

Given the findings of the Panel added to our preceding comments and the fact that construction of the side-tank design, for all appearances, will eventually be completed and put into operation, the Panamanian people, stakeholders and investors – and very particularly the residents of the western watershed – should be informed the facts, with true transparency and no spin.

Although the Panel cannot conclude what will happen with the western watershed – or even when, or if, the expanded locks will be placed in operation – we concur that resolution of the continuing conflict in the western watershed should be a priority. They are within the “area of influence” as are the majority of Panamanians. For the decades of uncertainties and suffering the people of the western watershed have already endured, truly fair compensation should be required, and for what they will suffer when their land is eventually inundated, fair remuneration for their loss of land, lifestyle, resources, community and history.

ADDITIONS TO PANEL DRAFT APPENDIX II: TIMELINE

1929 Congress authorizes studying possible expansion of the Panama Canal

1930's First attempt to expand Panama Canal is cut short by World War II

1935 Madden Lake (today's Alajuela) was created to ensure water availability in dry period

and to avoid using the Canal's more time-consuming 50% water-saving capability

1970 Anderson Study of sea-level canal in Panama concludes it is not economically justifiable

1977 Torrijos-Carter Treaty signed, setting a new course for the Panama Canal

1980 Panama Canal Consultative Committee sets guidelines for Tripartite Commission

1985-1993 Tripartite Commission established by US, Panama, and Japan to study alternatives concludes better use of existing water resources is essential if Panama Canal capacity is to be increased, disallows sea-level alternative.

1997-1999 Various laws passed in Panama, some mentioned in the Panel's draft. Important one to add is Law 21 which specifically protected the existing Panama Canal watershed and has been transgressed often in the last two decades.

1999-2000 Decision on the conceptual side-tank design was taken, criteria used to determine it have never been made available and are at the core of the Project's current engineering problems. Public declarations of intent were never made to the technical community in Panama or abroad, nor did details reveal of any such effort, that by all indications is questionable if it ever occurred.

2002 Announcement of intention to expand the waterway made to the Panamanian people

2003 Conceptual side-tank design divulged unofficially in the media initiates decade-long publicity campaign to attract investment and raise public interest. Increased travel to Panama begins and the "boom" is born.

2005 Geologic work by ECI establishes faults in Canal are active. Confirmation is followed by studies of other faults. Information not revealed to public.

2002-2006 As noted in Panel draft's timeline, many studies were undertaken by the ACP focused on the side-tank design as "best-&-only" alternative, despite high salt-intrusion characteristics added to slow operational speed. Important to add is that during this same period publicity of various forms, private and public, professional and technical inquiries by stakeholders were discouraged and rebuffed, including those of numerous

members and associates of Alianza ProPanamá, the Panamanian Society of Engineers and Architects (SPIA, Sociedad Panameña de Ingenieros y Arquitectos), etc.

2006 April Master Plan for the Panama Canal expansion is presented to the Panamanian people, containing conceptual side-tank design as divulged in 2003 and, by intending use of the western watershed, set the stage for the public protests that ensued.

2006 Apr-Jun Objections threaten approval of Project despite intensive communication campaigns favoring it, run by the ACP and political groups. Not impartial in any sense, opposition was drowned out.

2006 Jun In addition to repealing Law 44, as note in the Panel draft's timeline, design changes are simultaneously announced to "eliminate" need for Western Watershed. Without any corresponding rise in Project costs, the numbers of water-saving tanks was increased by 50%, which further raised stakeholder concerns. No revisions to studies, etc., and no documentation has been produced to validate those changes to-date.

2006 July As noted in the Panel draft's timeline, a law against building more water reserves for operating the proposed new locks was passed in order to remove the public objection to expanding the existing watershed. It is also worth noting that under Law 28 public presentations, forums, discussions or debates about the Project were illegal, unless held by the ACP or others it specified. Communication and free exchange of information among stakeholders and interested parties was, in effect, forbidden during the final months preceding the Referendum.

2007 Geologic study results reveal very serious earthquake risk to canal area. Active faults traversing new Pacific-Side lock location and under proposed Borinquen dam, threaten both existing and new locks. No changes to Project cost or to evaluation studies underway were announced. No revelation is made to the public, nor changes made to building codes with respect to seismic threat. Numerous port expansions are underway or planned around the world in anticipation of the additional business to be coming through the expanded Panama Canal in 2014. Oct 2007 Envir/Soc Strategy given to Env/Soc Rec Committee, declared Project Category A.

2008-2011 No plans for re-inforcing the existing Canal to minimize damage from earthquake were made as confirmed to Alianza ProPanamá by the ACP in the meeting attended by the

IADB in December 2011. Also revealed then was that Borinquen was designed to withstand a 6.5 seismic event, not one of 7 or greater magnitude as the studies in 2007 confirmed.

2011 Concrete begins to be poured as a rush to construction of the new locks and problems with its quality surface.

2012 Feb. 2012 Alianza ProPanamá Request declared eligible for Consultation.

Apr. 2012 Promoter declines to participate

Sept. 2012 Panel declares Alianza ProPanamá Request eligible for Compliance Phase
Alianza ProPanamá states clearly the material harm likely to be suffered due to salt-intrusion and seismic risks, which initiates period of casting doubt and questioning Alianza ProPanamá's "motives" for the Request for Review.

2012 Project revises Aug 2014 completion date for the expansion. Delayed and has been various times since which should be noted appropriately. It is currently uncertain.

2013 May Panel to have concluded Compliance Review Process per original plan: Dec 2012

2013 July While in July, as noted in the Panel draft's timeline, the IADB released the balance of its promised funds to the ACP, engineering challenges with the construction of the Project's locks – which became public by year end – were openly discussed in Panama. Among the problems were claims by the consortium of major cost increases including those due to complications from faults under the Pacific-Side locks.

2013 Dec Alianza ProPanamá meets with the ACP in a JBIC-sponsored meeting also attended by representatives of the IADB and its other counterparts and coinciding with crisis of the Project. Canal expansion Project effectively halted due to construction and financial problems.

2014 Project at a standstill during the first quarter of 2014 as dispute between ACP and consortium continues. As noted in the Panel draft's timeline, counterparts of the IADB also released the balance of funds being loaned to the ACP during that time.

2015 May Cost-related issues raised by the constructor of the locks remain unresolved.

MINOR CORRECTIONS TO PANEL DRAFT TYPOS

One of the four rivers listed for the Western Watershed is the Río Toabré, but is referenced as "Tobare" in the Glossary and body of the Spanish version draft (we did not receive the draft in English). The other is one of the lakes, named Alajuela (not "Ahuela") which is also known and referenced by its original name, Madden Lake.