

April 10, 2013

Dear World Bank Safeguards Team,

As you are aware, the effects of climate change are felt most strongly on water.¹ Climate change has begun to alter the rainfall patterns that replenish the Earth's natural land-ocean transport system: rivers. Meanwhile, more than 50,000 large dams have already greatly altered the world's river ecosystems and the human societies that rely on them.

We note that in response to the uncertainty caused by climate variability, the World Bank has advocated for regional resource pools that rely on dam infrastructure, especially large capacity storage and river flow regulation. Indeed, the World Bank currently manages or plans to manage over 150 dam and dam-related project and policy loans across all regions.²

The undersigned organizations request that the World Bank's safeguards policies revision process account for a number of areas of concern related to climate change and water, as well as the impacts of these on the human rights of people and communities.

Climate Change and Dams Cause Cumulative Impacts

Dam infrastructure, including large storage and run-of-the-river dams, basin transfer schemes, pumped storage, multipurpose storage, river channelization, and associated facilities, all cause considerable downstream impacts to ecosystems and livelihoods by altering the hydrological cycle and related environmental flows.³

These impacts will only be exacerbated by changes to the hydrological cycle associated with climate change.

This scenario has been described as a “perfect storm” for the biodiversity that underpins the world's fisheries, forestry industries, critical natural habitats, and agricultural systems. The combined impacts of habitat modification and degradation from dams, unusually rapid climate change, and other factors have the potential to create “multiple high intensity ecological stresses” that will worsen tensions between water users.⁴

Climate Change and Dams May Lead to Poor Human Rights Outcomes

Experience has demonstrated that the construction and operation of large dams may cause human rights impacts on people and communities, including a) irreversible damages to a community's right to a healthy environment, to human health, to food, and to culture; b) forced displacement, a lack of community participation, or a lack of resettlement and compensation plans; and c) violations of indigenous peoples' rights to land and natural resources.⁵ The effects

¹ Potsdam Institute for Climate Impact Research and Climate Analytics, November 2012. “Turn Down the Heat: Why a 4°C Warmer World Must be Avoided.” World Bank.

² The World Bank Project Database, accessed March 19th, 2013.

³ The World Bank, “Integrating Environmental Flows Into Hydropower Dam Planning, Design, and Operations,” Water Working Note 22, December 2009.

⁴ Potsdam Institute for Climate Impact Research and Climate Analytics, November 2012. “Turn Down the Heat: Why a 4°C Warmer World Must be Avoided.” World Bank.

⁵ Asociación Interamericana para la Defensa del Ambiente, AIDA, “Large Dams in America: A Cure Worse than

of climate change and water uncertainty may exacerbate these outcomes.⁶

The Bank Must Live Up to its Commitment to Safeguard People and Ecosystems

The Bank's safeguard policies are insufficient in addressing water-related social and environmental risks, and implementation of existing guidance has been ineffective. For example, while the World Bank's Environment Strategy established the need for biodiversity to be mainstreamed throughout the World Bank's energy and water sector investments, investments in the hydropower sector have ranked near last— 21 of 22— in mainstreaming biodiversity.⁷

For the World Bank to live up to its commitment to strong safeguards in a time of climate uncertainty and increased tensions over water demand, it must improve the framework and tools which it employs in risk management. This is best done by both mainstreaming requirements for assessments and action plans that manage the risks of climate change to water quantity and quality into existing safeguards, as well as by improving borrower implementation of existing guidance.

We consider the following recommendations as requisites for a credible commitment to strong safeguards against climate and water risks and the threats they pose to human rights. While these recommendations are most readily applicable to investments in the dam sector, they are equally applicable to other sectors of World Bank operations. See Annex 1 for specific suggested policy language.

1) Adopt a Cumulative Impacts Approach to Risk Management

The World Bank can more effectively manage increased tensions over water demands among multiple river basin users by adopting a cumulative impacts approach to risk management in its Operational Policies and Bank Procedures.

Cumulative Impact Assessment and Management (CIAM) is a multi-stakeholder process that assesses the cumulative, indirect, and interactive impacts of the proposed dam or set of dams and their associated facilities, as well as existing and planned projects from other sectors, on the condition of Valuable Ecosystem Components (VECs) identified within a specific spatial and temporal boundary. VECs identification, assessment methodology, and management action plans are agreed upon by all stakeholders, including affected communities, who must participate in all stages of the process. See CEQ's [NEPA Analysis Guidance Manual \(May 2007\)](#) and the [European Commission's Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions \(1999\)](#) for references.

The IFC's recent guidance note on cumulative impacts assessment and management for the private sector in emerging markets is not an appropriate approach to adopt. The IFC note leaves too little distinction between CIAM and a "good environmental and social impact assessment," while leaving too much discretion to the developer for implementation. The World Bank is well-positioned to work with governments for implementation of cumulative impact assessments at the strategic planning level, where they are often highly effective.

the Disease? Main Environmental and Human Rights Consequences and Possible Alternatives," November 2009, and "Climate Change and Human Rights in Latin America, a Human Crisis," December 2011.

⁶ World Commission on Dams, *Dams and Development: A New Framework for Decision-Making*, p. XXXIII, UK: Earthscan Publications (2000), and Inter-American Association for Environmental Defense, AIDA, "Climate Change and Human Rights in Latin America, a Human Crisis," December, 2011.

⁷ The World Bank, "The Role of Biodiversity and Ecosystems in Sustainable Development," 2010 Environment Strategy Analytical Paper, November 23, 2010.

2) Expand the Safeguards to Cover the Full Scope of Downstream Impacts

Rivers play a fundamental role in maintaining floodplain and forest ecosystem health by depositing soil along the entire length of a river network, from source to delta. When it reaches the ocean, soil deposition helps to maintain the base of marine food chains, contributes to the ability of oceans to absorb CO₂, and gives birth to coastal ecosystems that naturally aid in reducing disaster risk.

As foreshadowed by the Bank's Environment Strategy, the Bank is launching an important partnership to address ocean ecosystem degradation. To meet the biodiversity and ocean protection goals of this partnership and the Environment Strategy, the revised safeguards should broaden their scope to include measures that avoid and reduce downstream impacts from source to delta. See the [Downstream Response to Imposed Flow Transformation \(DRIFT\)](#) model, for reference.

3) Require Environmental Flows Assessments and Maintenance

Building greater storage capacity and regulating river flow through construction of cascade dams are two ways to hedge against the risks of climate uncertainty, but they both aggravate tensions between users over the quantity and quality of water as they alter environmental flows.

The World Bank should require environmental flows assessments that measure the impacts of dam infrastructure on freshwater fisheries, floodplain nutrient balance, sedimentation, and water and soil quality, and mitigation action plans that maintain environmental flows for healthy ecosystems and livelihoods. See the [Instream Flow Incremental Methodology \(IFIM\)](#) for reference.

4) Require the Creation and Implementation of Integrated Resources Plans

Climate change adds an additional risk to electricity resources planning. Integrated Resources Plans (IRP) are the best tool to evaluate and rank all options for delivering utility services—including all end-use efficiency and distributed generation approaches—according to comprehensive assessments of cost and risk. IRPs facilitate transparency and stakeholder engagement around decisions that otherwise are limited to supply options; enable fuller consideration of environmental and social costs; and reduce corruption.

The World Bank Safeguards should require borrowers to create and implement IRPs for the electricity sector before greenfield dam projects are selected. See [USAID's Best Practices Guide on Integrated Resource Planning For Electricity \(2006\)](#) for reference.

5) Require Rigorous Climate Variability Modeling

The IEG found that of 9 dams financed by the World Bank Group since it adopted the *Strategic Framework on Development and Climate Change* in 2008, only 3 explicitly assessed the impacts of climate change on project economic feasibility.⁸ Variations in rainfall increase the risk of extreme flooding and droughts, which will affect the economic feasibility of dam operations. When added to dams' social and environmental costs, the costs of climate variability will make many dams uneconomic.

The Safeguards should require borrowers to undertake climate variability assessments to model

⁸ Internal Evaluation Group, "Adapting to Climate Change: Assessing the World Bank Group Experience Phase III," page 74. World Bank Group.

impacts on investments. Assessments should include downscaled hydrological variability simulations based on the assumption that future trends will not necessarily mirror past observations (non-stationarity). Results should directly inform options and needs assessments identified within IRPs for electricity resources. See [Stockholm Environment Institute's WEAP model](#) for reference.

6) Require Borrower Compliance with Human Rights

The World Commission on Dams signaled that the assessment of any large dam should “[r]ecognise existing rights and those who hold them. Those groups whose livelihoods, human rights and property and resource rights may be affected by an intervention are major rights holders and thus core stakeholders in a stakeholder forum within which negotiated outcomes should be achieved.”⁹

Towards eliminating human rights impacts that may be exacerbated by climate change, the World Bank should assess borrower compliance with international human rights covenants and declarations to which they are a party, and should require project-level due diligence.

Assessment of the borrower's human rights compliance should occur during the Bank's assessment of the governance and legal risk of borrower systems. Due diligence assessments that identify all potential impacts on human rights during project design, implementation, and operation should occur before project approval. See the [Recommendations of the World Commission on Dams](#), the core United Nations Treaties and Joint Declarations of UN Special Rapporteurs, and regional human rights instruments, as a reference.

7) Require Greater Dam Safety Measures

Climate change increases probabilities of dam-related safety disasters such as glacial outbursts, cloud bursts, flooding, high intensity precipitation, silt inflows, drought, tectonic and geological activity, and subsidence. Increased risks of dam breaks and failure present higher risks for ecosystems and people downstream.

Incorporating designs for environmental flows into dam infrastructure is a cost effective way to strengthen dam safety. Improving project design aspects such as spillway capacity to accommodate for an increased probable maximum rainfall and flooding can improve both safety and economic feasibility.

The World Bank should require borrowers to design the safest possible dam infrastructure to prevent climate change from provoking dam safety disasters. See [Denver Water Utility Climate Alliance's Nonstationary Water Planning: A Review of Promising New Methods](#) for reference.

Do Not Sacrifice River Ecosystems on the Altar of Climate Mitigation and Adaptation

The World Bank has made a commitment to increase climate resilience across all of its operations. Yet, investing in climate change mitigation and adaptation should improve the resilience of the world's freshwater ecosystems, not create greater impacts on biodiversity and livelihoods.

To successfully manage the risks of climate change on water quantity and quality, the World

⁹ World Commission on Dams, 2000. “Dams and Development: A New Framework for Decision-Making.” Available at http://www.internationalrivers.org/files/attached-files/world_commission_on_dams_final_report.pdf

Bank must drastically improve its framework and tools for risk management during the safeguards policy revisions process. By adopting the recommendations above, the Bank can send a signal that it is prepared to work with borrowers to prevent a “perfect storm” for biodiversity, and is committed to protecting the ecosystems and livelihoods that depend on the world's water.

We kindly request that you respond to the concerns and recommendations raised in this letter in a timely manner. We look forward to continuing to discuss these important issues with you as the safeguards revision process continues.

Sincerely,



Zachary Hurwitz
Policy Coordinator
International Rivers, USA

Endorsed by the following organizations:

EcoLur (Armenia)
FOCO (Argentina)
11.11.11- Coalition of the Flemish North-South Movement (Belgium)
PROTOS (Belgium)
ECOIA (Brazil)
Food & Water Watch (Europe and USA)
Re:Common (Europe)
Association Green Alternative (Georgia)
OFRANEH (Honduras)
Friends of the Earth Japan (Japan)
Japan Center for a Sustainable Environment and Society JACSES (Japan)
Jamaa Resource Initiatives (Kenya)
FIVAS (Norway)
Derecho Ambiente y Recursos Naturales DAR (Peru)
EcoDoc Africa (South Africa)
Umphilo waManzi (South Africa)
Initiative to Keep Hasankeyf Alive (Turkey)
Amazon Watch (USA)
Blue Planet Project (USA)
Center for International Environmental Law (USA)
International Accountability Project (USA)
Asociación Interamericana para la Defensa del Ambiente, AIDA (Regional)
The Water for the People Network (International)
Waterkeeper Alliance (International)

Annex 1. Recommended Language for Revision of the Safeguards Policies

1) Adopt a Cumulative Impacts Approach to Risk Management

OP4.01: The World Bank requires borrowers to implement a Cumulative Impact Assessment and Management Plan prior to project approval. Cumulative impact assessments (CIAs) are a pre-requisite for any large dam, any cascade of dams planned in the same river basin, and for any associated facilities related to dam construction and operation. CIA requires thorough analysis of incremental impacts on Valued Ecosystem Component (VEC) condition within a spatial and temporal scale, previously agreed to through transparent, and participatory stakeholder engagement.

The Bank defines as Category A any project that produces cumulative impacts on identified VECs in a given spatial and temporal context.

The borrower must share responsibility for cumulative impact mitigation plans and activities with relevant public and private actors existing in the identified scope of assessment. In the case of trans-boundary and regional development projects, responsibility for cumulative impacts mitigation plans and activities is shared between the borrower and respective public and private stakeholders responsible for the project in each country.

The Bank will assist borrowers in applying the results of cumulative impacts assessment and management plans to iterative updates of country-level options and needs assessments, including in Strategic Environmental Assessments, River Basin Plans, and Integrated Resources Plans.

Annex A – Definitions:

Indirect Impacts: Impacts on the environment, which are not a direct result of the project, often produced away from or as a result of a complex pathway. Sometimes referred to as second or third level impacts, or secondary impacts.

Cumulative Impacts: Impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project.

Impact Interactions: The reactions between impacts whether between the impacts of just one project or between the impacts of other projects in the areas.

BP4.01 Annex A - Application of EA to Dam and Reservoir Projects:

During project identification and before assigning an environmental category, the task team (TT) ensures that the borrower selects and engages independent, recognized experts or firms, whose qualifications and terms of reference (TOR) are acceptable to the Bank, to carry out environmental reconnaissance that includes:

- (a) ascertaining the scope of environmental impacts, including the scope of VECs identified in a transparent and participatory process among all stakeholders;
- (b) identifying the potential cumulative environmental impacts of the project on the condition of identified VECs;
- (c) assessing the borrower's capacity to manage the EA process, including the ability to implement cumulative impacts assessment and management; and
- (d) advising on the need for an independent environmental advisory panel.

2) Expand the Safeguards to Cover Downstream Impacts

OP 4.01: The World Bank requires borrowers to include in CIAs potential impacts on the entire length of a river network, including on coastal ocean areas, wetlands, and estuaries.

Annex A – Definitions:

Downstream Impacts: Any social or environmental impact in a position further along a river or stream as it flows in the direction of the sea.

3) Require Environmental Flows Assessments and Maintenance

OP 4.01: As part of an ESA, of investments in water infrastructure, the World Bank requires borrowers to implement an Environmental Flows Assessment (EFA) prior to approval. Data-driven, scientific environmental flows assessments establish flow benchmarks that assure the maintenance of downstream ecosystem, biodiversity, and community health. Borrowers are required to incorporate optimal environmental flows levels into hydropower planning, design, and operations.

Annex A – Definitions:

Environmental flows: The water regime provided within a river, wetland or coastal zone to maintain ecosystems and their socially and culturally-defined benefits.

BP4.01: Bank staff advise borrowers on the use of tools to calculate scientifically-appropriate levels of environmental flow and help develop appropriate flow maintenance incentive plans with relevant stakeholders.

4) Require the Creation and Implementation of Integrated Resources Plans

OP 4.01: The World Bank requires borrowers to implement an Integrated Resources Planning (IRP) process for the electricity sector, in order to more effectively assess risk and alternatives prior to project selection. The IRP process must be open and participatory, and must first prioritize both supply- and demand-side efficiency measures before opting for new generation.

Annex A – Definitions:

Integrated Resource Plan: A comprehensive and holistic methodology to plan a country's electricity resources options, that equally weighs the full range of feasible supply-side and demand-side options and assesses them against a common set of planning objectives and criteria agreed to in a transparent and participatory process.

BP4.01: The Bank advises borrowers in the identification of demand-side and supply-side efficiency measures and on transparent stakeholder engagement.

5) Require Rigorous Climate Variability Modeling

OP 4.01: The World Bank requires borrowers to implement Climate Variability Assessments (CVA) for water infrastructure investments in order to measure projected hydrological flow and its effects on project safety and technical-economic feasibility.

BP 4.01: The Bank advises borrowers on the use of climate variability tools and methodologies for assessing probable future hydrological patterns.

6) Require Borrower Compliance with Human Rights

OP 4.01: The borrower is required to undertake human rights due diligence assessments on dams that resettle large amounts of people and/or produce impacts on indigenous people. In specific situations, the borrower must perform additional assessments of human rights due diligence.¹⁰

BP 4.01: The Bank will assess borrower governance and legal risk vis-a-vis compliance with international human rights covenants and declarations to which they are a party, as well as the ability of the borrower to provide quality access to justice for affected communities.

7) Require Greater Dam Safety Measures

OP 4.37: The World Bank requires borrowers to assess the dam safety risk of sudden disasters related to glacial outburst, cloud burst, flooding, high intensity precipitation, silt inflows, drought, tectonic and geological activity, and subsidence. Borrowers must incorporate design changes in siting, turbine type, wall height, and reservoir design to address these risks that do not decrease the resilience and adaptive capacities of downstream ecosystems and users.

Borrowers must implement cumulative disaster potential assessments in the case of river basins with multiple planned or existing dams. These assessments must measure possibilities of simultaneous flood releases and disaster probabilities.

Borrowers must weigh the climate-induced safety risks associated with large-scale infrastructure against those associated with smaller infrastructure options.

BP 4.37: Bank staff guides the borrower to assure that all stakeholders are included in the identification and assessment of climate-related dam safety risks, and the creation of dam safety emergency action plans.

¹⁰ See the civil society submission “Recommendations for the Review of the Policy on Involuntary Resettlement” endorsed by Accountability Counsel (USA), Bank Information Center (USA), Both ENDS (Netherlands), Bureau on Human Rights and Rule of Law (Kyrgyz Republic), Equitable Cambodia (Cambodia), Friends of the Earth – US, Halifax Initiative (Canada), Housing and Land Rights Network (MENA and South Asia), Inclusive Development International, International Accountability Project (USA), International Rivers (USA), Jamaa Resource Initiatives (Kenya), Oxfam, Pacific Environment (USA), Social Justice Committee of Montreal (Canada), Urgewald (Germany), VOICE (Bangladesh).