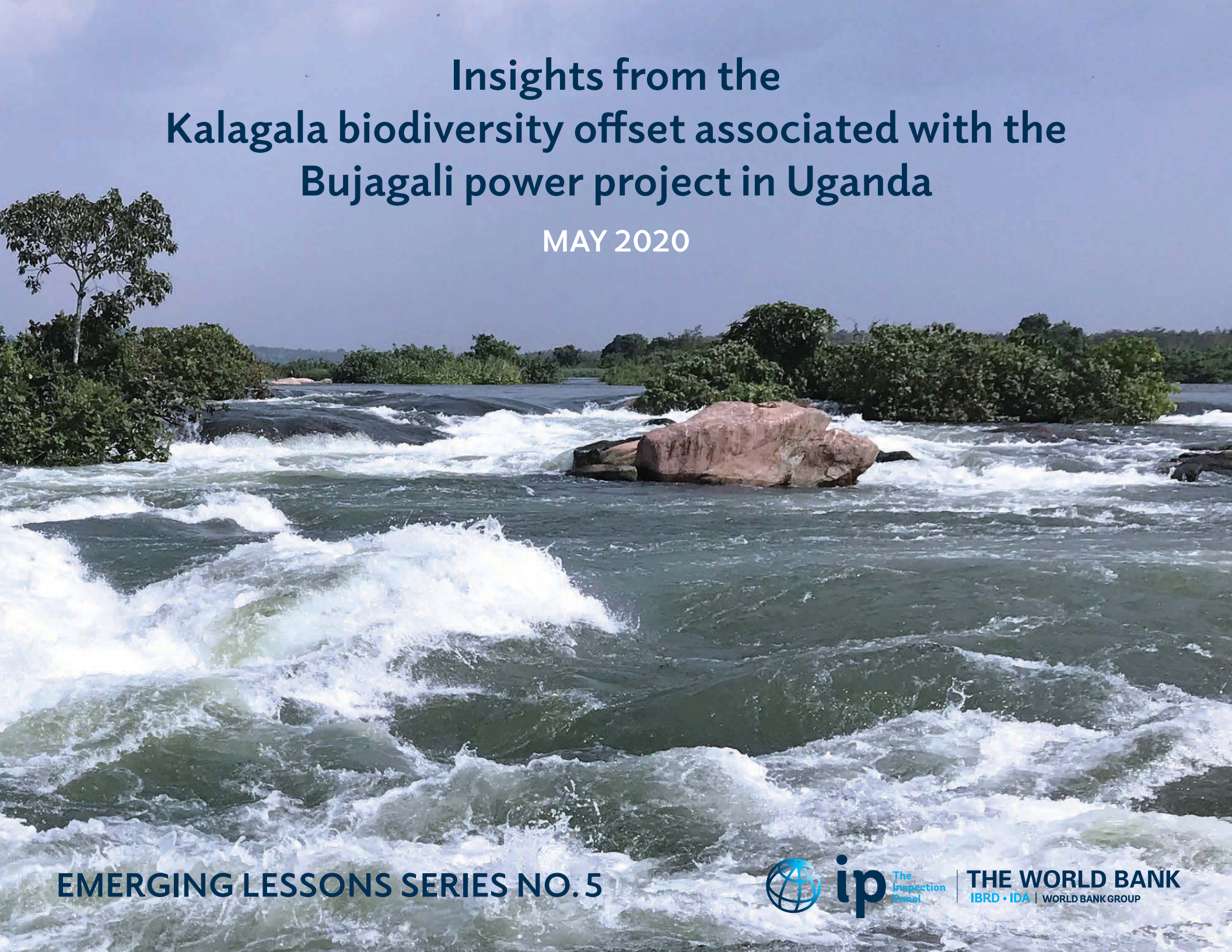
Insights from the Kalagala biodiversity offset associated with the Bujagali power project in Uganda

MAY 2020



EMERGING LESSONS SERIES NO. 5

The Inspection Panel
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INTRODUCTION

This report on biodiversity offsets is the fifth in a series published by the World Bank's Inspection Panel drawing on the main lessons that have emerged from its caseload over 26 years. The Inspection Panel was created in 1993 by the World Bank's Board of Executive Directors to receive and investigate complaints submitted by people actually or potentially suffering harm allegedly caused by Bank projects. With these reports, the Panel aims to contribute to institutional learning at the World Bank and in the larger development community by highlighting areas where improvements can enhance the social, environmental and overall sustainability of Bank-funded operations, further development effectiveness and enhance transparency.

Although the design and implementation of biodiversity offsets is a relatively new concept, almost 13,000 biodiversity offset projects in 37 countries have already been completed or are in the process of being implemented by governments or the private sector. There will undoubtedly be other lessons to learn as the number and age of offsets increase, but the design of the Kalagala Offset Area and the Extended Kalagala Offset Area, which are associated with the Bujagali power project in Uganda, provide a unique insight into the pitfalls of attempting to extend an existing offset area. The Inspection Panel investigations of the Kalagala Offset Area and the extended offset illustrate the importance of the design, implementation and monitoring of biodiversity offsets and the need for the responsible entity to ensure the allocation of appropriate resources for at least as long as the operating life of the original project and ideally longer. The creation of a biodiversity offset can have both positive and negative effects on the livelihoods of project-affected persons, with the Panel finding that active engagement and the consideration of the wider implications of the offset are key factors in ensuring a successful livelihood restoration plan. The most recent Panel investigation also underlined the need to apply a strong precautionary approach, using biodiversity offsets as a last form of mitigation.

Looking to the future, the Bank's new Environmental and Social Framework, and more specifically Environmental and Social Standard 6, which focuses on *Biodiversity Conservation and Sustainable Management of Living Natural Resources,* will more clearly define the requirements for offsets related to Bank-funded projects. In addition, there are several guidance documents, including those published by the Bank, the International Finance Corporation and International Union for Conservation of Nature, that provide good reference material in relation to designing and implementing a successful biodiversity offset. The lessons identified in this publication are the culmination of three Panel investigations and are shared to augment the guidance provided in these other documents, particularly when an extension or adjustment to an offset is being considered.

The intended audience for this publication are those with an interest in development projects and biodiversity conservation, including staff and consultants for the World Bank Group and other development organizations, government agencies, conservation non-governmental organizations and interested civil social organizations.

DEFINING TERMS

This publication refers to the **Kalagala Falls Site (KFS)**, the **Kalagala Offset Area (KOA)**, the **Extended Kalagala Falls Site (EKFS)** and the **Extended Kalagala Offset Area (EKOA)**. A brief explanation of how they relate to one another follows.

The protection of the KFS is the main reason for the creation of the Kalagala offset. During the design phase of the offset it was decided to include the Mabira Central Forest Reserve (CFR) as well, and collectively the area became known as the KOA—Map 1 on page 9.

The filling of the Isimba Dam's reservoir had an impact on parts of the KFS. Therefore, the KFS was extended to form the EKFS to maintain the offset area set aside for the Bujagali Dam. The Mabira CFR remains part of the management area of the offset, which is now known as EKOA—Map 2 on page 11.

HISTORY OF THE INSPECTION PANEL'S INVESTIGATIONS INTO THE KALAGALA OFFSET IN UGANDA

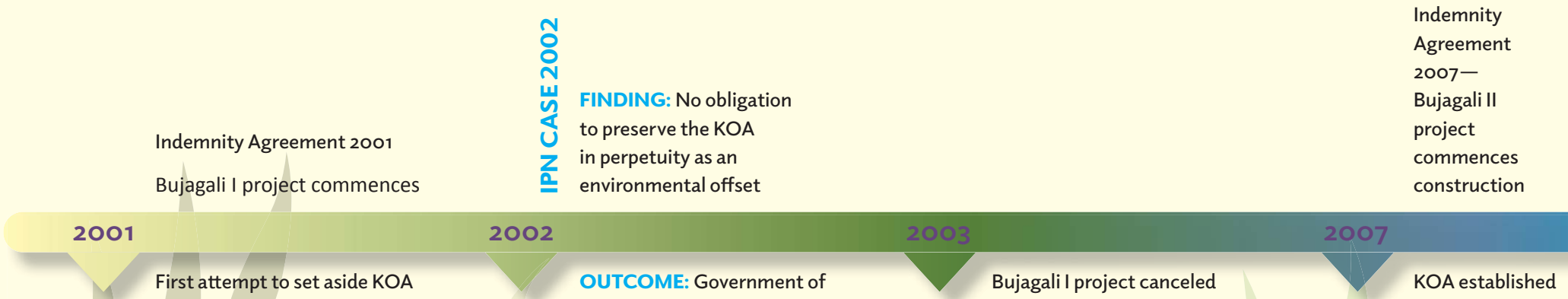
The Inspection Panel's involvement in the Kalagala Offset Area dates back to 2002 and 2008 with its first two investigations responding to concerns about the Bujagali hydropower project and its associated reservoir—known as the Bujagali Dam. Establishing and maintaining the KOA was a requirement for World Bank support for the construction of the Bujagali Dam under the Bank's Natural Habitats Policy since the dam's reservoir inundated the Bujagali Falls, river islands and pristine natural habitat. In 2002, the Panel found that there was no obligation within the December 2001 Indemnity Agreement (IA) between the Government of Uganda and the Bank to preserve the KOA in perpetuity as an environmental offset. Following the Panel investigation, the government reasserted its commitment to the KOA. The IA was revised to include a commitment not to develop power generation that could adversely affect the ability to maintain the protection of the Kalagala Falls Site central to the KOA without the prior agreement of the Bank.

The project was canceled in 2003 but re-emerged four years later, prompting a second Request for Inspection that raised concerns similar to those in the first complaint. In the 2008 case, the Panel's investigation found that the KOA was not subject to appropriate conservation and mitigation measures and the capacity to plan and manage the KOA had not been developed. The Panel therefore noted that the KOA might not accomplish the purpose for which it had been set aside. In response to the Panel's investigation, the Government of Uganda undertook to conserve the KOA through the Kalagala Offset Sustainable Management Plan (KOSMP) as reflected in a July 2007 Indemnity Agreement. Bank Management committed to monitor the implementation of the KOSMP and submitted Progress Reports to the Board of Executive Directors until 2018.

In the summer of 2016, the Panel received two new complaints concerning potential social and environmental harm caused by the construction the Isimba Dam (the reservoir of the Isimba hydropower project) on the Victoria Nile River in Uganda and the consequent flooding of part of the KOA. While the World Bank was not financing the Isimba hydropower project, the complainants alleged that the flooding caused by the filling of its reservoir would undermine the management of protected natural resources in the KOA and adversely affect livelihoods. As a result of the impact on the KOA, the Third Amended Indemnity Agreement created an Extended KOA and denoted the protection and maintenance of the EKOA and the mitigation of potential adverse impacts through a management plan and a livelihood restoration plan. Ugandan legislation was also enacted to declare the Extended Kalagala Falls Site a Special Conservation Area under the National Environment Authority. The Panel's 2019 investigation, based on the 2016 complaints, concluded that the Bank did not ensure that adequate management, institutional capacity and funding arrangements were in place for effective implementation of the management plan for the KOA and the continued protection of the offset area. Further, the Panel found that the creation of the EKOA as a mitigation measure for the flooding of the KOA can create new harm—particularly for livelihoods—and found that, despite the challenges faced by the original offset area, the Bank did not assess the institutional capacity and funding arrangements to implement the appropriate conservation measures for the extended offset.

The Panel concluded that offsets can be an important mechanism for achieving biodiversity conservation but need to be well designed and adequately managed and funded to be able to achieve their objectives. The Panel also stated that mitigating the partial loss of one offset by creating another erodes the underlying principles of offsetting, while it notes Bank Management's view that the EKOA might be regarded as a boundary adjustment to the original KOA, rather than as a new offset.

Inspection Panel KOA Investigations: A Timeline of Findings and Outcomes



IPN CASE 2008

FINDING: KOA lacked appropriate conservation and mitigation measures, and there were weaknesses in management and financing arrangements

OUTCOME: Conserve the KOA through the KOSMP and budget mutually agreed by the Government of Uganda and the Bank

2008

2012

Bujagali II project completed

2015

Isimba Dam (the reservoir of the Isimba hydropower project) construction commences

2018

Third Amended Indemnity Agreement 2018—Creation of EKFS, including management plan for EKOA

IPN CASE 2019

FINDING: KOA lacked adequate management, institutional capacity and funding arrangements for KOSMP implementation; "Offsetting the offset" through the creation of EKOA as a mitigation measure for the flooding of the KOA can create new harm—particularly for livelihoods; challenges faced by the original offset still present in extended offset

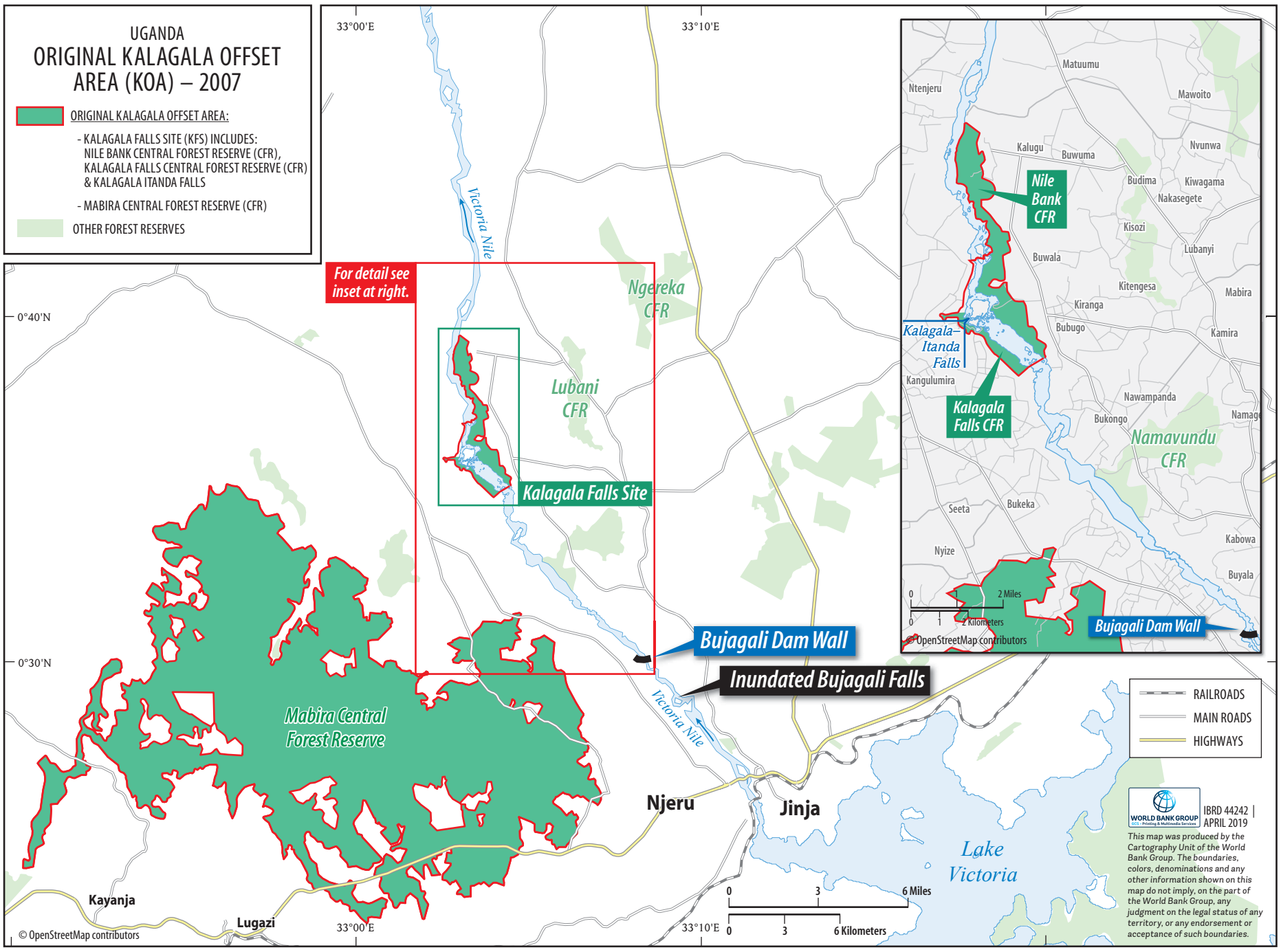
2019

OUTCOME: Protection and maintenance of the EKOA, and mitigation of potential adverse impacts, through a management plan; preparation of a Livelihood Restoration Plan, designation of EKFS as a Special Conservation Area under the National Environment Authority

Isimba Dam completed

ORIGINAL KALAGALA OFFSET AREA

The Kalagala Falls Site within the KOA was selected to be biologically diverse and ecologically equivalent to the reach of the fast-flowing river, islands and adjacent riverbanks that were inundated by the Bujagali Dam. It extended downstream of the Kalagala Falls and encompassed about 10 kilometers of free-flowing Nile River, along with seven rapids, seven groups of islands and 100 meters of riverbank on both sides of the Nile. This site, comprising the Kalagala Central Forest Reserve and the Nile Bank Central Forest Reserve on the banks of Kalagala Falls, together with the Mabira Central Forest Reserve, was identified in the 2007 Indemnity Agreement between the Bank and the Government of Uganda as the KOA.


UGANDA
ORIGINAL KALAGALA OFFSET AREA (KOA) – 2007
ORIGINAL KALAGALA OFFSET AREA:
- KALAGALA FALLS SITE (KFS) INCLUDES: NILE BANK CENTRAL FOREST RESERVE (CFR), KALAGALA FALLS CENTRAL FOREST RESERVE (CFR) & KALAGALA ITANDA FALLS
- MABIRA CENTRAL FOREST RESERVE (CFR)
OTHER FOREST RESERVES
For detail see inset at right.
33°00'E
33°10'E
0°40'N
0°30'N
Victoria Nile
Ngereka CFR
Lubani CFR
Kalagala Falls Site
Mabira Central Forest Reserve
Bujagali Dam Wall
Inundated Bujagali Falls
Njeru
Jinja
Lake Victoria
Kayanja
Lugazi
© OpenStreetMap contributors
0 3 6 Miles
0 3 6 Kilometers
Matuumu
Ntenjeru
Mawoito
Kalugu
Buwuma
Nvunwa
Budima
Kiwagama
Nakasegete
Nile Bank CFR
Kisozi
Buwala
Lubanyi
Kitengesa
Mabira
Kiranga
Bubugo
Kamira
Kalagala–Itanda Falls
Kangulumira
Kalagala Falls CFR
Nawampanda
Bukongo
Namavundu CFR
Seeta
Bukeka
Kabowa
Nyize
Buyala
0 1 2 Miles
0 1 2 Kilometers
© OpenStreetMap contributors
Bujagali Dam Wall
RAILROADS
MAIN ROADS
HIGHWAYS
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IBRD 44242 | APRIL 2019
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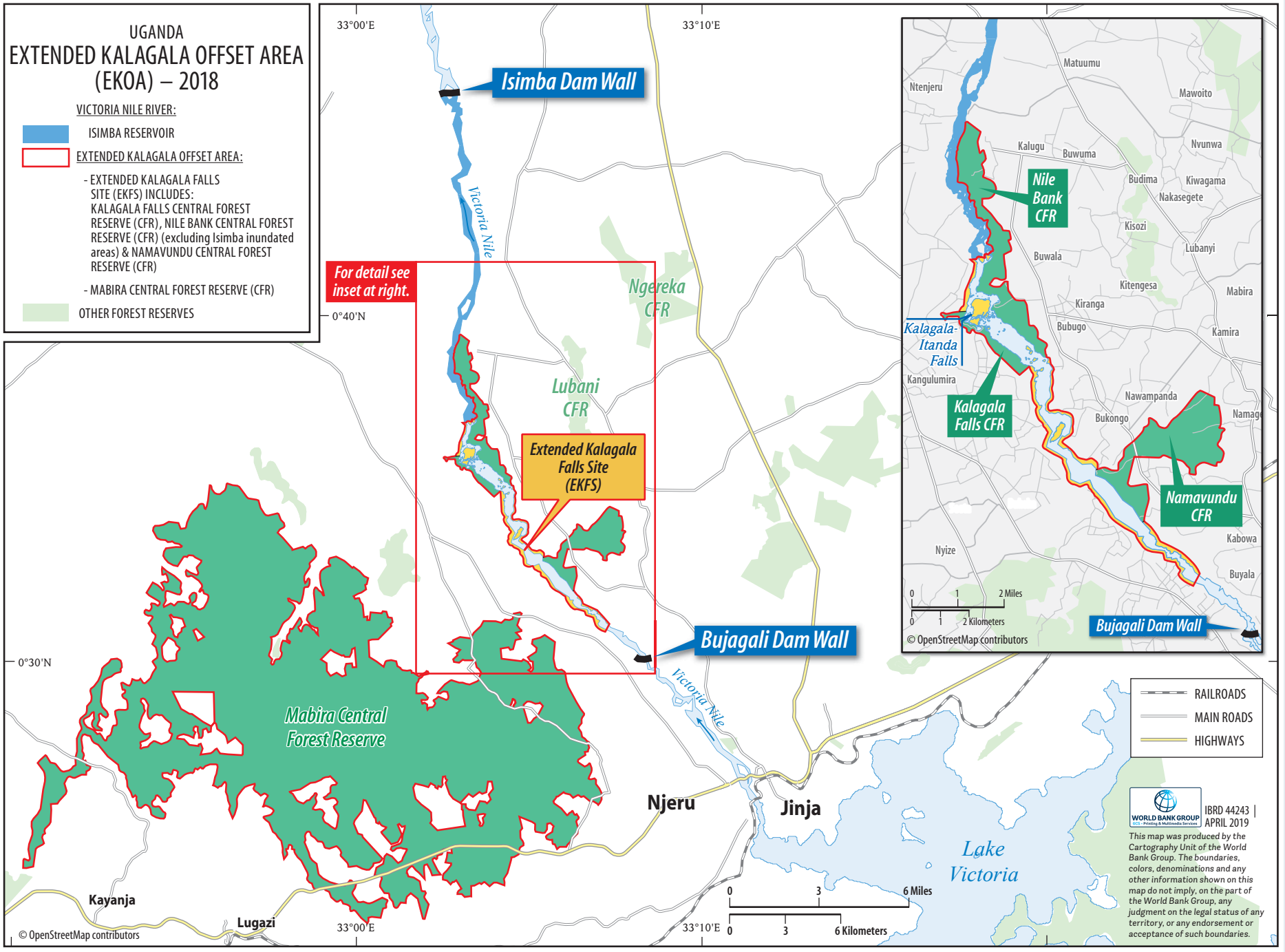
EXTENDED KALAGALA OFFSET AREA

The EKOA will include the extension of the KFS—a stretch of the Nile River that would be approximately 15 kilometers long and would begin upstream 2.5 kilometers below the Bujagali Dam and terminate downstream at the end of the reservoir of the Isimba Dam. It would include: the whole Nile River aquatic area within these limits; all river islands within these limits; all land within 100 meters of the left and right river banks from the annual maximum high-water line; and the entire area of the Namavundu, Kalagala Falls and Nile Bank Central Forest Reserves except the portions inundated by the Isimba Dam reservoir. The Mabira Central Forest Reserve would also fall within the EKOA.


UGANDA
EXTENDED KALAGALA OFFSET AREA (EKOA) – 2018
VICTORIA NILE RIVER:
ISIMBA RESERVOIR
EXTENDED KALAGALA OFFSET AREA:
- EXTENDED KALAGALA FALLS SITE (EKFS) INCLUDES: KALAGALA FALLS CENTRAL FOREST RESERVE (CFR), NILE BANK CENTRAL FOREST RESERVE (CFR) (excluding Isimba inundated areas) & NAMAVUNDU CENTRAL FOREST RESERVE (CFR)
- MABIRA CENTRAL FOREST RESERVE (CFR)
OTHER FOREST RESERVES
Isimba Dam Wall
Victoria Nile
For detail see inset at right.
Ngereka CFR
Lubani CFR
Extended Kalagala Falls Site (EKFS)
Bujagali Dam Wall
Victoria Nile
Mabira Central Forest Reserve
Njeru
Jinja
Lake Victoria
Kayanja
Lugazi
33°00'E
33°10'E
0°40'N
0°30'N
0 3 6 Miles
0 3 6 Kilometers
© OpenStreetMap contributors
Matuumu
Ntenjeru
Mawoito
Kalugu
Buwuma
Nvunwa
Budima
Kiwagama
Nakasegete
Nile Bank CFR
Kisozi
Lubanyi
Buwala
Kitengesa
Mabira
Kiranga
Bubugo
Kamira
Kalagala-Itanda Falls
Kangulumira
Kalagala Falls CFR
Nawampanda
Bukongo
Namavundu CFR
Kabowa
Nyize
Buyala
0 1 2 Miles
0 1 2 Kilometers
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Bujagali Dam Wall
RAILROADS
MAIN ROADS
HIGHWAYS
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INTRODUCTION TO BIODIVERSITY OFFSETS

Biodiversity denotes the range of life on Earth and the variability within species, between species, and of ecosystems. Development pressures such as resource extraction, agricultural practices and human encroachment pose an escalating threat to biodiversity.

Significant adverse impacts of a development project can be mitigated either by avoiding or preventing them in the first place (e.g., by altering its siting, scale, layout, scheduling or design), by minimizing them, and/or remedying the impacts that remain by restoring damaged areas and through compensation or offsets. Together this sequence of steps makes up the so-called "mitigation hierarchy" as illustrated below[1]:

Biodiversity offsets fit into the last step in this hierarchy as a type of compensation. Such offsets are widely defined[2] as "measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development and persisting after appropriate avoidance, minimization and restoration measures have been taken." They should be designed and implemented to achieve measurable conservation outcomes that can reasonably be expected to result in no net loss (the point at which project-related biodiversity losses are balanced by gains) and preferably a net gain of biodiversity.

THE MITAGATION HIERARCHY

THE CASE FOR BIODIVERSITY OFFSETS

Increasingly governments and the private sector are turning to biodiversity offsets as a way to compensate for the residual, unavoidable impacts on biodiversity caused by development and commercial projects.

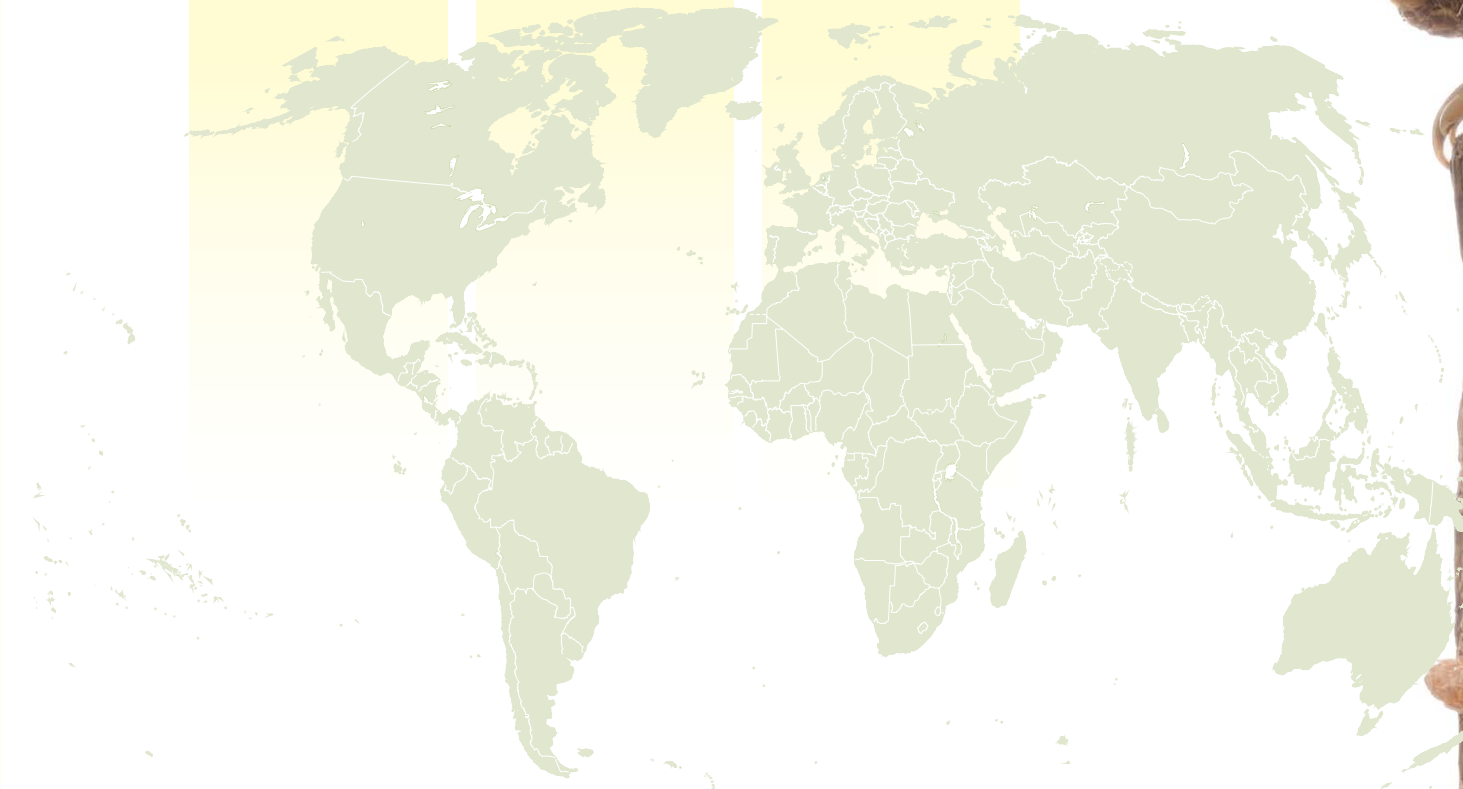
These offsets are implemented as a last resort form of mitigation to balance the project's biodiversity losses with new and lasting biodiversity gains. The aim of an offset is to ensure at least a no net loss and, preferably, a net gain of biodiversity. Importantly, some negative impacts are too severe to be compensated by an offset, since they would result in irreversible impacts or loss of irreplaceable biodiversity.

Although the words "compensation" and "offset" are often used interchangeably, a biodiversity offset is a subset of compensation. An offset is aimed specifically at achieving no net loss or a net gain of biodiversity; a measure of the project's residual impact is used to determine the amount, nature and scale of gain required to offset that impact. Using a clearly defined frame of reference, gains in biodiversity can be achieved by avoiding imminent loss and protection, restoration and/or improved management, or by reducing the drivers of biodiversity loss (e.g., illegal hunting or unsustainable harvesting). Efforts that are not intended to achieve no net loss or net gain outcomes and do not involve quantitative biodiversity accounting are best referred to as "compensation" or "reduced net loss" measures, not as an "offset."

The adoption of no net loss policies and use of offsets is growing rapidly. According to recent research[3], almost 13,000 biodiversity offset projects in 37 countries have been completed or are in the process of implementation, and adoption of the no net loss principle is estimated to be part of public policy in (depending on sources) 69 to 108 countries worldwide.

OFFSETS AROUND THE WORLD (2018)

Country	Number	Country	Number	Country	Number
Australia	395	Kyrgyzstan	1	Peru	2
Brazil	2,514	Laos	1	Qatar	1
Cameroon	4	Macedonia	3	Russia	1
Canada	473	Madagascar	9	Sierra Leone	2
Colombia	4	Malaysia	1	South Africa	32
Costa Rica	2	Mexico	5,970	Spain	200
France	975	Mongolia	1	Sweden	44
Georgia	1	Netherlands	116	Uganda	1
Germany	478	New Zealand	4	UK	11
Ghana	1	Panama	1	USA	1,729
Guinea	1	Papua New Guinea	1	Uzbekistan	1
Kazakhstan	1	Paraguay	2	Venezuela	1



WHEN SHOULD BIODIVERSITY OFFSETS BE USED?

Owing to social, political, institutional, economic and/or ecological constraints, there are limits to what can be feasibly offset. Offsets are not an adequate mitigation tool for projects with predicted loss of unique, irreplaceable or highly threatened biodiversity, or if there is a low likelihood of success of the offset. The Panel's experience with the KOA has revealed the complex factors that need to be taken into consideration when deciding whether to use a biodiversity offset in a particular context. Three factors stand out:

I. HAS THERE BEEN ADHERENCE TO THE MITIGATION HIERARCHY?

- In its 2002 Investigation Report the Panel, in line with legal advice from the Bank's General Counsel, noted that there was no obligation in the 2001 Indemnity Agreement to preserve the Kalagala Falls Site in perpetuity as an environmental offset. The appropriate use of an offset as a mitigation measure of "last resort" for the impact of the Bujagali project was analyzed in the 2008 Panel Investigation Report, which found that the consideration of alternative project configurations was unduly narrow and failed to explore all technically feasible options, including those that would not involve flooding the Bujagali Falls, with a full understanding of tradeoffs. As with the use of an offset for the Bujagali project, a key issue in the 2019 Panel investigation was whether the extension of the KOA was considered as a "last resort" form of mitigation, and if alternative project designs could have avoided or prevented the impact. Although the Bank was not involved in the Isimba project, the KOA was an integral part of the long-standing Indemnity Agreement between the Bank and the Government of Uganda.
- An offset is expected to protect biodiversity in the long term. In its 2019 Investigation Report, the Panel stated that mitigating the partial loss of one offset by creating another erodes the underlying principles of offsetting and levels a serious blow to the credibility of the offset concept. Although there was no World Bank Group support for the planning or construction of Isimba, the Bank-supported Isimba ESIA addendum provided baseline data on the biodiversity of the KOA to be inundated by the Isimba Dam and an analysis of alternatives for the height of the dam wall. The Panel found that the alternative with the most severe impact on the KOA was adopted.
- Regarding the selection of the extended offset area, the Panel found limited evidence that systematic measures of residual impact and expected and additional gains from the EKFS were employed. The Panel noted that without a robust scientific basis and comprehensive analysis of alternatives and tradeoffs demonstrating that overall project benefits substantially outweigh environmental costs, there had not been adherence to the mitigation hierarchy.

II. CAN THE IMPACT BE FULLY COMPENSATED OR WILL IT LEAD TO IRREVERSIBLE OR IRREPLACEABLE LOSS OF BIODIVERSITY?

- Limited biodiversity surveys and measurements in and around the KOA and EKOA on the EKOA's benefit to biodiversity included two National Fisheries Resources Research Institute-led fish biodiversity surveys, ESIA studies of the Bujagali and Isimba projects, and measurements of the aquatic and terrestrial surface area and the length of river within the protected offset area. Nonetheless, the Isimba ESIA addendum found that the Isimba Dam will have several large, negative and irreversible impacts on biodiversity values and there will be a net loss of rapids and falls in the EKFS compared with the KOA.

III. IS THERE SUFFICIENT ASSURANCE OF EFFECTIVE PROTECTION AND IMPROVED MANAGEMENT IN THE LONG TERM?

- The Panel's 2019 Investigation Report highlighted numerous KOA implementation challenges from an institutional and management perspective, such as lack of explicit and measurable management goals, competing objectives in regard to use (tourism development and conservation), the inappropriately wide scope of the management plan, and insufficient capacity and inadequate funds to implement management and monitoring effectively. Drawing on experience with the KOA, the effectiveness of the EKOA and the risks of implementation failure depend on the guaranteed provision of sufficient funds, institutional capacity to manage the offset and rigorous monitoring. To address the need for long-term protection of the offset area, the Government of Uganda proposed amendments to the country's National Environment Act. That led to the declaration of a Special Conservation Area providing stronger legal protection for the free-flowing river and adjacent land parcels within the EKFS boundaries.

FRAMEWORK FOR WORLD BANK BIODIVERSITY OFFSETS

It is important to note that the World Bank's Environmental and Social Framework (ESF)[4] and Environmental and Social Standard (ESS)6—*Biodiversity Conservation and Sustainable Management of Living Natural Resources*—did not apply to any of the Panel's KOA cases in Uganda since the Bank's Policy on Natural Habitats was applicable at the time. For this reason, both the KOA and EKOA are best described as compensation or reduced net loss measures, rather than strictly offsets in terms of more recent definitions. However, provision was made in the policy for mitigation to include "establishing and maintaining an ecologically similar protected area" where there would be significant conversion or degradation of natural habitats, suggesting that the underlying intentions were broadly comparable to those in the Bank's ESS6.

The ESF supports the use of biodiversity offsets specifically in ESS6. Echoing Performance Standard 6 implemented by the International Finance Corporation, points 15 to 18 of ESS6 directly address Bank requirements for biodiversity offsets. These requirements, simply stated, include:

i. using offsets as a last resort form of mitigation;

ii. achieving at least no net loss of biodiversity[5] through measurable, additional and long-term conservation outcomes in situ (i.e., on the ground) and at an appropriate scale;

iii. adhering to the "like-for-like or better principle," where the offset targets the same biodiversity values as that affected or, in specific cases, biodiversity of higher priority than that affected by a project, following Good International Industry Practice;

iv. involving stakeholders and qualified experts in the design and implementation planning for an offset;

v. demonstrating long-term technical and financial feasibility of the offset; and

vi. redesigning projects that have adverse residual impacts that cannot be offset because of the uniqueness and/or irreplaceability of the affected biodiversity.

As mentioned, the World Bank's Policy on Natural Habitats states that if the environmental assessment indicates that a project would significantly convert or degrade natural habitats, the project should include mitigation measures acceptable to the Bank, including establishment and maintenance of an ecologically similar protected area. The policy, however, does not include more detailed guidance on this mitigation measure.

In 2016, shortly after the Bank's Board of Executive Directors approved the ESF, but before it took effect in 2018, the Bank published its own user guide on biodiversity offsets.[6] This guide describes three core principles: additionality, equivalence and permanence.

Additionality—For any offset to be real, it must be additional. In other words, biodiversity offsets must deliver conservation gains beyond those that would be achieved by ongoing or planned activities that are not part of the offset.

Equivalence—In general, biodiversity offsets should conserve the same biodiversity values (species, habitats, ecosystems or ecological functions) as those lost to the original project, following a principle known as like-for-like.

Permanence—Biodiversity offsets are normally expected to persist for at least as long as the adverse biodiversity impacts from the original project; in practical terms, this often means in perpetuity. Like other conservation projects, biodiversity offsets are ideally designed to last over the very long term.

THE PANEL'S 2019 INVESTIGATION AND WORLD BANK OFFSET GUIDANCE—ADDITIONALITY

As mentioned on the previous page, the World Bank's guide on biodiversity offsets highlights three core principles: additionality, equivalence and permanence. The Panel's 2019 investigation into the KOA and EKOA considered these three principles as described below and on the next two pages.

CORE PRINCIPLE 1: ADDITIONALITY

Additionality: It means that the offset must achieve conservation outcomes over and above results that would have occurred without it. This principle is especially important for offsets that plan to strengthen protection and management of an existing protected area.

THE KALAGALA OFFSET

In the Uganda case, the original KOA gave protection to the river, its islands and the riverbed. It was also intended to improve the management of the existing Central Forest Reserves and restore the degraded areas that formed part of the KOA. Placing these measures within the Indemnity Agreement aided in protecting the Kalagala-Itanda Falls from hydropower development and commercial sector sugar cane cultivation in the Mabira CFR. However, given the limited extent to which management of the KOA has been implemented, additional conservation outcomes within existing CFRs are likely to be insubstantial. Declaration of the EKFS as a Special Conservation Area under Ugandan law could similarly deliver additionality, given the added protection to the stretch of Nile River and provided that there is improved management and restoration to the natural habitat of the existing protected areas in the EKOA.

THE PANEL'S 2019 INVESTIGATION AND WORLD BANK OFFSET GUIDANCE—EQUIVALENCE

CORE PRINCIPLE 2: EQUIVALENCE

Equivalence: The offset must provide gains in the same type of biodiversity that was negatively affected by the development project. Satisfying equivalence necessitates having reliable baseline data both on the affected biodiversity and the biodiversity in the offset area.

THE KALAGALA OFFSET

The KFS and the EKFS were deemed "ecologically similar" to the affected project sites through broad comparisons of biophysical features and species. However, it was uncertain if the selected offset areas would provide equivalent biodiversity given shortcomings in baseline data and in the methodology used to compare the impact and offset sites.

THE PANEL'S 2019 INVESTIGATION AND WORLD BANK OFFSET GUIDANCE—PERMANENCE

CORE PRINCIPLE 3: PERMANENCE

Permanence: Biodiversity offsets are intended to last at least as long as the project's adverse impacts endure, and preferably be permanent, in order to achieve lasting conservation outcomes required by ESS6 and to satisfy the requirements of Bank Policy on Natural Habitats to establish and maintain an ecologically similar protected area.

THE KALAGALA OFFSET

Maintaining the KOA in perpetuity was problematic, given that the Indemnity Agreement applied only until 2023, after which discussions were to be held regarding a possible extension to the protection of the offset area. The decision to build the Isimba Dam and flood part of the KOA reduced the duration of the offset. A decision was made to mitigate the partial flooding of the KOA by creating another offset through an extension to this area and the creation of the EKOA as an offset for Bujagali. Although grounded in the intention to compensate for loss, this decision erodes the underlying principles of an offset. The declaration of the EKFS as a Special Conservation Area in terms of Section 50 of the Ugandan National Environment Act provides a legal basis for this offset area to endure in the long term.

KEY PANEL INSIGHTS INTO THE USE OF OFFSETS

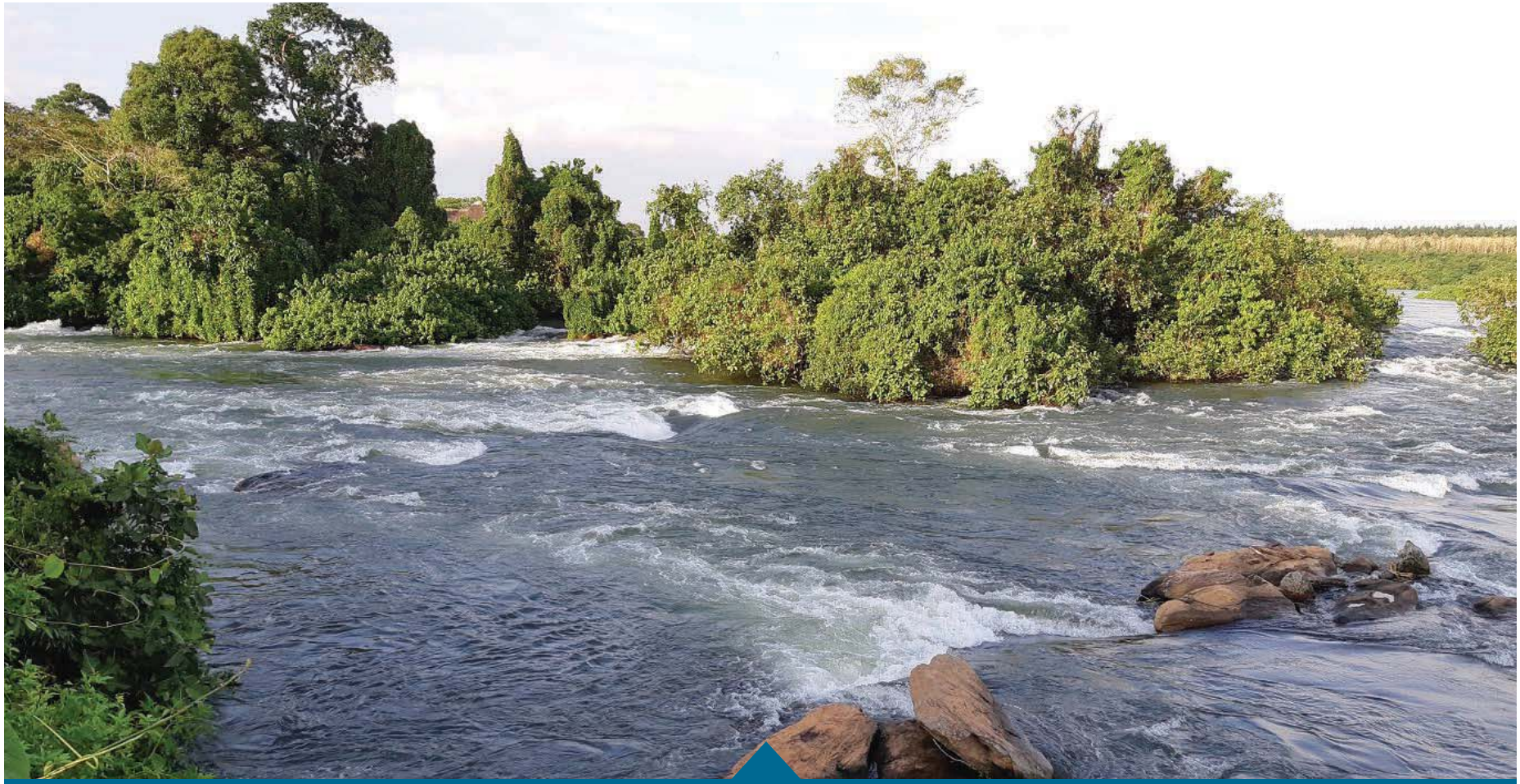
The Panel investigations into the KOA in Uganda offer insights into the long-term commitments and complexities inherent in the implementation of an offset. The KOA was set aside as an offset to compensate for negative impacts of the Bujagali Dam. The decision to "offset the offset" in response to the partial flooding of the KOA by the Isimba Dam has led to the extension of the KOA. Both the KOA and EKOA are best described as compensation measures, rather than offsets, since their intention was not to achieve no net loss of biodiversity. However, in accordance with the Indemnity Agreement and applicable Bank policy, they were to be established and maintained to protect biodiversity and spiritual values.

The Panel believes offsets are going to be increasingly important as World Bank lending transitions from the application of the institution's safeguard policies to the new ESF. No net loss policies and the need for offsets are proliferating globally. While biodiversity offsetting is intended to deliver environmental benefits, substandard offsets could have a detrimental effect on both the environment and local communities. Insights from the Panel investigations in 2002, 2008 and 2019 can serve as a learning opportunity in the future design, implementation and management of biodiversity offsets.

Biodiversity offsets must recognize the interdependence of people and ecosystems, and the necessity to reconcile different biodiversity, societal and local community values, land use and resource demands, and livelihood needs. The importance of this approach became clear to the Panel in both the KOA and EKOA, given the range of stakeholders, conservation priorities and development opportunities in the landscape. Affected communities use the fertile land of the riverbanks and islands in the Victoria Nile to grow crops for subsistence and extra income; the river provides freshwater and is a source of employment for sand miners, fisher folk and adventure tourism. Both the hydropower developments and the offset will affect local lives and livelihoods. The Panel observed that although a biodiversity offset must first and foremost conserve biodiversity, crucial to its success and sustainability is stakeholder engagement and participation to explore how—and if—the different interests, needs and activities of stakeholders can be balanced, and to identify the likely ramifications of setting aside and managing an area as an offset.

The Panel's experience shows how important it is to assess all mitigation options and alternatives in a given context and determine if offsetting is feasible and appropriate. While both the KOA and EKOA give some added protection to the offset area, the Panel draws the following conclusions:

1. Offsets should be the last mitigation option and used with precaution
2. The design of an offset must be systematic and defensible
3. Measures of biodiversity losses and gains must be transparent and reliable
4. Resources and capacity need to be well planned to implement the offset
5. The offset should preferably be secured before the project impacts occur
6. Effects of offsets on local lives and livelihoods must be assessed

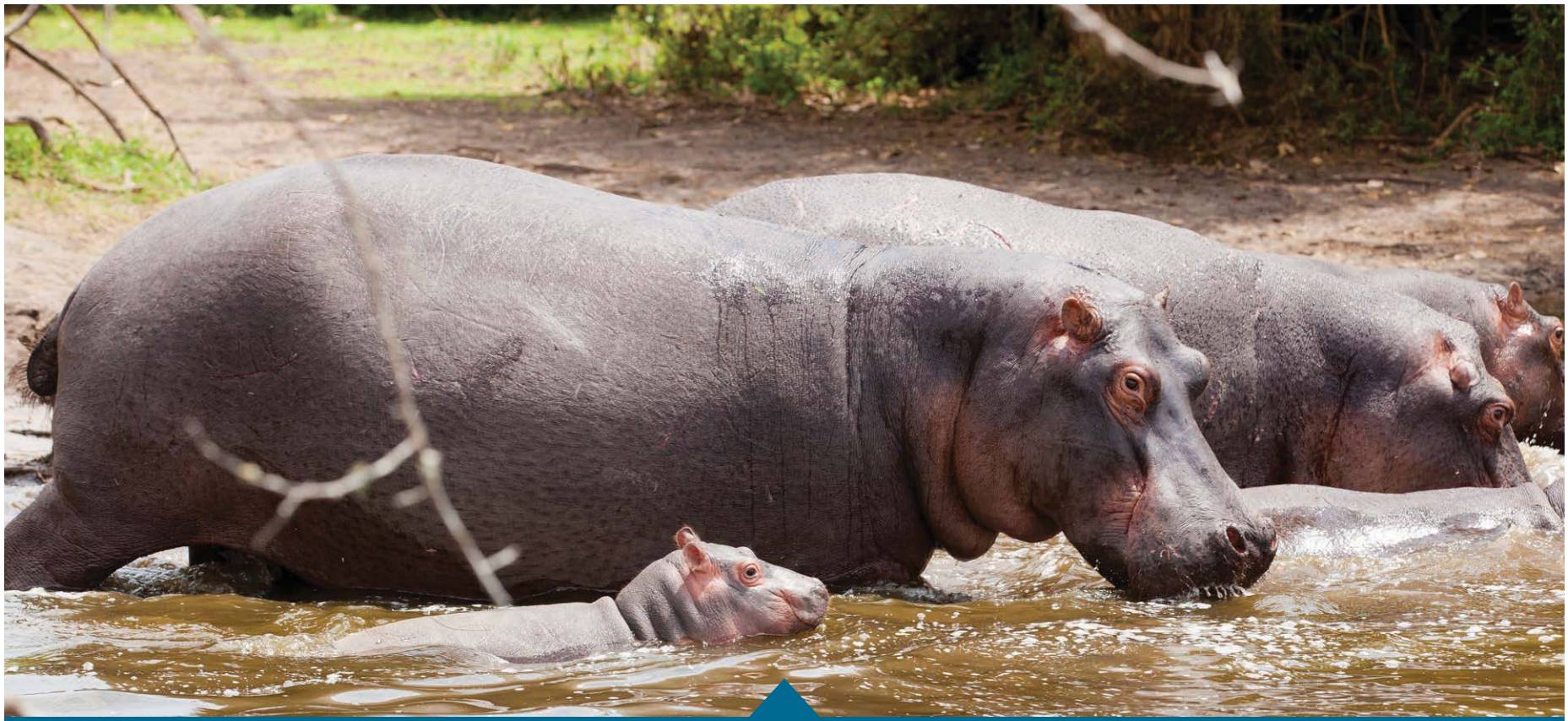


KEY PANEL INSIGHT NO. 1—OFFSETS SHOULD BE THE LAST MITIGATION OPTION AND USED WITH PRECAUTION

- Offsets should be used strictly as a last resort form of mitigation, with clear evidence that all feasible and reasonable options to avoid and minimize potentially significant harm to biodiversity have been exhausted. A defensible rationale should be provided for any tradeoffs involving significant loss of biodiversity.
- A strong precautionary approach to using offsets should be taken when there are risks of irreversible loss of biodiversity and associated values, and/or high risks of failure to implement the offset successfully, and where other mitigation options appear feasible.
- Improving the protection status of an area under threat of imminent or projected loss and improving the condition of affected biodiversity relative to a "without-the-offset" situation through conservation management actions—such as restoration, threat reduction or arrested degradation—are some of the main ways to offset residual negative impact on biodiversity.

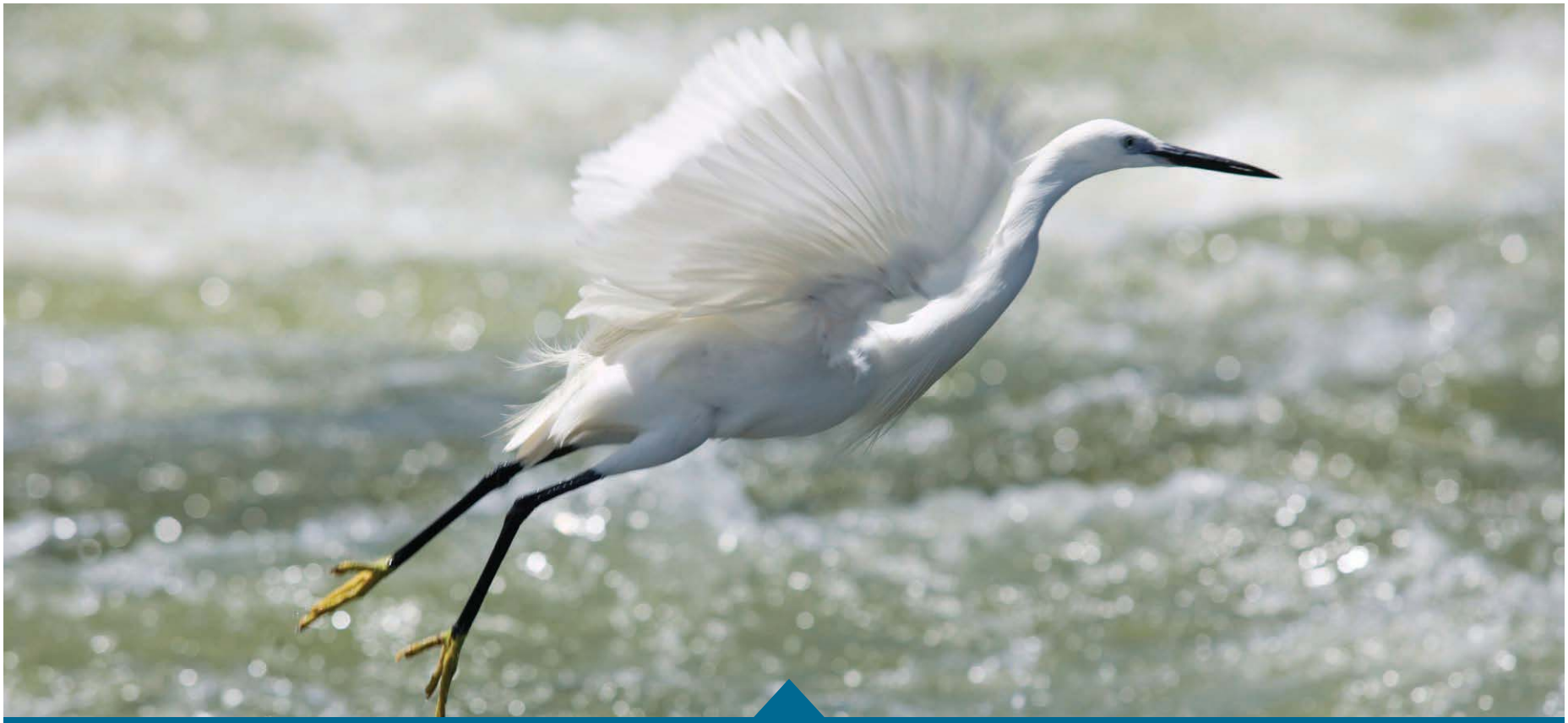
KEY PANEL INSIGHT NO. 2—THE DESIGN OF AN OFFSET MUST BE SYSTEMATIC AND DEFENSIBLE

- The choice of geographic location and design of an offset must take into consideration its context—ecological, geographical and social—and threats to its status and condition. It must also factor in political and economic risks and uncertainties likely to affect the success of the offset, as well as any delays in achieving the planned biodiversity gains.
- The Panel observed that conferring protected status alone does not necessarily reduce the probability of biodiversity loss. However, it is an important step towards achieving this objective. In the future under ESS6 the use of offsets will need to satisfy more stringent requirements than was the case under the Bank's Policy on Natural Habitats. Offsets will have to seek assured and measurable gains for biodiversity because of protection and improved management.
- The design of an offset is informed by explicitly defined objectives and its intended scope. Offsets need to consider species composition, habitat structure, ecosystem function and/or people's use and cultural values associated with biodiversity. Both the KOA and the EKOA are best described as compensation measures, rather than offsets, since their intention was to achieve no net loss of biodiversity.



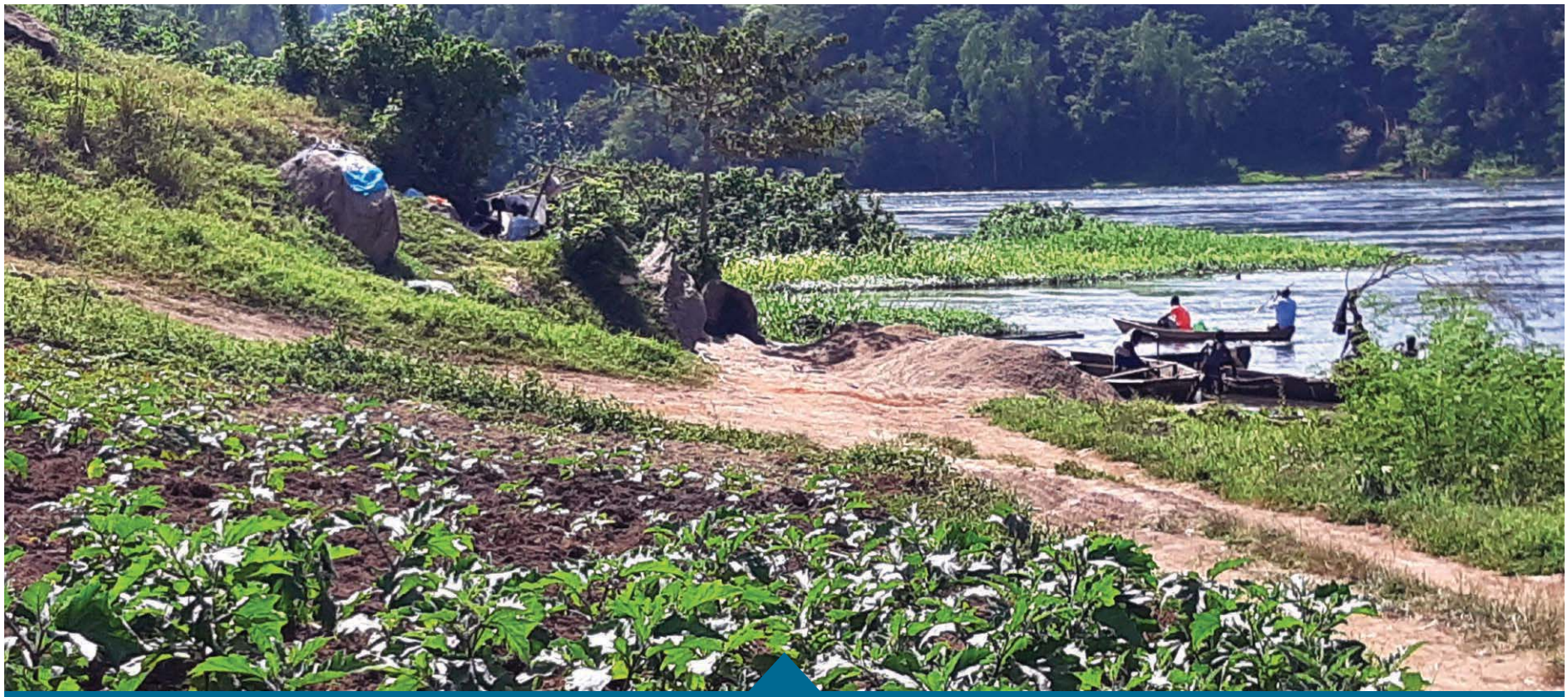
KEY PANEL INSIGHT NO. 3—MEASURES OF BIODIVERSITY LOSSES AND GAINS MUST BE TRANSPARENT AND RELIABLE

- Offsets should be used only where there is a strong likelihood of counterbalancing losses with gains, at a minimum. A reliable estimate of residual negative impact on biodiversity is needed as the basis for designing an offset with commensurate gains that would counterbalance biodiversity losses.
- Reliable baseline data on the biodiversity in the project's area of influence and potential offset sites are crucial to demonstrate their equivalence, and to provide defensible measures of biodiversity loss and expected gains, together with a robust approach to measuring expected gains.
- The way in which gains will be achieved, as measured against a defined frame of reference, must be clear. As with the residual losses, a measure of predicted gains in biodiversity must be provided.
- An offset must be designed to deliver gains in the same biodiversity as that negatively affected by the project—i.e., be a "like-for-like" exchange. In special cases, an offset could protect an ecosystem different from the one damaged by the original development project, if the offset-protected ecosystem is clearly acknowledged to be of higher conservation value. This concept, known as "trading-up," is endorsed in World Bank ESS6 and in the World Bank Biodiversity Offsets User Guide.
- The conservation outcomes must exceed what would have happened without the project or offset—i.e., be additional.
- An offset should be designed to last at least as long as the project's residual negative impact on biodiversity, and preferably in perpetuity.



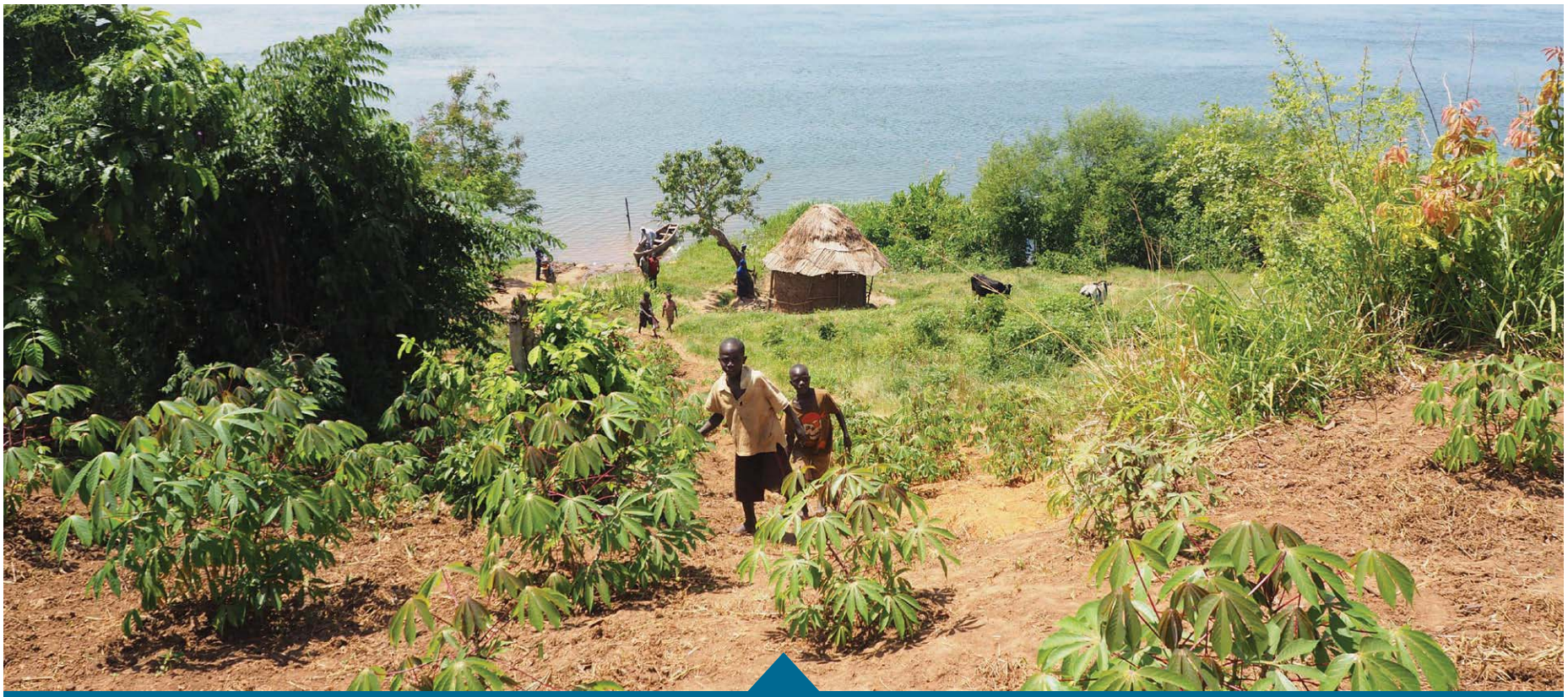
KEY PANEL INSIGHT NO. 4—RESOURCES AND CAPACITY NEED TO BE WELL PLANNED TO IMPLEMENT THE OFFSET

- Offsets should only be used where there is assurance that the responsible entity has sufficient capacity, resources and funds to implement and monitor the offset effectively over the long term.
- The implementation of an offset requires careful planning and the preparation of an "offset management plan" that sets out the specific activities needed to deliver biodiversity gains—the "what," "where," "how" and "when."
- Implementation must comply with all applicable legal and policy requirements. The institutional, budget and funding sources and mechanisms must be determined to ensure that the offset achieves its intended outcomes.
- The roles and responsibilities of different parties must be clearly defined in the offset management plan.
- Provision must be made for checking the progress of offset implementation over time and enabling corrective or adaptive management changes to keep the offset on track. To this end, measurable indicators of performance must be identified, and timelines given for monitoring.[7]
- Both implementation performance (i.e., use of funds, staffing, reporting, number of patrols or visits to the site, etc.) and impact performance (i.e., a measure of gains in those key biodiversity components that must be tracked to demonstrate that the offset is successful) must be monitored. Independent audits and verification of the offset's performance are important for credibility and transparency.



KEY PANEL INSIGHT NO. 5—THE OFFSET SHOULD PREFERABLY BE SECURED BEFORE THE PROJECT IMPACTS OCCUR

- A project's impacts are certain and offset gains uncertain, so gains in biodiversity ideally should be achieved before the negative impacts of the project begin in order to avoid both time lags between the biodiversity losses and gains, and the risks associated with offset implementation.
- The long-term security of an offset site must be assured before impacts occur, and a clear management plan must be in place covering activities needed to deliver gains in biodiversity and remedy any impacts on affected parties who rely on services provided by the impacted ecosystems.
- Gains in biodiversity to balance residual impacts may take many years to achieve and fulfill their purpose. In this case, Bujagali II commenced in 2007 with the Indemnity Agreement establishing the KOA intended to compensate for the project's impact. The KOSMP prescribing its management only came into effect three years later in 2010. The flooding of the KOA compounds the loss of biodiversity due to the Bujagali project and leads to the effective "loss" of a decade of protection and management of the offset area, increasing the time lag between impact and offset accordingly.
- The partial flooding of the KOA by Isimba has occurred and, while the EKOA is to be set aside as a Special Conservation Area, measures to compensate harm to, or restore livelihoods of, affected parties have yet to be finalized. The effectiveness of revised management plans for the EKOA and EKFS area is uncertain, and time lags in the compensation for impact appear inevitable, compromising the effectiveness of the offset.



KEY PANEL INSIGHT NO. 6—EFFECTS OF OFFSETS ON LOCAL LIVES AND LIVELIHOODS MUST BE ASSESSED

- Offsets should only be used where their wider implications[8] for people's lives and livelihoods have been assessed, and provision can be made to implement measures to remedy all adverse impacts, preferably before the offset is implemented. These measures include livelihood restoration initiatives, and other forms of compensation.
- In some cases, an offset may deliver gains in biodiversity that also benefit people affected by a project—e.g., restoration of degraded wetlands can improve water supply and quality. In other cases, where access to—and use of—natural resources is restricted, an offset for a project may amplify the negative impact on people adversely affected by the project that would need be to mitigated.[9] Where socioeconomic and cultural uses of biodiversity cannot be compensated adequately by improvement to biodiversity, additional compensation packages that give access to affordable and acceptable substitute resources are required.
- People rely on services provided by ecosystems. Where these services—or access to them—are reduced, people are likely to move to other areas, in turn potentially affecting biodiversity. Without adequate compensation measures, the negative impacts will be displaced, preventing the achievement of no net loss.[10]
- Active engagement with affected communities in the planning of an offset, and their involvement in its implementation, is important. Payment to affected people to deliver specific conservation outcomes needed to achieve the offset (e.g., restoring degraded areas or helping with monitoring) and support for local enterprises that would boost conservation and local livelihoods (e.g., nature-based tourism) can help compensate for negative impact and ensure local benefits.

REFERENCES AND SOURCES OF INFORMATION ON BIODIVERSITY OFFSETS

Bull JW & Strange N. 2018. The global extent of biodiversity offset implementation under no net loss policies. Nature Sustainability. s41893-018-0176-z loss.

Bull JW, Baker J, Griffiths V, Jones JPG & Milner-Gulland EJ. 2018. Ensuring no net loss for people as well as biodiversity: good practice principles. Oxford, UK. https://www.iucn.org/news/business-and-biodiversity/201903/no-net-loss-ensuring-best-possible-outcomes-people-and-biodiversity.

Business and Biodiversity Offsets Programme (BBOP). 2012. Standard on biodiversity offsets. BBOP, Washington, D.C. https://www.forest-trends.org/publications/standard-on-biodiversity-offsets/

Business and Biodiversity Offsets Programme (BBOP). 2012. Biodiversity Offset Design Handbook-Updated. BBOP, Washington, D.C. https://www.forest-trends.org/wp-content/uploads/imported/biodiversity-offset-design-handbook-pdf.pdf

Business and Biodiversity Offsets Programme (BBOP). 2009. Biodiversity Offset Implementation Handbook. BBOP, Washington, D.C. https://www.forest-trends.org/publications/biodiversity-offset-implementation-handbook/

Inspection Panel Report. Uganda: Third Power Project (Credit No. 2268-UG), Fourth Power Project (Credit No. 3545-UG) and Bujagali Hydropower Project (PRG No. B 003-UG). Report No. 23998. May 23, 2002.

Inspection Panel Report. Uganda: Private Power Generation (Bujagali) Project (Guarantee No. B0130-UG). Report No. 44977-UG. August 29, 2008.

Inspection Panel Report. Uganda: Water Management and Development Project (123204) and the Energy for Rural Transformation Phase III Project (133312), May 2, 2019.

International Finance Corporation (IFC). 2012. Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources (as part of the IFC Sustainability Framework: Policy and Performance Standards on Environmental and Social Sustainability). IFC, Washington. https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/performance-standards/ps6.

International Union for Conservation of Nature (IUCN). 2016. IUCN Policy on Biodiversity Offsets. World Conservation Congress Resolution WCC-2016-Res-059-EN. https://www.iucn.org/theme/business-and-biodiversity/our-work/business-approaches-and-tools/biodiversity-offsets. 29 January 2016.

IUCN, The Biodiversity Consultancy and the Durrell Institute of Conservation & Ecology. Global Inventory of Biodiversity Offset Policies (GIBOP), online portal. https://portals.iucn.org/offsetpolicy/.

Maron M, Brownlie S, Bull JW, Evans MC, Von Hase A, Quétier F, Watson JEM & Gordon A. 2018. The many meanings of No Net Loss in environmental policy. Nature Sustainability. Volume 1: January 2018: 19–27.

Sonter, LJ, Gourevitch J, Koh I, Nicholson CC, Richardson LL. et al. 2018. Biodiversity offsets may miss opportunities to mitigate impacts on ecosystem services, Front Ecol Environ, 16(3). DOI: 10.1002/fee.1781.

World Bank. 2018. Environmental and Social Framework (includes Environmental and Social Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources, with supporting Guidance Notes). Washington: The World Bank. https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards.

World Bank Group (WBG) and ProFor. 2016. Biodiversity Offsets: A User Guide. http://documents.worldbank.org/curated/en/344901481176051661/Biodiversity-offsets-a-user-guide.

zuErmgassen SOSE, Baker J, Griffiths RA, Strange N, Struebig MJ & JW Bull. 2019. The ecological outcomes of biodiversity offsets under “no net loss” policies: A global review. Conservation Letters.e12664. https://onlinelibrary.wiley.com/doi/full/10.1111/conl.12664.

ENDNOTES

1 https://www.thebiodiversityconsultancy.com/approaches/mitigation-hierarchy/

2 E.g., World Bank's Environmental and Social Standard 6, the International Finance Corporation (IFC)'s Performance Standard 6, the Business and Biodiversity Offset Program' Standard on biodiversity offsets.

3 Data from Bull & Strange, 2018

4 http://pubdocs.worldbank.org/en/837721522762050108/Environmental-and-Social-Framework.pdf

5 No net loss is required for natural habitats, and net gain for critical habitats, as defined in these standards.

6 Biodiversity Offsets: A User Guide, WBG 2016 . Note that, over and above these principles, international principles (BBOP 2012) include achieving no net loss or net gain, adhering to the mitigation hierarchy, respecting limits to what can be offset, transparency, use of science and traditional knowledge, equity and stakeholder participation, and landscape context.

7 BBOP, Biodiversity Offset Implementation Handbook, 2009.

8 Bull et al 2018.

9 World Bank and ProFor, Biodiversity Offsets: A User Guide, 2016, p. 20.

10 Bull, et al 2018

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RIGHTS AND PERMISSIONS

Design: Debra Malovany.

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