

GREAT RIVERS PARTNERSHIP PHASE II

BUSINESS PLAN 2013-2017



TABLE OF CONTENTS

PREFACE.....	4
1. OVERVIEW.....	10
1.1 The Challenge.....	10
1.2 IRBM—The Elusive Solution.....	10
1.3 The Great Rivers Partnership.....	11
1.4 Theory of Change.....	12
1.5 Global Outcomes.....	13
1.6 Shared Value.....	14
2. SUMMARIES OF GRP BASIN PROFILES.....	15
2.1 Introduction.....	15
2.2 Summaries of River Basin Profiles	15
Africa – Niger.....	17
Africa – Ogooué.....	21
Asia – Mekong.....	25
Asia – Yangtze	29
North America – Colorado	33
North America – Mississippi	37
South America – Magdalena	41
South America – Tapajós.....	45
3. STRATEGIC & TECHNICAL SUPPORT, KNOWLEDGE EXCHANGE AND THE GLOBAL PRACTICES TEAM	49
3.1 Overview.....	49
3.2 Cross-Basin Themes	50
3.3 Structure of the Technical Practice Areas and Delivery of Services.....	50
Basin Support and Communities of Practice	52
Cross-Basin Exchanges and Thematic Working Groups	52
Global Practices Team Engagement with Network and External Audiences	53
Knowledge Management	54
4. GLOBAL NETWORK TO ADVANCE INTEGRATED RIVER BASIN MANAGEMENT	55
4.1 Context	55
4.2 Network Intent and Aim	55
4.3 Network Partnerships and Avenue for Collaboration	55
Support Partners for the Network	56
Opportunities for Collaboration Among Support Partners.....	56
Engagement with Broader Network of IRBM Practitioners	56
4.4 Network Structure and Function.....	57
4.5 Network Management and Products.....	58
Network Management.....	58
Network Products	58

5. GOVERNANCE & MANAGEMENT	60
5.1 Overview.....	60
5.2 Leadership Council.....	61
5.3 Donors Council	61
5.4 GRP Team.....	62
5.5 Capacity for Shared Leadership.....	62
5.6 Measuring Results.....	64
5.7 Financial Accountability [this section is being written].....	66
6. COMMUNICATION SYSTEMS	67
6.1 Situation Analysis.....	67
6.2 Strategic Framework and Tactics	68
6.3 Communications Capacity.....	68
6.4 Communications Activities.....	69
7. RESOURCES AND FUNDING.....	70
7.1 Overview.....	70
7.2 Next Steps.....	71
7.3 Public Fundraising Strategy	71
Additional Considerations for Public Funding in the U.S.	72
7.4 Private Fundraising Strategy.....	73
APPENDICES	75
4-1 Draft Memorandum of Understanding for the IBRM Global Network.....	75
4-2 Synopsis of the Aims, Scope and Areas of Interest of the Support Partner Organizations for the Network.....	78
5-1 Great Rivers Partnership Leadership Council Cooperative Agreement.....	81
5-2 Measuring Results.....	84
7-1 Budget.....	89
7-2 Work Plan	90

PREFACE

The Great Rivers of the planet are in trouble. Entire economies depend on them, yet they increasingly show symptoms of collapse under strain. We rely on their waters to produce our food and energy, more and more constrained by fierce competition for diminishing resources. Our cities, old and new, depend on sufficient and secure supplies of clean water, progressively at risk from deteriorating quality and unpredictability of flows. Ecosystems that are essential for the long-term health of Great Rivers for future generations are declining under the weight of overuse and pollution.

The good news is that solutions exist. But to be implemented successfully at a scale that matters requires breaking down fragmented and siloed management institutions, and engaging stakeholders in the creation of shared solutions that are informed by science and cultural values. While many Great Rivers face common dilemmas, workable solutions must be rooted in the complexity of individual river basins, integrating different needs, incorporating the intricacies of rivers' political economies, and relying on deep local expertise, sensibility and practice. Without deep rooting, generic calls-to-action are not heard, one-size-fits-all solutions fail, and minimal progress is made towards attaining the water security that the world's societies and economies need.

The Great Rivers Partnership (GRP) was created to change (and accelerate) our course towards sustainable management and development of the world's Great Rivers and their basins. It was founded on the belief that deep, practical and on-the-ground expertise exists around the world to help address the challenges facing these Great Rivers, and that better understanding of those practices will help manage and sustain large, working rivers for people and nature.

The effort launched in 2005 with a generous grant from the Caterpillar Foundation to The Nature Conservancy (TNC). Caterpillar recognized TNC's deep experience working with multiple stakeholders in one such Great River—the Mississippi—and appreciated the mutual advantages that could result from extending these experiences to organizations embarked upon similar journeys in other river basins. In the first seven years of the GRP, under TNC's leadership, scientists and resource managers and stakeholders came together to advance conservation and sustainable development. They invested in innovative strategies, shared results, and exchanged knowledge to achieve lasting changes in policy, management and funding. For example, a conservation blueprint for the Upper Yangtze River paved the way for a new system of protected areas in China. A project launched in one Brazilian watershed in 2007, where downstream landowners paid upstream “producers of environmental services” for clean water, is now being replicated in other parts of the country and helping improve the health of rivers that supply drinking water to major cities. Millions of dollars for

ecosystem restoration in the Mississippi River Basin were generated by policy initiatives that GRP helped craft and advance through the political process. (For more outcomes, please see below “Milestones: A Brief History of the Great Rivers Partnership’s First Five Years.”)

The first phase of GRP proved that basins gain mutual benefit by sharing expertise and experience. By applying the beginnings of a practical, locally grounded version of integrated river basin management, during this period the GRP developed trusted relationships with global corporations dependent on these river basins, implemented innovative on-the-ground conservation projects linked to system-scale outcomes, and further deepened its history and broad network of expertise in the Mississippi River Basin. It has shown that an integrative approach can achieve impact on the ground, while fostering innovation and driving real change at scale.

Now, during GRP’s second phase, it is time for GRP to expand farther beyond the reach of TNC and evolve its approach to incorporate a greater footprint, more rivers, and other organizations whose objectives are similar and whose competences are complementary. Since the early stages of its first phase, the GRP has expanded to include a broad range of organizations that have embraced the goal of fundamentally changing the way Great Rivers are managed. Our objective is to build on these achievements to advance ecologically and economically sustainable management of eight Great Rivers at the heart of their nations and regions. Specifically, *the GRP mission is to bring together diverse partners and best science to expand options for achieving the sustainable management and development of the world’s Great Rivers and their basins. We seek shared solutions to common land- and water-use dilemmas, recognizing the inescapable linkages that connect our economy, human well-being and ecosystem sustainability.*

We are under no illusion: achieving this mission will not be easy. Major initiatives on river basins have been tried before and have struggled to scale. But based on the experience of the last seven years we have cause for optimism. It is because of that experience that six core principles will guide our work:

- Aim for Integrated River Basin Management (IRBM)—acknowledge and manage the complex set of demands and interests that are placed on the river, facing trade-offs and seeking practical, non-ideological solutions.
- Act as an Honest Broker of Science and Policy—expand options by building trust, and creating a space for dialogue among diverse stakeholders informed by scientific knowledge.
- Focus on Common Dilemmas and Reach Tangible Outcomes—focus on initiatives that can solve specific problems through practical, focused interventions that achieve on-the-ground impact for multiple stakeholders.
- Develop Communities Of Practice—invest in practice more than theory, for the benefit of all, and engage the people who possess the decades of experience required to understand any one of these Great Rivers.
- Communicate with a Credible Expert Voice—help the world understand the value of these Great Rivers, and show what can be achieved, not because it will be the same everywhere, but to demonstrate that solutions are possible and that the process works.
- Collaborate through a Global Network—support a multi-directional exchange of knowledge that spans both public and private sectors, and enables deep expertise to be deployed against real, practical problems.

As a testament to how much this experience has resonated, since 2005 hundreds of individuals, foundations and corporations have collectively contributed more than \$70 million to GRP's efforts to find innovative ways to conserve and restore Great Rivers while also considering the economic needs of people and nations. Then, in 2011, the John D. and Catherine T. MacArthur Foundation gave TNC a year-long planning grant to develop a strategy for expanding the GRP to additional river basins, and build the capacity needed to provide coordinated support to these individual basins as well as leverage that work to advance IRBM globally. This business plan articulates the outcome of this planning process, and is intended to provide a road map for how the GRP will scale up. It describes a vision, theory of change, goals and expected outcomes, and governance of the GRP as a coordinated, mutually owned global initiative. It presents detailed information about the challenges, opportunities, and strategies for work in eight Great Rivers—the Colorado, Magdalena, Mekong, Mississippi, Niger, Ogooué, Tapajós and Yangtze—with full profiles for all these rivers available as an electronic annex. The plan outlines levels of funding and human resources needed to elevate the GRP to this level of impact.

We invite you to join us on the next five years of this exciting, dynamic and truly historic journey to safeguard the mighty waterways that sustain us all.

Milestones: A Brief History of the Great Rivers Partnership's First Five Years

Five years ago, Caterpillar Inc. and The Nature Conservancy created the Great Rivers Partnership to advance conservation and sustainable development of great rivers around the world. Following are a few milestones from our first five years.

2005

The Great Rivers Partnership (GRP) launches with a \$12 million grant from Caterpillar Inc., through its Foundation.

The GRP holds first staff exchange with Brazil for the Paraguay-Paraná river system; goal is to begin identifying conservation priorities using Upper Mississippi River freshwater classification system as a model.

Chinese government asks the Conservancy to lead study to identify lands and waters critical to conserving biodiversity.

Grasslands exchange strategy to decrease pollution in the Paraguay River is developed and implementation begins in Mato Grosso State.

The GRP begins partnership with barge transportation industry on the Mississippi River leading to joint advocacy efforts in support of navigation improvement and ecosystem restoration funding in Water Resources Development Act (WRDA) of 2007.



Mississippi River
© Jim Brekke

The GRP Brazil team and WWF help inform Brazil's national freshwater management plan, the first of its kind in South America.

With GRP support, the Conservancy hosts a delegation of Chinese officials to study hydropower initiatives on the Savannah and Columbia rivers, including ways to minimize environmental impacts.

Congress authorizes 2007 Water Resources Development Act, which includes more than \$1.7 billion for ecosystem restoration along navigable portions of the Upper Mississippi and Illinois rivers.



Barges on the Mississippi River near La Crosse, Wisconsin © Robert J. Hurt

The GRP joins with potential partners from the Africa Wildlife Foundation to explore areas for collaboration including the possible expansion of the GRP to the Zambezi River.

The Conservancy, Brazil's National Water Agency (ANA) and the Environmental Secretary of São Paulo State partner to reforest one of São Paulo's most important watersheds – the Piracicaba, which supplies water to 8.8 million people.

2006

1,200 rural properties are mapped in the Upper Paraguay River watershed to gather information about existing natural vegetative cover in support of the grasslands exchange strategy.

The first Yangtze River Forum in Wuhan, China, brings people from around the world together to discuss environmental protection and resources and socioeconomic development in the Yangtze basin.



Brazilian Cerrado
© Scott Warren

The China Blueprint project launches with staff and financial support from the GRP. The project will identify a network of priority conservation areas that capture the full range of biodiversity in China.



China blueprint team
© Ron Geatz/TNC

Through participation in Field to Market, the Conservancy launches partnership with agriculture to support sustainable agriculture practices.



Resident of Yunnan Province, China
© Ami Vitale

2007

The Conservancy launches a two-year partnership with IBM to develop an interactive, online tool to help improve decision-making by water management agencies on large river systems.

The GRP, WWF and the Changjiang Water Resources Commission co-host the second Yangtze River Forum in Changsha, China, strengthening relationships with partners including the Zambezi River Authority and U.S. Army Corps of Engineers.

Africa's Zambezi River is designated as fourth GRP focal river.

Landmark floodplain restoration begins at Emiquon Preserve in Illinois, the premiere demonstration area for the Conservancy's work on the Illinois River and within the Mississippi River system.



Emiquon wetlands
© Byron Jorjorian

Executive Director of the Piracicaba-Capivari-Jundiá (PCJ) Watershed Committee announces \$260,000 in funding for forest conservation and reforestation in the PCJ watershed. The first Water Fund project in Brazil, it will compensate landowners for the ecological benefits their forested lands provide.

500,000 tree seedlings are planted in the PCJ watershed to protect 50 freshwater springs in and around Extrema, one of Brazil's largest cities.



Seedling nursery
© Flávio Hermínio Carvalho/ANA (Agência Nacional de Águas, Brazil)

The Conservancy and Changjiang Water Resources Commission sign a Memorandum of Understanding (MOU) to work together on sustainable management of the Yangtze River.

2008

Kentucky scientists from the Conservancy's Obion Creek-Bayou de Chien floodplain project visit Illinois' Emiquon Preserve to learn about the Conservancy's floodplain protection and restoration work and establish a "sister project" relationship.

Through the GRP, the Conservancy and U.S. Army Corps of Engineers host a delegation from Cormagdalena on the Mississippi River to help advance sustainable management of Colombia's Magdalena River. A draft Memorandum of Understanding between the Conservancy and Cormagdalena is developed in 2009.



Magdalena River
© Bridget Besaw

The Conservancy facilitates a scientific exchange between the U.S. Geological Survey and the Yangtze Valley Water Environmental Monitoring Center to inform the development of a long-term, comprehensive monitoring program for the Yangtze River.

The GRP expands the "sister project" relationship between Emiquon in Illinois and Obion Creek-Bayou de Chien in Kentucky to include Mollicy Farms on the Ouachita River in Louisiana.

2009

Mollicy Farms on the Ouachita River in Louisiana floods in advance of the Conservancy's plan to breach portions of a 17-mile-long levee. Planned levee breaches take place in September 2010.

The GRP and U.S. Geological Survey host two exchanges—one each on the Mississippi and Yangtze rivers—to help develop aquatic monitoring systems on the Yangtze. As a result, the Chinese government provides \$1.9 million to incorporate USGS monitoring protocols into the Yangtze program and explore expansion of the monitoring effort to the Yellow and Amur rivers.



China exchange
© Erika Nortemann/TNC

The Natural Resources Conservation Service launches its Mississippi River Basin Healthy Watersheds Initiative (MRBI) to improve water quality and overall health of the Mississippi River basin. MRBI will provide \$320 million over four years to priority watersheds in 12 states contributing the greatest amount of excess nutrients to the river and downstream to the Gulf of Mexico.

2010

\$12.7 million of MRBI funding is awarded to priority watersheds in seven states where the Conservancy is a project lead or partner.

U.S. Army Corps of Engineers and the GRP host America's Inner Coast Summit in St. Louis. Together with findings from a Meridian Institute study requested by the GRP, the summit reveals that diverse partners want to work together to manage the Mississippi River more holistically as one system, marking new opportunities for the GRP to take a leadership role.



Water monitoring equipment
© Jennifer Filipiak/TNC

2011

2012

1. OVERVIEW

1.1 THE CHALLENGE

More than ever, the 21st century presents unprecedented challenges to the long-term viability of the world's Great Rivers. These rivers—the Mississippi, Mekong, Yangtze, and many others—provide immense benefits to people. The soils of their basins feed the world and their deep main channels are vital transportation corridors. The power of their falling water generates the largest source of low-carbon energy on the planet (hydropower) and they provide drinking water for billions of people.

Yet as the demand for these vital uses grows, the capacity of these great rivers to meet the need is deteriorating. Growing demands for energy, food, and water place increasing strain on river basins. For example, the production of major food commodities will need to double by 2050 to meet projected demand, and agriculture is already the largest user of water, representing more than 90 percent of total human consumption of water. Though few major rivers remain undammed, rising demand for electricity is forecast to drive a 50 percent increase in hydropower generation—provided by thousands of new dams—by 2050. Climate change will likely further strain freshwater resources, intensifying both droughts and floods. Due to drought and population growth, it is estimated that by 2025 nearly 2 billion people will live in regions facing moderate to severe water scarcity. Flooding is already the most damaging type of natural disaster, and the value of property at risk from “100-year floods” is projected to triple by the end of this century.

Maintaining or increasing the production of any one of these basic resources and services—water supply, agriculture, hydropower and flood management—

is challenging enough. However, these sectors compete with each other, often unknowingly. For example, agricultural runoff can degrade water supplies, and using reservoirs for flood control can diminish hydropower production.

Further, pursuit of these basic resources and services can degrade other highly important benefits from river systems. Though occupying a relatively small proportion of the planet's surface area, rivers and floodplains are the sites of intense production of important ecosystem services, with a greater per-acre economic value than any other ecosystems on Earth. Their biological productivity provides direct sustenance to hundreds of millions of people in the form of fish and flood-dependent agriculture. To illustrate, more than 50 million people depend on Mekong River fisheries for their primary source of protein, and 100 million people in rural Africa regularly consume fish caught from river-floodplain systems. Inland fisheries provide employment for more than 60 million people in developing countries. However, in much of the developed world, river fisheries have mostly disappeared in large part because of the intense management of rivers to reduce floods and to produce food and energy. For similar reasons, freshwater ecosystems have rates of endangerment and extinction which have been estimated to be five times greater than terrestrial and three times greater than marine ecosystems.

A recent study in *Nature* concluded that a variety of environmental stressors, including pollution, agricultural runoff and over-allocation of water, threaten rivers that serve 80 percent of the world's population. These same stressors threaten 65 percent of the world's freshwater habitats, placing increasing strain on freshwater biodiversity that is already greatly stressed.

At this rate, meeting the demands placed on the full spectrum riverine resources by 21st Century economies and societies will be a growing challenge. The risks are immense, placing a rich diversity of nature in jeopardy and compromising a wide range of services that these systems provide to society. Local communities, national governments, industry, and other stakeholders increasingly recognize that simply optimizing productivity within individual sectors in isolation leads to overall system decline—a scenario in which everyone loses. Managing the Great Rivers so that they can continue to provide a full spectrum of benefits and meet the needs of a growing global economy is one of the world's greatest challenges.

1.2 IRBM—THE ELUSIVE SOLUTION

The management challenge confronting the world's Great Rivers is clear—nations will need to provide more benefits, in a more sustainable manner, than has been demonstrated by any previous management approaches. Historically, river basin management has largely been characterized by fragmentation into individual sectors, with production of one resource coming at the expense of another, with land degradation in the upper basin flowing downstream to impact resources in the lower river and estuary. *However, because these rivers are so important—they are the economic and cultural hearts of their countries or regions—continued fragmentation and failure is not an option.*

In recent decades, the concept of Integrated River Basin Management (IRBM) has emerged to address the limitations of fragmented management. The GRP definition of IRBM is “the collaborative process of integrating conservation, management and

development of water, land and related resources across sectors within a given river basin to improve the economic and social benefits derived from water resources in an equitable manner while preserving and, where necessary, restoring freshwater ecosystems (adapted from Integrated Water Resources Management (IWRM), Global Water Partnership Technical Advisory Committee Background Papers, No. 4, 2000).

The concept of IRBM holds great potential because collaborative and system-wide approaches are the only way to meet the overarching challenge confronting Great Rivers: the need to maintain or increase production in one sector, such as agriculture or energy, while restoring or protecting freshwater ecosystems that provide a range of benefits to other sectors, such as transportation, fisheries, clean water and flood-risk reduction

Multilateral organizations, non-governmental organizations and some government agencies have begun implementing IRBM, with solid examples on a few rivers such as the Danube. However, broader uptake of IRBM has not yet occurred and, for all its potential, basin-wide management has proven difficult to implement. Further, while some progress has been made to address the economic and social aspects of IRBM, environmental aspects have taken a back seat. Part of the challenge is that we must recognize that IRBM is only a means to an end—it is the ability to use this process to generate practical outcomes that is critical. IRBM has to be much more than creating governance or decision-making frameworks, however critical they are. Its true potential depend upon a broader level of implementation, driven by a suite of innovative tools,

polices, and financial mechanisms that produce on-the-ground results *and* overcome constraints to system-scale planning, management and implementation. Developing, refining and demonstrating these key components of IRBM will facilitate and support the expansion of governance frameworks in river basins.

1.3 THE GREAT RIVERS PARTNERSHIP

The Great Rivers Partnership (GRP) is designed to support a collaborative effort among a broad range of organizations working to advance sustainable management of the world's Great Rivers for people and nature. Achieving this vision for Great Rivers—which are characterized by immense cultural, economic, and ecological complexity—transcends the abilities of any single organization or government, no matter how large. The GRP emerged in response to this complexity and need for greater collaboration. The future of these systems, and the associated livelihoods of billions of people, depends upon shared knowledge and collective action.

The GRP focuses on entire river systems and brings together the best available science, the best on-the-ground experience and a diverse group of stakeholders—from industry and navigation to academia and government—to develop and implement innovative solutions to the challenges that threaten the sustainability of freshwater ecosystems and their resources and services. The GRP is focused on solving system-scale management challenges in specific river basins using an IRBM process, and generating solutions and tools that can advance IRBM globally.

Preceding the expansion process, GRP staff interviewed several government agencies, funders and international water management organizations about what they perceived to be the key advantages that GRP brought to the challenge of advancing IRBM. They consistently noted several key strengths:

1. Strong partnerships with a broad range of stakeholders, including industry have built trust and established credibility across government, corporate, and NGO actors.
2. Deep engagement on the Mississippi, collaborating with diverse stakeholders, and building global connections from this basin to other basins for mutual benefit, has begun to demonstrate the value that GRP can add in other river systems.
3. Deep experience with on-the-ground conservation and management actions and innovative transactions and deals indicates that GRP can deliver real results.

These then become the building blocks for the GRP: practical orientation, deep expertise within specific basins that can be deployed to the benefit of others, a focus on specific solutions, and the involvement of multiple stakeholders in a practical, action-oriented framework.

To guide the planning process, the GRP established an International Steering Committee, consisting of representatives of government agencies, multilateral organizations, corporations and funders, all of who had experience with various facets of river management and international freshwater policy.

Out of this process came a theory of change that will support GRP's work, as well as a focus on a set of key outcomes across a selected number of basins.

International Steering Committee

Brian McPeck (Chair)
The Nature Conservancy
Chief Operating Officer

Kimberly S. Hauer
Caterpillar Inc.
Chief Human Resources Officer and Vice President, Human Services

Daniel P. Mecklenborg
Ingram Barge Company
Senior Vice President, Human Resources; Chief Legal Officer and Secretary

Brenda Shapiro
The Nature Conservancy's Illinois Chapter
Trustee; GRP Advisory Board Trustee

Richard R. Calhoun
Cargo Carriers, Cargill, Inc.
President

Dr. Fritz Holzwarth
German Ministry of Environment, Nature Protection and Nuclear Safety
Deputy-Director General

Dr. Eun-Kyung Park
Korea Water Forum
President

Steven L. Stockton, SES
U.S. Army Corps of Engineers
Director of Civil Works

Alfred Duda
Global Environment Facility
Senior Advisor, Recently Retired

Rachel Kyte
World Bank
Vice President for the Sustainable Development Network

Mark Sanderson
Anne Ray Charitable Trust
Director of Programs

Jorgen Thomsen
John D. and Catherine T. MacArthur Foundation
Director, Conservation and Sustainable Development

1.4 THEORY OF CHANGE

While environmental and socio-economic settings vary extensively around the world, nations face a set of similar challenges as they manage Great Rivers and their basins. On the Yangtze and Magdalena rivers, for example, prominent challenges have included balancing hydropower development with managing flood-risk and sustaining fisheries. On the Mississippi River, a similar situation exists with a mixture of issues cresting simultaneously which includes Gulf hypoxia, coastal subsidence, flood-risk management, aging infrastructure, and environmental restoration.

It is these similarities that form the basis for GRP's opportunity. In these situations, there is need for honest brokers and solutions providers who can bring experiences from one instance to another. To play this role, GRP has assembled partners with a diversity of experiences and backgrounds, and has established a growing global network of

affiliated river basins and organizations seeking to exchange knowledge and expertise. The full structure of the GRP combines these partners and networks with innovative, on-the-ground conservation results intended to influence policy and river management globally.

The GRP will remain focused, however, on a small number of key river basins, representing about 10 percent of all the Great Rivers in the world. At these places the GRP will go deep, establishing strong relationships and demonstrating through its projects how environmental, social and economic outcomes can benefit stakeholders both individually and collectively, as they engage in the collaborative management of Great Rivers and their basins.

In essence, then, the GRP "Theory of Change" is that the integration of basin-scale and global efforts greatly increases the potential for success at both scales. Pursuing innovative solutions on the ground will result in tangible, balanced outcomes for river

ecosystems, and a broad range of associated economic activities for the people that depend on both the ecosystems and those activities. Promoting IRBM at the basin scale will make those outcomes more durable and widespread. Leveraging both on-the-ground and basin-scale IRBM gains through a global network will help advance sustainable management of river basins beyond those in which the GRP is working directly.

Work within the basins will focus on both the *architecture* of IRBM (e.g., governance and policies) and *on-the-ground* projects that produce tangible outcomes, illustrate the potential environmental and socioeconomic benefits of IRBM, and reduce constraints to system-scale management. Thus, within a basin, the tangible outcomes help promote and solidify the architecture of IRBM, while that architecture will help make those tangible outcomes more durable. Further, those outcomes can be leveraged through policy and planning

processes to achieve more systemic outcomes within basins. This combination of direct outcomes (from projects) and leverage outcomes (e.g., through policy reforms) will allow the GRP to achieve impact.

To address basin-scale constraints, the GRP will assemble a broad coalition of funders, advisors, and partners that implement actions. By working together, this coalition can mobilize more financial resources and direct them toward work in specific river basins in more efficient and effective ways. It will also be able to support the work in individual basins, for example by assisting with strategy development, implementation and measuring outcomes, and drawing on its extensive expert network.

In specific cases, and where the local experience can be generalized, policies and practices that solve recurring problems will be promoted and positioned for replication through creation of sector-specific global policies and standards, such as the International Hydropower Association's Hydropower Sustainability Assessment Protocol.

Ultimately, the interaction between basins and the global network will also help improve global uptake of IRBM. Clear demonstrations of the achievement of IRBM outcomes—both in terms of governance and on-the-ground solutions—in GRP basins will encourage other river basins to test and adopt IRBM. The new tools and approaches can reduce constraints to that adoption. In addition to supporting basins, the GRP Team will also focus on synthesizing and delivering those demonstrations to a global network. The global network will provide opportunities for collaboration on global leverage and learning objectives, such as influencing global industry standards, flows of funding, and capacity development.

1.5 GLOBAL OUTCOMES

GRP staff worked with 15 teams submitting nominations called pre-profiles that defined challenges and opportunities for IRBM in their respective river basin. Working with the ISC, the GRP selected eight river basins to include in the next phase of the partnership. These include the Colorado, Magdalena, Mekong, Mississippi, Niger, Ogooué, Tapajós and Yangtze river basins. Teams from these eight rivers then developed full profiles. Chapter 2 of the Business Plan includes summaries of those profiles and the full profiles are available as electronic annexes. The full profiles describe how the teams will pursue the IRBM approach to achieve more durable and sustainable outcomes and augment the institutional capacity for improving human well-being and ecological conditions.

Because these eight river basins are among the most important freshwater systems in the world, for both people and nature, outcomes in these basins are by themselves globally significant. Transferring and amplifying these results through a global network can potentially drive outcomes at even greater scales.

One of the strengths of the GRP is that it will focus on tangible, practical and scalable outcomes, based on on-the-ground projects that solve common problems. Outcomes for each of the river basins are described in Chapter 2. Here, however, we provide an overview of the global scope of those outcomes across the GRP portfolio to give a sense of the GRP's potential impact:

- *Increases in hydropower production using approaches that are more sustainable for the environment and for people and cultures that would be affected by dam development and operations.* These

dams would contribute electricity to grids that supply hundreds of millions of people and the economic engines of the U.S., China, Southeast Asia, Colombia, Brazil and West/Central Africa. Thousands of kilometers of river and millions of hectares of floodplain areas will be saved, and many more will be restored or will benefit from more sustainable management of dam operations.

- *Increases in agricultural production and transportation* in rivers which already supply more than 40 percent of the world's corn and soy globally (Mississippi and Tapajós), food and product sources for millions of people. Environmentally sustainable approaches will lower water use and nutrient and sediment run-off, decreasing expenditures for sediment management and water supply for tens of millions of people.
- *Decreases in flood risk* by integrating green infrastructure and flow management as components of existing dams and other grey infrastructure projects. These approaches will benefit millions of people and save billions of dollars in potential property loss (Mississippi, Yangtze, Magdalena). Over a million hectares of floodplain and flood retention areas hectares will be protected and reconnected.
- *Sustaining and improving water quality and quantity* to provide secure drinking water supplies and lower future expenditures on municipal water supply for millions of people in all eight basins. This will occur through alternative management of agricultural and silvo-pastoral lands, forestry, and protected and managed areas.
- *Sustaining fisheries* which provide the major source of protein for more than 50 million people, employ more

women than men, and provide billions in economic values annually (Magdalena, Mekong, Mississippi—Gulf of Mexico, Niger, Ogooué, Yangtze) from sustainable dam development, floodplain and flood retention area reconnections, and improved fisheries management approaches.

- *Supporting flood-dependent agriculture and cattle grazing*, which provide major sources of food and livelihoods for tens of millions people (Mekong, Niger) from integrated dam and floodplain management approaches.
- *Sustaining the lands and waters, and the cultures and livelihoods* that indigenous people and local communities depend upon through integrated management for Ramsar sites and other protected areas, and development approaches that take into account needs for sustainability across all strategies (all rivers).
- *Maintaining environmental integrity* to sustain and restore critical habitats and related ecosystem services, including for more than 2,000 species of freshwater fish and for the highest concentrations of bird diversity and population densities in the world. A further outcome is improved terrestrial ecosystems for plants, birds and mammals, including those for 20 species of primates, and unique high altitude ecosystems and plants.

1.6 SHARED VALUE

A key concept that underpins the GRP Theory of Change is “shared value”. We define this as the mutual benefit that accrues to GRP Partners and GRP Basins through participation in this joint endeavor. We suggest it can be developed in at least three ways: *fundraising support* value, *technical resource* value and *brand affiliation* value.

The shared value associated with *fundraising support* is often the first enticement for basin managers to participate in the GRP. Indeed, it is a major goal for the GRP to increase the amount of funding available to support key outputs and outcomes identified for GRP Basins. The GRP provides a multi-level framework for advancing sustainable river management, which may have broad appeal to funders and thus provide greater opportunities for support for individual basins than they could achieve independently. Every leading organization in the GRP will be asked to contribute to the realization of this value for mutual benefit. Fundraising is covered in Section 6 of this plan.

The *technical resource* value will arise from the activities of the Global Practices Team (Section 3) and the links to the global network (Section 4). The Global Practices Team facilitates

the creation of this value by contributing technical knowledge to the portfolio of GRP Basins, and also through networking these basins to enable the co-generation of ideas, experiences, and lessons learned.

Finally, the shared value created through *brand affiliation* depends upon the GRP becoming broadly recognized for engaging significant leaders and stakeholders in river basin management and related sectors, and also generating significant results. That credibility creates value to GRP Basins individually and collectively through their affiliation with GRP, perhaps somewhat analogous to the way wetlands gain value when recognized by the Ramsar Convention on Wetlands of International Importance. The scientific and communications outputs of the Global Practices Team and active engagement with the network will contribute to brand affiliation value and, in turn, this value will contribute to fundraising support value.

While the promise of the GRP is the ultimate outcomes described earlier in this chapter, the Theory of Change hinges upon the successful creation of this shared value.

2. Summaries of The GRP Basin Profiles

2.1 INTRODUCTION

At the heart of the GRP are the river basins themselves, as outlined in Chapter 1. The eight Great River basins that have been selected to participate in GRP have plentiful human and biological diversity; they represent the major regions of the world and some of the world's richest cultures and ecosystems. The partners engaged in each of the eight river basins are pursuing an integrated river basin management (IRBM) approach to achieve more durable outcomes for people and nature and to augment the institutional capacity needed to address future challenges.

In addition to three basins that were part of GRP's first phase (Magdalena, Mississippi and Yangtze), the GRP has selected five additional Great River basins to be included in the partnership under phase II: the Colorado, Mekong, Niger, Ogooué, and Tapajós river basins.

The eight basins contained in this business plan were recommended by the International Steering Committee, selected from a total of 15 pre-profile nominations. The eight basins collectively intersect 21 countries, providing opportunities for international collaboration and learning to advance IRBM processes globally beyond these river basins. There are more than 25 defined policy changes and agreements in the profiles, which will support management approaches and sustainable financing for IRBM.

Sustainable finance mechanisms include: existing policy appropriations (\$ 600 million over 10 years in the Mississippi River); a hydropower mitigation fund (Yangtze River—expected \$200 million/year); water banking (Colorado River); water funds (Magdalena River); and a sustainable development offset system (Ogooué River). These sustainable finance mechanisms could exceed \$300 million/year in a decade.

Products such as new analytical tools, databases, environmental, social and economic assessments, and capacity building through training, technical exchanges, knowledge transfer and stakeholder engagements will support changes in management approaches to realize IRBM in these river basins and beyond.

Besides the positive global economic benefits that derive from these basins, as outlined in the Overview (Section 1.4), the environmental benefits from these approaches will sustain and restore critical habitats and the processes necessary to maintain them. The health and integrity of many of the largest mainstem rivers and floodplain ecosystems in the world are critical to supporting a significant proportion of the fish, bird, reptile, amphibian, aquatic mammal, invertebrate and plant diversity of the world. The people who live in the basins of these rivers depend on them for livelihoods, food security and overall well-being.

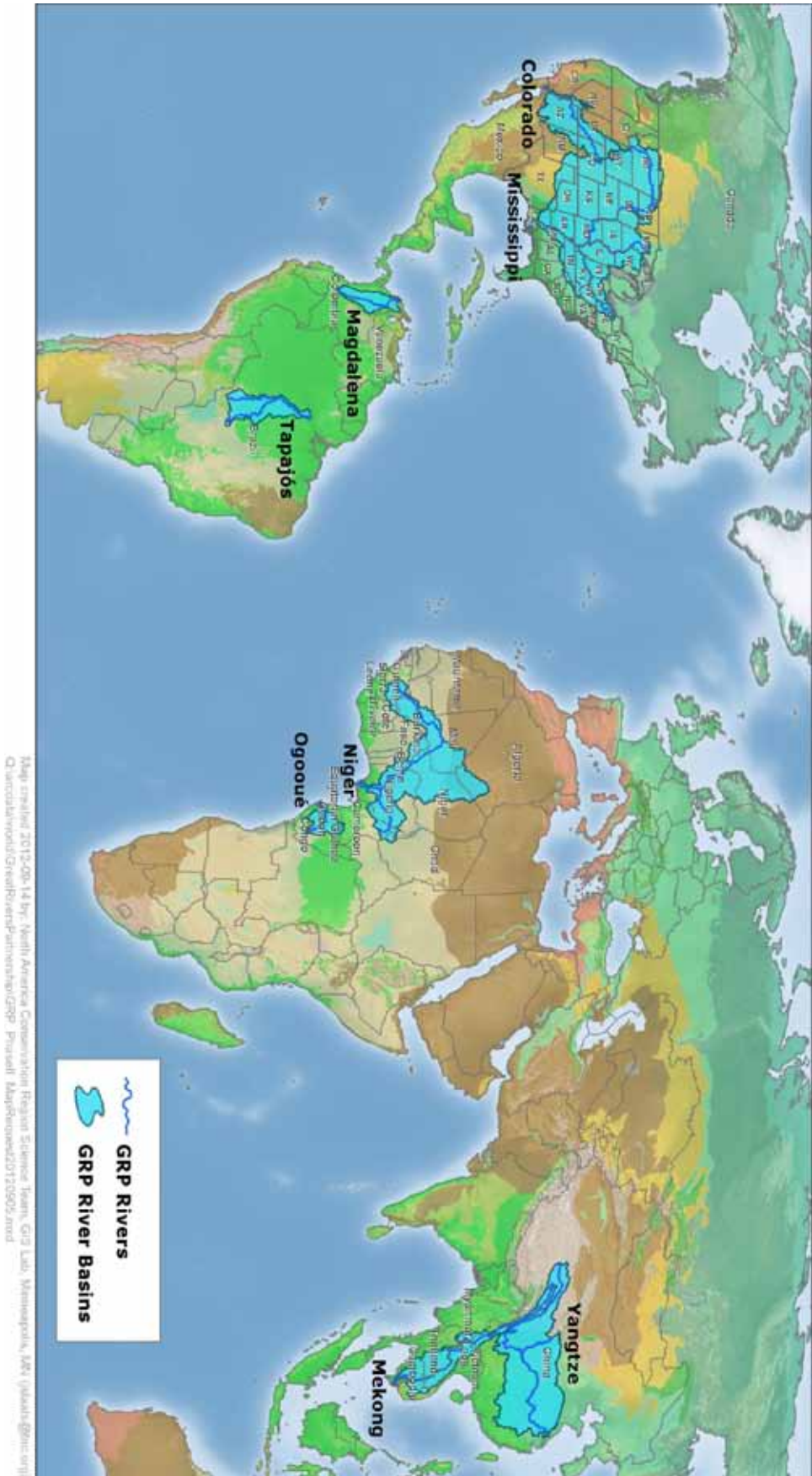
2.2 SUMMARIES OF BASIN PROFILES

This chapter summarizes the detailed profiles developed by the eight Great River Partnership basins for GRP. They are organized by region as follows and in the electronic Annexes to this business plan:

- A. Africa
 - 1. Niger
 - 2. Ogooué
- B. Asia
 - 1. Mekong
 - 2. Yangtze
- C. North America
 - 1. Colorado
 - 2. Mississippi
- D. South America
 - 1. Magdalena
 - 2. Tapajós

The map below indicates the location of these eight Great River basins. The summaries that follow outline the major challenges and opportunities, expected outcomes and proposed strategies, and required capacity and financial resources to achieve the desired outcomes.

River Basins Considered for the Great Rivers Partnership



INTEGRATED MANAGEMENT OF THE NIGER RIVER BASIN

International Union for Conservation of Nature (IUCN), Central and West Africa Program and Niger Basin Authority (NBA)



Niger River

Length of mainstem river:

4,200 km

Size of drainage basin:

2,200,000 km²

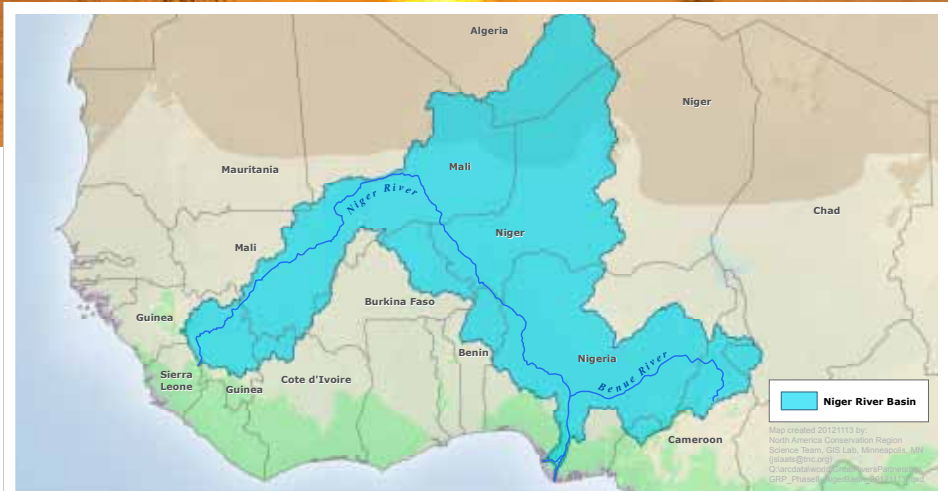
People living within the basin:

100 million

Countries: Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Guinea, Mali, Niger, and Nigeria

Level of economic development:

Developing and Least Developed



OVERVIEW

The Niger River, Africa's third longest river, interlinks nine countries of West Africa and Central Africa from West to East, spanning a wide range of climatic zones and 25 degrees of longitude. Born in the Guinean Fouta Djallon water tower, it brings the waters of the rainy Southern part of the region to its northern arid part, irrigating the famous historical towns of Djenne,

Timbuktu and Gao at the Sahara margin, before flowing to the sea through the moist forests and mangroves of southern Nigeria. The Niger River broadens within the arid lands of the Sahel, creating an Inner Niger Delta, the second largest floodplain in Africa and a Ramsar site of high international importance for biodiversity conservation. Further downstream,

the river supports additional rich floodplains and finally, spreads out after the confluence of the Benue River, its principal tributary, to form the vast coastal Niger Delta.

Perhaps more than any other river, it offers conditions for life in the driest part of West Africa, attracting diverse populations and activities, leading to

the emergence of some of the most dynamic, populated and powerful societies and kingdoms of Africa. Today, more than 100 million people inhabit the basin, nearly 60 percent of whom live in rural areas, heavily dependent on the river water resources for their economic activities and their livelihoods. The Niger River also provides the historical basis of regional integration in West Africa. Today, the Economic Community of West African States (ECOWAS) is a vibrant regional economic community in Africa, coordinating the efforts of countries among the poorest in the world to meet unprecedented demographic, development and climatic challenges. The region is a dynamic one, where natural resources are valuable assets, but which face intense pressures and exhibit a common trend of rapid depletion. The Niger's water resources are at the core of the development of the region, exploited for supplying a quickly growing urban population, for increasing food production to meet growing demands, for massive needs in energy, and even for navigation. All these demands cannot be met on a long-term basis without a healthy and resilient river ecosystem.

Satisfying the basin's rapid growth and development trends, under harsh climatic conditions of drought and floods, by sustaining and building on the river system's natural resource base is the challenge for the many and diverse institutions engaged in the GRP. The Partnership is led by IUCN and the Niger Basin Authority, with support from TNC. Partnership members are the institutions in charge of river, water and land management in the countries, and the institutions that help develop their capacity through best science, tools and practices.

Following is a summary of key points of the Niger full profile (Annex A.1a), providing a road map to the challenges, actions, outcomes and budget for the GRP project for this river.

GUIDE TO THE MAJOR COMPONENTS OF THE FULL PROFILE (ANNEX A.1a)

Main Challenges & Opportunities for Action

Though abundant in general, the Niger's water resources are highly inequitably distributed in time and space. Some countries and areas are extremely dependent on other parts of the basin and, due to a variety of threats including climate change, competition for water may lead to tension and conflicts. The large basin size, number of countries, and diversity of sociopolitical situations throughout the basin call for a well designed, effective governance system. The commitment of the nine basin countries to an integrated water resources management (IWRM) approach gives a strong institutional framework for a coherent decentralized governance system. Such a strengthened basin-wide water governance system based on an ecosystem approach to natural resources management is needed.

Within the implementation of such a framework, the planning and management of water infrastructure need to support climate-resilient sustainable development, and water, food and energy security. Decisions on building large infrastructure must safeguard the multiple benefits to river-dependent communities from the Niger's ecosystem services and nature-based food production systems.

The combined effects of the increasing pressure of a rapidly growing population needing better living conditions,

climate variability and change, and the present levels of catchment and river ecosystem degradation are already demanding urgent attention. They are particularly of concern given that the state of river health is poorly known, yet millions of people in West Africa depend directly on the river system for their water and food security daily.

KEY STRATEGIES & ACTIONS (3-5 Years)

Develop water governance policies for sub-basins

1. Support efforts to ratify the UN Convention on International Watercourses and adopt other international instruments, as a basis for strengthening policy and legal coherence among basin countries.
2. Establish national and sub-national policies supporting decentralization of water governance, and secure the enabling conditions for implementation.

Establish sub-basin IRBM organizations

1. Implement a five-case pilot project to advance institutional models for decentralized water resource governance from sub-basin to local levels, and adapt frameworks to the different parts of the basin.
2. Develop the capacity of national to local governments and civil society organizations in water governance, mainly the legal and institutional arrangements needed for effective decentralization reform.

Develop the knowledge base on river-related services and health

1. Establish a quantitative knowledge base on economic values of natural river-floodplain food production systems (fisheries, agriculture, livestock), energy systems, and

associated ecosystem services, and their relationships with natural and altered flow and climate regimes. This will be used to support the basin Sustainable Development Action Plan (SDAP), Environmental Strategic Action Plan (SAP) and Investment Plan.

2. Develop environmental flow standards to ensure ecosystem health, and support a basin network of important inland waters, including Ramsar sites.

Build a sustainable financing mechanism to safeguard natural resources

1. Build a regional, sustainable financing mechanism to protect and restore the rivers and forests of catchments of the Guinean Highlands.

EXPECTED OUTCOMES (10 Years) & MILESTONES (3 Years)

Key long-term goals for the Niger River Basin include a strengthened and decentralized system for water resources governance across the majority of the river basin, from local to transboundary levels. This will require that cooperative decision-making structures are in place at local to regional scales, including in 10 sub-basins, five of which are transboundary, with sufficient capacities to implement sustainable and equitable management of natural resources.

It is also expected that at least three priority areas of the river system, encompassing at least two Ramsar sites, will be valued in social, economic and environmental terms, and will be under effective management to safeguard basin freshwater assets, ecosystem functions and services, and climate resilient water, food and energy production. Moreover, the needs of river-dependent people and ecological requirements of the

river-floodplain-delta ecosystem are to be fully integrated into water infrastructure planning, design and operation at the basin scale, leading to reduction in negative social and environmental impacts and increased benefits to people.

To accomplish these goals, milestones by 2016 include:

- Five to eight sub-basin IRBM organizations or bodies are established, with sufficient technical and institutional capacity for implementation, covering the highest priority providers of ecosystem services across the basin.
- The economies of three river-floodplain-delta ecosystems, their importance to water, food and energy security for local communities, and the hydrological impacts of development and climate change, are scientifically documented and understood by decision-makers.
- The enabling conditions are in place and a sustainable financing mechanism is designed and in operation for the protection of the Niger River's water tower and its catchment in Guinea.
- The basin network of important inland waters, including 24 Ramsar sites and other protected areas, is a more effectively managed portfolio of priority locations for securing freshwater ecological integrity, assets and services for people.

CAPACITY NEEDS

To ensure effective collaboration with NBA, the GRP program will have its main team unit at the NBA office in Niamey, Niger, where the overall basin policy-science coordinator will be based, with an ecological economist and sociologist, supported by finance staff. Team members will be distributed

regionally in strategic locations, to work in close relationship with partners at different scales in this large basin. A lower-basin program unit will be based in Nigeria, to support strategy implementation through the Nigerian IWRM Commission (NIWRMC); it will bring communications and water resources expertise. A Guinea field unit, with natural resources management and hydrology skills, will coordinate activities in the upstream sources sub-basin and its associated Ramsar wetlands. The GRP Team will complement and strengthen the established IUCN, Wetlands International and other partner teams across the basin. It will share some staff with the Partnership for Environmental Governance in West Africa (PAGE), in Ouagadougou, Burkina Faso. Units may host seconded persons from ministries in Guinea and Nigeria. The IUCN offices in Niamey, Bamako, Ouagadougou and Yaoundé will assist with strategy implementation and administration in their respective countries. The team will also benefit from philanthropy, marketing and communications support.

CURRENT BUDGET & RESOURCE MOBILIZATION STRATEGY

Requested Funding for GRP

= \$19.35 million over five years

Existing & Proposed Funding

Available funding = \$2.83 million

Other Sources of Funding

- NBA projects = \$186 million (World Bank).
- Global Environment Facility = \$43 million.
- U.S. Millennium Challenge account = \$234 million (irrigation in Mali).
- Country projects = \$200 million (agriculture and environment).
- Other bilateral donors = \$30 million +.

MAIN IRBM PARTNERS

The IUCN leads the partnership under the political guidance of the co-proposer, the Niger Basin Authority. The NBA has the mandate from the nine member States sharing the basin to implement the SDAP. It signed a Memorandum of Understanding with the Ramsar Convention Secretariat in 2002; its International Organization Partners established a Program for the long-term conservation of the natural heritage of the Niger Basin in 2007. Seven basin countries are Member States of IUCN and collaborate with its teams on technical and policy issues. Local river-dependent populations of the basin (mainly of Guinea, Mali, Burkina Faso, Niger, Nigeria and Cameroon) will be engaged in local governance decision-making arrangements and community-based ecosystem management and restoration efforts.

The following are key partners with IUCN and NBA:

- The Water Resources Coordination Center (WRCC) is an agency of ECOWAS which led the recent regional dialogue on large infrastructure.
- The Nigerian IWRM Commission provides an important institutional platform for mainstreaming the decentralized governance approach in Nigerian sub-basins.
- Wetlands International has implemented various basin projects, including a ten year Inner Niger Delta project with IUCN Mali and one on conservation financing in the upper basin.
- The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) support project to the NBA is elaborating a new regional strategy to strengthen capacities of basin civil society organizations, and assisting with water sector reform.
- The African Union funded Regional Program for the Integrated Development of the Fouta Djallon Highlands supports sustainable management of West Africa's water tower.
- The Ramsar Convention Secretariat maintains the List of Wetlands of International Importance, and provides scientific and technical support to Contracting Parties for Ramsar Strategic Plan implementation.
- The Permanent Interstate Committee for drought control in the Sahel (CILSS) invests in research for food security and the fight against effects of drought and desertification, for a new ecological balance in the Sahel.
- The Global Water Partnership with the help of Country Water Partnerships supports the sustainable development and management of water resources at all levels.

SUSTAINABLE MANAGEMENT OF THE OGOOUÉ RIVER BASIN

The Nature Conservancy-Africa; Agence Nationale des Parcs Nationaux (ANPN); Direction Générale de l'Environnement et de la Protection de la Nature (DGE); Ministère des Eaux et Forêts (MinEF); Wildlife Conservation Society (WCS-Gabon); World Wide Fund for Nature (WWF-Gabon)



Ogooué River

Length of mainstem river:

1,200 km

Size of drainage basin:

224,000 km²

People living within the basin:

1 million

Countries:

Gabon (90% of basin), Republic of the Congo (Congo-Brazzaville), Equatorial Guinea, and Cameroon

Level of economic development:

Developing



OVERVIEW

The Ogooué River Basin provides one of the few remaining places where we can demonstrate how to pursue economic development opportunities in one of the world's Great Rivers while protecting resources for people and nature. Although not well known globally, the Ogooué's diverse resource base fuels one of Africa's most vibrant

economies, that of Gabon, with one of sub-Saharan Africa's highest per capita incomes. Nearly 90 percent of the Ogooué River basin is within the borders of Gabon.

The government of Gabon is committed to pursuing sustainable development programs for its lands and

waters. The country has the advantage of a low population density - especially within the Ogooué basin. It is already developing national climate and land-use plans. Such a proactive approach to sustainable development planning is unique among countries in the region and presents a tremendous opportunity to test and perfect an

Integrated River Basin Management (IRBM) approach.

The Ogooué River basin supports more than 325 diverse fish species, including a fascinating group of weak electric fishes (Mormyridae). On land, and along the waters, some of the world's best remaining populations of forest elephants, gorillas, chimpanzees, mandrills and dwarf crocodiles in the world are thriving. This diversity of wildlife inhabits an area that is approximately 85 percent forested and includes a new system of National Parks and Ramsar wetland sites.

Gabon and the Ogooué River basin are developing rapidly, however. Major hydropower and infrastructure development projects (road, rail, and port), and expanded mining and forestry operations and now underway. The Ogooué River Basin Sustainable Management Project was recently formed to inform decisions about sustainable development and basin-wide conservation programs. The project partners include Gabon's National Parks Agency (ANPN), Environmental Agency (DGE) and Ministry of Water and Forests (MinEF). International partners include WWF-Gabon, WCS-Gabon, and TNC. This public-private partnership will focus on building capacity for IRBM and freshwater science, protected area management that provides economic and biodiversity benefits, and sustainable development techniques ranging from the site to basin scale.

Following is a summary of key points of the Ogooué's full Profile (Annex A.1b), providing a road map to the challenges, actions, outcomes and budget for the GRP project for this river.

GUIDE TO THE MAJOR COMPONENTS OF THE FULL PROFILE (ANNEX A.1b)

Main Challenges & Opportunities for Action

The broad conservation challenge is to sustain not only the current relatively intact forests and waterways of the Ogooué River basin, but also the critical benefits that a significant portion of Gabon's population derive from these natural systems for their livelihoods. The benefits that nature provides in the Ogooué River Basin could be at risk in the face of rapid development in the forestry, mining, energy, and infrastructure sectors.

Some specific challenges include:

- Planned hydropower development on the mainstem and tributaries has the potential to fragment aquatic habitats and to negatively impact aquatic ecosystem health and fisheries production;
- Freshwater conservation and management frameworks are inadequate to sustain freshwater biodiversity and the ecosystem services human communities depend upon;
- Decision support information, and public and private sector capacity reinforcement, are within the basin in the areas of freshwater conservation and management;
- Sedimentation and chemical pollution from rapidly expanding forestry and mining operations are threatening the aquatic ecosystem; and
- Inadequate fisheries management, particularly overharvesting through use of illegal gear and lack of entry limitations, jeopardizes the future availability of freshwater fish protein.

Nonetheless, the opportunity for productive action is very high. A National Land Use Plan is expected to

be completed in 2013, and a new Code for Sustainable Development is under discussion in Parliament. National Park management plans will be developed by mid-2014, and the Government of Gabon is in discussion with the World Bank and Global Environment Facility (GEF) to obtain five-year funding for management improvement for Ramsar wetland sites. Gabon has defined an energy generation goal of 1200 MW by 2020, and there is a clear opportunity for basin-wide hydropower planning that balances energy with conservation. Half the basin is in forestry concessions and almost a third of those concessions are seeking Forest Stewardship Council certification. Bechtel Corp., working within the new l'Agence Nationale des Grands Travaux, has requested information about critical freshwater habitats to inform siting and design of new infrastructure. These examples illustrate that achievement of a sustainable development vision is possible for the Ogooué River basin, as it is almost exclusively governed by Gabon, a country that has demonstrated the political will to chart a new path which prioritizes natural resources stewardship as a pillar for sustainable development.

KEY STRATEGIES & ACTIONS (3-5 Years)

Reduce extractive industry impacts on water quality

1. Understand and document relationships between extractive industry practices and water quality — including the impact of excessive sedimentation on the freshwater biodiversity of black water systems in the basin - through scientific study, expert workshops, and development of decision support tools.
2. Test and implement an erosion vulnerability mapping approach and associated best management practices that reduce sedimentation

impacts from the forestry industry and guide revisions of the Gabon Forestry Code.

3. Introduce catchment-based management and reporting to extractive industry sectors, applying best practices to the management of Ramsar sites and to national guidance on the management of High Conservation Value areas.

Establish models for freshwater conservation and management

1. Improve baseline ecological and social knowledge of the Bas Ogooué, the Ivindo River, the Dji-dji River, and the Monts Birougou Ramsar site; identify enabling conditions for their management.
2. Establish a freshwater protected area management framework model with long-term economic benefits to local communities, starting with Bas Ogooué Ramsar site in collaboration with the Ramsar Secretariat and local Ramsar Committee.

Create an information framework for sustainable basin development

1. Provide data, mapping, and technical support to the government and private sector to enable full consideration of freshwater resources and biodiversity of the Ogooué Basin.
2. Design and implement a set of pilot projects that illustrate the use of an offset and mitigation framework to achieve sustainable development goals.
3. Use ecosystem service valuation and mapping and any mitigation or offset framework to inform the Gabonese National Accounting System.

Strengthen water management capacity

1. Incorporate IRBM elements into training programs to target government and private needs.

2. Implement applied freshwater assessments, including a climate change resilience and vulnerability analysis, and develop decision support tools.
3. Define IRBM needs for freshwater based on Gabon Wetlands Management Plan.

EXPECTED OUTCOMES (10 Years) & MILESTONES (3 Years)

The long-term goals for the Ogooué basin are:

- to avoid or greatly reduce sedimentation and other water quality impacts on aquatic biodiversity and ecosystem services from extractive industries;
- to support effective management of freshwater resources in National Parks and Ramsar sites under Gabonese law to benefit freshwater biodiversity and local economies;
- to implement a sustainable development approach that accounts for and protects critical freshwater ecosystem services and biodiversity; and
- to have an IRBM process underway for the Ogooué basin based on clear authorities and adequate in-country capacity.

Government institutions and private sector actors will benefit from new decision support information, reinforcement of capacity, water strategy development, and networking within the GRP. As steps towards achievement of these goals, the project has milestones by 2016 that include:

- Improved management in two forestry concessions will reduce the threat to water quality and freshwater species from excessive sedimentation.
- A model for Ramsar site management is developed in the

Bas-Ogooué Ramsar site through collaboration among government, community groups, and NGOs and benefits both the ecosystem and human communities within it.

- Sustainable development policy will incorporate: 1) a definition of critical freshwater ecological areas; 2) a quantification of freshwater ecosystem services; and 3) a sustainable development credit and/or biodiversity offset system that includes freshwater elements.
- Freshwater capacity reinforcement programs have reached all major resource management institutions in Gabon and an IRBM process is defined and underway.

CAPACITY NEEDS

The five-year capacity need across the three primary collaborating NGOs is approximately 12 staff, with support staff and field assistance as necessary. This includes project management, aquatic ecologist, hydrologist, forestry specialist, spatial analyst, socioeconomic specialist, communications officer, and monitoring and evaluation lead positions. In addition, capacity building for government agencies and Gabonese institutions engaged in water management is part of the proposed program.

CURRENT BUDGET & RESOURCE MOBILIZATION STRATEGY

Requested Funding from GRP
= \$75 million over five years

Existing & Proposed Funding

Existing funding for Project activities is approximately \$250,000, all from public sources to date. A proposal was submitted to the Wildlife Without Borders Program of the U.S. Fish and Wildlife Service (FWS) in November 2012 in the amount of \$270,000.

Private funding sources have just begun to be explored for this new collaboration.

Other Sources of Funding

The Government of Gabon is in discussion with the World Bank/GEF about up to \$5 million in five-year funding for management improvement for Ramsar sites, which would directly link to Project outcomes. Beyond FWS, a key but relatively difficult to gauge funding source is the Government of Gabon. If the Project shows results in line with government priorities funding will likely be available to both government agencies and NGOs within the Project Team to achieve proposed outcomes

MAIN IRBM PARTNERS

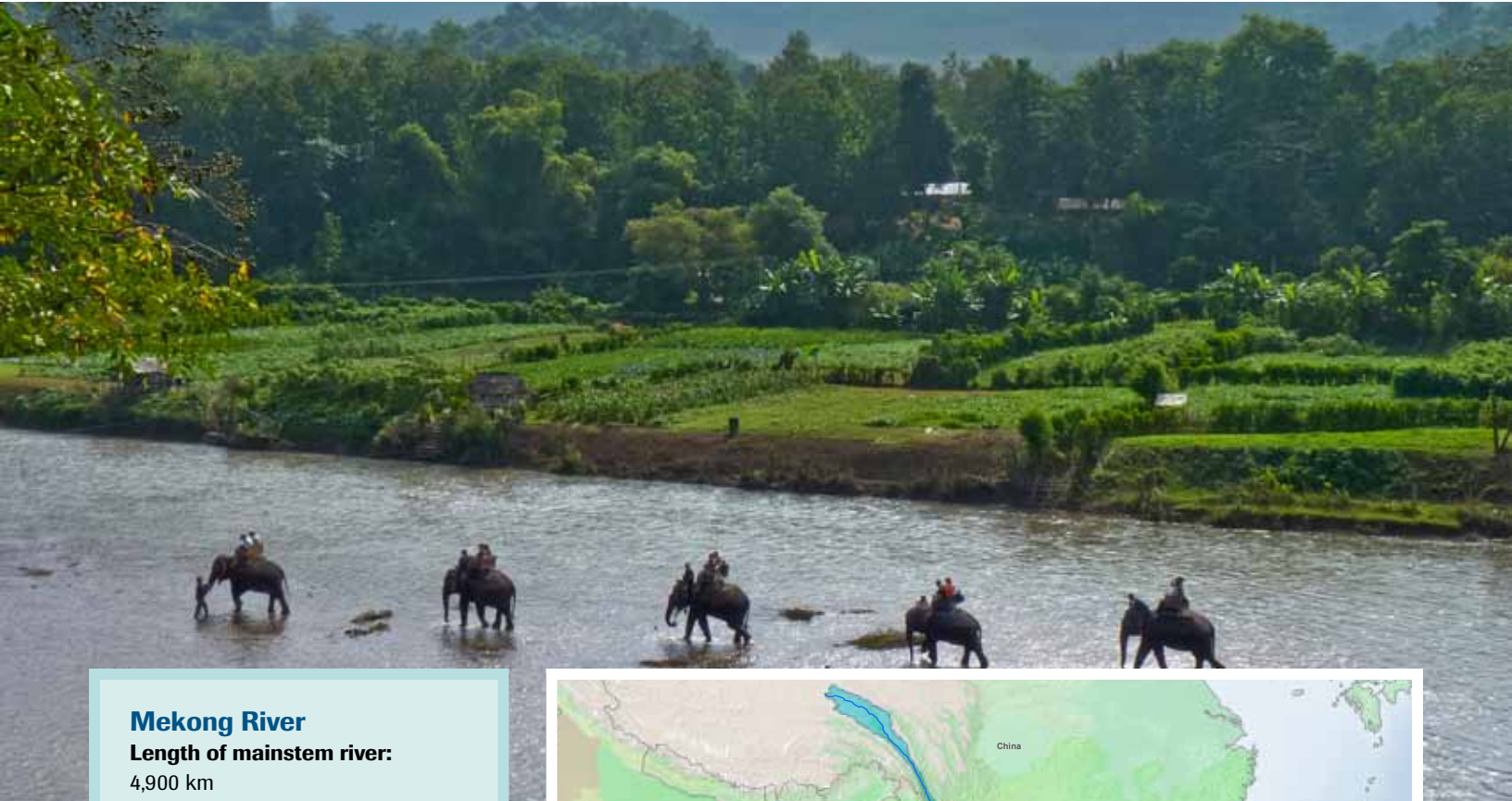
Ogooué River Basin Sustainable Management Project is being coordinated by TNC but is a unique collaborative among government institutions and NGOs working in Gabon. A Project Steering Committee is under formation to ensure coordination and to govern project activities. The following institutions are Project leads:

- Agence Nationale des Parcs Nationaux which is responsible for national parks and their buffer areas, and has proved a strong institution for delivering conservation outcomes.
- Direction Générale de l'Environnement et de la Protection de la Nature which is the Ramsar lead and plays a critical role in reviewing and deciding upon environmental impact statements.
- Ministère des Eaux et Forêts ensures sustainable and responsible management of Gabon's forest resources and monitors and controls the application of existing rules and regulations in the forestry sector. Its aquatic ecosystem branch is designed to provide critical coordination and leadership on aquatic issues, and has been tasked with developing a Wetlands Management Plan for the country.
- WWF-Gabon has developed public/private partnerships for responsible oil and mine extraction in Gabon, and is promoting sustainable financing approaches. It has a new field office for the Bas-Ogooué system to engage in program implementation at this Ramsar site
- WCS-Gabon is involved with all relevant government agencies and many private sector forestry corporations in the Basin. WCS has a long history in the Basin, assisting the founding and development of Gabon's National Park system.
- TNC is new to Gabon and the Basin, but has been asked to bring its freshwater technical, development-by-design, and IRBM capacity to the basin.

Other key partners include: government agencies engaged in fisheries, agriculture, mining and energy development; academic institutions and collaborators within and outside of Gabon such as the Natural Capital Project and Université des Sciences et Techniques Masuku; influential private sector actors such as Bechtel Corporation (infrastructure), Olam (agriculture and forestry), Corawood (forestry); and community-based organizations such as the Organisation Ecotouristique du Lac Ogoemoué located in the Bas Ogooué region.

PROTECTING BIODIVERSITY & SUPPORTING LIVELIHOODS IN THE LOWER MEKONG RIVER BASIN

World Wide Fund for Nature (WWF) Greater Mekong Programme; International Union for Conservation of Nature (IUCN), Viet Nam Country Office



Mekong River

Length of mainstem river:

4,900 km

Size of drainage basin:

760,000 km²

People living within the lower basin:

60 million

Countries:

Cambodia, China, Kingdom of Thailand, Lao People's Democratic Republic & Viet Nam

Level of economic development:

Developing



OVERVIEW

The Mekong is one of the most bio-diverse river systems in the world, with its nearly 800 freshwater fish species making it second only to the Amazon. It is also one of the last major rivers on Earth that is relatively undeveloped, with the mainstream free flowing through Myanmar, Lao PDR (Laos), Thailand, Cambodia and Viet Nam.

The river supports the largest inland fishery in the world, and for this and other reasons the 60 million people who live in the lower Mekong Basin are highly dependent on the river system. Around 80 percent rely directly on the river for their food and livelihood, and in Laos and Cambodia the majority of animal protein comes from freshwater fisheries. The delta in Viet Nam is

home to 17 million people, and contributes more than 50% of the country's staple food crops.

At present the river is at great risk from hydropower development. There are 88 hydropower projects in the pipeline, including 12 on the mainstream of the lower Mekong. These dams could have

catastrophic impacts on the biodiversity of the basin and the people that depend on that biodiversity. Dams will reduce riverine habitat, change the flow regime, and limit the movement of the many migratory fish species. By some estimates, fisheries production could fall by more than 40%. Impacts on the movement of sediment and nutrients, and the consequences for channel structure are also expected to be severe. The delta —already identified as one of the world’s three most vulnerable deltas to climate change—is particularly susceptible to changes to the river’s sediment dynamics.

The scale and nature of hydropower development on the river is far from settled, and there remains major disagreement amongst the riparian countries. Decisions on many of these dams are likely to be made in the next 3-5 years—decisions that will effectively be irreversible. This presents an enormous opportunity to influence the way development occurs. WWF and IUCN, and the large group of partners they have drawn together, are well placed to play an invaluable role in promoting the protection of biodiversity during this period of major change. It is a role that will support and complement the existing work of the Mekong River Commission and national government agencies.

We propose work in three key areas: (i) improving understanding of the biodiversity and ecosystem functions of the river, and using this to assess trade-offs in development options; (ii) influencing decisions on hydropower development, and (iii) promoting basin-wide freshwater protection. This work will promote an informed and considered approach to development of the basin, which is hoped will protect and preserve its unique biodiversity and the many millions of people who depend on it.

Following is a summary of key points of the Mekong’s full profile (Annex A.3e), providing a road map to the challenges, actions, outcomes and budget for the GRP project for this river.

GUIDE TO MAJOR COMPONENTS OF THE FULL PROFILE (ANNEX A.3e)

Main Challenges & Opportunities for Action

The massive expansion of hydropower development presents the greatest challenge for sustainable river management in the Mekong. There are 88 hydropower projects in the planning or design phase, including 12 on the mainstem of the lower Mekong. These dams could have catastrophic impacts on the biodiversity of the basin and the people who depend on the river for their food and livelihoods. Decisions on many of these dams are likely to be made in the next 3-5 years. Given the potential impacts and the irreversible nature of hydropower development, the highest priority opportunities for engagement will center on developing collaborative, science-based solutions for balancing hydropower development with other river resources.

A second challenge is that management of the basin’s rich wetlands and associated resources is often fragmented and hampered by insufficient capacity. These management challenges compound the problems associated with hydropower development, and limit the effectiveness of responses to other threats in the basin. In response, high priority opportunities include establishing a system of freshwater protected areas, and improved regulation and enforcement of activities that impact on wetlands and related aquatic ecosystems. In order to respond to these challenges, active community engagement in planning and managing wetlands will be essential.

KEY STRATEGIES & ACTIONS (3-5 Years)

Create database & assess hydropower trade-offs

1. Fill key knowledge gaps on important species, habitats, food security, sediment flow, and human factors vulnerable to impacts of dams and infrastructure.
2. Synthesize information on key ecosystems and assess impacts of dams (power production, food security and biodiversity); recommend optimal location, design, and operation of dams.

Influence hydropower development plans

1. Initiate reforms in the electricity sector to produce accurate assessments of future electricity demand and focus on demand management.
2. Promote regional legal arrangements that require prior informed consent of affected countries for projects with potential large-scale irreversible transboundary impacts.
3. Engage the mass media and organize outreach events to raise public awareness of the risks of current development plans.

Develop basin-wide freshwater protections

1. Develop a basin-wide wetlands management plan to ensure more effective conservation of globally threatened species and habitats and increased resilience to climate change.
2. Expand and strengthen engagement with community groups, such as community fisheries organizations, to improve sustainable wetlands management.
3. Identify agricultural and water use projects that threaten protected species and food security, degrade water quality and increase

vulnerability to climate change; advocate against such projects.

EXPECTED OUTCOMES (10 Years) & MILESTONES (3 Years)

One of the key long-term goals for the Mekong River Basin is to maintain the ecological integrity and productivity of the basin through a strategic approach to hydropower development. This approach will be based on an accurate scientific understanding of the impacts of dams and other infrastructure on key aquatic species, ecosystems and environmental services. Another long-term goal is to expand the protected area system to enhance the ecological and livelihood values of the basin's wetlands. This would require meaningful community participation in wetlands management and more effective policy advocacy.

To accomplish this, milestones by 2016 include:

- Basin-wide conservation priorities are mapped and integrated into a spatially explicit database; hydro-power trade-offs are assessed and include a detailed economic valuation of wetlands goods and services.
- Hydropower development plans are underway that optimize the cumulative trade-offs between power production, food security, and biodiversity at the basin level, and are based on more realistic power consumption forecasts.
- A plan is drafted for a basin-wide freshwater protected area system that can be used as the basis for Ramsar site nominations.
- Community participation in wetlands management is piloted and scaled up in the Tonle Sap in Cambodia and other large wetlands; Viet Nam reforms policies to allow more diverse agriculture and more natural hydrology.

Capacity Needs

It is expected that WWF would have overall responsibility for the GRP and perform a secretariat function. An internal GRP program team would be established within WWF to manage the program, including addressing issues related to governance, finance, and communications. For example, the WWF Greater Mekong Program has over 250 staff in Cambodia, Laos, Thailand and Viet Nam, working on over 70 projects (involving freshwater and terrestrial components). Representatives from WWF and IUCN would constitute a small steering committee, to allow a focused approach to decision-making.

Specific program personnel who will be required for the GRP project include: Regional Directors (5): program, finance, human resources, marketing, country; Regional Coordinators (3): monitoring & evaluation, thematic, ecoregion; Regional Managers (3): communications, project, IT; Regional Officers (4): program, communications, finance, administration; Conservation experts (7): fish ecology, benthic ecologist, geomorphology, hydrology, food/health, law, GIS.

CURRENT BUDGET & RESOURCE MOBILIZATION STRATEGY

Requested funding for GRP
= \$25.27 million over five years

Existing & Proposed Funding
Existing WWF, IUCN and other partners proposals approved and/or under implementation: = \$ 28 million

Matching funds = \$8 million

Other Sources of Funding

Mekong River Commission Secretariat (MRCS) - Basin Development Plan, Climate Change Adaptation Initiative, Environment Programme, Flood Management and Mitigation Programme, Fisheries Programme, Integrated Capacity Building Programme, Information and Knowledge Management Programme, Initiative on Sustainable Hydropower Programmes = \$25.3 million

Lower Mekong Basin Wetland Management and Conservation Program (KfW) = € 8 million

MAIN IRBM PARTNERS

The proposed partnership includes the following implementing partners:

- WWF, an international conservation organization
- IUCN, an international conservation organization
- WorldFish Center, a CGIAR research center based in Phnom Penh
- Conservation International (CI), an international conservation organization
- Oxfam, an international development organization
- M-POWER, a network of universities, NGOs and other capacity-building organizations in the Mekong region
- Natural Heritage Institute (NHI), an international conservation organization based in the U.S.

The following organizations would not be responsible for implementing activities nor would they seek funds under the partnership, but would work closely with the partnership to support implementation:

- Mekong River Commission Secretariat (MRCS)

- World Bank
- National Mekong Committees of the member countries of the MRC: Cambodia, Laos, Thailand and Viet Nam
- Asian Development Bank (ADB)

There are clear synergies and efficiencies that will result from working together, as a result of complementary skills and networks and potential for aligning specific activities. The core

partners have been identified based on a long history of successful work in the basin, on-ground presence, shared values and mission, complementary skills, and a history of collaboration with one another and with key government organizations. This group is not exclusive, and a large number of additional potential partners have been identified. These organizations might ultimately become involved based on final design of the program of work.

MOTHER RIVER & THE NINE DRAGONS: ADVANCING IRBM IN THE YANGTZE RIVER BASIN

The Nature Conservancy (TNC), China Program



Yangtze River

Length of mainstem river:

6,300 km

Size of drainage basin:

1,800,000 km²

People living within the basin:

427 million (2005)

County:

China

Level of economic development:

Emerging



OVERVIEW

The Yangtze River, the third longest river in the world and one of China’s “mother rivers,” has sustained human civilization for millennia, with over one-third of China’s population living in its watershed (over 400 million). The main stream of the river originates from the southwest side of Geladandong Snow Mountain in the Qinghai-Tibetan Plateau. The entire river basin

passes through 11 administrative provinces and autonomous regions and finally enters into the East China Sea at Shanghai, with a total length of more than 6,300 km and a total descent of more than 5,400 meters. The river creates numerous ecological landscapes, where endemic and unique species live. The Basin contains rich and globally important biodiversity, and its complex

and various freshwater ecosystems provide irreplaceable freshwater ecosystem services.

Over the past 30 years, because of its abundant resources of freshwater, hydropower, land, and minerals, as well as its vast navigation potential, the Yangtze River has played a key role in the rapid development of China. It

supported growing resource and energy consumption and suffered from the resulting pollutions and manmade changes. The Yangtze's freshwater ecosystems became degraded and fisheries and aquatic habitats declined, not only because of inadequate attention to conservation and sustainable development, but also because of intense competition and unregulated construction.

Currently the Yangtze River basin lacks—but urgently needs—an integrated river basin management (IRBM) mechanism to balance the needs of hydropower development, flood control, and environmental conservation effectively. Moreover, the investment in conservation and its effectiveness needs to be enhanced to maintain a balance and eliminate conflicts between overall development and conservation on a vast scale.

After five years working with partners in the basin, the Yangtze team aims to safeguard the vitality of the Yangtze River basin by preserving biodiversity and ecosystem services for the millions who call the basin home. Mitigating the impacts of hydropower and flood control infrastructure, protecting fish populations and managing fishery resources, and improving river health monitoring systems will contribute to balanced, forward-looking development of the basin. Multi-stakeholder conservation strategies and hydropower sustainability funds will further promote IRBM goals

Following is a summary of key points of the Yangtze's full Profile (Annex A.3f), providing a road map to the challenges, actions, outcomes and budget for the GRP project for this river.

GUIDE TO THE MAJOR COMPONENTS OF THE FULL PROFILE (ANNEX A.3f)

Main Challenges & Opportunities for Action

For thousands of years, the Yangtze River (often referred to as the Mother River of China) has played a vital role in the evolution of Chinese civilization. Although the Yangtze has traditionally provided a reliable water supply for multiple purposes, today the basin faces major infrastructure development pressures. Moreover, the fragmentation of water resources management among numerous decision-making agencies has made it difficult to approach basin management in an integrated way.

A great challenge for the Yangtze River basin is to create an IRBM mechanism to balance the needs of hydropower development, flood control, and environmental conservation effectively. Fortunately, the people living along the river and the state council are recognizing the importance of conservation. Moreover, some ministries, such as the Ministry of Water Resources (MWR), have identified the conflicts and started making plans and related policies to solve the problem.

Another major challenge for the basin is to protect fish populations and to manage fishery resources, under increasingly degraded environmental conditions. Improved river health monitoring systems will contribute to balanced, forward-looking development of the basin. Multi-stakeholder conservation strategies will further promote IRBM goals.

KEY STRATEGIES & ACTIONS (3-5 Years)

Promote sustainability fund mechanism

Advocate for the Yangtze Hydropower Sustainability Fund Mechanism to the Ministry of Water Resources (MWR) and other related government authorities through all channels and methods.

Encourage cascade dam operation

Work with Three Gorges Corporation (TGC) to develop, evaluate, improve and promote the optimized operation plan for the lower Jinsha River cascade dams, and integrate operation with ecological flow.

Help develop integrated flood control system

1. Work with local water authorities and others to develop plans for restoring natural ecosystem service functions in selected pilot flood detention areas.
2. Integrate the current flood control plan with the utilization of flood detention areas.

Improve monitoring network on fish and environment

1. Identify location of priority habitats and the gaps in assessments of environmental flows, artificial propagation and release of fish and fish resources in the basin.
2. Assist in creating a cooperative network mechanism among multiple agencies on data sharing.
3. Make recommendations for compensation to fishermen so as to promote sustainable fishery management.

Enhance conservation capacity

Based on TNC's scientific analysis, develop models of conservation practice on-site to provide experience for effective management of river ecosystems and fisheries.

EXPECTED OUTCOMES (10 Years) & MILESTONES (3 Years)

One of the key long-term goals for the Yangtze basin is the establishment of a Hydropower Sustainability Fund Mechanism and its adoption by concerned Yangtze River basin management authorities. It is expected that the Fund can contribute to improved river basin flood control, hydropower development and ecosystem conservation plans. Collaboration on the Fund will enhance cooperation among different management authorities and advance the development of IBRM approaches in the Yangtze River basin.

Another long-term goal is to put in place a monitoring network and evaluation system in key locations that would be supported by multiple stakeholders. Such a network would strengthen effective management for conservation of fish and natural resources in the Yangtze basin. It will also support potential expansion of freshwater sites under the national nature reserve system under the Ministry for Environmental Protection (MEP) and other relevant agencies.

To accomplish these goals, milestones by 2016 include:

- The concept of the Yangtze Hydropower Sustainability Fund Mechanism has been reviewed and generally accepted by MWR and other related government authorities.
- The sustainable operation of cascade hydropower dams has been achieved, which improves the efficiency of hydropower generation and a healthy freshwater ecosystem. The operation plan optimizes hydropower revenue to initiate the Hydropower Fund.
- An integrated flood control system

utilizing flood detention areas has been explored and implemented in the Yangtze River Basin, with responsibility for flood control being shared with upstream cascade dams.

- A monitoring network on fish and environment in the Yangtze Basin is shared and used by decision makers and the public for fish and natural resources conservation across the basin. Strengthened management plans and models lead to improved conservation of fish populations and ecosystems in the basin. Supporting the fisherman livelihood survey which will be regarded as one part of the guild lines of the sustainable fishery.

CAPACITY NEEDS

A nine-member fixed-term equivalent (FTE) team is expected to fulfill the basic staff requirements for implementing for the project, including: 1 FTE project leader; 1 FTE senior consultant; 1 FTE coordinator; 3 FTEs on IBRM approaches (including a hydropower engineering senior officer and a flood management senior officer) and 3 FTEs on conservation monitoring and evaluation system (including a priority site conservation consultant). Recently, the core team has included: 3 senior managers, 2 senior advisors and 1 coordinator.

CURRENT BUDGET & RESOURCE MOBILIZATION STRATEGY

Requested Funding for GRP

= \$6.6 million over five years
Total budget requested—US\$6.6 million over five years; GRP is expected to finance 80-100 percent of that.

Existing & Proposed Funding

- GRP Yangtze River Project—\$100,000/year
- Anonymous donor—\$1 million over three years

Other Sources of Funding

National and provincial governments and other partners may provide matching funds in cash or in kind.

Parallel funding, not part of existing funding:

- Expected from Chinese government and other partners: \$15 million
- Universities and research institutes —\$0.5 million
- Corporations —\$0.5 million

MAIN IRBM PARTNERS

Water resources management along the Yangtze River is carried out by multi-layered government departments (the “nine dragons”) in China. The main players are:

- MWR is the major department responsible for water administration;
- The Ministry of Construction (MOC) is responsible for urban water supply, drainage and sewage treatment;
- The Ministry of Agriculture (MOA) handles non-point pollution control, fishery areas conservation and wildlife habitats protection;
- The State Forestry Administration (SFA) is in charge of ecological environment, water source conservation and wetlands management;
- The National Development and Reform Commission (NDRC) is involved in policy-making for water resources exploration and balancing competing demands for water;
- The Ministry of Transport (MOT) supervises inland navigation;
- The Ministry of Health (MOH) takes charge of drinking water standards.

Further, there are five basin management institutions: the Changjiang Water Resources Commission (led by MWR); the Yangtze River Basin Fishery Resource Management

Commission (lead by MOA); the Yangtze River Navigation Administration (lead by MOT); the Yangtze Valley Water Resources Protection Bureau (jointly led by MWR and MEP); and the Water and Soil Conservation Committee Upper Yangtze River.

TNC, as a NGO, has established a long-term cooperative partnership with MOA, SFA, MWR and MEP, in the areas of biodiversity maintenance and ecological environment conservation.

Under the Sino-U.S. Ten-Year Framework, TNC signed an EcoPartnership agreement with the Yangtze Fishery Commission in May 2012, aimed at effective conservation and management of fish resources.

Partnerships with other NGOs are also very important for implementation of the project. The World Wide Fund for Nature is deeply involved in conservation along the river basin, especially in the middle and lower sections of the river. A coalition that includes TNC,

CTGC, Goldman Sachs, the Changjiang River Scientific Research Institute (CRSRI) and other academic institutions has proposed a coordinated solution that takes hydropower, flood control and nature conservation into account. An initial implementation plan has been created.

Other stakeholders who are extremely important to the partnership are: local governments; local communities; and the media, the largest and most influential group in the public sphere.

SUSTAINING THE RIVERS & PEOPLE OF THE COLORADO RIVER BASIN

The Nature Conservancy (TNC), Colorado River Program



Colorado River

Length of mainstem river:

3,410 km

Size of drainage basin:

640,464 km²

People living within the basin:

10.9 million

Basin supplies water to:

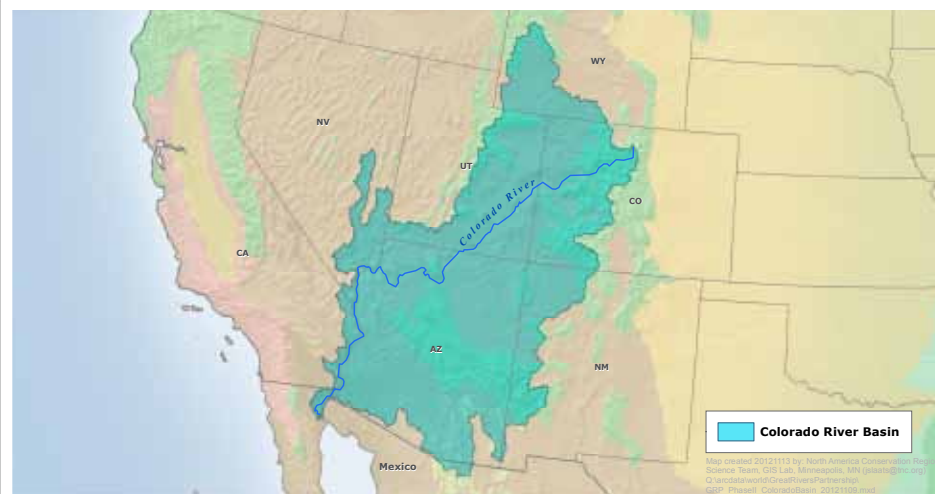
40 million people

Countries:

US, Mexico

Level of economic development:

Developed



OVERVIEW

The Colorado River is one of the most iconic and storied symbols of the American West, a dramatically beautiful river that descends from high mountains into deep canyons and red rock deserts. The river supports species and ecosystems adapted to both drought and surging floods, including 30 fish species found nowhere else. The Colorado's waters weave a ribbon of

green through deserts and mountains, providing a flyway for hundreds of species of migratory songbirds.

The Colorado supplies water to 40 million people for municipal use, irrigates 4 million acres of land—farms that provide the entire U.S. winter lettuce and carrot supply—and serves as the lifeblood for 15 Native American tribes, seven

National Wildlife Refuges, four National Recreation Areas, and 11 National Parks. One of the world's hardest working—and best loved—rivers, the Colorado produces 4,200 megawatts of hydro-power and supports a thriving \$25 billion recreation and tourism industry.

Yet the ecological and economic vitality of this Great River system is at risk.

Dramatic population growth—the fastest in the U.S.—is increasing water demand at the same time that climate change is diminishing supply. Drought and over-allocation are pitting farmers, cities and environmental interests against each other in a zero-sum game that no one is winning: Native fish and birds are in decline, demand from cities and agriculture exceeds supply—and the river no longer reaches the sea.

The impending crisis presents opportunities for reforms in policy and practice that will increase flexibility, manage risk, and allocate water equitably for people and nature. It also provides an opportunity to demonstrate how integrated water management can be applied to an over-allocated, aridland river system. TNC and its partners are poised to play a key role in developing and implementing solutions in collaboration with stakeholders at the local, sub-basin and basin-wide scales in seven U.S. states and Mexico. We propose to address three areas: 1) Flow Protection—integration of environmental flow needs into water planning and management; 2) Water Banking—establishment of enabling conditions for and working examples of water banks for healthy flows and water security; and 3) Water Exchange and Allocation—interstate and international water right exchanges to resolve supply-and-demand imbalances and provide water for the environment.

These strategies will greatly expand restoration and protection of environmental flows while reducing conflicts between ecosystem needs and human water demands, thereby sustaining the ecosystems and human communities that depend on this important river. Solving the problems of the Colorado River will provide valuable lessons for other water-scarce places in the world.

Following is a summary of key points of the Colorado's full profile (Annex A.3e), providing a road map to the challenges, actions, outcomes and budget for the GRP project for this river.

GUIDE TO THE MAJOR COMPONENTS OF THE FULL PROFILE (ANNEX A.3e)

Main Challenges & Opportunities for Action

One of the biggest obstacles to realizing Integrated River Basin Management (IRBM) in the Colorado basin is that environmental flow needs are not and have not been integrated into basin-wide water budgeting and decision-making. The challenge is to quantify and balance the needs of the ecosystem with other human needs and allocate resources based on an integrated plan.

A second major problem is that the lack of flexibility in water law in the Western US makes it difficult to meet the needs of both people and rivers. The Lower Basin states already use their full allocations of water entitlements under the 1922 Colorado River Compact. Each new Upper Basin diversion comes at the cost of an increased risk of shortage to Lower Basin users and to the river system.

The Colorado River system has been in the grip of a serious drought since 1999, revealing the legal over-allocation of its water supplies and bringing the problem of water shortages in both the Western U.S. and Mexico into sharper focus. This presents a major opportunity to work with the agriculture, municipalities and businesses to devise and implement creative solutions to water scarcity, water and food security, and environmental degradation.

KEY STRATEGIES & ACTIONS (3-5 Years)

Incorporate environmental flow needs and climate change

1. Identify gaps in quantification of environmental (ecological and recreational) flows and other human water needs for priority river reaches; develop and implement plans to reduce such gaps.
2. Support modernization of the water management decision-support system to incorporate environmental flows and other human water needs and to identify potential conflicts.
3. Develop and implement plans that take climate change into account and include measures to resolve conflicts between environmental flow and other human water needs; assist agencies increase funding and management actions to protect environmental flows.

Establish water banks

1. Establish a water bank on Colorado's West Slope in partnership with likely beneficiaries and government agencies; initiate the necessary funding and water policy reforms.
2. Work with the partners for the on-going Colorado River Basin Water Supply and Demand Study (Basin Study) and the West Slope water bank to analyze and model a water bank that increases flow protection in the Upper Basin and utilizes tribal water rights.
3. Articulate proposals and policies for adoption by the Upper Colorado River Commission (UCRC) that enable an interstate agreement establishing an Upper Basin water bank and build a partnership with the UCRC to facilitate such an agreement.

- Sufficiently capitalize the Colorado River Delta Water Trust in Mexico and support acquisition of water needed for delta flow restoration and wetlands under new five-year bi-national agreement.

Help shape bilateral agreements

- Scale up international water exchanges and acquisitions for delta flow restoration as a core element of long-term extension of the five-year agreement.
- Work with Upper Basin partners, and then Lower Basin partners, to expand tentative agreements for Upper Basin water bank and establish more sustainable interstate water allocations basin-wide.

EXPECTED OUTCOMES (10 Years) & MILESTONES (3 Years)

Key long-term goals for the Colorado River Basin include protecting healthy river flows and thereby conserving native species and ecological systems, increasing flexibility for water sharing, and reforming basin-wide water allocations. In ten years, we envision that environmental flow restoration and protection will be an integral part of the basin's water management regime, while meeting other human water needs. To increase flexibility, water banking that allows water sharing among sectors in the US and in Mexico will increase the protection of environmental flows and reduce supply imbalances. Most significantly, potential conflicts will be reduced by policies reforming basin-wide, interstate and international water allocations that sustain both the people and ecosystems that depend on the river system.

To accomplish this, milestones by 2016 include:

- Environmental flow needs and climate change are incorporated into basin-wide water budgeting and potential conflicts identified.
- Water Management Plans that integrate environmental flows and take climate change into account have been adopted, funded and implemented.
- A water bank has been established on Colorado's "West Slope" (the portions of the State of Colorado within the Colorado River Basin).
- International water exchanges and acquisitions for delta flow restoration have been tested and any needed increases have been proposed, as a core element of the long-term extension of the five-year, bi-national agreement.

CAPACITY NEEDS

GRP implementation will be carried out by existing and new personnel for the TNC's Colorado River Program and state chapters in the Basin. The program is currently managed by the Colorado River Program Director, who is supported by a Senior Water Policy Counsel and Director of Conservation. An Executive Team, comprised of six state directors from TNC chapters in the basin, oversees and directs the program. Program staff coordinates with TNC staff working on specific river reaches. These two groups of staff also work with many partners throughout the basin, creating a network of practitioners.

Additional staff needed for GRP would include a new position to create an "expert voice" on integrated water resources management in the U.S. and in the region. This position might be

shared with the Mississippi River Basin Program. New staff are also needed to work on flow science, restoration and protection at TNC's priority river reaches across the basin. Added government relations staff will also be necessary to monitor and advocate for flow management policies.

CURRENT BUDGET & RESOURCE MOBILIZATION STRATEGY

Requested Funding for GRP

= \$14.85 million over five years

Existing & Proposed Funding

Some funds are currently available from in-kind contributions, foundations, public agencies, corporation, individuals, and others. Additional funding may also become available.

\$2.96 million	Currently available over five years
\$2.96 million	Potential funding over five years
<hr/>	
\$5.92 million	Total

Other Sources of Funding

A group of NGO partners are currently funded through a partnership with Walton Family Foundation and David and Lucile Packard Foundation.

CURRENT BUDGET & RESOURCE MOBILIZATION STRATEGY

In addition, the Environmental Defence Fund (EDF) and Trout Unlimited provide fundraising support. Western Resource Advocates and Pro Natura Noroeste are focused in the US and Mexico, respectively. All four of these partners would likely contribute in-kind services.

The Colorado River Water Conservation District has engineering, political and legal capacity to support the water banking work in Colorado and potentially the Upper Basin. Colorado's major cities will use water revenues to develop the water bank.

Finally, the Colorado Water Conservation Board and similar water districts and agencies in other states are expected to contribute in-kind services and cash.

If U.S.-Mexico Bi-National Negotiations are successful, both countries, the lower basin states in the U.S., and the NGO partnership are committed to support the terms of the agreement that include purchasing water rights for delta flow restoration.

MAIN IRBM PARTNERS

Each of the partners in the Colorado River basin offers a different expertise and capacity to contribute to the shared strategy, where it can leverage its strengths to best advantage.

- TNC State Chapters —TNC's Colorado River Program coordinates with **seven state chapters** on implementation of demonstration projects and development of partnerships with government agencies.
- Environmental flow protection—TNC's program now works primarily with the **U.S. Bureau of Reclamation (BoR)**, the **Fish and Wildlife Service (FWS)** and **state water agencies**. The BoR maintains the most extensive modelling platform in the basin, which is used for basin-wide water supply planning purposes. FWS is responsible for endangered fisheries management in the basin.
- State of Colorado Water Bank—The partnership consists of **water districts, major cities, Native American tribes, private agricultural water users, TNC and BoR**. These groups have specific interests in developing the water bank, and the partnership enables them to work through issues and minimize conflict once the water bank is operational. This group has jointly funded the initial technical work to determine a water bank's feasibility.
- Mexico Partnership—**Federal agencies** in the U.S. and Mexico work together with **agricultural water districts, municipal suppliers and conservation organizations in both countries** as part of the Bi-National Negotiation process. This process aims to resolve long-standing flow management concerns between the U.S., Mexico, the U.S. states and the environmental organizations.
- Non-governmental organizations—The partnership includes **Environmental Defence Fund (EDF), Trout Unlimited, Western Resources Advocates, TNC, and Pro Natura Noroeste** (Mexico). Members of this partnership have been working closely together for three years. The group collaborates with other NGOs, such as Family Farm Alliance, National Parks Conservation Association and American Rivers.

ADVANCING IRBM IN THE MISSISSIPPI RIVER BASIN

The Nature Conservancy (TNC) Large Rivers Program, Great Rivers Partnership



Mississippi River

Length of mainstem river:

3,766 km

Size of drainage basin:

4,760,000 km²

People living within the basin:

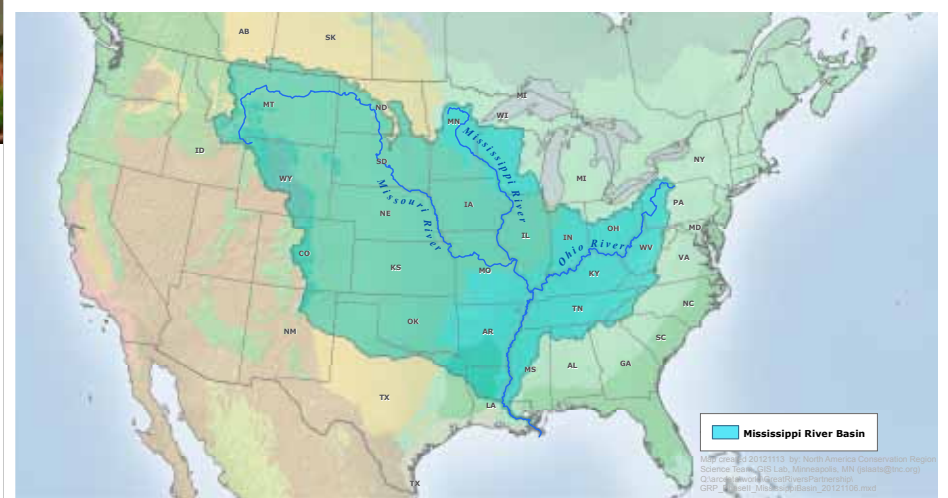
~90 million

Countries:

U.S.

Level of economic development:

Developed



OVERVIEW

The Mississippi River basin is the third largest watershed in the world, draining 41 percent of the continental U.S. across 31 states. It is the most biologically diverse temperate river system in the world, hosting globally significant natural diversity—including over 400 species of native freshwater fishes, half of the diversity in the U.S. Its rich lands and waters fuel one of the world's largest

bird migrations—a highway connecting life from the Arctic to South America.

The Mississippi River basin has also been a breadbasket for people in the basin and around the world. It generates \$54 billion/year in agricultural products—92 percent of the nation's agricultural exports, including 40 percent of the world's exported corn

and soybeans. Over 50 percent of goods and services used by U.S. citizens are produced with water from the Mississippi River and its tributaries. Over 500 million tons of goods are transported annually in barges on the basin's rivers. A \$660 million/year fishing industry is supported by the flow of the Mississippi into the Gulf of Mexico. Outdoor recreation along the

river enriches people's lives through its rich ecology, scenic beauty, and hunting and fishing opportunities.

This economic engine is not boundless. Planning and regulations not integrated with the needs of nature have led to significant degradation of the environment and the services it provides. Costs have skyrocketed to dredge transportation corridors, repair levees, provide drinking water and irrigation, and manage dams for hydropower and river transportation to meet growing demands. The system's infrastructure is aged and inefficient, requiring constant maintenance and repair.

Record-setting floods in 2011 kindled a broad conversation about blending green and grey solutions that deliver increased resilience and decreased repetitive flood losses. Increasing demands on the basin's water and lands for food, fiber and fuel are stimulating national debate on agricultural and water policy through the Water Resources Development Act (WRDA) and Farm Bill. Ensuring the needs of a healthy river system are included within these policies is critical and would benefit all.

The GRP is responding to the challenges by connecting full-basin, sub-basin and local scales to create a shared vision among stakeholders. We aim to address four areas: Governance—forming a basin-wide structure guided by integrated sustainable use; Sustainable Agriculture—increasing production with environmentally sustainable practices; Resilient Floodplains—protecting floodplains to lower flood risk and benefit wildlife and recreation; and River Infrastructure—incorporating & considering the environment to lower future costs and risks to people and nature.

Following is a summary of key points of the Mississippi full profile (Annex A.3f), providing a road map to the challenges, actions, outcomes and budget for the GRP project for this river.

GUIDE TO MAJOR COMPONENTS OF THE FULL PROFILE (ANNEX A.3f)

Main Challenges & Opportunities for Action

Integrating management approaches for commercial navigation, agricultural production and flood control with the needs of a healthy river ecosystem requires meaningful engagement of divergent stakeholders over a large geography, while considering difficult issues crossing jurisdictional boundaries. Fragmented governance, driven by fundamental challenges in agriculture, floodplain management, and infrastructure necessitates a change in the way stakeholders communicate, plan and work throughout the basin. A broad group of stakeholders have created America's Great Watershed Initiative (AGWI) to address these issues, integrate management approaches, and deliver guidance in a collaborative governance approach.

Agricultural production has altered flows and water quality of the basin and the Gulf of Mexico, impacting water security, fish and wildlife and related social and economic sectors. Increasing agricultural production to meet global demand may exacerbate these impacts. The challenge is to deliver and support alternative farming approaches that will maintain producer profitability, be implemented at the necessary scale in critical places, and allow for environmental improvements.

Market forces and federal policy provide opportunities as the vehicles of change. Existing policies and programs that have enabled poor floodplain

management actually increase flood risk and threaten ecological conditions of the river-floodplain system and the fish, wildlife and social and economic benefits dependent on them.

Floodplain functions—seasonal wetland habitat, storage/conveyance of flood water, nutrient/sediment cycling, and groundwater recharge—have been degraded throughout the basin by flood storage reservoirs and levees. The challenge is to change floodplain management approaches at a meaningful scale in a profitable agricultural landscape. Floodplain agriculture is dominated by fragmented private ownership, where small changes in hydrology affect large areas of land. Demonstrating approaches to address the needs of landowners, flood risk reduction, and environmental health provides an opportunity to develop markets for floodplain services and improve floodplain management policy.

Throughout the basin, dams and other infrastructure have altered the magnitude, timing, duration, and variability of flows in the rivers and their floodplains. An aging engineering infrastructure in urgent need of upgrade provides an opportunity to change policies in support of alternative designs and operations that include green infrastructure when warranted; enhance river hydrology, fish and wildlife; lower flood risk and maintenance costs; and offer secure transportation corridors.

KEY STRATEGIES & ACTIONS (3-5 Years)

Shape collaborative basin-wide governance

1. Work with advisory committee in America's Great Watershed Initiative (AGWI) to define and deliver a vision of Mississippi River basin sustainability through engaging multi-sector stakeholders and

existing regional and sub-basin efforts using an IRBM approach.

2. Create an assessment framework that enables a shared understanding of status and trends, and alternative management scenarios to guide funding and management.
3. Support a recurring Biannual Mississippi River Basin Summit that provides national and global visibility to the system, engages a broad range of stakeholders in the basin to achieve the vision, connects to international issues and capacity, and builds support and recognition.
4. Establish long-term partnerships of diverse stakeholders with authority, support, and funding to accomplish IRBM and achieve the vision.

Reduce nutrient loads draining into the Gulf of Mexico

1. Support current policies that target best management practices (BMPs), such as the Mississippi River basin Healthy Watersheds Initiative focused on nutrient abatement in 44 critical watersheds across 12 states.
2. Work with academic, agency and corporate partners to develop, demonstrate and communicate emerging technologies to address runoff abatement and Gulf hypoxia; and alternative farming practices to support changes in the Farm Bill, corporate standards, and management guidance.
3. Work with Field to Market coalition to develop sustainable management approaches and consumer behaviors through the supply chain from producer to processor to consumer.

Promote the restoration and protection of floodplains

1. Develop, test and communicate alternative and mixed-use agriculture —integrating green/grey infrastructure and market mechanisms that pay for floodplain services.
2. Support policy changes that provide the authority and flexibility to flood risk management agencies to implement alternative approaches that benefit people and nature.

Consider ecosystem restoration in dam and infrastructure decisions

1. Test, document and communicate dam reoperations for environmental flow, pool level management, floodplain connectivity and fish passage with the U.S. Army Corps of Engineers (USACE) to broaden management approaches through policy changes and broader partnerships.
2. Work with Congressional staff to: adjust the WRDA to cover environmental flows, pool level management, floodplain connectivity & fish passage in management decisions; expand authority of the USACE and other agencies, e.g., Navigation and Environmental Sustainability Program (NESP) and Environmental Management Program (EMP), beyond the Upper Mississippi basin.
3. Work with USACE and Congressional staff to expand use of traditional funding sources, including the USACE's programs on Avoid and Minimize, and Operations and Maintenance, to improve infrastructure design, operations and maintenance to benefit the environment.
4. Work with partners to transform the Lower Mississippi River Resource Assessment into a framework to guide funding and support integrated restoration and management approaches.

EXPECTED OUTCOMES (10 Years) & MILESTONES (3 Years)

Over the next 10 years, it is expected that a governance structure with increased authority will be in place that integrates sustainable practices, improved ecosystem health and social and economic benefits. Changes in policies and standards will be needed to implement improved land and water resource management practices and alternative infrastructure design and operations. Improvements in water quality, floodplain function, sediment and flow regimes, fish and wildlife populations will result, and the Gulf hypoxia zone will be reduced. Other benefits will accrue to recreational economies, flood protection, more secure transportation corridors, and infrastructure maintenance.

To accomplish this, milestones by 2016 include:

- AGWI Summit results in collaboration among commissions, agencies, industry, agriculture, conservation organizations and others from all sub-basins
- A broad partnership among diverse stakeholders is established to support sustainable solutions, based on IRBM as the main approach.
- Language is included in the 2012 and 2017 Farm Bills to support more efficient and effective water, sediment and nutrient management.
- Agricultural demonstration projects show economic and social benefits for three new nutrient abatement BMPs and are available to Natural Resources Conservation Service (NRCS).
- Water quality and biodiversity indicators available and used by farmers and corporations to assess operations and supply chains, and applied to 500,000 acres of land.

- WRDA authorization and appropriations for expanded authority: 1) extend the scope of NESP and EMP; 2) integrate floodplain and environmental flow management, and; 3) include fish passage through lock and dam structures.
- The Lower Mississippi River Resource Assessment used as framework to support a management and restoration program.

CAPACITY NEEDS

Existing staff and programs work with multiple partners and stakeholders with expertise to implement components of the strategies outlined in the full Profile. Effective implementation of the activities outlined in the Profile will require an increase of 10 staff over the next five years. A Mississippi River Director, AGWI Summit Coordinator and Administrative Assistant will be brought on in year 1 and maintained thereafter to provide coordination and implementation of the operational governance structure among partners and stakeholders. Six sub-basin Directors will be brought on in years 1-3 and maintained thereafter. Those geographically based staff will coordinate on the ground programs and define and implement additional sub-basin strategies that contribute to total basin results. Finally, an additional Administrative Assistant will be added in year 4 because of the demands from staff and implementation.

Given the geographic and the complex scope of this enormous basin, this represents the minimum staffing necessary to carry out the outcomes described in the full Profile.

CURRENT BUDGET & RESOURCE MOBILIZATION STRATEGY

Requested Funding for GRP

= \$31.99 million over five years

Existing & Proposed Funding

- Available funding = \$6.58 million over five years
- Private financial commitments = \$2.18 million for 2013
- Project cost estimates—\$605.47 million over five years (allocations from government agencies).

MAIN IRBM PARTNERS

The main governmental and other partners who will work to accomplish profile outcomes are:

- TNC State Chapter Operating Units: TNC's Mississippi River Basin Program will coordinate with state chapters, (currently 13) to implement demonstration projects and partnerships with federal agencies.
- U.S. Department of Agriculture NRCS: will monitor impacts of agricultural BMPs at demonstration sites.

- USACE, U.S. Fish and Wildlife Service (FWS) and Tennessee Valley Authority (TVA): the primary federal agencies managing the main Mississippi River arteries for river transport, flood protection, hydro-power production, recreation and fish & wildlife benefits. The partnership will work in the six sub-basins with these and other federal agencies (e.g. Environmental Protection Agency, Bureau of Reclamation, Bureau of Land Management, Forest Service) to provide integrated approaches to resource and infrastructure management.

Other partners include the Conservation Technology and Information Center, Soil and Water Conservation Society, the Keystone Center with Field to Market, and the Waterways Council, Inc., a national public policy organization that represents almost 200 member organizations with interest in commercial navigation.

GRP will need to develop stronger relationships with sub-basin organizations such as the Upper Mississippi River Basin Association, Lower Mississippi River Conservation Committee, Ohio River Basin Alliance, Missouri River Recovery Implementation Committee, and the Missouri River Association of States and Tribes to support IRBM approaches to planning and implementation.

A SUSTAINABLE FUTURE FOR THE MAGDALENA RIVER BASIN

The Nature Conservancy (TNC), Northern Andes & Southern Central American Conservation Program



Magdalena River

Length of mainstem river:

1,540 km

Size of drainage basin:

271,000 km²

People living within the basin:

35 million

Country:

Colombia

Level of economic development:

Developing



OVERVIEW

Colombia's longest river, the Magdalena, is born among the glaciers and cloud forests of the Andes Mountains, meanders through vast floodplains, and then flows into the Caribbean Sea near the 500-year-old walled city of Cartagena. The Magdalena supports some of the most diverse and productive ecosystems in South America. The basin also supports 80 percent of Colombia's

people and economic activity, including the country's most important freshwater fish harvest. Beyond its natural and economic importance, the Magdalena is the cultural heart of Colombia, woven into its history and culture. But much like other Great Rivers, the Magdalena's vitality is now jeopardized by the sheer weight of the numerous demands placed upon it. Colombia's rapidly growing

economy will trigger a large expansion in the major infrastructure that manages water, including dams, levees and navigation structures. For example, 42 major hydropower dams have been proposed for the river. While this development can provide important benefits, such as low-carbon electricity, poorly planned projects threaten to erode the Magdalena's ability to provide

its full spectrum of benefits, including productive fisheries. Further, Colombia is recovering from the worst flooding along the Magdalena in decades. The flooding impacted more than 1.9 million people and damaged important infrastructure, necessitating a phase of intensive reconstruction.

Though a great deal of change is coming to the Magdalena, there currently is a considerable opportunity to pursue Integrated River Basin Management (IRBM) and to ensure that the development of the Magdalena follows a course that will sustain a broad range of values and benefits from the river, ranging from hydropower to fisheries. The opportunity arises from the several basin-scale planning and decision-making processes that are just getting under way. Cormagdalena (the Magdalena River Environmental Authority) is developing a “master plan” for the Magdalena, emphasizing hydropower and navigation. Meanwhile, Colombia’s Ministry of Environment and Sustainable Development (MADS) is drafting a sustainable development strategy for the entire basin. Further, in response to the recent flood, the government has launched a multi-billion dollar fund to implement flood-risk reduction strategies.

The implanting organization for this profile, TNC has collaborative relationships with each of these entities. TNC proposes to build on these relationships and develop tools, promote policies, and implement demonstration projects that will advance IRBM for the Magdalena.

Following is a summary of key points of the Magdalena’s full profile (Annex A.4g), providing a road map to the challenges, actions, outcomes and budget for the GRP project for this river.

GUIDE TO THE MAJOR COMPONENTS OF THE FULL PROFILE (ANNEX A.4g)

Main Challenges & Opportunities for Action

The basin is at a critical stage of development, facing a major expansion of water infrastructure (mainly related to hydropower, navigation and flood control) that may change the ecological integrity of the Magdalena as a natural river. The problems include inadequate institutional coordination, weak governance, and low quality information and decision-making tools. In addition, unsustainable basin-wide land-use practices and land-use changes (e.g., deforestation, overgrazing, insufficient protected freshwater areas) are degrading the integrity of freshwater ecosystems and the services they provide.

The flood of 2011 has raised awareness of the need for integrated management of the Magdalena. The Adaptation Fund, created in response to the flood, will lead to major investment in water-related infrastructure. Ensuring that this investment fully considers the broad spectrum of river processes and benefits is a critical opportunity. Moreover, basin-scale planning processes are under way for navigation and hydropower, thus providing an opportunity for introducing integrated management.

KEY STRATEGIES & ACTIONS (3–5 Years)

Enable & Advance IRBM

1. Assist national government formulate, implement and promote adoption of IRBM guidelines and strategies into the Strategic Management Plan, led by MADS.
2. Promote the development, management and maintenance of collaboration among government

agencies, TNC and stakeholders to improve institutional coordination for river basin governance.

3. Assist the national government in creating policies, laws and regulations to ensure that biodiversity and ecosystems services are included in their planning processes and investments, particularly those related to key sectors such as energy, agriculture, environment, and industry.

Develop Science-Based Decision Systems

1. Develop decision-making tools to: analyze impacts from future activities in the basin, mainly related to hydropower; inform management policies, water concessions, and licensing requirements.
2. Incorporate climate change scenarios and ecosystem services into hydrological and hydraulic modeling to identify flood risk areas and define ecosystem-based adaptation strategies in five priority conservation areas.
3. Analyze priority strategic water infrastructure projects proposed by government and the private sector for hydropower, navigation and flood control to ensure they follow mitigation guidelines, including a freshwater compensation scheme.
4. Identify priority floodplain areas and develop a management plan to maintain natural floodplains.

Protect Critical Areas

1. Strengthen the National Protected Areas System (SINAP) by supporting creation of new regional and local protected areas in at least 80,000 ha of priority conservation areas (including floodplains); develop management plans for at least 20 critical biodiversity conservation areas based on participatory processes and technical studies; and guide implementation of priority investments.

2. Implement silvopastoral systems in at least 50,000 ha in priority conservation areas that benefit small and medium ranchers, as part of a land management system that includes forest conservation and restoration, “live fences” and riparian corridors.
3. Support development and implementation of sustainable fishery management plans in at least two priority wetlands or river lagoons (cienagas) within selected priority floodplains, including an assessment of the causes of fishery decline.

Expand Water Funds

1. Create and consolidate Water Funds, long-term payment schemes for environmental services, in key cities as funding mechanisms to conserve watersheds and water-recharging zones.

EXPECTED OUTCOMES (10 Years) & MILESTONES (3 Years)

The long-term goal for the Magdalena is to put management plans in place at national, regional and local level that incorporate the policies (e.g., review, licensing and mitigation), regulations and governance guidelines needed to support sustainable management. This will require that protected areas, resources management programs and funding mechanisms are secured through the use of innovative conservation and finance mechanisms, leading to more sustainable basin-scale land management and restoration of freshwater ecosystem services. In ten years, it is expected that at least 10 percent of the basin will be under the Magdalena freshwater conservation blueprint.

To accomplish this, milestones by 2016 include:

- Ecological and institutional considerations are incorporated into policies, legislative frameworks and government planning processes at national, regional and local level, considering the basin as a whole as the foundation for IRBM.
- A suite of decision-support tools has been developed and adopted by Colombian government authorities to improve planning capacity and allocate water resources with ecological criteria in the basin, and to integrate “green infrastructure” solutions into water infrastructure projects.
- At least 50,000 ha in critical biodiversity areas are under protection, with emphasis on protection of freshwater ecosystems, biodiversity, ecosystem connectivity and riparian habitat restoration. At least three priority areas with community-based fishery management plans are developed and being implemented, to maintain freshwater biodiversity.
- Water Funds are consolidated to secure water for at least 4 million people.

CAPACITY NEEDS

Additional capacity will be need to implement these strategies.

- The scientific staff will need to be increased to effectively coordinate multiple partnerships and to continue developing the integrated decision making system for the Basin and a range of other strategies, including ecosystem based adaptation, comparison of “green” vs. “grey” infrastructure for flood management, and freshwater mitigation schemes. These strategies will require two Geographic Information System (GIS) specialists, one ecologist, one hydrologist and one hydrological engineer.

- Due to the complex structure of government agencies that manage the Magdalena, TNC’s external affairs staff will need to be expanded to bolster engagement at national, regional and local levels. The team will seek to hire a policy coordinator and two regional coordinators (focused on government relations for IRBM with the 13 regional environmental agencies).
- Recently four proposals were submitted (three approved), and new opportunities are arising for the Magdalena. Thus, one financial assistant and two project assistants are needed to provide technical and financial support to formulate proposals and manage approved ones.

CURRENT BUDGET & RESOURCE MOBILIZATION STRATEGY

Requested Funding for GRP

= \$29 million

Existing & Proposed Funding

Existing TNC proposals approved and submitted to foundations, private companies, donors & NGOs:

Requested	= \$13.07 million (\$0.5 million approved so far)
Direct support	= \$ 3.74 million
In-kind match	= \$23.23 million
Total	= \$39.95 million

Other Sources of Funding

Indicative co-financing from Colombia government and other partners for Global Environment Facility (GEF) project (grants and in-kind) = \$23.13 million

TNC match for GEF = \$2.00 million

MAIN IRBM PARTNERS

TNC's Magdalena River program involves a large number of national, regional, and local government organizations with different roles in the basin, and will require a substantial effort in coordination.

- **MADS** is the lead government institution involved in the partnership; it will provide political and technical guidance during execution and be part of the process of creating new protected areas, developing policies and regulations, and updating land use and watershed plans.
- The Magdalena River Environmental Authority (**Cormagdalena**) will provide guidance for project execution and ensure that project results

are in line with regional priorities and local policies and initiatives. It will provide in-kind and cash resources for the GEF project directed towards sustainable watershed management practices.

- The National Institute of Hydrology, Meteorology and Environmental Studies (**IDEAM**) will participate in development and implementation of hydrological models. IDEAM will provide data on precipitation, climate, and hydrology from its 700 monitoring stations.
- The Institute of Rural Development (**INCODER**) and **Universidad Tecnológica del Bolívar** will actively participate in activities related to fisheries management.

- **States, municipalities and regional environmental authorities** will also play active roles in the selection of conservation sites, declaration of protection sites and implementation of sustainable water fund strategies.

Local inhabitants who depend on the basin for their livelihoods, such as the Community El Hobo, will be major actors in specific pilot projects for the protection and management of wetland areas, recovery of fishing stocks and implementation of sustainable cattle activities. Many other diverse interests including those of the private sector and communities will also be taken into account.

SUSTAINABLE AGRICULTURE & HYDROPOWER: TAPAJÓS RIVER BASIN

The Nature Conservancy (TNC), Amazon Conservation Program, Brazil



Tapajós River

Length of mainstem river:

1,814 km

Size of drainage basin:

492,300 km²

People living within the basin:

1.4 million

Country:

Brazil

Level of economic development:

Emerging



OVERVIEW

The Tapajós River is one of the largest tributaries to the Amazon basin, covering almost 6 percent of the Brazilian territory, traversing the country from the central savanna to the Amazonian lowland rainforest. Given its beauty, characterized by green waters and extensive white sand beaches during the dry season, it is locally known as the pearl of the Amazon. The Tapajós River

is not only a main source of life for over 1.4 million people living in the basin, but also a source of pride and joy. Over 60 percent of the Tapajós basin is covered by large tracts of forest considered of global importance for both aquatic and terrestrial biodiversity. The basin contains 30 conservation reserves (national and state), 42 indigenous lands and locations of other traditional

communities. It represents vast potential for a large scale integrated conservation and development planning under an Integrated River Basin Management (IRBM) framework.

With some exceptions, the Tapajós has been mostly free of major infrastructure projects. However, due to national and international demand for food and

energy, economic pressures are threatening the river, local people and hydrological balance in the Amazon as a whole. The two most immediate threats to the river systems are hydropower development and expansion of agriculture for commodity exports. The Tapajós River and its tributaries have significant hydropower potential, and are considered a key to meeting Brazil's demand for electricity over the next 20 years. Close to a hundred dams are being planned in the basin without an integrated strategic vision. Besides threatening the maintenance of minimum river flows and connectivity, the dams are expected to inundate 720,000 ha of land that sustain indigenous and local populations and protected areas, leading to loss of habitat, ecosystem services, and sites of cultural and spiritual value.

Agriculture development also threatens the basin. Soybean production is expanding along one of the major highways, and the new road will facilitate grain export by shortening the distance to shipping ports by almost 1,000 km. This expansion of commodity exports will result in further exploitation of forest resources and degradation of water bodies. If not well planned and implemented, hydropower and agricultural expansion pose a serious threat to livelihoods of local and indigenous populations.

Despite these threats, the Tapajós basin provides a great opportunity for the development of IRBM at large scale in tropical forests, sound science and decision makers to implement IBRM as a model for other Amazon tributaries, the Amazon as a whole and rivers in tropical forests in other regions.

Following is a summary of key points of the Tapajós full profile (Annex A.4h), providing a road map to the challenges, actions, outcomes and budget for the GRP project for this river.

GUIDE TO MAJOR COMPONENTS OF THE FULL PROFILE (ANNEX A.4h)

Main Challenges & Opportunities for Action

The Tapajós River basin is becoming a confluence zone of infrastructure development and agribusiness expansion (e.g. large-scale cattle-ranching and mechanized agriculture). Current and future investments in infrastructure are being driven by macro-economic energy needs in Brazil and by regional demands from the mining industry and agribusiness sectors. However, infrastructure development and agricultural expansion have been carried out in the Amazon region, while ignoring or underestimating the social and environmental impacts they provoke.

There is a need to minimize impacts of water infrastructure development in the face of ambitious plans to expand hydropower capacity in the Tapajós basin and throughout the Amazon basin. It will be necessary to plan for sustainable hydropower and IRBM and to improve the decision-making environment, including policies for environmental licensing, mitigation and compensation.

Brazil is facing increased pressure to expand its production of certain crops to satisfy global commodities markets and ship goods on rivers such as the Tapajós, but that expansion is leading to loss of ecosystem resources and services. It is crucial to minimize impacts from agricultural expansion, and to improve inclusive governance capacity related to environmental management, ecological and economic zoning, and land-use planning.

KEY STRATEGIES & ACTIONS (3-5 Years)

Develop conservation blueprint

1. Develop and strengthen an ecological foundation (conservation blueprint) for the entire Tapajós basin, emphasizing connectivity as a key ecological function.
2. Advance integrated planning and licensing of water infrastructure, by building consensus among key stakeholders.
3. Develop capacity for integrated planning within key agencies and partners; develop scenarios that optimize benefits for hydropower, conservation and indigenous peoples' livelihoods; and advocate for implementation of related policies.

Encourage bilateral agreement on infrastructure development

Advance Amazon basin-wide feasibility analysis of integrated planning with Peru and Bolivia to support decision making, using lessons and experience from the Tapajós basin.

Implement environmental management plans

Build capacity for municipal planning and environmental management.

Develop plan for watershed management

1. Plan for and create sustainable functional land uses.
2. Implement agricultural best practices to minimize environmental and social impacts of agricultural production on watersheds.

EXPECTED OUTCOMES (10 Years) & MILESTONES (3 Years)

Over the next 10 years, the vision is that introducing IRBM at the earliest stages of development will lead to solutions for economic growth combined with environmental conservation and social value. One of the long-term goals for the Tapajós basin is to pioneer collaborative planning and decision making about where to build and where not to build infrastructure, maximizing benefits to nature, people (traditional and local populations) and economic development. It is envisaged that optimization of hydropower at a few sites can leave significant portions of the basin free of dams.

A related goal is to be a springboard for extending sustainable development across much of the Amazon basin, encouraging basin countries to reach an agreement in principle that hydropower development should proceed on the basis of integrated basin planning and be sustainable.

Highly efficient agriculture based on recognized best practices and sustainable land-use planning is expected to be achieved, accompanied by no encroachment on native lands and protected areas. Improvements in agricultural practices will reduce environmental impacts on basin functions, such as protection of riparian zones, water quality, flow regime, and aquatic and terrestrial biodiversity.

To accomplish this, milestones by 2016 include:

- Conservation blueprint for the Tapajós Basin developed with key stakeholders in Brazil; consensus reached on integrated planning and licensing of water infrastructure, including an appropriate governance structure.

- Ecological and institutional considerations are incorporated into policies, legislative frameworks and government planning processes at national, regional and local level, considering the basin as a whole as the foundation for IRBM.
- An agreement is reached to conduct a joint feasibility analysis of sustainable water infrastructure development (“dams by design”) between Peru and Brazil in the Amazon basin, under the Brazil-Peru bilateral agreement on hydropower.
- Sustainable rural development plans are in place as municipal (district/county) policy, compatible with indigenous lands policies, in 18 target municipalities of the Tapajós basin; environmental management tools developed to ensure that 80 percent of private land area in the 18 target municipalities are in compliance with the Forest Code.
- Scenarios for sustainable landscapes developed and agreed among main stakeholders in target municipalities, to minimize impacts on aquatic and terrestrial ecosystems.

CAPACITY NEEDS

Building capacity within stakeholder groups and agencies is an important component of the approach. The proposed process is relatively technical, involving bio-geographical expertise and infrastructure expertise. There is need to combine information on ecological and socio-cultural systems, including indigenous interests, along with hydropower engineering. The team will need additional full time staff, including: the project manager, a hydropower specialist, a state licensing specialist, a freshwater specialist, a land cover monitoring and data analyst, a native lands specialist, seven local articulators and a GIS specialist. A

number of staff from other Amazon programs will also dedicate part of their time to the Tapajós River Basin Project, including from the Atlantic Forest & Central Savanna Conservation Programs, TNC’s Latin America Smart Infrastructure Program and GRP staff.

There will be also a need for training, providing tools and models. This capacity building should be supported by learning from other projects around the world, and from other basins on a parallel track, including several in the GRP network. Capacity building should involve on-going learning through participation in the network of emerging IRBM experiments.

CURRENT BUDGET & RESOURCE MOBILIZATION STRATEGY

Requested Funding for GRP

= \$29.94 million over five years

Existing & Proposed Funding

- Available = \$7.06 million (Amazon Fund, Cargill, Syngenta & Amaggi, Grantham Family, Bunge).
- Other partners = \$0.5 million (Vale Fund, proposal to be presented in April 2013).

MAIN IRBM PARTNERS

To accomplish its goals the current proposal involves a wide range of partnerships, from public, private and the third sector, each of them contributing to specific sets of skills and responsibilities.

As of now, the implementing partners are:

- World Wide Fund for Nature (WWF-Brazil): Has experts working on hydropower planning in the country and will provide technical expertise for the basin conservation

blueprint. WWF and TNC offer a sophisticated voice on science based solutions for decision makers.

- Pará State Environment Secretary (SEMA-PA): a long term partner of TNC in the State, SEMA plays a fundamental role both in the agricultural and infrastructure areas. SEMA is responsible for monitoring land use and licensing infrastructure projects within the State.
- Mato Grosso State Environment Secretary (SEMA-MT): holds same responsibility as SEMA-PA, in agriculture, infrastructure and water rights allocation fields; has formal cooperation agreement with TNC.

Potential additional or supporting partners include:

- Brazilian Agriculture Research Corporation (EMBRAPA): it is the lead public agency supporting

agriculture and ranching research and innovation.

- National Indigenous Foundation (FUNAI): monitors initiatives on indigenous lands, and has responsibility to protect those territories.
- Pará State Special Secretary for the Green Municipalities Program: coordinates State policies and programs around green development.
- Pará State Special Secretary for Economic Development and Incentives for Production: provides incentives and orientation for local enterprises.
- Municipal governments: responsible for land monitoring at local level.
- Farmers organizations: fundamental to ensure good dialogue with farmer groups.

- Confederation of the Brazilian Amazon Indigenous Organizations: provides information on national policies and indigenous positions on agriculture and infrastructure development, and participate in dialogues with Tapajós team on other river basins in the Brazilian Amazon.
- Instituto Centro de Vida and Instituto Socioambiental: civil society organizations in the Tapajós region and long-term TNC partners.
- Bunge and Cargill: two of the biggest soy traders active in the region; are partners of TNC.
- Odebrecht: company involved with infrastructure development.
- Research institutions—IBIO and COPPE: studies on environmental and social aspects; TNC has worked with them to deal with the region's challenges.

3. Strategic and Technical Support, Knowledge Exchange and the Global Practices Team

3.1 OVERVIEW

As described in the Theory of Change, the GRP aims to influence river management at multiple scales and to promote interactions between and among the eight basins and between the GRP and a broader network of basins and organizations that are working on similar challenges. The GRP will support a core group of staff, known as the Global Practices Team, to facilitate these interactions. The Global Practices Team (GPT) of the GRP will provide strategic and technical support to the basins and catalyze a multi-directional flow of knowledge and experience among the basins, the network, and the

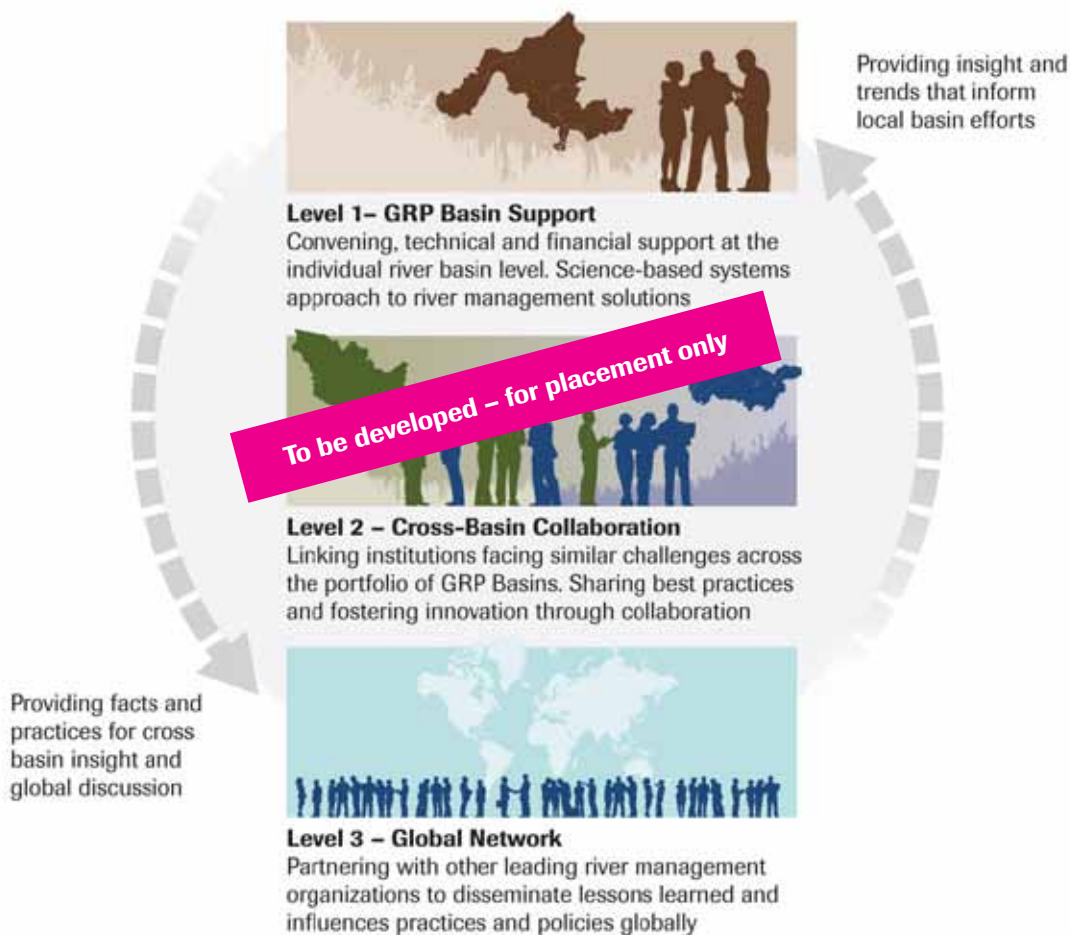
broader community of river basin managers, practitioners, funders and scientists. The Global Practices Team will engage at three scales (Figure 3-1):

1. *Basin support.* The eight GRP basin teams are proposing a broad range of strategies to advance IRBM but may currently lack the capacity, expertise or experience to implement some of these strategies effectively. The Global Practices Team will work with each basin to define needs and help to identify sources of capacity that can meet those needs. Specifically, GPT staff can provide direct assistance with refining strategies and developing proposals, work plans and monitoring plans. To

meet capacity gaps for implementation, GPT staff can directly support basin teams where they have the expertise needed or, more commonly, can help basin teams identify and secure external capacity from a variety of sources.

2. *Cross-basin exchanges and collaboration.* A key strength of the GRP is that it is structured as a partnership among multiple basins and a variety of implementing partners. Many basins are confronting similar challenges and have proposed a number of common strategies to address them. The Global Practices Team staff will facilitate exchanges and other interactions among GRP basins to

Figure 3-1. Interaction between the basins, Global Practices Team, and network



facilitate inter-basin learning and collaboration.

3. *Synthesis and communication to the global network and other external audiences.*
Global Practices Team staff will maintain close working relationships with the implementing team in each basin and will track the progress and status of activities, outputs, outcomes and impacts. Through this on-going collaboration and communication, Global Practices Team staff will be responsible for collecting and synthesizing results and innovations arising from work within and across the basins. Through a variety of methods, the Global Practices Team will then deliver this information to the network and other external audiences with the objective of advancing IRBM globally.

3.2 CROSS-BASIN THEMES

The structure and operations of the Global Practices Team (described in Section 3.3) will be guided by a set of themes that are found within many or all of the eight basins. These cross-basin themes are derived from the challenges the basin teams confront and the sectors with which they interact. Seven cross-basin themes are listed below in bold, with associated sub-themes. GRP staff derived this list of themes and sub-themes following review and discussion about all eight full profiles. The indicative distribution of these themes across the basins is shown in Table 1.

- 1. Conservation areas and natural capital**
 - a. Conservation area networks
 - b. Conservation best practices and monitoring
 - c. Ecosystem services valuation
 - d. Natural capital accounting

- 2. Natural resources for human wellbeing**
 - a. River-dependent food security
 - b. Fisheries
 - c. Water security
 - d. Indigenous and communal systems
 - e. Cultural services, including recreation

- 3. Climate resiliency**
 - a. Climate vulnerability assessment
 - b. Flood risk management
 - c. Drought-risk management
 - d. Ecosystem Based Adaptation

- 4. Smart infrastructure**
 - a. Siting and design of new infrastructure
 - b. Water allocation and environmental flows
 - c. Floodplains as green infrastructure
 - d. Sustainable hydropower
 - e. Transportation systems

- 5. Sustainable agriculture and forestry**
 - a. Responsible crop production
 - b. Responsible timber production
 - c. Agricultural Best Management Practices
 - d. Forestry Best Management Practices

- 6. Financing mechanisms and other economic instruments**
 - a. Water trading, banking and markets
 - b. Payment for Ecosystem Services, including water funds
 - c. Compensation mechanisms

- 7. River basin governance**
 - a. IRBM law and policy reform
 - b. Regulatory frameworks
 - c. Institutional capacity development and reinforcement
 - d. Transboundary agreements
 - e. Adaptive management

3.3 STRUCTURE AND OPERATIONS OF THE TECHNICAL PRACTICE AREAS

The Global Practices Team will be structured so that its staff can best address the needs of the GRP and its basins, geographically, and also in terms of the common cross-basin themes and associated demands for coordination of the multi-directional exchanges of information (Figure 3-2). To promote effective customer service, each basin will have a single point of contact on the Global Practices Team. Through this arrangement, the geographically assigned Global Practices Team staff will have the closest working relationship with a given basin and will be the primary coordinator for Global Practices Team assistance to the basin team.

Second, the Global Practices Team will have staff with a distribution of expertise and experience to engage effectively across the themes described above. The Global Practices Team will provide strategic and technical support to the basins but will generally not be able to serve as the primary source of external capacity for the basins. Thus, a key role of GPT staff will be to link basins to external sources of expertise via the Communities of Practice (CoPs) and global network, as described below. In addition to the expertise needed to engage on the cross-basin themes, the GRP will also include expertise for two disciplines that cut across all themes: capacity development and measures and evaluation.

Third, to facilitate the delivery of technical and strategic support, the collection and dissemination of content, and the multi-directional exchanges, the Global Practices Team will include expertise on knowledge management. These staff will maintain web-based

Table 1. Distribution of cross-basin sub-themes in the eight GRP Basins

Themes	Colorado	Magdalena	Mekong	Mississippi	Niger	Ogooue	Tapajos	Yangtze
Conservation areas and natural capital	Natural capital into accounting systems	Conservation area networks	Conservation Area networks Conservation best practices and monitoring	Conservation best practices and monitoring	Ecosystem services valuation Conservation area networks Conservation best practices and monitoring	Conservation best practices (management) Natural capital Ecosystem services	Conservation area networks Native lands management Free running rivers corridors	Conservation area networks Conservation best practices and monitoring
Natural resources for human well-being	Water security Cultural and recreational services Indigenous and communal systems	Fisheries Water security	River dependent food security Fisheries Water security	Cultural and recreational services	River-dependent food security Water security Indigenous and communal systems	Fisheries	Indigenous and communal systems	Fisheries
Climate resiliency	Drought-risk management Climate vulnerability assessment	Flood-risk management		Flood-risk management	Climate vulnerability assessment	Climate vulnerability assessment	Climate vulnerability assessment	Flood Risk Management Drought Risk Management
Smart infrastructure	Water allocation and environmental flows Sustainable hydropower	Sustainable hydropower	Siting and design of new infrastructure Water allocation and environmental flows Sustainable hydropower	Floodplains as green infrastructure River transport	Water allocation and environmental flows Siting and design of new infrastructure	Siting & design sustainable hydropower River transport	Sustainable Hydropower planning and licensing	Flood plains green infrastructure Sustainable hydropower
Sustainable agriculture and forestry	Agricultural Best Management Practices Responsible crop production chains	Forestry best management practices		Agricultural Best Management Practices Responsible crop production chains	Agricultural Best Management Practices	Forestry BMPs	Agricultural Best Management Practices Land use planning	
Long-term financing mechanisms	Water trading, banking and markets	Water funds				Offset mechanisms	Compensation funds from hydropower development	Hydropower compensation fund
River basin governance	Institutional capacity building and reinforcement IRBM Law and policy reform Trans-boundary agreements	Licensing frameworks	Payment for ecosystem services	Institutional capacity building and reinforcement IRBM Law and policy reform	Institutional capacity building and reinforcement IRBM Law and policy reform	Institutional capacity building and reinforcement IRBM Law and policy	Institutional capacity building and reinforcement IRBM Law and policy	Institutional capacity building and reinforcement

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resources (including CONNECT and other information exchange systems), provide logistical and coordination support to the CoPs, build capacity for network learning, and lead efforts to capture the learning achieved, including close collaboration with communications team. The Global Practices Team will not attempt to be a repository for all data or documents generated by the basins but, rather, will serve as a clearinghouse for emergent results (e.g., case studies, reports) that can influence the practice or science of IRBM.

Basin Support

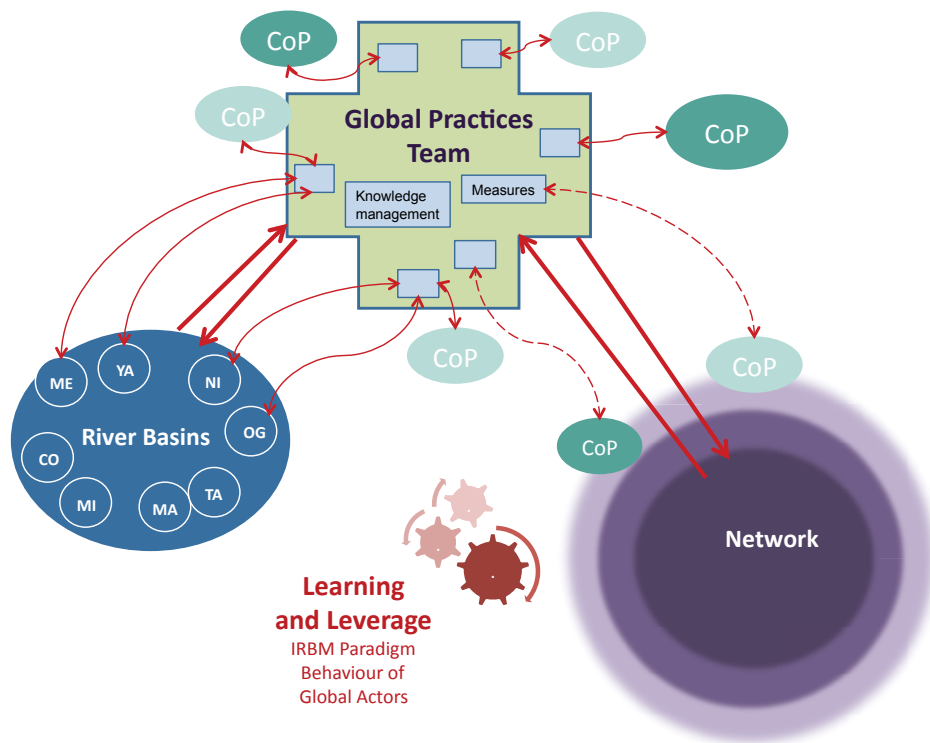
The Global Practices Team staff will provide strategic and technical support to the basins through both direct engagement and by serving as a bridge to link a basin with external expertise drawn from several potential sources,

including the communities of practice and the network. Each basin will have a primary point of contact on the Global Practices Team who will work most closely and continuously with their specific basin on strategy development and work plans and proposals. Through this collaboration, the geographic representative will help the basins identify capacity gaps and needed expertise, and will then determine how best to meet these gaps in discussion with the Global Practices Team. For certain capacity gaps, members of the Global Practices Team can provide direct support to basin projects. The range of expertise of current GPT staff includes floodplain management, hydropower, environmental flows, freshwater conservation prioritization, and measures.

Cross-Basin Exchanges and Communities of Practice

Much of the external capacity and expertise required by the basins will need to arrive from sources beyond the Global Practices Team, and a key role of GPT staff will be linking basin teams with these other sources of capacity. The Global Practices Team will develop and maintain several Communities of Practice (CoPs) that can serve as an informal network to provide information, capacity and expertise to GRP basins (Figure 3-2). These CoPs will be roughly based on the cross-basin themes identified above, although other CoPs will likely emerge over time. In addition to linking a GRP basin to a source of expertise from the CoP, Global Practices Team staff can work with the basin to develop proposals to fund acquisition of that expertise.

Figure 3-2. The multidirectional flow of knowledge and experience between the GRP basin, the Global Practices Team and the network.



Notes: Within the Global Practices Team shape, gray squares represent individual staff who manage a Community of Practice (CoP). The varying intensity of color in the CoPs represent the range of intensity of activity and management responsibility among the CoPs. Some CoPs are managed by others in the network and for those the Global Practices Team staff participates but does not manage (shown by dotted line). For clarity only four of the geographic points of contact are shown, but all eight basins will have a primary point of contact on the Global Practices Team.

Further, the CoPs will provide a primary initial audience and network for distribution for the results and advances made within GRP basins. Coordination of the CoPs will be assisted by the Global Practices Team's knowledge management staff and will draw upon Web-based tools for communication and knowledge archiving, sharing and exchange.

Members of the Communities of Practice will be drawn from a variety of sources, including:

1. *GRP basin teams and partners.* Staff from the Global Practices Team and within the basin teams working on a common issue (e.g., hydropower) provide the most direct source for members of a CoP. In addition to participating in the overall CoP, staff within one basin may have skills or expertise that may be needed within another basin and the Global Practices Team can foster the transfer of information between basins, ranging from short-term (e.g., conference calls) to medium (a site visit) or longer-term (an exchange or fellowship). This exchange of information can be between NGO implementers but can also include partner organizations. For example, TNC has a longstanding relationship with the U.S. Army Corps of Engineers (USACE) for river projects in the United States, and USACE staff have made themselves available to other basins, such as the Yangtze and Magdalena, for site visits, workshops and other means of sharing expertise.
2. *Staff of GRP Global Partners.* The Global Partners of the GRP, including TNC, World Wide Fund for Nature (WWF) and the International Union for the Conservation of Nature (IUCN), collectively have thousands of staff with technical, scientific or

management expertise, including hundreds with expertise in various aspects of freshwater science and management and related or relevant disciplines (e.g., agriculture, conservation finance). The Global Practices Team will recruit staff with relevant expertise to engage with a specific CoP and these staff are potential sources of short- to medium-term capacity. For example, TNC has a Coda Fellows Program that matches fellows from throughout TNC to projects that could benefit from their skills. The Coda Fellows program has recently expanded to work with partners outside of TNC and thus this program will be able to facilitate the exchange of staff from among GRP partners. As described below, we will work with TNC's Knowledge Initiative to develop a standing Coda Fellows placement program to match interested fellows with capacity gaps within GRP basins.

3. *Organizations within the global network,* such as the Global Environment Facility (GEF) and its IW:LEARN program, and the International Commission for the Protection of the Danube River.
4. *External sources of expertise,* including consultants, academic scientists, university departments, and other sources of scientific and technical expertise. As one example, an emerging source of expertise is Nature Lab, a cooperative venture by TNC, the Wildlife Conservation Society (WCS) and the National Center for Ecological Analysis and Synthesis. Nature Lab will combine teams of NGO, academic and other scientists to pursue applied research projects focused on how natural ecosystems benefit society. Conservancy and WCS staff (an implementing partner in the GRP) can propose research projects to Nature Lab.

As the CoPs are anticipated to evolve organically over time, in response to the needs of the basins and the opportunities presented through the global network (Chapter 4), their number, objectives and composition will be fairly dynamic. CoPs are not necessarily intended to be permanent. While some will likely persist for the duration of the GRP, others may emerge, serve a specific purpose, and then dissolve. Management of the CoPs will also vary. While it is currently anticipated that TNC will administer the Global Practice Team, and most Global Practice Team staff will be TNC employees, we would like to explore the possibility of direct involvement in the Global Practice Team of staff from other organizations. For example, a staff person from another GRP Global Partner may have expertise and/or relationships that are particularly appropriate for leadership of a given CoP. We envision exploring options for how that person could function as a leader of that CoP and as a direct member of the GRP's Global Practices Team. Further, some relevant CoPs already exist within the network (Figure 3-2) and thus the Global Practice Team will not manage those CoPs, but rather participate in them and serve as a bridge between that CoP and the overall GRP.

Activity for the CoPs will range from informal knowledge sharing to focused working groups. When the need arises for focused problem solving or specific outputs, the Global Practices Team will convene a working group around a specific issue, drawn from the CoP. These working groups will facilitate the exchange of experiences, ideas and solutions among the basins and between the basins and external experts, e.g. through in-person meetings and WebExes. In addition to providing solutions to problems, and generating new insights and ideas for basins to

apply to their challenges, the working groups will synthesize their discussions as resources (in the form of policy briefs, new tools, journal articles) that can be applied to similar problems in river basin management elsewhere.

Global Practices Team Engagement with Network and External Audiences

Through the interactions with individual basins, Global Practices Team staff will have familiarity with the range of strategies and projects, and their associated outputs, outcomes and impacts that are occurring across the GRP basins. A primary responsibility of the Global Practices Team will be to summarize and communicate this work to external audiences to help advance IRBM globally. The CoPs will be an obvious initial audience for the products of the GRP basins. The Global Practices Team will also interact regularly with the global Network, through both in-person meetings and Web-based tools, to deliver insights and precedents that arise from work in GRP basins and that can advance IRBM.

In addition to disseminating the results of progress achieved at GRP basins, Global Practices Team staff will have objectives for using GRP outcomes to achieve global leverage. For example, members of the Global Practices Team are involved deeply with the application of Hydropower Sustainability Assessment Protocol, and successful examples of “hydropower by design” within GRP basins can help advance objectives for hydropower sustainability. Global Practices Team staff will also contribute to IUCN’s global dialogue on water infrastructure.

Further, TNC’s Global Priorities framework provides collaborative opportunities for leveraging GRP outcomes for influencing global policies, practices and funding decisions. Several GRP basins are also demonstration sites for other TNC global priorities. For example, the Magdalena and Mississippi basins are demonstration sites for the priority Climate and Disaster Risk Reduction (CDRR). The CDRR strategy has explicit global leverage objectives for influencing the flow of disaster mitigation funding toward allocating more toward “natural infrastructure” approaches. Floodplain and

flood-risk reduction work at GRP sites, along with a floodplain community of practice, can provide examples, expertise and networks for achieving this global leverage goal. Similar overlap exists with other global priorities such as Smart Infrastructure (also known as Development by Design) and Global Agriculture.

Knowledge Management

To provide technical and strategic support and to manage the two-way flow of information (e.g., network to basins, basins to network), the Global Practices Team will need expertise in knowledge management and the capacity for coordinating the various communities of practice and exchanges described in this section. The Global Practices Team will include a knowledge management specialist and a technical exchange coordinator, through either staff or consultants. The Global Practices Team will also work with a consultant to develop a web-based portal for knowledge archiving, and distribution and to facilitate communication within and between the various communities of practice, the Global Practices Team and the network.

4. GLOBAL NETWORK TO ADVANCE INTEGRATED RIVER BASIN MANAGEMENT

[This section will require an opportunity for review by all network MOU parties, before finalization. The current draft includes early content and placeholders for two new support partners (WWF and IUCN). MOU legal review by WWF and IUCN is near completion]

4.1 CONTEXT

The Great Rivers Partnership will promote the exchange of experience, knowledge and innovative best practices to advance Integrated River Basin Management (IRBM) at three interconnected scales (Figure 4-1): individual basins, across basins, and through a network, reaching other global audiences, as described in Chapter 3. This Chapter addresses the GRP's interaction and strengthening of relationships with the existing network of organizations and practitioners working on IRBM and other facets of river basin management around the world.

Although the GRP is not proposing to be the owner or manager of a new global network of IRBM organizations, the **Global Network to Advance Integrated River Basin Management** outlined below (hereafter referred to as the Network) will be critical to the multidirectional flow of knowledge detailed in Chapter 3. The Global Practices Team will be working to match people with specific skills and expertise with the needs of individual river basins, and the Network will be a principal source for identifying this high-potential capacity. Similarly, the Network, and its existing communities of practice, will be a primary location of insights, expertise and tools for the cross-basin project work focused on common themes and challenges. The Network will also be the initial and most direct audience for the GRP as it seeks to influence IRBM policy and practice, as well as the behavior of and interrelationships among key actors worldwide, by communicating lessons from GRP basins and activities. Finally, collaboration with Network partners

will be critical for achieving specific global leverage objectives for the GRP.

These various needs and opportunities have provided the impetus for the initial engagement of the GRP in the Network and its ongoing development, outlined below.

4.2 NETWORK INTENT AND AIM

The spirit and intent of the Network are fully aligned with the concept and principles of Integrated River Basin Management (IRBM), nested within the broader sphere of integrated water resources management (IWRM) and hence, with the overall mission and aim of the GRP. The sheer number and diversity of organizations, practitioners, and their various affiliated Communities of Practice (CoPs) and networks currently comprising the global IRBM community, is testament to growing acceptance of this approach, and of its importance in fostering more sustainable development trajectories for river basins. Arguably, IRBM remains the approach to basin freshwater management that offers the best means of reconciling competing sectoral demands in a manner that better takes into account all needs, including those of ecosystems, without jeopardizing the array of ecosystem benefits that rivers freely provide for society.

Given this potential for IRBM to generate more sustainable future outcomes for the Great Rivers and other river basins, the overall aim of the Network and its supporting organizations is: *to facilitate in all world regions the emergence of effective and efficient water governance and of sustainable development of water resources, through the implementation of IRBM.*

Proposed principal objectives of the Network are:

- To catalyze and foster an open learning exchange across the IRBM community that leads to demonstrably significant advancement in IRBM policy and practice at a global scale.
- To build synergies among organizations and practitioners addressing IRBM-related challenges, and to leverage resources to help more river basins globally develop and implement IRBM.

4.3 NETWORK PARTNERSHIPS AND AVENUES FOR COLLABORATION

Support partners for the Network

A cluster of established, internationally recognized organizations, which share a common vision and aspirations for the future of river basin management, support the Network at its core. Hereafter referred to as "support partners," they include (in no particular order):

1. The **International Network of Basin Organizations (INBO)**, which promotes river basin management as an essential tool for sustainable development and for implementing IWRM.
2. The **Global Environment Facility's International Waters Learning Exchange and Research Network (IW:LEARN)**, which aims to enhance the efficiency and effectiveness of GEF International Waters projects to deliver tangible results in partnership with other global initiatives.
3. The **International River Foundation**, which works in partnerships around the world to

fund and promote the sustainable restoration and management of river basins.

4. The **World Wide Fund for Nature/World Wildlife Fund (WWF)**, which [Freshwater program - to be inserted based on Appendix 4.2]. The WWF is also a GRP Global Partner.
5. The **International Union for Conservation of Nature (IUCN)** Global Water Programme, which brings together its extensive network of IUCN Members, experts, government and private sector partners to develop sustainable solutions to preserve our water resources and the ecosystems they depend on. The IUCN is also a GRP Global Partner.
6. The **International Commission for the Protection of the Danube River (ICPDR)**, which works to ensure the sustainable and equitable use of waters and freshwater resources in the Danube River Basin, and to share the experiences from the Danube with other river basins. [The ICPDR may elect to be represented in the MOU and Table of support partners through INBO, rather than independently; this remains to be clarified. The ICPDR will support the Network in either capacity].
7. The **Great Rivers Partnership (GRP)**, which represents a global effort, led by The Nature Conservancy, to create a new model for sustainable management of the world's Great Rivers for people and nature.

The current support partners have agreed to work together in a manner formalized through a signed Memorandum of Understanding (MOU) which outlines the basic principles for collaboration (see Appendix 4.1, for the draft MOU,

which is due to be finalized in December 2012). The partnership will remain open, permitting other organizations to join the collaborative effort at any time, provided that they are willing to invest their time and resources to advance IRBM collectively.

For each support partner, an overview of their principal aims and objectives, areas of interest and expertise, as well as the types of support they envisage being able to contribute to the Network, are provided in Appendix 4.2. This organizational matrix is being used to help identify the most effective ways in which the partners will manifest their support and contributions to the Network, and generate benefits.

Opportunities for Collaboration Among Support Partners

The supporting organizations expect that the collaborative effort outlined in the MOU will enable each organization to add value to its existing work programs around IRBM, and to engage a wider range of stakeholders than would be possible through their individual efforts. The partners see several major benefits from this collaboration, including overall increased public exposure, and capacity development and education opportunities. The MOU will provide the framework for the voluntary, cooperative and committed effort by the partners to work on activities that build synergies between and among the organizations and connect their various organizational networks. Additionally, the joined-up efforts of the partners will leverage resources to help more river basins globally develop and implement IRBM.

Common activities identified by the support partners for the first year of the Network will be drawn from among the following main areas of interest (indicative, and not an inclusive list):

- Knowledge and information sharing including, but not restricted to, organizational Web sites. This might, for instance, build on the current GEF IW Community Platform, an interactive online platform where stakeholders and CoPs can gather, collaborate and share their knowledge and experiences in transboundary waters management.
- Training programs and technical exchanges to develop capacity, particularly in developing countries. Examples of approaches already in use include basin twinning projects (currently a focus of the International RiverFoundation) and the delivery of technical support for the establishment of river basin commissions in different regions (e.g. as provided by the INBO and the ICPDR).
- Conducting events at key conferences and forums to advance the dialogue on IRBM. Promising high profile annual and multi-year conferences include Stockholm World Water Week, the GEF Biennial International Waters Conference, the International RiverSymposium, and the triennial World Water Forum.
- Development and broad public sharing of educational materials on implementing IRBM.
- Celebrating and sharing successes, including through the promotion of awards, such as the present International and European river prizes, and provision of support for the regionalization of the Prize.
- Supporting one other and helping promote one another's activities at river basin and global levels.

Engagement with the Broader Network of IRBM Practitioners

Beyond the core support partners, the many other global IRBM organizations and practitioners (corporations,

academia, and advanced research programs and institutes, social networks, development sectors, etc.) will be encouraged to join and participate in this open, loosely structured Network. This broader set of potential participants will bring their own networks and CoPs. We currently anticipate that other potential participants in the Network will be asked to sign on to a statement of principles on IRBM/IWRM, as a sign of their support for the goals of the Network. We have begun initial discussions about how this broader Network might be formalized as a professional IRBM association, which would constitute a new interdisciplinary organization globally that integrates a broad range of actors, disciplines and institutions.

4.4 NETWORK STRUCTURE AND FUNCTION

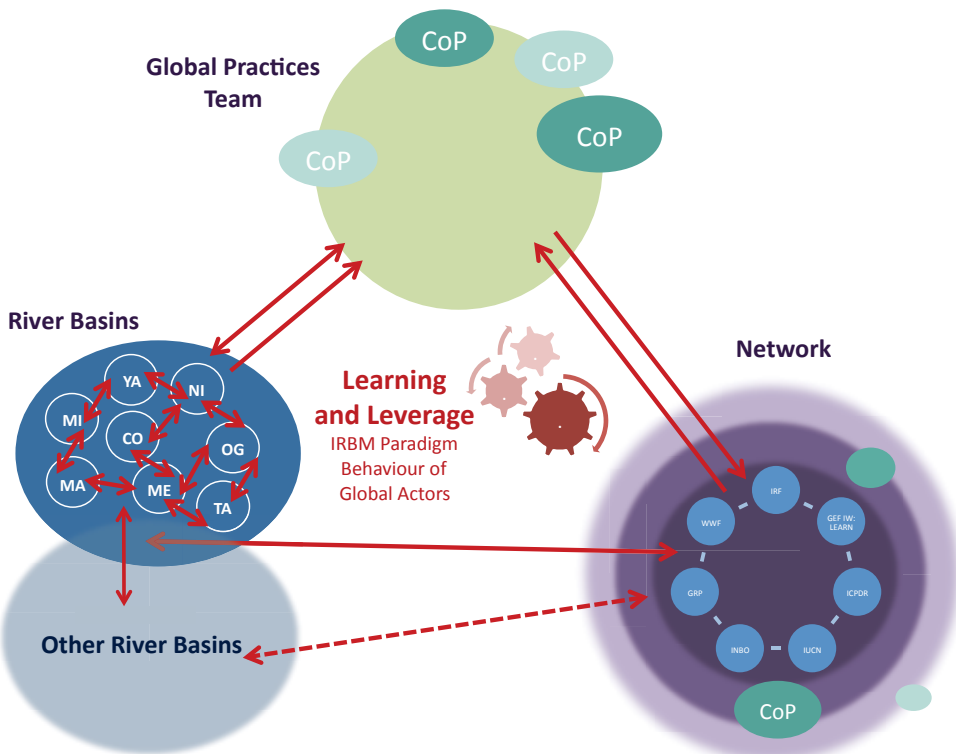
The Network, comprising its core partners together with affiliated partners and institutions within the broader IRBM community, acts as a hub interlinking with two other hubs central to the GRP, the River Basins and the Global Practices Team, as illustrated in Figure 4-1. The basins hub comprises the eight GRP Great Rivers, the river basins of the Network partners (see Appendix 4.2), and other river basins globally that are active in the area of IRBM and express an interest in engagement. The structure and work of the Global Practices Team is described in Chapter 3. The design of the

Network reflects its role in ensuring that the flows of knowledge and expertise needed in the GRP (and outside) are multi-directional, organic and sustained within and across basins. Furthermore, it is intended to reflect its complementary role in supporting the GRP's Global Practices Team (see below and Chapter 3) to develop balanced capacity in the basins and generate targeted IRBM learning and leverage at different scales (see Figure 4-1).

Exchange with the Global Practices Team and its communities of practice is expected to be a central function of the Network, with bridges designed to make use of the team's role in delivery of the most current concepts, tools and best practices to IRBM practitioners and

Figure 4-1. Schematic of the form of the Network, highlighting its interlinkages with the eight GRP rivers and other river basins and the Global Practices Team.

[To be revised and then created by graphics designer, with supporting short legend]



Notes: The lightening shading of the purple bands representing the Network indicates the progressively looser structure it takes—from its main support partners at the centre, to the outer edges of the IRBM/IWRM practitioners community, and finally, their informal social networks. Green solid circles represent the diversity of Communities of Practice (CoPs) formed with the GRP and those existing in the Network. Red arrows represent the dynamic two-way exchanges among the various components and their direct (solid) and indirect (dashed) links with the Network. Learning and leverage are generated through these variously complex interactions from basin to global scales, as detailed in the text.

partners working in the basins, as well as in capacity development of the GRP teams and partners. The exchange might include activities such as the establishment of a fellowship program with varying-term assignments to match the specific capacity needs of different river basins confronting similar thematic challenges, drawing in recognized professional experts and sources of experience from the CoPs and/or the Network. River basins might also be brought together through working groups combining representatives from each basin and experts best suited for helping identify solutions to the problem at hand, or through basin project twinnings or similar initiatives. Using the Network as a vehicle, and working with the support of the core Network partners and their communications and marketing teams, the GRP Global Practices Team, and TNC's Knowledge Initiative, the outcomes and products of such exchanges will be captured, synthesized, and more broadly disseminated and adopted worldwide. Similarly, the Network will provide a means for effective large-scale dissemination to the wider IRBM community of the case studies, models and tools, and other lessons learned through the GRP, its CoPs, and the work and platforms of the other Network partners.

4.5 NETWORK MANAGEMENT AND PRODUCTS

Network Management

As outlined in the draft MOU, which provides the formal framework for the Network structure, each of the partner organizations is committed to providing the internal resources in time and funds to maintain its ongoing engagement with and participation in the various activities agreed within the Network. Specific opportunities for supplemental resources and support for Network activities will be proactively sought, where considered necessary.

An organizing group representing all of the core partners has been established, and the main point person(s) for each organization has been identified. GRP is currently the lead of the group, and will likely remain in that position for the first year of the partnership. It is likely that the head of the group will be rotated on at least an annual basis, though this remains open for discussion. A regular (at least quarterly) conference call schedule is to be established. Early in each year, a meeting of the organizing group will take place, to develop the year's work plan and maintain the relevance and vitality of the Network. It is anticipated that the support partners will be able to meet annually at the key conferences and forums identified as priorities for a Network presence and contribution through joint events.

Active yearly monitoring will be needed to maintain the Network's vitality and organic growth, and to ensure that it (and any CoPs it directly supports) stays dynamic and relevant from year to year over its lifespan and that of the GRP. Measures of the impact and sustainability of the Network will need to be developed during the first quarter of 2013, as part of the work plan (see Section 5.6 on Measuring Results), before the Network is officially launched.

Network Products

Near-term opportunities for launching the Network in early 2013, and for convening the partners around thematic or regional issues, are being identified. These will act as early emblematic efforts demonstrating the value and benefits of the Network. A more focused discussion is planned among the Network support partners in early 2013, on the potential set of outputs and outcomes the Network should strive to achieve in the near-term and

longer-term, the measures of success in meeting them, and the full work plan needed to generate them.

Provisional 2013 and other near-term outputs identified through preliminary discussions among the support partners may include:

- Launch of the Network at a key IRBM conference or forum linked to the 2013 United Nations Year of Water Cooperation, in early to mid-2013.
- Provision of initial sources of expertise for the establishment of CoPs within the GRP and sources of information, cases and tools.
- Hosting of a first event developed by Network support partners, e.g. special session at Stockholm World Water Week which has the theme of "Water Cooperation", GEF Biennial International Waters Conference, Caribbean.
- A science-oriented thematic activity on river restoration as part of the the current European River Prize being organized by the ICPDR.
- Contribution to the design of the next phase of GEF IW:Learn (current phase due for completion approx. mid-2014).
- Mobilization of inputs from the Network into the recently launched IUCN-led, U.S. Department of State funded two-year global nexus dialogue on best practice in water infrastructure planning and management, including natural infrastructure.
- Reinvigoration of the existing Global Environmental Flows Network, eFlowNet (www.eflownet.org), a gateway to information on the thematic issue of environmental flows in basin flow management, supported by a moderated discussion forum among members, newsletter and regional networks.

- Support to capacity development, e.g. through the ongoing GRP, WWF and IUCN contributions to the structure and content of the UNESCO-IHE online Masters Course on environmental flows.
- Cultivation of new Network support partners representing key sectors and audiences (e.g. private sector, advanced research institutes).

Subsequent longer-term outputs might include, for example: at least one jointly convened event or special session at a key IRBM conference or forum each year; and jointly written, published and disseminated materials showcasing innovation in IRBM policy and practice and/or documenting leveraged changes in the behavior of global actors and the paradigm of IRBM.

5. GOVERNANCE AND MANAGEMENT

5.1 OVERVIEW

The Great Rivers Partnership is designed and implemented as a global partnership, convened and supported by TNC, but involving other major international conservation organizations, donors, and basin stakeholders as equal partners in managing plans and commitments. This section outlines a possible management structure for GRP as a starting point for discussion with potential partners or donors.

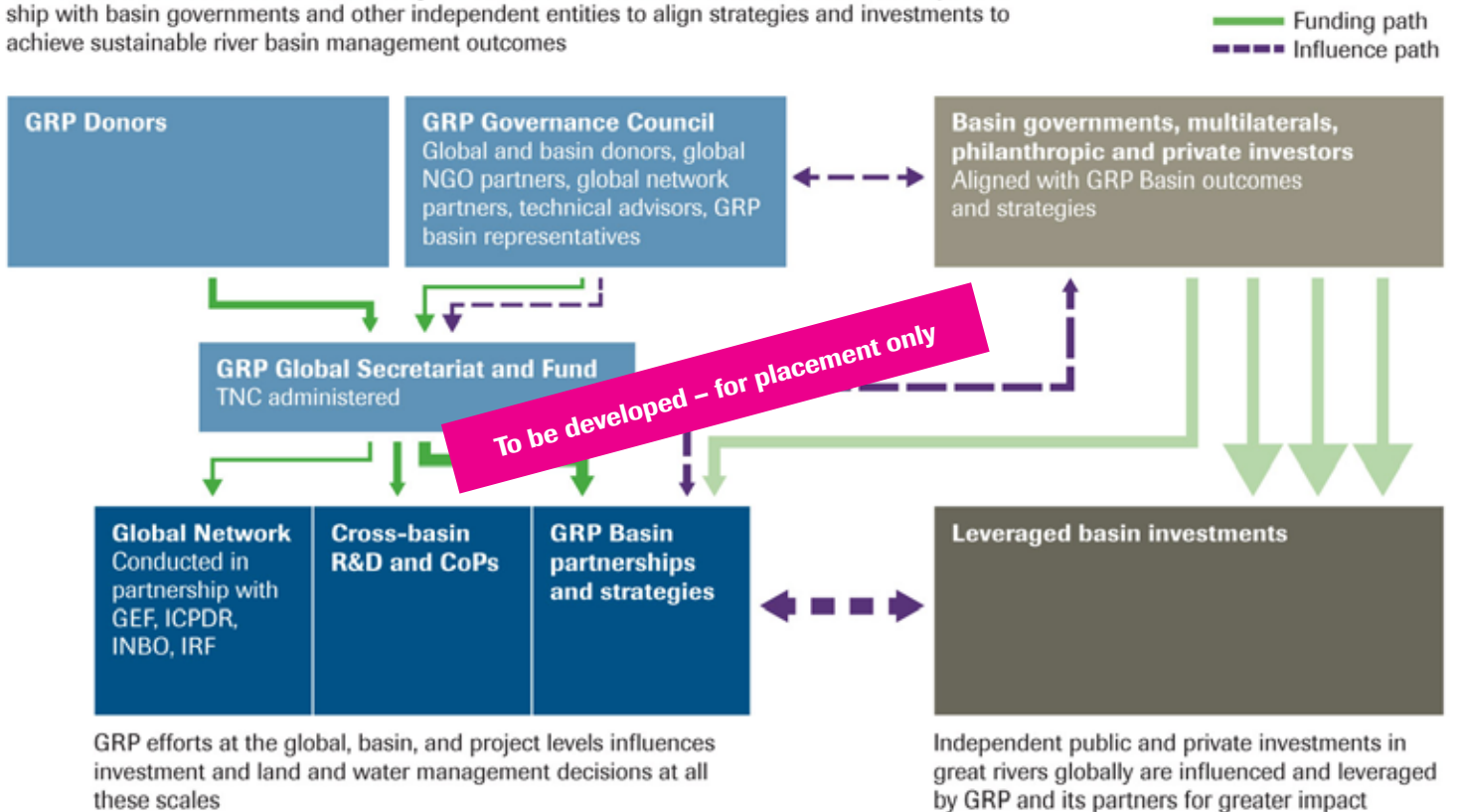
The proposed governance structure includes a Leadership Council and Donors Council. The Leadership Council involves organizations that

support GRP in significant ways, such as providing core science or conservation capacity, public policy advocacy, and aligned funding. The Council serves as a planning and implementing body that facilitates that exchange of scientific expertise and interactions among influential stakeholders. A formalized cooperative agreement among organizations involved in the Leadership Council will set the “rules of engagement” for decisions on strategy development and planning, transparency in funding, measures, evaluation of achievements by members of the collaborating organizations, and communications to the public (see model agreement in appendix 5.1).

The Donors Council is comprised of key organizations making significant funding commitments to the core functions of GRP, rather than only an individual basin or basins, or making overall contributions above a designated level. All members of the Donors Council are also members of the Leadership Council. The Donors Council reviews goals and plans developed by the Leadership Council and provides a forum for prioritizing and aligning core investments and mobilizing additional resources. The Donors Council, in addition to the Leadership Council, helps build the base of awareness and financial support for GRP.

Great Rivers Partnership: Structured funding and governance for success

GRP’s Global Secretariat and Fund, along with its donors and Governance Council, work in partnership with basin governments and other independent entities to align strategies and investments to achieve sustainable river basin management outcomes



5.2 LEADERSHIP COUNCIL

Purpose: Lead the development and implementation of GRP goals, including regular review and updates to GRP Basin Profiles.

Tasks:

- Plan and implement overall goals and objectives for GRP, including those included in the basin profiles.
- Support implementation of GRP business plan, including support for global Network, cross-basin initiatives, and basin-level partnerships.
- Review and agree on GRP annual work plans that leverage various organizations' expertise, geography and financial capacity.
- Oversee GRP support to the basin partnerships, Global Practices, and global Network, and ensure effective management and implementation of approved plans and activities.
- Mobilize funding for GRP, including support to relevant organization(s) for plan execution, alignment of funds at basin and global levels, and leverage of investments for implementation of specific sectoral activities.
- Engage donors on prioritization of GRP funding for global and basin-level activities.
- Review internal monitoring and evaluation plan as well as independent evaluations of GRP implementation, and recommend ways to integrate lessons learned into future plans and operations.

Membership: Up to 18 members, representing:

- 2-4 global NGO partners
- 3-6 representatives of foundation, corporate, government, and multilateral donors that make substantial

commitments in the form of funding, expertise and/or leadership in one or more GRP Basins

- 1-2 eminent experts in IRBM
- 1-2 developing country government representatives
- 1-2 basin-level NGO partner representatives
- 1-2 basin-level private sector representatives

Formation: Core group of 4-6 organizations initially recruited by TNC in consultation with GRP Global Partners, such as WWF and IUCN, and current ISC members, then joint recruitment of other members—adding quasi-constituent representation of government, non-governmental organizations, and business partners developed at basin level once these partnerships are established.

Decision-making: Seek consensus of the full Leadership Council on all major planning issues for implementation of GRP goals; cooperative agreement and operating charter to be developed.

5.3 DONORS COUNCIL

Purpose: Provide funding to support implementation of GRP strategies and work plan; prioritize investments and mobilize additional resources when needed; and oversee those investments.

Tasks:

- Provide leading financial commitments, and work to garner commitments from others, in support of GRP Basin activities, the GRP Team, and direct funding for the TNC's management and administration costs.
- Provide joint financial oversight to ensure effective use of GRP funds, with activities, including:

- Provide independent evaluation of GRP implementation, and support the integration of lessons learned into GRP plans and operations;
- Disclose regular financial and conservation status reports from each organization represented on the Donors Council regarding their portion of the GRP conservation plans.

Membership: Roughly 4-6 members, representing key organizational donors committed to significant funding of the core and/or aligned work in more than one GRP Basin.

Formation: Recruited by TNC, in consultation with GRP Global Partners and current ISC members.

Decision-making: The Donors Council will normally meet immediately before and/or following meetings of the Leadership Council. The activities and decisions of the Donors Council will be transparent to the Leadership Council. Any significant divergence in perspectives between the Donors Council and the Leadership Council as a whole will be resolved by dialogue and consensus seeking. However, organizations participating in the Donors Council will retain independent decision-making authority for the use of their organizations' funds.

While each organization represented on the Donors Council retains independent control over its respective funds and activities, strong leadership and a transparent financial management model assures that the Donors Council is fully committed, informed, and able to achieve alignment among its members to support GRP plans and activities. In practical and legal terms, any organization may fund activities, including the administration of the

Donors Council and Leadership Council, through grants to TNC and GRP Global Partners, such as WWF and IUCN, in accordance with plans endorsed by the GRP Leadership Council.

5.4 GRP TEAM

Purpose: The GRP Team, which includes the Global Practices Team, directly supports the Leadership Council and Donors Council, and facilitates the global partnership to achieve GRP goals. A GRP Team, working in partnership with the basin teams, executes this work across multiple regions and basins, and supports the communities of practice.

Administrative Tasks:

- Develop business plan and annual work plans, and create monitoring and evaluation plans, to meet GRP objectives with involvement from the Leadership Council and Donors Council.
- Organize and facilitate meetings of the Leadership Council and Donors Council.
- Coordinate reporting on various organizations' fundraising, expenditures and implementation relative to GRP plans, including TNC's activities relative to administration of the Leadership Council and Donors Council.
- Manage public communications regarding plans and achievements of the GRP.
- Represent GRP with global network partners and others as appropriate.
- Oversee the staffing and work of the GRP Team.

Program Implementation Tasks:

- Advise and support basin teams in developing and implementing

strategies to achieve basin-level outcomes. Provide support for revising GRP Basin Profiles as needed.

- Organize and facilitate cross-basin communities of practice on key issues and strategies (e.g., conservation areas and natural capital, sustainable use of natural resources for human well-being, climate resiliency, smart infrastructure, sustainable agriculture and forestry, long-term financing mechanisms, river basin governance).
- Link basin-level partnerships to global network and expertise on IRBM issues and strategies.
- Provide input to Leadership Council and Donors Council on key opportunities for investments at basin and global levels.
- Support periodic assessment, reporting and evaluation of strategies and outcomes by basin partners, and for the GRP as a whole.

5.5 CAPACITY FOR SHARED LEADERSHIP

The coordination and management of GRP globally will be the responsibility of a managing director working closely with the leads of regions and basins, Global Practices Team and various other support functions. This will be a team bound by shared accountability to a common vision. Many of these roles and responsibilities could be assigned to TNC staff, but we will aspire to recruit leads from collaborating organizations. Leads from organizations other than TNC will most likely occur in the communities of practice, regional and basin-level leadership, and a few specialized functions. Because TNC will administer the partnership, certain functions such as finance and operations, planning and evaluation, philanthropy, and marketing and communications will likely always reside within TNC.

The success of this multi-organizational model, working at multiple levels, requires the recruitment of leaders into the GRP Team who can achieve outcomes through a participative management style. It also requires a high level of accountability among executive leaders in these respective organizations. Such a high level of collaboration and shared leadership is easier said than done, and therefore the GRP Team will engage experts in this area to provide necessary training and facilitation. We will grow the partnership at a deliberate pace, consistent with the establishment of trusted relationships where a shared vision is present and this level of collaboration can be demonstrated.

A managing director will provide staff support to the Leadership Council and the Donors Council, report on finances and progress, and supervise development of the Global Practices Team and communities of practice. In partnership with the regions and basins the managing director will advance global philanthropy and marketing and facilitate execution of the GRP shared agenda.

Key Positions:

- *Managing Director*—supports the Leadership Council and Donors Council, and manages collaborative execution of GRP Business Plan.
- *Administrative Assistant*—provides administrative support to Managing Director and core members of the GRP Team.
- *Planning and Evaluation Manager*—facilitates development of annual work plans, and manages evaluation and reporting to donors, partners, stakeholders.
- *Director, Global Practices Team*—manages Global Practices Team and communities of practice.

- *Leads, communities of practice (4-6)*— provide disciplinary expertise and facilitate one or more communities of practice.
- *Knowledge Management Specialist*— supports the multi-directional flow of information within various levels of the GRP.
- *Technical Exchange Coordinator*— supports technical exchanges between GRP Basins, CoPs, and Network.
- *Administrative Coordinator*— provides administrative support to Global Practices Team.
- *Finance and Operations Manager*— supports financial accountability for all GRP funding.
- *Director, Global Philanthropy*— leads private fundraising strategy at global level, in partnership with regional and basin programs.
- *Director, Global Partnerships*— leads external relationship development with public, bi-lateral, and multi-lateral partners.
- *Marketing and Communications Manager*— leads communications strategy at global level, in partnership with regional and basin programs.
- *Partnership Specialist (consultant)*— supports effective management of the GRP inclusive of multiple contributing individuals and organizations.

Capacity and Functions Recommended for GRP Basins

So much of the ability to accomplish integrated river basin management relies on a deep understanding of the socio-political context of the region in which the basin resides. No single organization can begin to amass the influence, relationships, and technical capacity required to work successfully across so many varied geographies and management challenges. Therefore, during this phase of the GRP it will be important to develop regional and

basin-level leadership to execute regional or basin-level strategies over the longer term. Some of this leadership must transcend any individual river basin and begin to address the broader conditions that enable success.

The experience of TNC and partners in working in river systems, large and small, demonstrates that measureable results are *more likely* if some of the following capacities and institutions are available in a given river basin:

- A river basin organization that has the potential to fulfill up to three main functions, 1) monitoring, investigating, coordinating and regulating; 2) planning and financing; and 3) developing and managing (GWP, 2009). Ideally this a river basin commission with powers delegated by the relevant governments via agreement, and that is involved in coordination and collaborative decision-making.
- A basin management plan, ideally reflecting the input of stakeholders throughout the basin, that defines a vision and issues to be addressed in the form of measureable objectives that allow for accountability.
- Basin councils, associations, or other technical bodies that are empowered to represent stakeholder interests and provide input to decision-makers in key management sectors (e.g. fisheries, agriculture, navigation, flood control, etc.).
- An agreed upon decision support system, or set of computer models, that allow for scenario analysis of alternative management actions designed to address systemic issues (e.g. management of floods, nutrient, sediments, siting of major infrastructure, etc.).
- Access to natural and social science capacity to analyze complex cause-effect relationships and provide

expert opinion to fill gaps in published knowledge

- A unified monitoring program to inform a structured adaptive management program.
- Strong communication with political actors that are defining laws and determining budgets.
- Clear and compelling communication with the public that should hold political actors accountable.
- A network or set of networks in which stakeholders (including corporations, citizens groups, NGOs, etc.) can be heard to ensure that management actions are responsive to changing needs.
- A network or set of networks in which water managers can learn best practices and exchange lessons learned.
- Laws and policies across the political units in the basin that are harmonized to extent possible, and are designed to meet the basin-wide vision and objectives.
- A set of finance mechanisms that support stewardship of the resource, developing and maintaining basin infrastructure, and operation of the basin organizations (GWP, 2009).

Promoting these capacities in a basin will require a GRP Global Partner to have a range of skills and capabilities, spanning management, government relations and science. These capacity and function recommendations are based on the premise that advancing integrated management requires a set of roles to be filled within basin countries across science and policy realms, which can be supported by the GRP Team.

In the near term (e.g., next 3 years), we expect that each GRP Basin will have several key positions in place. First, each basin will require an experienced

project manager, with a full-time focus on basin issues acting as point person for interactions with the GRP Team. This staff member will have the authority and ability to speak for the project partners to all levels of stakeholders. The project manager position will significantly contribute to:

- Development and implementation of a common vision and shared management agendas for basin-level management and conservation
- Creation and stewardship of networks and capacity building opportunities for managers and stakeholders
- Establishment of committees and studies designed to inform management decisions
- Fundraising, by working effectively with philanthropy staff within GRP and their own organization

In addition, effective basin teams will almost always require an experienced government relations or policy expert, a river scientist, and sufficient support staff. The suggested total capacity that would be needed across this basin-level project team would be typically at least three full time equivalents. This is considered “basic” funding needs for the basins. For river basin projects in their early development (i.e. those in which capacity is ramping up over time starting with a focus on a few threats or sectors) the functions above will likely need to be phased in over time in accordance with funding availability and partner efficacy. Yet GRP success will depend on these capacities and functions to be filled at a pace that keeps up with opportunities, and the GRP will need to create incentives to have partner organizations to invest in these critical human capacities (as discussed in sections below). In some cases, broad partnerships may be required to fill the functions described above. This

situation is not only adequate, but desirable, as long as accountability can be maintained over time.

Beyond the near term, even more capacity will be required of basin teams to accomplish significant progress towards implementing the strategies and achieving the outcomes described in their profiles. Although supporting three staff may be a challenge for some project teams, the geographic scope and technical complexity of working at the scale of a Great River demands effort commensurate with the task. What this capacity need will look like in any specific river basin will vary based on government investment, partner capacity, political stability, private sector engagement, etc., but both the GRP Team and basin-level project teams will need to work together to ramp up investment at the appropriate pace.

The level of capacity that exists in North America where the GRP was founded may or may not be replicable in all regions, but it would be desirable. Regionally placed capacity can support development of river basin organizations, facilitate establishment of enabling policies and best practices at country or regional levels, and lead fundraising and communications. Such regional capacity may develop from one of the more established river basin management efforts in the region, as it has in North America linked to the Mississippi River, but that remains an open question that will be answered in due time. Where that capacity doesn't exist at this moment, the GRP Team will provide interim support as it works to create capacity for the longer term.

5.6 MEASURING RESULTS

With the objectives of highlighting challenges, progress, and of communicating the cumulative results of basin

efforts and the overall GRP to program managers, participating organizational leadership, partners, and funders, the GRP will measure results at multiple scales and provide appropriate information to different audiences.

To ensure consistent reporting across basins and the ability to aggregate results to summarize basin and global progress and results, the Global Practices Team of the GRP will provide a measures framework for all basins. The measures framework is intended to: (1) be adaptable to various types of activities, ranging from on-the-ground conservation to policy; (2) provide distinctions between achievements under the immediate control of the participating organizations and those that are under less control but affect large scales and results; (3) allow aggregation at higher levels for reporting to various audiences; and (4) be transparent and provide capabilities to cross-walk with commonly used approaches for tracking and reporting on performance to organizations and funders.

The Global Practices Team will designate a lead for measures who will work with each basin team to develop and refine measures for their strategies for basin-wide project reporting and with GRP management, participating organizational leadership and funders for GRP-wide reporting.

The measures framework is designed to track results in three categories: outputs, outcomes and impacts, defined below. These terms and definitions are commonly used by major foundations to track performance, and can be cross-walked to a variety of other measures frameworks that are currently being used.

Outputs:

Outputs are the direct results of the activities undertaken as part of a

strategy. They are products, tools, goods, or services that GRP basin teams and partners create or deliver as defined in their profiles and strategy summaries. Output statements are formulated to clearly define what each individual output is, and the date by which it will be met or completed. Ideally, outputs can be measured as being in process, completed or not yet started, or a quantitative measure of progress towards a level defined as an objective. Output measures are managed by project teams and reported to others to document status and progress within each strategy. Examples include:

- TNC Farm Bill platform is documented for 2012 and 2017 by the end of the previous calendar years
- A freshwater blueprint and ecosystem services map is completed by April 2013
- An assessment of potential dam impacts and mitigation options is completed and documented by July 2014
- A natural capital baseline assessment is completed and documented by January 2014

Outcomes:

Outcomes are the changes an output is intended to ultimately influence and realize. These may, for example, be changes in policy, sustainable finance, management activities, or human behavior or activities. Unlike outputs, outcomes are typically beyond an implementation team's direct control, and they may depend on many factors. Outcome statements should state clearly who or what are intended to change, and by when. Like outputs, outcomes should ideally be clearly measured as completed or not (when appropriate), and they are often quantitative, and should state the intended direction, magnitude and/or scope of the changes (when appropriate). There are three

general categories of outcomes that broadly capture the efforts of GRP basins. Additional categories or types of outcome can be added to ensure that project teams report the scope of intended outcomes of their work if they are not captured by these categories:

Policy/Governance includes, for example, changes to and creation of standards and legal mechanisms that guide public and private (including corporate) behaviors and practices.

Sustainable Finance includes those financial mechanisms that are intended to persist and support strategies over the long term, such as investment or compensation funds, and dedicated government appropriations.

Management is the type and scope of changes in management of lands and waters. Each strategy may not have all three types of outcomes.

Illustrative examples of the different outcome types include:

- 50,000 additional ha of land are protected through expanding protected area networks (management)
- TNC platform language is included in updated Farm Bill legislation in 2012 and 2017 (policy/governance)
- The U.S and Mexico have reached a long-term agreement on managing shortages and protecting environmental flows on the lower Colorado River mainstem by 2020 (policy/governance)
- By 2015, US\$ 5 million has been secured for a sustainable water fund mechanism (sustainable finance)

Impacts:

Impacts are those changes that take place to nature and to people as a result of the outcomes that have occurred. Impacts generally result from efforts of

multiple teams and multiple strategies. Examples include:

- By 2020, there is a 10 percent decrease in the 5-year running average of the Gulf Hypoxia Zone (nature)
- By 2020, floodplain dependent fish and wildlife populations have increased 10 percent (nature)
- By 2020, fisheries production has increased by 10 percent (people)
- By 2020, flood risk has been reduced for 5 million people (people)

Basin project teams will report on the status and progress of achieving their objectives for outputs in the context of their strategies and the outcomes and impacts they are intended to result in (Table A5.1 in Appendix 5.2). This information will be used primarily by managers in basin programs, participating organizations, the GRP, and funders of specific basins to track progress, and identify challenges that may need to be addressed in each basin.

Basin teams will report summary measures of basin-scale outcomes and impacts (Table A5.2 in Appendix 5.2). This information will be used primarily by basin teams, participating organizations and funders to communicate the benefits of their basin-scale work to their boards and other decision makers, partners and stakeholders, and to outside audiences.

The GRP will report a set of outcome and impact measures across the eight basins (Table A5.3 in Appendix 5.2) that will be used primarily by the GRP, participating organizational leadership, partners, and funders of the GRP at large, to understand the impacts being made by the GRP as a whole, and the return on investments that have taken place on a global scale. The individual

basin reports will provide more detail for each basin, while the overall summary will highlight progress across major themes using currencies common to all basins.

5.7 FINANCIAL ACCOUNTABILITY

[THIS SECTION WILL BE
ADDED LATER]

6. COMMUNICATIONS SYSTEMS

6.1 SITUATION ANALYSIS

Communications is a critical factor in the success of the Great Rivers Partnership. The GRP provides a global communications platform, a way to bring many voices together into a shared vision for managing large, working rivers for people and nature. Creating a shared vision requires a shared message. Moving the world to follow this vision requires a credible, exciting and bold voice.

The GRP will work to crystallize and energize this message, and build a global brand as an honest broker of real solutions with tangible, lasting benefits. A compelling, inclusive message will help the GRP to draw more partners and support across a broad spectrum of audiences, including those not traditionally receptive to conservation approaches. A unified brand will strengthen the ability of partners to attract funding and leverage innovative, on-the-ground conservation successes into policy changes at global, national and local levels.

The expansion of the GRP presents new communications opportunities and challenges across numerous geographies with extreme variation of capacity, issues and complexity, among other factors. Therefore, over the next five years GRP communications capacity will work on two levels: advance the specific five-year conservation, policy and funding goals; and build a permanent mechanism for global, inclusive communications to advance the broad goals of the GRP, including the formation of a Communications Leadership Team comprised of marketing representatives from each Global Partner organization.

6.2 STRATEGIC FRAMEWORK AND TACTICS

The GRP communications team will design and implement strategies that position the GRP as an “expert voice” on whole-basin solutions that achieve a more sustainable and equitable suite of economic, social and ecological benefits. Our strategic framework will focus activities and investments on three tactics:

1. *Equip key messengers with tools and capabilities to make a credible case for the GRP.* The top year 1 communications priority for the GRP is the development of an inclusive message platform that captures the global scope and bold, yet practical, character of the GRP. The process will begin with conducting audience research, a competitive analysis and risk analysis. Outputs will include a foundational message blueprint, talking points on key issues and briefings on risk issues. The GRP communications team will work closely with GRP basin teams to develop basin-level message platforms that are thematically and structurally consistent with the global platform. Messages that expand upon key issues, such as floodplain management, will be developed over the course of years 1–2. Communications staff from GRP Global Partners will come together to jointly provide messaging sessions to the GRP team to ensure that all representatives carry forward the same message.

Concurrent to the messaging effort, communications will:

- Create a portfolio of core assets, including an expert spokesperson directory for the media, visual identity system, reputational risk plan and protocol, and print and

multimedia tools, including a brochure that links the eight rivers under one coherent and compelling brand.

- Collaborate with staff of implementing partners at local levels to develop marketing assets such as video and photos illustrating new science and innovative, on-the-ground conservation results, and to develop content packages that will help staff leverage these results for policy and funding success. The communications leadership team will offer resources and technical support to field marketers for this work within basins and central communications will engage directly on packaging and promoting content opportunities with the greatest potential to drive policy change and fundraising across basins.
- 2. *Build brand visibility and credibility through strategic promotional campaigns.* Raising awareness of GRP successes and elevating the visibility of partners will foster uptake of whole-basin solutions and accelerate cross-basin collaboration. The GRP will implement innovative strategies to reach key audiences with its message, including continuing to improve its Web site with focus on two key functions: promote expert voices, success stories, lessons learned and new science; and provide a platform for global conversation on whole-river solutions.

While improving the GRP Web site as a robust online platform for IRBM, communications will:

- Develop and implement strategic promotion plans most likely to reach key audiences, such as media outreach to elite and industry publications, participation in relevant online channels, editorial placements in key locations and building social media reach.

- Working in collaboration with the Global Practices Team, create high-value visibility opportunities for public dialogue, such as media roundtable events that convene thought-leaders from various sectors to address central issues.
- Support participation at major policy events, such as the triennial World Water Forum, the Stockholm World Water Week and niche events of top value to the Global Practices Team. Activities may include creating presentations, conducting media outreach and designing materials and displays in conjunction with communications staff of implementing partners in host locations.
- Cultivate thought-leaders from key sectors to provide third-party validation and secure opportunities to elevate these voices through joint editorials, interviews on the GRP website and pitching the validators to the media.

3. *Create an effective global communications system for applying the brand and delivering communications objectives across all basins.*
In order to build, manage and grow a trusted and cohesive brand for the GRP, communications must be a collaborative, inclusive multi-stakeholder effort. Given the scope of the GRP, communications will earn greatest return on investment through strategic focus, collaborative teams across levels, sequencing and scaling of activities.

In year 1 communications will:

- Establish a formal, standing Communications Leadership Team comprised of representatives from the GRP Global Partners, chiefly field-based staff from implementing organizations.
- Convene a summit of communications professionals from Global

Partners and key external supporters and stakeholders, such as corporations represented on the International Steering Committee and the U.S. Army Corps of Engineers.

- Work with a leading strategic communications agency to develop a framework for an effective multi-stakeholder Communications Leadership Team and a franchise-type protocol for applying the brand at basin and local levels. This process will include conducting an audit of marketing capacity within partner entities; creating recommendations on best use of these resources and augmenting for gaps; and establishing protocol for collaboration, decision-making, reporting and measuring impact. This process will yield recommendations for building dedicated marketing capacity over years 2–5.
- Conduct a comprehensive inventory of relevant existing marketing assets across partner entities and develop recommendations for bringing such materials into brand alignment.

In year 2, communications will:

- Apply the branding protocol to a pilot basin which will be selected based on multiple readiness criteria, including maturity of marketing channels at the local level, presence of risk issues and existing capacity among partners.
- Develop a portfolio of branded marketing assets for this basin, aligned with the broader branding protocol, and spokespersons will be identified for increased training and promotion. Successes and lessons learned will be captured and used to refine the franchise model.
- Establish substantive fellowship opportunities for partner communications professionals who seek to

engage deeply in the building and management of the global brand for a discrete period of time and scope of work.

In years 3–5 communications will:

- Extend the branding and promotion model to all eight river basins in a strategically determined sequence and method and the full portfolio of marketing assets will be completed.
- In year 5, primary focus will shift to measuring impact, refining strategies and developing a plan for scaling up in year 6.

6.3 COMMUNICATIONS CAPACITY

The GRP has been supported by a team of four full-time TNC communications staff specifically allocated to the promotion of the GRP and who can draw upon a broader set of marketers at global and regional levels throughout the organization as required for success. However, the overwhelming majority of work to promote effective management of the GRP rivers is being conducted by marketers in Global Partner organizations and countless additional organizations throughout the eight basins. The GRP will work to become a resource for these marketers, facilitate connections and provide a platform for expanding the reach of their work. TNC will continue staffing central communications and will assume responsibility for managing the Communications Leadership Team with sufficient autonomy from the discrete brand or goals of any individual partner organization.

The GRP will retain additional specialized capacity through communications agencies and contractors in order to secure best return on lean investment and to efficiently provide additional capacity at project levels as needed. For

example, as digital production needs increase in order to fully represent all rivers on the GRP website, the team will secure more value through outsourcing than adding dedicated production staff. Capacity needs will vary and fluctuate significantly across the eight rivers so it is unlikely that a standardized pattern of staff growth will be feasible or productive.

Working with leading agencies will facilitate rapid and efficient development of a franchise model which can be employed at basin and local levels. A standing relationship with an agency will also put the GRP Communications Leadership Team in a strong position for responding rapidly to crisis issues and for maximizing benefit from unanticipated opportunities, such as late invitations for high-visibility participation in major policy events.

6.4 COMMUNICATIONS ACTIVITIES

Managing a GRP Communications Leadership Team will require substantial time investment on an on-going basis, which may be in part offset by utilizing

marketing capacity of partner entities and contractors. Anticipated activities include: 1) convene quarterly meetings of the communications team and provide minutes to the management team; 3) manage agencies and contractors, 4) manage media inquiries and track media for opportunities to insert GRP into the news stream; 5) manage crisis issues that may arise; and 6) provide ongoing strategic counsel to GRP spokespersons, such as coaching for best performance in public appearances.

Outcomes

- By 2017, GRP staff and close partners are consistently adhering to the expert voice brand and message. The Communications Leadership Team will conduct yearly analyses of digital and print content, presentations and media placements and find a steady measurable increase in on-message communications and third-party validation.
- By 2017, the GRP is consistently positioned as the expert voice on whole-basin solutions at major policy events and in the media at global, basin and local levels.

Communications research will show that key audiences have increased awareness and perception of the GRP as a trusted force for solving common dilemmas and reaching tangible outcomes.

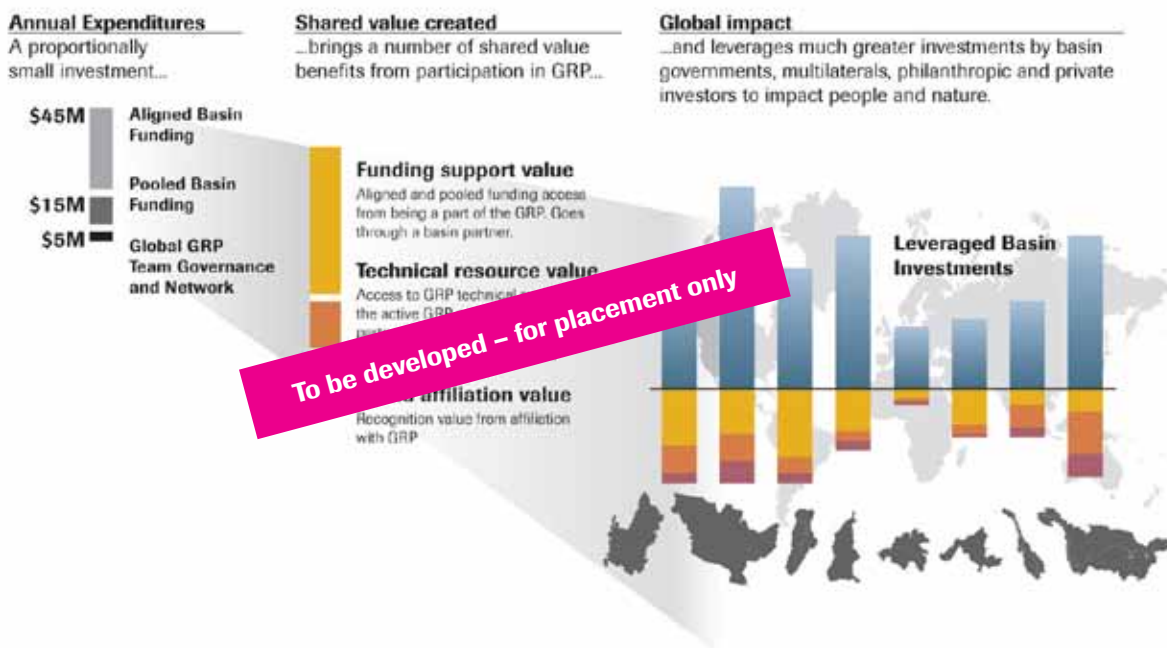
- By 2017, a Communications Leadership Team inclusive of GRP Global Partner organizations is jointly implementing strategic communications and brand marketing activities at the global and cross-basin levels and providing strategic and material support to field based communications staff at regional, national and local levels.

Impact

The effectiveness of strategic communications will be measured in terms of the creation of enabling conditions for success for our partners in conservation, fundraising and external affairs. Measuring enabling conditions requires research, such as focus groups with opinion leaders and internal stakeholders, for which we currently lack baselines. Our year 1 work will include designing a methodology for tracking and measuring success.

7. RESOURCES AND FUNDING

Creating shared value to improve Human Well-Being and Ecosystem Health in GRP Basins



7.1 OVERVIEW

The GRP has identified a vertically aligned funding strategy that provides coordination at the global and basin scales and flexibility for funders to engage at whatever geographic scale and funding level best matches their interests.

As outlined in Chapter 5, the GRP governance structure provides global coordination through a Leadership Council, Donors Council and GRP Team. This global framework will facilitate coordination and communication within the GRP, among basin organizations within the GRP portfolio, and with critical partners through the global network. At the river basin scale, the lead organization(s) and associated partners provide a bottom-up approach to clearly identifying basin specific issues, needs, opportunities and strategies.

Each of the eight GRP Basins has completed a profile document, as

summarized in Chapter 2. These profiles provide the lens to help align investments by private and public funders to achieve basin-scale impacts and advance integrated river basin management. The profiles may include specific proof-of-concept projects that target funding to the highest priority projects with regional and international significance.

The projected five-year financial need for the GRP overall is \$191 million, with fundraising responsibility to be shared among the GRP Team, Leadership Council, and Donors Council. The lead organizations in each GRP Basin will be primarily responsible for raising funds needed to advance the work delineated in the basin profile, with assistance from the GRP Team. Note that \$191 million is a strong estimate, but as profiles are further refined over coming weeks budgeted amounts may change (see Appendix 7.1 for details).

A funding analysis of public and private sources will be completed by December 31, 2012, upon which an assessment of the percentage breakdown between public and private funds will be determined and made available. During the first phase of the GRP (2005-2011), over \$74 million in private funds were raised. Based on anticipated future support from some of these same funding sources, and an expanded list of prospects, the GRP goal is to raise a minimum of \$85 million in private funds through 2017, with a firm fundraising target to be established upon completion of the funding analysis mentioned above. As a global priority for TNC the GRP is supported by TNC's Executive Team and Board of Directors, as well as a seasoned principal gifts fundraising team responsible for securing organizational gifts, grants and pledges of \$5 million or more.

The GRP will establish a coordinated funding strategy that provides opportunities for funders to engage at either the

basin or global scale (or both) and according to their interests.

To meet its goals and objectives, the GRP will work to raise the following categories of funding:

Core: Funds that are directed to support the GRP’s core management and functions at the basin and global levels, involving Leadership Council, Donors Council, the core GRP Team, and core staff in each basin. Initially, this support would likely come from the Donors Council. (Five-year need of \$45 million.)

Aligned: Funds or capacity that support actions in the basins that are aligned directly to the portfolio work plans. An example of aligned capacity is a private foundation or public entity supporting basin-level partners directly through their regular grant making and not through *core* or *pooled* funding. (Five-year need of \$146 million)

Leveraged: Funds for work related to the goals and objectives as articulated in the river basin profiles, but not carried out by the Leadership Council or GRP Team. To qualify as leveraged there must be evidence that reasonably substantiates a connection to the strategy or activity. This might be targeted Farm Bill funding in the U.S. or funding for protected areas in China. The GRP will report on *leveraged* funds as part of its reporting to the Donors Council. A *leveraged* funding target will be established in 2013, and after the public/private funding analysis is completed.

Pooled: If desired by donors at some point, a pool of funds could be combined and managed together in a trust, or similar entity administered by TNC or another organization, to advance global objectives set by the Leadership

Council. The funds differ from aligned or other categories of funding because they have substantial ongoing flexibility, and are invested at the discretion of the trust leadership.

We posit that the GRP Leadership Council, Donors Council and GRP Team will elevate the global profile among the individual rivers, resulting in improved and increased access to funding, technical assistance, knowledge sharing among the GRP basins, and ready access and exchange through the larger network of river basins advancing IRBM approaches. As momentum builds around GRP activities in each basin, the work funded through GRP is expected to help leverage additional public and private support to non-GRP members. The GRP will work with all river basins and with major funders of IRBM approaches to maximize our ability to track leveraged funds and document the impacts of these investments.

7.2 NEXT STEPS

As detailed in the 2013-2015 work plan (see Appendix 7-2), the GRP will:

- Identify and recruit lead organizations and individuals to the GRP Leadership Council, Donors Council and GRP Team.
- Complete a private fundraising plan by June 30, 2013, from which an executive summary will be shared with the GRP Leadership Council and Donors Council, and an official GRP campaign launched shortly thereafter.
- Create a task force of public funders and non-governmental organization partners to develop a public funding alignment strategy to help drive investments toward this effort.
- Work with the GRP Donors Council and other major funding sources to

secure early and ongoing support and campaign leadership.

- Design and implement a comprehensive communications strategy to enhance the visibility of the GRP for a broad range of audiences, including those who can financially support the program.

7.3 PUBLIC FUNDRAISING STRATEGY

Public funding from bilateral and multilateral agencies will be a key component of the financial streams to implement GRP across the eight basins. This chapter details the outlines of the public funding strategy for the six non-U.S. basins—Magdalena, Mekong, Niger, Ogooué, Tapajós and Yangtze—where foreign aid agencies will be key sources of public funding, as opposed to internal public funding which will be the dominant source of public funding for the U.S. rivers (and discussed below).

The public agencies can be expected to provide a combination of core, aligned and leveraged funding for each of the six non-U.S. basins, though core funding will likely be limited, simply because foreign aid agencies provide the overwhelming amount of their funding for activities in developing countries; thus, funding for core coordination activities of the central team is not expected from bilateral and multilateral sources. Nevertheless, we are developing a public funding strategy that would seek the bulk of the funding coming in as a combination of core, aligned and leveraged funds, based on individual public funding strategies for each of the six international basins, specific bilateral and multilateral donor programs and preferences and host country interests.

The Global Environment Facility (GEF) is one possible opportunity for

core funding for the GRP made possible by aligning closely with its International Waters Learning Exchange and Resource Network (IW-Learn) and its various partner agencies. Beyond the IW-Learn program, the GEF remains a key public funding agency for each of the basins, both through the GEF's International Waters portfolio (for the transboundary rivers—Mekong and Niger) as well as through the GEF's biodiversity portfolio for rivers contained within a single national jurisdiction (Magdalena, Ogooué, Tapajós, Yangtze). These are potentially windows for core funding (for basin level activities in-country) as well as aligned and leveraged funding. The World Bank is also an important partner for potential leveraged funding in several basins, especially for the Mekong and the Niger, where the World Bank (and its private sector arm, the International Finance Corporation) have established transboundary-context partnerships and lending programs.

Over the next few months, the GRP Team will have a more detailed set of conversations with each of the basin lead organizations to map out public funding strategies unique to each basin. These strategies will consist of a combination of potential GEF funding (from the International Waters and/or Biodiversity portfolios, depending on host government interest) as well as opportunities with specific bilateral aid agencies.

The GRP Team has already done a preliminary analysis for the Magdalena, where TNC is the basin lead, as an example of what each basin strategy might look like. In the case of the Magdalena, TNC is partnering with the Government of Colombia and the Inter-American Development Bank to put forward a \$30 million proposal to the GEF's Biodiversity program. The

funding would consist of \$6 million ultimately going to TNC to execute basin-level activities in the Magdalena, and would be complemented by \$21 million in cash and \$3 million of in-kind funding from the government of Colombia for aligned activities in the basin. In addition, TNC has submitted a proposal for a €1 million project for the Magdalena under the German Environment Ministry's International Climate Initiative.

To summarize, the GRP Team will undertake the follow activities over the next six months:

- Meet with GEF, UNDP, UNEP and World Bank colleagues to define a strategy and set of relationships which would position the GRP as a delivery mechanism under IW-Learn IV in conjunction with the GEF-VI replenishment;
- Establish relationships between each of the World Bank's regional teams on the two transboundary basins with the basin lead organizations and explore country-level relationships in the other four basins;
- Develop explicit public funding strategies with the basin leads for each of the six non-U.S. basins.

Additional Considerations for Public Funding in the U.S.

Public funding also plays a vital role in the management of Great Rivers in the U.S. . . . Public funds will be focused almost exclusively on project work and associated science and research. It is not expected that public funding will support the core operations of GRP Basins as these funds are generally not available to cover general operations expenses.

GRP's public funding strategy in the U.S. includes a three-pronged approach:

1. Supporting federal appropriations for federal and state programs that fund key leveraged activities for Mississippi and Colorado Rivers;
2. Supporting federal and state appropriations to key basin-level projects developed by Mississippi and Colorado River programs; and
3. On-going coordination and communications to basin programs and TNC state programs about federal and state grant opportunities that can support basin-scale work.

TNC's U.S. public funding strategy builds on the strong working relationship between state-level government relations staff, federal-level government relations staff and the GRP Team. Together these three groups provide a means to take coordinated action in support of federal funding (both with U.S. Congress and the key federal agencies) by building support with federal delegates at the state level and in Washington D.C. and by including such action in TNC's broader federal advocacy efforts. By ensuring the basin program directors are able to communicate program needs consistently and clearly to government relations staff and by building capacity to ensure that other staff are aware of existing funding opportunities, we can align basin needs to federal funding opportunities.

In the U.S., the GRP will support efforts to secure appropriations for federal and state programs that fund key leveraged activities for GRP Basins. The work in both the Mississippi and Colorado River depends on existing federal programs that are working on system-scale issues and are providing the context and the opportunity for activities described in the basin profiles. Working to maintain or expand funding levels for these programs are key to management of these rivers. The GRP

will also support federal and state appropriations for key basin-level projects developed by GRP Basin programs. The GRP Basin programs have specific projects they are undertaking which require federal or state funds for implementation. Finally, the GRP will support on-going coordination and communications to GRP Basins about federal and state grant opportunities that can support basin-scale work. Many public funding opportunities are available through existing grant programs, such as USDA Farm Bill programs to implement restoration projects, WaterSmart grant programs for conservation and water management, and numerous other land and water conservation programs.

Outcomes:

1. Sustained federal and state funding for river basin projects.
2. Strong support for these programs in the U.S. Congress and with federal agency leadership.

Outputs:

- Summary of FY2014 & 2015 public funding needs from Mississippi River and Colorado River Program by January 2013.
- Basin state GRP point-of-contact identified by January 2013.
- Summary of key leverage funding programs by basin by January 2013.
- Advocacy and lobbying plan for FY2014 appropriations process in place by March 2013. This includes identification of key partners and allies.
- Implementation of plan in a coordinated approach among GRP river basin staff, state staff, NAFW and government relations staff.

The close coordination and development of annual funding and advocacy

needs by the river basin program, state government relations staff, and national government relations staff provides for an unparalleled ability to identify and secure public funding for priority work within the basin. Establishing clear lines of communication and responsibility by each basin will encourage regular and structured communications to ensure that basin projects are a priority in public funding advocacy efforts of TNC and its partners.

7.4 PRIVATE FUNDRAISING STRATEGY

Each of GRP’s implementing partners will develop private fundraising targets and strategies. Here we provide a brief description of TNC’s primary fundraising strategy for GRP.

On the private side, the feasibility process has included working with TNC’s principal and major gift fundraising network to develop a list of likely prospects for this effort. The majority of the prospects on this list are \$5 million+ donors to TNC and donors and prospects with capacity at \$1 million or more. Starting in November, TNC began meetings with a list of 20 prospects to determine the clarity of the GRP’s messaging and the viability of its ideas in the marketplace of high net worth individuals, foundations and thought leaders. Although this exercise is not built around development of specific solicitation strategies for the GRP, it will deepen and broaden engagement with a group of identified and high-likelihood supporters of the GRP, from whom TNC will energize ongoing fundraising efforts in 2013 and beyond.

A smaller-scale GRP raised a total of \$74 million from 2005-2011, including \$33 million from corporations (45 percent), \$23.1 million from individuals

(31 percent), \$4.9 million from foundations (7 percent) and \$13 million from public sources (17 percent). This effort was heavily focused on work within the Mississippi River Basin, and nearly all of the contributions to this work came from U.S.-based donors/entities. The expanded GRP should draw more funding from both private and public sources, including non-U.S. sources, given the broader geographic scope of the initiative. It is expected that individuals, foundations and corporations will provide funding that will be dispersed across all areas of financial need; moving forward, institutional donors (both public and private) will be central to GRP success. Since 2012, approximately \$24 million in private funding has been secured toward GRP through 2017.

Although the feasibility assessments are not yet complete, a few observations follow:

- The potential impact on human well-being and nature in the GRP Basins, and the overall theory of change made possible through the GRP, are very compelling in terms of scope and scale;
- There is excellent global representation in terms of populations of people and natural communities served;
- The leverage potential is high; and
- There is demonstrated commitment among key donors.

Funding from public agencies is not likely before year 3 and, although there may be exceptions, it is assumed that most public funds will be earmarked directly to one or more river basins. It will be important to identify early sources of funding so that sufficient capacity is secured to meet the five-year funding need of the GRP, as identified in this business plan.

Conditions for success include:

- Establishing clear, concise, outcome-based messages.
- Early commitments from the Donors Council amount to roughly half of the eventual overall campaign target.
- GRP Leadership Council and Donors Council are actively working to secure additional support for GRP, where appropriate—specifically, foundation and corporate support.
- WWF and IUCN, the other two non-governmental organization members of the Leadership Council, are mobilizing private support to the basins for which they are the lead—

the Mekong and Niger, respectively.

- Ensuring a strong prospect list/s that includes healthy numbers of mature prospects and donors ready for solicitation within the first 12-18 months of the fundraising effort, and in addition to Donors Council commitments.
- Establishing clarity in the roles of key stakeholders, including fundraising responsibilities for the overall effort.

In conclusion, a five-year private fundraising target will likely fall in the \$85 million to \$100 million range, and that range is feasible, provided conditions for success can be achieved. The

GRP enjoys such outstanding leadership, enthusiasm and scale that it should inspire significant investments and build the momentum it needs to be successful.

Big visions tend to generate big investments. The GRP has one of the biggest visions in conservation, and has already generated the largest single corporate gift in TNC's organizational history. With the access and influence of key stakeholders, this campaign has the potential to convey that vision to new and existing donors, resulting in significant financial commitments to the project.

Appendix 4-1. Draft Memorandum of Understanding for the IRBM Global Network

Draft as of 15 November 2012.

Memorandum of Understanding of the Support Partner Organizations for the IRBM Global Network

Aim of the Parties

The 21st Century presents unprecedented challenges to the long-term viability of the world's river basins. These critical systems provide freshwater for half the world's people, most agricultural crops, crucial transportation, and the dominant low carbon energy source (hydropower). Yet these vital, but often competing uses for water jeopardize a rich diversity of ecosystem services. Managing river basins so that they can continue to provide this full spectrum of benefits for society is one of the world's greatest challenges.

With increasing competition over limited water resources, governments and others have begun over the last few decades to accept the concept of integrated resource management (IWRM) as a fundamental approach to resource allocation issues, steering away from traditional sectoral approaches. An integrated approach to freshwater management offers the best means of reconciling competing demands. The challenge remains how to address all of the pillars of sustainable development, to create and maintain prosperous social, economic, and ecological systems.

The general objective of the collaboration among the organizations is to facilitate in all regions of the world, the emergence of effective and efficient water governance and of sustainable development of water resources, through the implementation of IWRM at basin level, which allows a better taking into account of all needs, including those of ecosystems.

Parties

The following organizations agree to collaborate on advancing integrated river basin management (IRBM) in their own regions and globally:

- International RiverFoundation, which works in partnerships around the world to fund and promote the sustainable restoration and management of river basins.
- International Commission for the Protection of the Danube, which works to ensure the sustainable and equitable use of waters and freshwater resources in the Danube River Basin.
[May be a support partner outside the MOU – still to be agreed]
- The Global Environment Facility's International Waters Learning Exchange and Research Network (IW:LEARN) which exists to strengthen global GEF IW portfolio experience sharing and learning, dialogue facilitation, targeted knowledge sharing and replication in order to enhance the efficiency and effectiveness of GEF IW projects to deliver tangible results in partnership with other IW initiatives, will support international river basin management by promoting knowledge sharing and capacity building on GEF IW projects addressing transboundary surface water basins.

- INBO, which aims to promote river basin management as an essential tool for sustainable development and for implementing IWRM.
- The Great Rivers Partnership, which is a global effort led by The Nature Conservancy to create a new model for sustainable management of the world's Great Rivers for people and nature.
- WWF, which... [To be completed by parties during legal reviews (near completion)]
- IUCN, which... [To be completed by parties during legal reviews (near completion)]

Areas of Collaboration

This MOU provides a framework for a voluntary, cooperative and committed effort by the organizations to work on circles of activities that build synergies between and among the organizations, and help leverage resources to help more river basins globally develop and implement IRBM.

The organizations expect that the collaborative effort outlined in this MOU will enable each organization to add value to their existing work programs, and to engage a wider range of stakeholders in their individual ongoing work on IRBM, than would otherwise be possible. The MOU signatories view the overall increased public exposure, capacity development and education opportunities arising from joint, cooperative work on advancing IRBM as one of the most important sets of benefits arising from such work and the connection of organizational networks.

All signatories to this MOU agree that other organizations are welcome to join this collaborative effort provided that they are willing to invest their time and resources to advance IRBM collectively.

The following (not an inclusive list) have been preliminarily identified as common activity areas over the next year:

1. Knowledge and information sharing via organizational websites;
2. Training programs and technical exchanges to build capacity particularly in developing countries;
3. Promotion of the International and European River Prize and supporting regionalization of the Prize;
4. Conducting events at conferences to keep the dialogue on implementing IRBM advancing (e.g., RiverSymposium, GEF Biennial International Waters Conference, World Water Forum, Stockholm Water Week);
5. Development of and broad public sharing of educational materials on implementing IRBM;
6. To support each other and help promote each other's activities at river basin and global levels.

Principles of Collaboration

The organizations recognize and accept that each shall be fully responsible for all of their own administrative, operational, and incidental costs arising from participating in the cooperative efforts established under this MOU. Nevertheless, the organizations also commit to, as circumstance and opportunity allow, undertake cooperative fund-raising efforts aimed at supporting the overall joint efforts established under this MOU.

The organizations acknowledge and agree that each may refer to and communicate fully with third parties about the work being undertaken pursuant to this MOU, provided that such references and communications are always consistent with the terms established under this MOU. In case of doubt about a communication involving the signatories to this MOU, the party planning to make or issue such a communication shall check in advance with the other signatories to confirm that they are comfortable with the proposed communication.

In regard to the use of organizational logos, no use of such, or use of any other intellectual property that may be the exclusive property of any of the signatories hereto, may occur without the express written consent of the signatory holding the rights to such intellectual property.

This MOU may be amended in whole or in part, at any time, by the mutual written consent of all the signatories. Should any signatory wish to withdraw from participating in the cooperative work established under this MOU, they shall give thirty (30) days' written notice of the intention to do so, and shall provide in such notice the reason for doing so. No such withdrawal shall affect this MOU as it pertains to the non-withdrawing signatories. Should all of the signatories to this MOU wish to terminate this MOU prior to the expiration date set forth below, they may do so in writing.

This MOU is not intended to and does not create any contractual rights or legally enforceable obligations for the signatories in regard to each other, nor for any third parties working with the signatories on IRBM issues.

This MOU is effective as of the date _____, and will remain in effect for one (1) year. Approximately six (6) months prior to its expiration, the signatories shall review all aspects of this MOU and determine if it should be renewed, amended, or allowed to lapse upon reaching the termination date.

Contact Person

Signature

ICPDR: _____

By: _____

IW:LEARN: _____

By: _____

IRF: _____

By: _____

INBO: _____

By: _____

GRP: _____

By: _____

WWF: _____

By: _____

IUCN: _____

By: _____

Appendix 4-2. Synopsis of the Aims, Scope, and Areas of Interest of the Support Partner Organizations for the Network.

Draft as of 15 November 2012.

Organization	International RiverFoundation	International Commission for the Protection of the Danube River (ICPDR) [To be completed]	Global Environment Facility's International Waters Learning Exchange and Research Network (IW:LEARN)	International Network of Basin Organizations (INBO)	World Wide Fund for Nature/ World Wildlife Fund (WWF) [To be completed]	International Union for Conservation of Nature (IUCN) Global Water Programme	Great Rivers Partnership (GRP) The Nature Conservancy
Aim and Objective(s)	<p>Works in partnerships around the world to fund and promote the sustainable restoration and management of river basins.</p> <ul style="list-style-type: none"> To support the sustainable management of river basins. To reward and promote best practice in river basin management. To share knowledge and link practitioners in river basin management, restoration and protection. To promote the ideals of integration in project funding and activities. 	<p>Works to ensure the sustainable and equitable use of waters and freshwater resources in the Danube River Basin.</p>	<p>To strengthen global GEF IW portfolio experience sharing and learning, dialogue facilitation, targeted knowledge sharing and replication in order to enhance the efficiency and effectiveness of GEF IW projects to deliver tangible results in partnership with other IW initiatives.</p>	<p>To promote river basin management as an essential tool for sustainable development and for implementing IWRM.</p> <ul style="list-style-type: none"> To develop relations between organizations interested in IWRM at basin level. To favor exchanges of experiences and expertise. To facilitate the implementation of tools suitable water management at basin level. To promote information and training programs for stakeholders and staff involved in water management in basin organizations. 		<p>Brings together its extensive network of IUCN Members, experts, government and private sector partners to develop sustainable solutions to preserve our water resources and the ecosystems they depend on.</p> <p>Helps to create policies and laws in which all users, rich and poor, urban and rural, have a say in how their increasingly stressed waters are allocated, managed and conserved.</p> <p>Promotes an ecosystem approach where IWRM planning is complemented by pilot actions demonstrating results that address local to national priorities.</p>	<p>A global effort to create a new model for sustainable management of the world's Great Rivers for people and nature. To bring together diverse partners and best science to expand options for achieving sustainable management and development of the world's Great Rivers and their basins, with a central principle of ensuring healthy ecosystems for the long term while meeting human development goals, through:</p> <ul style="list-style-type: none"> Advancing comprehensive, IRBM approaches for at least three Great Rivers. Building readiness for IRBM in three to five additional basins. Synthesizing experiences, examples, and tools developed within GRP Basins, and sharing and promoting best practices for IRBM globally.

Organization	International RiverFoundation	International Commission for the Protection of the Danube River (ICPDR) [To be completed]	Global Environment Facility's International Waters Learning Exchange and Research Network (IW:LEARN)	International Network of Basin Organizations (INBO)	World Wide Fund for Nature/ World Wildlife Fund (WWF) [To be completed]	International Union for Conservation of Nature (IUCN) Global Water Programme	Great Rivers Partnership (GRP) The Nature Conservancy
Geographic Scope	Global and basin		Global and basin	Global, with Regional Basin Organization Networks		Global, regional and basin	Global, regional and basin
Focal Basin(s)	<ul style="list-style-type: none"> • Ganges, India • All basins of Mindanao, Philippines • Ayuquila Basin, Mexico • Murray-Darling, Australia • All basins of Mongolia • Ciliwung, Indonesia • Nairobi River, Kenya 	<ul style="list-style-type: none"> • Danube River Basin, Europe 	<ul style="list-style-type: none"> • Basins with GEF IW investments, totaling approx. 75 projects globally 	<ul style="list-style-type: none"> • Latin America • North America • Africa • Mediterranean • Europe • Central Asia • Asia 		<ul style="list-style-type: none"> • Mesoamerica • South America • West & Central Africa • East & Southern Africa • West Asia & Mediterranean • Asia • Oceania 	<ul style="list-style-type: none"> • North America: Mississippi, Colorado • Asia: Yangtze, Mekong • Africa: Niger, Oogué • Latin America: Tapajós, Magdalena
IRBM Thematic Areas and Expertise	<ul style="list-style-type: none"> • Transboundary cooperation at the practitioner level • Twinning and knowledge exchange • Basin scale ecosystem health monitoring • River Prize 	<ul style="list-style-type: none"> • Transboundary commissions • Nutrient management 	<ul style="list-style-type: none"> • Transboundary waters 	<ul style="list-style-type: none"> • Institutional arrangements for water management at basin scale • Data banks • Planning and programme of measures at basin level, including climate change issues • Financial arrangements for basin organizations • Capacity building for staff and stakeholders involved in basin management 		<ul style="list-style-type: none"> • Implementation of IWRM/IRBM • Ecosystems as water infrastructure • Climate change resilience • Food security • Good governance 	<ul style="list-style-type: none"> • Conservation areas and natural capital • Natural resources for human wellbeing • Climate resiliency • Smart infrastructure • Sustainable agriculture and forestry • Financing mechanisms and other economic instruments • River basin governance

Organization	International RiverFoundation	International Commission for the Protection of the Danube River (ICPDR) [To be completed]	Global Environment Facility's International Waters Learning Exchange and Research Network (IW:LEARN)	International Network of Basin Organizations (INBO)	World Wide Fund for Nature/ World Wildlife Fund (WWF) [To be completed]	International Union for Conservation of Nature (IUCN) Global Water Programme	Great Rivers Partnership (GRP) The Nature Conservancy
Types of Support	<ul style="list-style-type: none"> • Twinning programs • Post graduate education funding • Direct investment in on-ground works • Marketing and campaigns 		<ul style="list-style-type: none"> • Project-project twinning exchanges • Targeted regional workshops • Surface water community of practice 	<ul style="list-style-type: none"> • Project support • Workshops and training sessions 		<ul style="list-style-type: none"> • Demonstrating tangible benefits for local, national or river basin level priorities • Learning, capacity building and knowledge exchange • Multi-stakeholder dialogues consensus-building forums • Support for national policy, legal and institutional reforms, and international cooperation 	<ul style="list-style-type: none"> • Convening of basin stakeholders • Targeted technical support, capacity building and problem solving to basins and proof-of-concept projects • Links to expertise and resources toolbox • Various IRBM communities of practice • Marketing, fundraising, communications, and policy campaigns
Eligibility for Support	Partnership agreement as a basis to document activities and investment goals.		Stakeholders need to have some affiliation or direct involvement with an active GFF IW project.	Basin organizations (staff and stakeholders of basin commission). Governmental institutions involved in basin organization.		Open to stakeholders active in IRBM policy and practice.	Open to stakeholders active in IRBM policy and practice.
Affiliations with Other IRBM Networks	ICPDR, MDBA, Minda, UMMRL, and others			Various		Surface water Community of Practice within IW:LEARN and others	Various
Contact(s)	Matthew Reddy matthew@riverfoundation.org.au Melanie Ryan melanie@riverfoundation.org.au		Mish Hamid mish@iwlearn.org	Jean François Donzier jfdonzier@wanadoo.fr	Karin Krchnak karin.krchnak@wwfus.org Lindsay Bass Lindsay.Bass@wwfus.org	Mark Smith mark.smith@iucn.org	Rebecca Tharme rtharme@trc.org
Communication Platform and Website	www.riverfoundation.org.au		www.iwlearn.net	www.rriob.org		www.iucn.org/water www.waterandnature.org	www.GreatRiversPartnership.org

Appendix 5-1. Great Rivers Partnership Leadership Council Cooperative Agreement

This Cooperative Agreement (“Agreement”) is entered by the below signed organizations (collectively “Organizations” and individually “Organization”) for the purpose to advance conservation management of the Great Rivers Partnership (“Purpose”).

RECITALS

WHEREAS, the Great Rivers Partnership (“GRP”) was established in 2005 to fundamentally change the way Great Rivers are managed by advancing conservation and sustainable development with investment in innovative strategies, sharing the results, exchanging knowledge through scientific research and lessons learned, and bringing a large and diverse group of partner organizations together to leverage expertise and resources for large, working river systems;

WHEREAS, through the work of the GRP the opportunity has developed to pursue Integrated River Basin Management at a large scale as a partnership among organizations, communities and governments around the work (collectively “partners”) to ensure that the Great Rivers are protected and restored on a course that will sustain a broad range of values and benefits from the river;

WHEREAS, The Nature Conservancy is a public charity with a mission to conserve the lands and waters upon which all life depends with a major conservation priority of the long term health of larger, working rivers by managing for sustainability that serves people and nature;

WHEREAS, [organization legal name] is a [describe legal status such as U.S. public charity, private foundation, multi-lateral organization, or similar] with a purpose to [insert any descriptor of organization and its interest in conservation of rivers];

WHEREAS, [organization legal name] is a [describe legal status such as U.S. public charity, private foundation, multi-lateral organization, or similar] with a purpose to [insert any descriptor of organization and its interest in conservation of rivers];

WHEREAS, [organization legal name] is a [describe legal status such as U.S. public charity, private foundation, multi-lateral organization, or similar] with a purpose to [insert any descriptor of organization and its interest in conservation of rivers];

WHEREAS, the Great Rivers Partnership is ready build on its achievements and formalize the cooperation among organizations to move forward on ecologically and economically sustainable river basin management for eight Great Rivers at the heart of their nations by the formation of a Leadership Council with the undersigned;

WHEREAS, the above named organizations (“Organizations”) will commit resources, management and expertise as members of the Leadership Council under this Agreement to advance the Great Rivers Partnership.

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Organizations, intending to be legally bound, hereby agree as follows.

TERMS

1. This Agreement is entered by each Organization as of the date hereunder signed.
2. All Recitals are incorporated herein.
3. The Organizations agree the work of the Leadership Council will be conducted in accordance with the following principles:
 - a. Conservation is the primary purpose.
 - b. Cooperation with and respect for all partners is necessary.
 - c. Cultural traditions will be respectfully regarded.
 - d. Commitment of resources is expected of all Organizations.
 - e. Influence of each Organization will be used to advance the Purpose.
 - f. Transparency of information related to the purpose, such as plans, funding, outcomes and challenges, is required.
4. The Leadership Council will be composed of organizations for development and collaborative implementation of GRP goals. The membership of the Leadership Council will be balanced among global NGOs, nonprofits, government organizations and other leaders in integrated river basin management.
5. Leadership Council formation and operation are as follows:
 - a. The Organizations agree to establish a Leadership Council that is composed of individuals representing each Organization.
 - b. To serve on the Leadership Council, each Organization will make a commitment of ____ years to the Purpose and a funding investment of at least \$____ (cash or in-kind) during the term of the Agreement or at least \$____ during each year of service on the Leadership Council.
 - c. The Nature Conservancy will provide sufficient staffing to support the Leadership Council administration while each Organization is responsible for costs associated with its own participation.
 - d. The Organizations may agree to increase the membership of the Leadership Council by mutual agreement under terms and conditions of this agreement.
 - e. The Leadership Council will meet no less than ____ per year.
6. The Leadership Council will be responsible for:
 - a. Development of a long-term strategic plan through 20____ to achieve the Purpose (“Plan”);
 - b. Development of an annual plan that establishes the conservation plans and commitment of resources of each Organization and augmented funding of all partners for implementation of the Plan;
 - c. Annual review of the Plan implementation, including conservation and financial outcomes,
 - d. Publish an annual public report of GRP accomplishments, challenges and plans.
 - e. Development of core communication messages about the objectives and achievements of GRP with implementation by TNC serving as the primary source of public and joint communications about the GRP.
7. This Agreement is not for the following purposes: establishing any association, joint venture, partnership, or agency relationship of any kind between the Organizations; transferring the rights in the trademark(s) of an Organization to another Organization except where provided for in Section 8; establishing standards; fundraising on behalf of any other Organizations; lobbying on behalf of any other Organization; or any endorsement of any Organization’s practices, policies, standards, products or services.

8. TNC grants to each other Organization (“Licensee” for purposes of this section) a non-exclusive, non-transferable, non-assignable, non-sublicensable license (the “License”) to use the trademark “Great Rivers Partnership” (“Mark”) and for the limited purpose of Purpose during the term of the Agreement. TNC warrants and represents its ownership of the Mark in the United States. Nothing in this Agreement gives Licensee any right, title or interest in the Mark, other than the License rights granted herein. The License is subject to the following conditions: (a) Licensee recognizes and acknowledges TNC’s ownership of the Mark, the value of the goodwill associated with the Mark and the validity of the Mark and every registration thereof; and (b) Licensee agrees that all use of the Mark by Licensee inures to the benefit of Conservancy; and (c) Licensee will not use, nor directly or indirectly permit the use of, the Mark in any manner not expressly permitted by this Agreement without the prior written consent of TNC; and (d) Licensee must employ best efforts to use the Mark in a manner that does not derogate from Conservancy’s rights in the Mark and Licensee will take no action that will interfere with or diminish Conservancy’s rights in the Mark; and (e) Licensee agrees not to use the Mark in any way that would disparage or injure Conservancy’s reputation for high quality.

9. Each Organization will retain its fiduciary control over its resources and may participate in accordance with its own policies and procedures.

10. Each Organization will release, indemnify and hold harmless each other Organization from and against any and all claims, actions, demands, losses, damages, judgments, settlements, costs and expenses (including reasonable attorneys’ fees and expenses), and liabilities brought by third parties against the indemnified Organization which may arise by reason of any act or omission by the indemnifying Organization or any of its officers, directors, employees, or agents. This provision survives any termination or expiration of this Agreement.

11. The Agreement term will expire on _____, 201__. Any extension must be in writing signed by the Organization(s). Upon written notice to the other Organizations, TNC may terminate the Agreement at any time and any Organization may withdraw its participation in the Agreement at any time.

THE NATURE CONSERVANCY

 [name, title]
 4245 North Fairfax Drive
 Arlington, VA 22203

 Date

[INSERT LEGAL NAME OF ORGANIZATION]

 [name, title]
 [insert address]

 Date

Appendix 5-2. Measuring Results

INDIVIDUAL BASIN PROGRESS TOWARDS OBJECTIVES IN THE CONTEXT OF STRATEGIES

Table A5.1 provides an example of a portion of a basin summary from the Colorado River summarizing impacts, long-term and short-term outcomes, strategies tied to them, and the outputs of each strategy. These are consistent with the profiles of all the basins. Specific time frames have been provided for the outputs and outcomes in this strategy, but were not included here in this example. Those specific time frames will be included for all basin profiles. The colors indicate the status of the outputs. Blue indicates completed, green indicates in progress, yellow indicates behind schedule, and white indicates not started. The example using the Colorado River Basin is not intended to show actual status, but is only illustrative.

Table A5.1. Measures of progress for the Colorado River Basin

	Colorado River Basin
	Challenge: Environmental flow needs are not incorporated into basin-wide water budgeting, because current western and U.S policies are too inflexible and constrained to integrate the water needs of people and rivers.
IMPACTS???	There are no explicit impacts for the environment and for people listed yet—these will be defined
	1: Protecting Healthy River Flows:
Long-Term Outcomes	By 2020, environmental flow protection will be a fundamental part of the Basin’s water management regime while meeting other human water needs (management) Indicators/Measures % Basin managed for flow protection
Short-Term Outcomes	By 2017, Environmental flow needs are incorporated into basin-wide water budgeting (management) Indicators/Measures % of water budget plans with environmental flows incorporated into them
	By 2017, Conflicts between quantified environmental flow and other human water needs are identified. Indicators/Measures Conflicts are documented Y/N
	By 2017, Potential water conflicts are significantly reduced through wide-spread adoption, funding, and implementation of water management plans that integrate environmental flows with other human water needs and account for climate change (management, sustainable financing) Indicators/Measures # of conflicts that are documented (how—lawsuits? What is the mechanism or entity where conflicts are designated or documented?)

Strategy 1.1.1 (2012-2013)

Work with partners and institutional targets to identify gaps and shortcomings in the quantification of environmental (ecological and recreational) flow and other human water needs for priority river reaches.

Organizational/Institutional Targets:

Federal and state water management agencies (principally the U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, U.S. Geological Survey, National Park Service, and Bureau of Land Management) and the water management agencies for each of the seven basin states, with an initial focus on the Upper Basin.

Outputs:

1. The configuration and groupings of TNC's Phase 1 river reaches are confirmed, other high priority river reaches are determined, the environmental (ecological and recreational) flow needs for these reaches are catalogued, and gaps in the quantification of flows needs for groups of connected priority river reaches (river sub-systems) are identified.
2. The flow needs for groups of priority river reaches are catalogued with the flow metrics for the Colorado River Water Basin Water Supply and Demand Study (Basin Study, to be issued by the U.S. Bureau of Reclamation) and with the Colorado River Basin Focus Study (Focus Study, to be issued by the U.S. Geological Service) are cross-referenced and the shortcomings of these two basin-wide studies in incorporating such flow needs are identified.
3. The basin-wide data on human water demands in the Basin Study (other than for environmental flows) are correlated with the data for the Focus Study and with the most recent data from the basin states, the scenarios for future increases in human water demands are narrowed, the demand data for the preferred scenarios against priority river reaches are arrayed, and gaps and shortcomings in assessing the impact of human water demands impacts on environmental flows are identified.

Strategy 1.1.2 (2012-2017)

Collaboratively develop and implement plans to overcome the gaps and shortcomings in these quantifications.

Organizational/Institutional Targets:

Federal and state water management agencies (principally the U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, U.S. Geological Survey, National Park Service, and Bureau of Land Management) and the water management agencies for each of the seven basin states, with an initial focus on the Upper Basin.

Outputs:

1. The gaps and shortcomings in environmental flow quantifications of and other human water needs are prioritized. State and federal water management agencies are targeted to address the high priority deficiencies. Plans with those agencies and interested stakeholders are developed to fill gaps. Funding to implement plans to address the deficiencies is secured.
2. The flow quantification and management actions recommended for endangered fish recovery are improved, with an initial focus on the Upper Basin (including the lower San Juan River mainstem) and the Virgin River mainstem in the Lower Basin Working through working with established multi-species recovery programs.
3. The coordination and cooperation between the main water management agencies in the U.S. Department of Interior (Bureau of Reclamation, Fish and Wildlife Service Geological Survey, National Park Service, and Bureau of Land Management) in applying the best possible flow assessment tools for river reaches within and across their jurisdictions in collaboration with interested state agencies and stakeholders is improved.
4. The gaps in the flows needs for Delta restoration are filled through work with partners in Mexico.

Strategy 1.1.3 (2012-2013)

Support modernization of the basin-wide water management decision support system to incorporate quantifications of environmental flow and other human water needs and to identify potential conflicts between them.

Organizational/Institutional Targets:

Federal and state water management agencies (principally the U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, U.S. Geological Survey, National Park Service, and Bureau of Land Management) and the water management agencies for each of the seven basin states, with an initial focus on the Upper Basin.

Outputs:

1. The basin-wide modeling platform for the Basin Study is assessed as to whether it can be linked to finer-scale platforms for flow assessment and water budgeting at the state and river sub-system scales or whether a new basin-wide, modeling platform needs to be constructed.
2. The U.S. Bureau of Reclamation and Geological Survey, other federal agencies responsible for environmental flow management, state water agencies, and active conservation partners define the parameters for a basin-wide modeling platform that incorporates flow needs and enables resolution of conflicts with other human water needs.
3. A new (linked or whole) basin modeling platform on the lower Green and Virgin river mainstems is created that can be scaled up is tested.

OUTCOME AND IMPACT MEASURES FOR EACH BASIN

Each basin will summarize outcomes and impacts in the context of the objectives that are listed below in Table A5.2. This table provides an example from the Colorado River basin. Progress in achieving outcomes, and measured changes of impacts will be provided in the context of these objectives.

Note: Specific objectives, dates and clearer descriptions will be included in these measures when we get more information from some of the basins. The information below provides objectives. The results to date will be reported within this framework.

Table A5.2. Individual basin summary of objectives for outcomes and impacts

COLORADO

OUTCOMES

Policy/Governance

- Stated changes to basin-wide allocations are agreed upon
- Mexico/U.S. water bank agreement is signed
- Mexico/U.S. e-flows agreement is signed
- Policies for reforming the fundamental interstate and international water allocations for the Colorado River Basin have been adopted

- The seven basin states, Native American tribes and other stakeholders have reached a short-term agreement that reduces the risk of compact curtailment in the Upper Basin and increases the certainty of water supplies and flow protection basin-wide
- The U.S and Mexico have reached a long-term agreement on managing shortages and protecting environmental flows on the lower Colorado River mainstem.

Sustainable Finance

- \$ (TBD) secured finances necessary to sustain water bank

Management

- Increasing flexibility for water sharing implemented basin-wide:
 - o 5,000 acre-feet for river through water banking
 - o 15,000 acre-feet for delta through water banking
- #/% of priority (TBD) dams implementing water management plans that integrate environmental flows with other human water needs and account for climate change.

IMPACTS

People

- Adequate water for xx people (TBD) in cities?
- xx hectares of irrigated agriculture?
- # recreational boat day use?

Nature

- % of priority reaches and total kms of river with improved flows for freshwater-dependent plants and animals from e-flow management.
- Proportion of native fish species in reaches with improved flows

SUMMARY OUTCOME AND IMPACT MEASURES FOR OVERALL GRP

A summary of highlights of outcomes and impacts across the eight basins to illustrate the cumulative effects of the GRP will be a powerful communications tool. While the summaries below in Table A5.3 do not include all of the effects that are shown in Table A5.1, it summarizes measures across all basins using currencies and indicators that can express these outcomes and impacts across all basins.

Note: Specific objectives (quantitative levels or directional change) will be explicitly stated to be achieved within a given time frame for each measure. Each river basin can/will provide more detailed information, including measures shown in Table A5.1, and attributes not addressed in these measures. For instance, the degree to which environmental flow objectives are being met, not just the scope of river habitat where environmental flows are being implemented, is the measure.

Table A5.3. A summary of highlighted outcomes and impacts across all eight basins

OUTCOMES

Policy/Governance

- #/% of 10 explicit IRBM basin-wide and sub-basin governance structures in place and operating (by xx – TBD – stated within each profile, will include in dashboard figure)
- #/% of 56 policies created/improved (will be larger number after several basins define them) (by xx – TBD)

Sustainable Finance

Total \$, % of objectives achieved for sustainable financing through:

- Appropriations (\$600 m/10 years)
- Long-term foundation support (xx amount?) (TBD)
- Water funds and conservation compensation hydro fund (\$200 million + per year by xx TBD)

Management

- #/% of 16.8 million ha where management is in place to protect, restore, improve, manage environment as part of system approach (will be higher value when quantified for other areas and sites mentioned in profiles) (by xx – TBD- most info is within each profile)
- # km, % basin stream objectives where management is in place to protect, restore, improve, manage ecosystem as part of system approach(need to define in future – Colorado leading the way on this) (by xx – TBD - most info is within each profile)
- #, % objectives met for infrastructure projects being designed, rebuilt, avoided, mitigated, managed in more environmentally sustainable manner (will be defined in future through basin programs– Colorado leading the way on this) (by xx – TBD)
- #/% of project sites and areas receiving improved management (this in addition to first two?) (by xx – TBD)

IMPACTS

People

- Changes in annual production (tons, bushels) and \$ of fisheries and river-dependent agriculture over time
- # People with reduced flood-risk (by xx – TBD)
- # People with sustained/improved river-dependent livelihoods
- # People with improved water quality (at municipal water supply intake)
- # People benefiting from sustainable hydropower
- Alternatively to above 4 bullets: Estimated number of people benefiting from sustainable management approaches and ecosystem resiliency (can incorporate reduced flood risk, river-dependent livelihoods, water quality, access to electricity, recreation – includes all people across all strategies across all basins).

Nature

- # ha with improved environmental conditions (improved management, restoration – e.g., protected/restored watershed lands, floodplains, Gulf hypoxic zone); this is a measure of the scope of impact, not the type of impact.
- # km of riverine habitats with improved environmental conditions (i.e., improved water quality, flow, sediment regime). Alternatively, we would be challenged to list the degrees of changes in nutrient loadings and other measures for river basins, but these things are not being calculated except for the Mississippi by the NRCS. Detailed information will be provided from basins that have it – this is broad summary information on scope of impact.
- Average and range % increase in target fish, wildlife populations for each basin.

Appendix 7-1. Budget

The projected 5-year budget for the GRP Team and eight river basins is summarized below. Details for this budget were developed by a collection of organizations. Additional detail can be obtained by the lead conservation organization for each basin upon request.

	FY13	FY14	FY15	FY16	FY17	FY13-17 Total
GRP Team	\$ 2,107,700	\$ 5,163,900	\$ 5,422,100	\$ 5,693,200	\$ 5,977,900	\$ 24,364,800
Niger	\$ 4,302,300	\$ 4,524,100	\$ 4,668,100	\$ 3,054,000	\$ 2,215,500	\$ 18,764,000
Ogooue	\$ 1,572,900	\$ 1,575,400	\$ 1,639,100	\$ 1,417,400	\$ 1,439,500	\$ 7,644,300
Mekong	\$ 4,395,000	\$ 5,300,000	\$ 5,600,000	\$ 5,200,000	\$ 4,770,000	\$ 25,265,000
Yangtze	\$ 1,775,900	\$ 1,295,600	\$ 1,537,500	\$ 1,141,100	\$ 1,143,400	\$ 6,893,500
Colorado	\$ 2,086,800	\$ 3,961,900	\$ 3,956,000	\$ 3,814,400	\$ 2,339,400	\$ 16,158,500
Mississippi	\$ 4,857,500	\$ 7,422,700	\$ 8,152,400	\$ 8,405,200	\$ 8,907,100	\$ 37,744,900
Magdalena	\$ 4,515,400	\$ 4,592,700	\$ 6,532,700	\$ 6,420,400	\$ 6,525,400	\$ 28,586,600
Tapajos	\$ 5,941,200	\$ 6,926,500	\$ 6,354,900	\$ 3,622,000	\$ 3,201,300	\$ 26,045,900
TOTAL	\$ 31,554,700	\$ 40,762,800	\$ 43,862,800	\$ 38,767,700	\$ 36,519,500	\$ 191,467,500

These budget figures are draft numbers.
As basin profiles are refined over the coming weeks, budgeted amounts may change.

Appendix 7-2. Work Plan

GRP II WORK PLAN FOR 2013-2015 (Draft 11/12/15)

ORGANIZATIONAL LEVEL	WORK/OUTPUTS	2013 Q1 & 2	Q3 & 4	2014 Q1 & 2	Q3 & 4	2015 Q1 & 2	Q3 & 4	2016 OUTCOMES	MEASURES
Leadership Council									
	Negotiate cooperative agreements with members								
	Execute MOUs with basin partners								
	Develop Work Plans (annually)								
	Meet (quarterly)	2	2	2	2	2	2		
Donors Council									
	TNC-recruit participants	Q1							
	Meet (bi-annually)								
	Advise Leadership Council								
GRP Team									
Executive Team & Associates	Fundraising Plan (for 5 years, updated annually)								
	Budgets (annually)								
	Financial protocols								
	Management & reporting systems								
	Oversight - Basins, CoPs, Global Network								
	Partner development & collaboration								
	Meetings (monthly)	6	6	6	6	6	6		
	Reports (annually)								
Technical Advisors - Global	Set up team/Design work								
	Support basin start ups								
	Global Tech Team Plan (annually)								
	Basin & cross-basin support								
Support Staff									
Finance	Financial management structure for core money								
	Financial accountability								
Fundraising	Fundraising plan & updates								
	Execute fundraising plan								
	Fundraising report (annually)	Q2		Q2		Q2			
H.R.	Capacity Building								
(interfaces w TNC KI)	Workforce Development								
Monitoring	Monitoring systems start up								
	Assessment of results								
Communications	Expert voice								
	Influence policy								
	Synthesize results								
IT	Set up GRP IT systems								
	Manage IT systems								
Program Management	Set up management systems								
	Basin project support								
Administration	General administration								
Global Network									
	Participation & support								
	Meetings (Annually)								
Technical Areas of Practice									
	Cross-cutting meetings								
	Inter-basin exchanges								
All Basins - see basin profiles in Appendix A for individual basins									
Executive Teams	Redesign & update profile	Q1							
	Develop work plans & budgets (update annually)	Q1		Q1		Q1			
	Kickoff meeting	Q1							
	Basin start ups	Q2							
Technical Coordinators - Basins	Basin & cross-basin support								
Support Staff									
	Hire new personnel & build teams								
	Manage projects in basins								
	Funding proposals for basin								

Note: Information for the Work Plan will be completed in December.

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