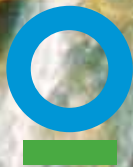


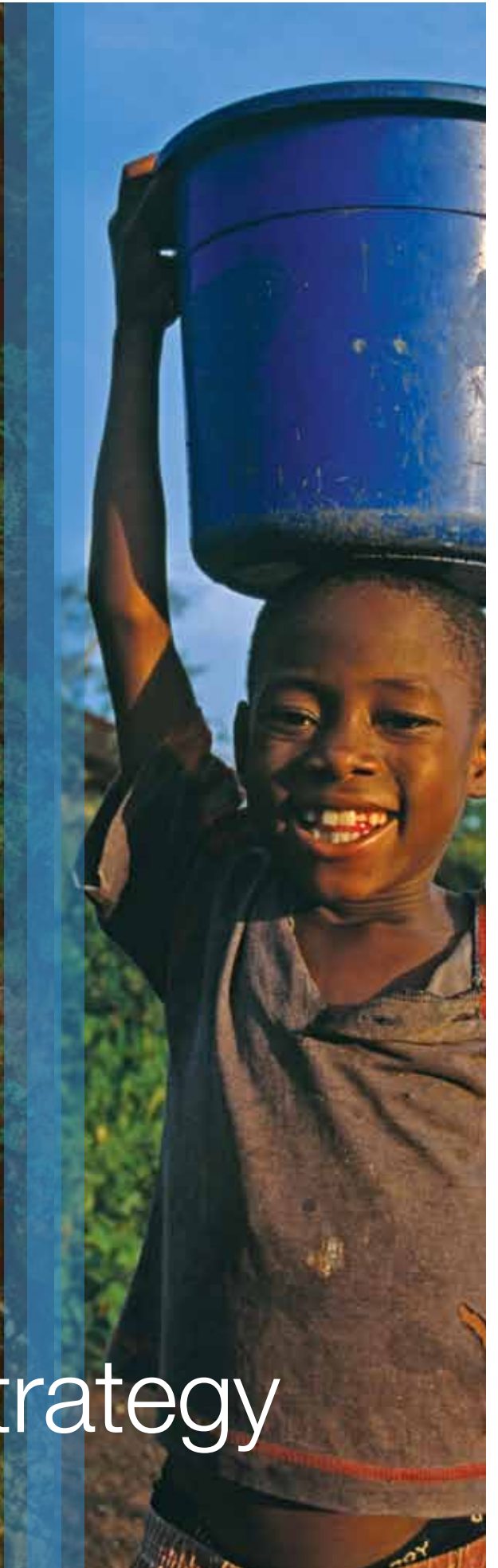


CONSERVATION
INTERNATIONAL



freshwater strategy

JUNE 2010



executive summary

Fresh water is critical for the survival of life on Earth. It satisfies our most basic needs, defines our landscapes and living conditions, and drives our economic productivity and growth. Water management is the second-most asset-intensive industry after oil and electricity, with \$800 billion a year in annual turnover. Fresh water is also central to poverty alleviation. Sufficient supplies of clean water are necessary for health and food security, and define educational and livelihood opportunities – offering families brighter futures and keeping kids in school, instead of spending several hours per days collecting water for basic needs.

Fresh water comes from precipitation and runoff, crossing over and under land through rivers, lakes, wetlands, and underground systems, ultimately emptying into our oceans. Water also replenishes our groundwater stores through the soil and evaporates back into the atmosphere through plants. Fresh water sustains a high concentration of diverse ecosystems and species. Fish, snails, crabs, dolphins, plants, and other life flourish in our rivers, lakes, wetlands, springs, aquifers, and other freshwater ecosystems. There are more than 126,000 freshwater species found in these systems, which are important for their own sake—merely because they exist. They also are vital for maintaining the health of our freshwater ecosystems, and they provide us with food, medicine, recreational, and cultural benefits.

Freshwater ecosystems moderate the distribution and timing of freshwater flows, ensuring that we receive a multitude of ecosystem services. These services include water for drinking, growing food, generating electricity, transporting goods, recycling nutrients, and producing a myriad of products. When functioning and healthy, freshwater ecosystems also protect us against the impacts of climate variability and change through storm buffering, flood protection, and freshwater storage.

Despite its obvious importance, we overuse and abuse fresh water and degrade the ecosystems and watersheds responsible for its provision. We have

already lost over half of our planet's wetlands and 30 percent of freshwater species. We have also dammed nearly every major river and use more than 70 percent of available surface water annually for agricultural purposes alone. Nutrient runoff has created algal blooms and dead zones. The value of freshwater ecosystems in delivering services has been estimated at over \$7 trillion a year, yet the value of maintaining them and the costs of losing them are very rarely understood or factored into our decision-making on land and resource use.

Our failure to value freshwater ecosystems is a fundamental driver of global freshwater insecurity. In the next few decades, more than half of the planet's people will live with severe water scarcity. Billions of people already lack adequate access to water or sanitation, suffer water-related illness, and endure periodic flooding and drought. The fact that the portion of fresh water available to us is incredibly small, only around .008 percent of the total volume of water on earth, makes our current use and abuse of it even more daunting. We don't have enough water to waste or pollute it.

Fresh water must meet the needs of both people and species if we are to survive and thrive together, yet we typically allocate only 10 percent of fresh water to meet the needs of natural ecosystems in our infrastructure projects, when as much as 80 percent may be required to sustain their function and health. Our water use and allocations must be balanced and equitable to meet the demands of people and nature or we will undermine our own freshwater security. If we fail to manage our fresh water and land use wisely, we will suffer significant consequences: lost freshwater ecosystem function, services, and species, increased poverty, conflict, political instability, and even war. If we pursue our current trajectory, we are headed for a major global tipping point where water will become the next crisis, after oil.

CI proposes to catalyze a major paradigm shift in how we manage our fresh water. Our freshwater strategy aims to enhance global to local freshwater security by increasing knowledge of management alternatives, incorporating freshwater values into development decisions, strengthening markets for freshwater services, promoting enabling policies and governance

and scaling-up action for the conservation of entire natural freshwater systems, from headwater to estuary. This is the scale required for effective management. Our program of work for freshwater security builds from sound science to effective field action. Our flagship projects target critical freshwater ecosystems, threats to flows, and innovative, replicable solutions. Priority landscapes represent regions of acute freshwater scarcity and abundance, ecosystems of high climate change vulnerability and watersheds with great human dependency, including:

- **Namaqualand, South Africa**
- **Upper Zambezi and Okavango Rivers, Southern Africa**
- **Madagascar**
- **Atlantic Forest, Brazil**
- **Páramos, Colombia**
- **Qinghai province and Sichuan basin, China**
- **Lower Mekong, Cambodia**
- **Viti Levu, Fiji**

CI is well-positioned to catalyze this urgent transformation from global water depletion and pollution to freshwater security. Our approach is comprehensive and vertically integrated, from communities to global institutions and markets. Over two decades of practical conservation experience, core expertise, diverse partnerships and a base of sound science position CI to be an immediate and influential agent of change in the freshwater sector. Our deep biodiversity conservation roots offer urgent input to freshwater ecosystem science and management – offering vital insight on the ecological ramifications of human actions and ecosystem-based alternatives. Our science and field knowledge will influence infrastructure and agriculture development agendas to better utilize natural ecosystems in water provision. Our ecology, spatial planning and economics tools will provide decision-support for integrated water resource management tools

across large-scale natural ecosystems. We will replicate successful payment-for-ecosystem-services programs across critical freshwater landscapes –the seeds have already been established in all of our flagship regions. We will build upon this solid foundation to rapidly scale-up efforts in partnership with governments, civil society, corporations, and communities.

Once implemented, our strategy will enhance freshwater ecosystem function and service storage and delivery for at least 20 percent of the areas with the highest freshwater service and biodiversity concentration on Earth—benefitting freshwater-dependent species and at least half a billion people. This is the pathway to global freshwater security.

The Freshwater Strategy charts CI's course from 2010. Our aspirations, efforts and resources span a 5-year horizon, however, the strategy is a living document, to be adapted as knowledge, relationships, and priorities develop. The document begins with an overview of the current global freshwater crisis, followed by a description of our goals, hypotheses and program of work. We summarize key outcomes and outputs for our major areas of work: science and tools, policy and markets, field implementation, and communications and outreach. The enabling conditions required for implementation, primarily partnerships, staffing, and funding, are also presented to operationalize the strategy. A five-year budget overview is presented at the end of the document to describe major investment needs.

OUR vision

We imagine a healthy, prosperous world in which societies are forever committed to caring for and valuing nature, our global biodiversity, for the long-term benefit of people and all life on Earth.

OUR mission

Building upon a strong foundation of science, partnership and field demonstration, CI empowers societies to responsibly and sustainably care for nature, our global biodiversity, for the well-being of humanity.

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