



SAVING THE LAST GREAT PLACES ON EARTH



10TH ANNIVERSARY EDITION

Conservation *by* Design

A Strategic Framework for Mission Success





Acknowledgements

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The First 10 Years with Conservation by Design

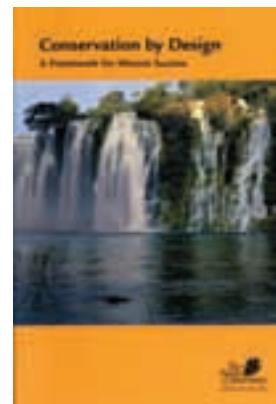


In 1996, based on our own experience and borrowing the best practices of our colleagues and partners, The Nature Conservancy developed a new approach to conservation, one that translated our broad mission into a more specific articulation of common purpose and direction. We call that framework Conservation by Design.

Today, Conservation by Design is the foundation of all our work. It shows us where to work, what to conserve, what strategies we should use and how effective we have been.

Over the past decade, we have learned a great deal by applying Conservation by Design. By stepping back and assessing biodiversity and threats over broad areas of land and water, we are better able to set priorities. By more systematically analyzing threats and their root causes, we can design more effective strategies. Together, these two improvements help us achieve more progress in meeting our mission for every dollar we invest.

Conservation by Design has served to unify our organization and inspire us to achieve more effective and higher-leverage conservation. It is also the foundation of how we intend to achieve our goal for the year 2015: to work with others to ensure the effective conservation of places that represent at least 10 percent of every major habitat type on Earth. Conservation by Design offers an approach that can be used not just by The Nature Conservancy, but by all those who wish to effect conservation change in their countries or communities.



With this 10th anniversary edition of Conservation by Design, The Nature Conservancy is celebrating how far we've come while challenging ourselves to do much more to achieve lasting conservation around the world.

A handwritten signature in black ink that reads 'Steven J. McCormick'.

Steven J. McCormick
President
The Nature Conservancy



Inspired by the
unprecedented
challenge that lies before us,

The Nature Conservancy is stepping up
to do more to **conserve**
ecosystems and the life
they support.

The past half-century marked a period of growing environmental responsibility and conservation action on the part of governments, individuals and organizations such as The Nature Conservancy. National parks and marine protected areas were created. Legislation was enacted to ensure people have clean air and water. Private lands were protected to conserve endangered species. Communities began to demand healthy, sustainable environments and to organize themselves to protect their fisheries, rivers, forests and other vital natural resources.

Despite these efforts, threats to our natural world and quality of life are escalating in the 21st century. Lands and waters are under pressure from a rapidly expanding human population, damaging industrial and agricultural practices and poorly planned development. The consequences of global climate change on the natural world are already evident as scientists are observing changes in the distributions of plants and animals, their growth rates, the timing of animal migration, the retreat of glaciers and the intensity and frequency of storms, droughts and fire. These factors are having a major impact on biodiversity. Plants and animals are caught up in a massive human-caused wave of extinction in which species are disappearing at a rate estimated to be 100 to 1,000 times greater than normal.

Ecosystem services – the benefits that nature provides, from fresh water to food to flood control – are also under siege around the world. The connection between poor ecosystem health and declining human well-being cannot be overlooked. Consider Samana Bay in the Dominican Republic, an important sanctuary for humpback whales and also the source of 40 percent of the fish caught in that country. Deforestation in the upper watershed has washed tons of soil into the bay, damaging critical habitat that supports a productive fishery. Poor ecosystem health around the world diminishes the Earth's natural resources, resulting in fewer fish to catch, less available clean water, more soil erosion and a growing potential for conflict as people compete to have and control these increasingly limited resources. With the degradation of





Terrestrial major habitat types



Marine major habitat types



Freshwater major habitat types



forests, rivers, oceans and other ecosystems that sustain us both physically and spiritually, we stand to lose something of ourselves, too.

Inspired by the unprecedented challenge that lies before us, The Nature Conservancy is stepping up to do more to conserve ecosystems and the life they support. Our focus is to conserve “enough of everything,” not just the rarest or most imperiled species or places. Our vision is a world where forests, grasslands, deserts, rivers and oceans are healthy; where the connection between natural systems and the quality of human life is valued; and where the places that sustain all life endure for future generations.



the nature conservancy

Mission

The mission of The Nature Conservancy is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.

Vision

The Nature Conservancy envisions a world where forests, grasslands, deserts, rivers and oceans are healthy; where the connection between natural systems and the quality of human life is valued; and where the places that sustain all life endure for future generations.

Goal

By 2015, The Nature Conservancy will work with others to ensure the effective conservation of places that represent at least 10 percent of every major habitat type on Earth.

Values

Integrity Beyond Reproach

We will meet the highest ethical and professional standards in all of our organizational endeavors and, in doing so, we hold ourselves accountable to our mission and to the public.

Respect for People, Communities and Cultures

Enduring conservation success depends on the active involvement of people and partners whose lives and livelihoods are linked to the natural systems we seek to conserve. We respect the needs, values and traditions of local communities and cultures, and we forge relationships based on mutual benefit and trust.

Commitment to Diversity

We recognize that biological diversity conservation is best advanced by the leadership and contributions of men and women of diverse backgrounds, beliefs and cultures. We will recruit and mentor staff to create an inclusive organization that reflects our global character.

One Conservancy

Our strength and vitality lie in being one organization working together in local places and across borders to achieve our global mission. We value the collective and collaborative efforts that are so essential to our success.

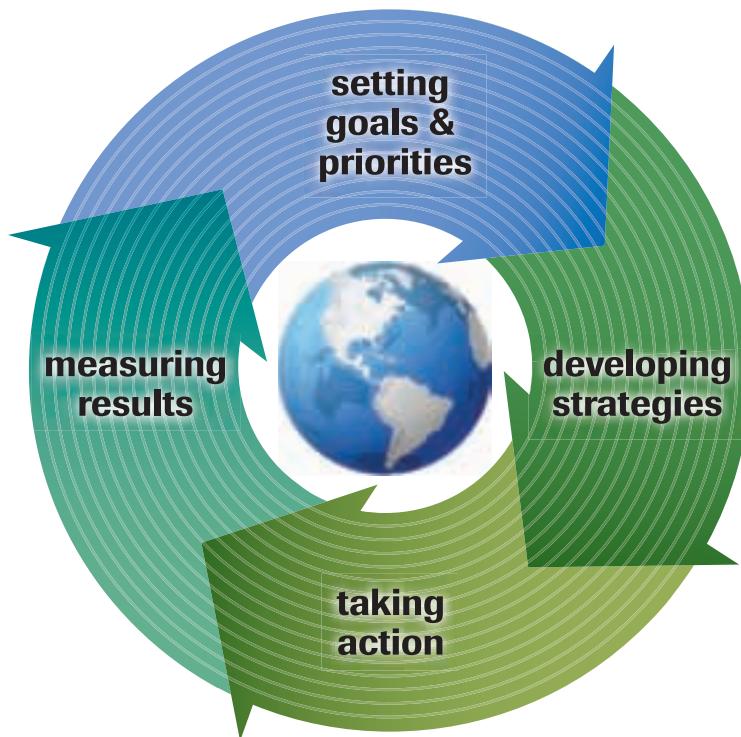
Tangible Lasting Results

Our mission of preserving biological diversity guides everything we do. We use the best available science, a creative spirit and a non-confrontational approach to craft innovative solutions to complex conservation problems at scales that matter and in ways that will endure.

To fulfill this vision, The Nature Conservancy has set the most ambitious goal in the organization's history: to work with others to ensure, by 2015, the effective conservation of places that represent at least 10 percent of every major habitat type on Earth.

Currently, eight of 13 terrestrial major habitat types are below the goal of 10 percent. Meeting the conservation goal for these eight terrestrial habitat types, as well as for freshwater and marine habitats, means at least doubling the rate of effective conservation around the globe within the next 10 years. Guided by Conservation by Design, we believe we can meet this goal and ultimately achieve our mission, thus preserving healthy ecosystems that support people – their health, their livelihoods, their futures – and host the diversity of life on Earth.

The Basics of Conservation by Design



The Nature Conservancy uses a collaborative, science-based conservation approach and a common set of analytical methods to identify the biodiversity that needs to be conserved, to decide where and how to conserve it and to measure our effectiveness. Together this conservation approach and set of analytical methods form the core of what we call Conservation by Design.

A Science-Based Conservation Approach

The basic concepts of our conservation approach are simple and follow an adaptive management framework of setting goals and priorities, developing strategies, taking action and measuring results.



Setting Goals and Priorities. Conservation goals describe the results we want to achieve for biodiversity. Based on the best available scientific information, The Nature Conservancy sets long-term goals for the abundance and geographic distribution of species and ecological systems necessary to ensure the long-term survival of all biodiversity on Earth. We also set near-term goals, such as our current goal of conserving at least 10 percent of every major habitat type on Earth by 2015, as “stepping stones” toward our global mission. To make the most effective progress toward our conservation goals, we establish priorities – those places, threats to biodiversity and strategic opportunities that are most in need of conservation action or promise the greatest conservation return on our investment.

Developing Strategies. Guided by those priorities, we work with others to design innovative conservation strategies to meet our goals. Conservation strategies are tailored to our understanding of ecology and critical threats to biodiversity, as well as the social, political and economic forces at play. We seek solutions that will meet the needs of species and ecosystems as well as people. These solutions often require some combination of global-, regional- and local-scale strategies.

Taking Action. The Nature Conservancy is committed to place-based results by taking action locally, regionally and globally, as called for by the strategies. The bulk of our resources – human and financial – are spent executing the strategies we develop together with partners. Our actions are varied and agile, but typically include:

- Investing in science to inform decision-making
- Protecting and managing land and water
- Forging strategic alliances with a variety of groups from all sectors
- Creating and maintaining supportive public policies, practices and incentives
- Strengthening the institutional capacity of governments and non-governmental organizations to achieve conservation results
- Developing and demonstrating innovative conservation approaches
- Building an ethic and support for biodiversity conservation
- Generating private and public funding



Measuring Results. We measure our effectiveness by answering two questions: “How is the biodiversity doing?” and “Are our actions having the intended impact?” The first question evaluates the status of species and ecosystems. The second question more specifically evaluates the effectiveness of our conservation strategies and actions. Tracking progress toward our goals and evaluating the effectiveness of our strategies and actions provide the feedback we need to adjust our goals, priorities and strategies and chart new directions.

Key Analytical Methods



The Nature Conservancy applies our science-based conservation approach at multiple scales to reflect patterns in nature as well as socio-political and economic realities. To do this, we use three complementary analytical methods: global habitat assessments, ecoregional assessments and conservation action planning.

representative of an ecoregion, and to establish ecoregional priorities for resource allocation – specific landscapes, threats to biodiversity and strategic opportunities that affect one or more ecoregions and demand immediate attention. Ecoregional data also provide a baseline against which we can measure progress toward our mission at the level of the ecoregion, as well as toward the long-term goals for the representative ecosystems and species within an ecoregion.

Global Habitat Assessments. To establish goals and priorities in a global context, The Nature Conservancy works with others to assemble, improve and disseminate global data on the distribution and status of biodiversity, habitat condition, current and future threats to that biodiversity and the socio-political conditions that influence conservation success. These data are used to estimate the current level of effective conservation within and across ecoregions in each *major habitat type* on Earth, and to set 10-year goals for advancing effective conservation. Global habitat assessments help us identify conservation gaps and establish priorities for allocating resources on a global scale – which specific ecoregions, threats to biodiversity and strategic opportunities affect one or more major habitat types and demand immediate attention. Such assessments also provide a baseline against which we can measure progress toward our mission at the level of major habitat types.

Ecoregional Assessments. To establish goals and priorities for the highly ranked *ecoregions* identified in a global habitat assessment, The Nature Conservancy works with others to develop and disseminate finer-scale data on the distribution and status of biodiversity, habitat condition, current and future threats and the socio-political conditions that influence conservation success within those ecoregions. These finer-scale data allow us to set long-term conservation goals for ecosystems, natural communities and imperiled or declining species

Conservation Action Planning. We translate global and ecoregional priorities into conservation strategies and actions through Conservation Action Planning. This method is used to design and manage *conservation projects* that advance conservation at any scale – from efforts to conserve species and ecosystems in a single watershed or landscape, to efforts to reform regional or multi-national policies. Similar to global habitat and ecoregional assessments, Conservation Action Planning is driven by data on the distribution and status of biodiversity, current and future threats and the socio-political conditions within the project area. These data are used to develop strategies and actions of sufficient scope and scale to abate threats, maintain or restore biodiversity and strengthen capacity to ensure long-term results. The data used in Conservation Action Planning also provide a baseline against which we can measure the effectiveness of our strategies and actions, gauge progress toward project objectives and adapt conservation strategies to changing circumstances.

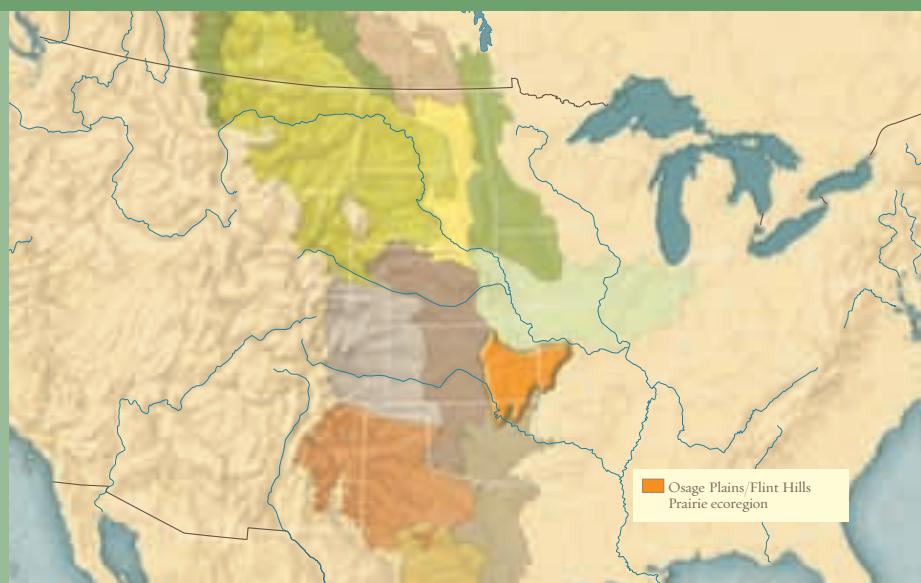
Major Habitat Types of North America



major habitat type:

A grouping of ecoregions with the same dominant ecosystems. Major habitat types reflect the broadest ecological patterns of biological organization and diversity on Earth.

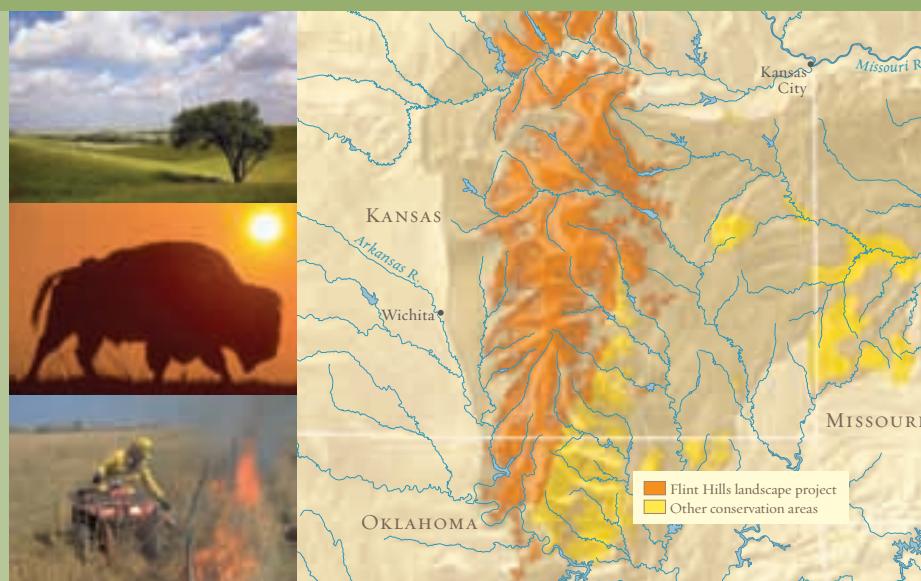
Temperate Grassland Ecoregions of North America



ecoregion:

A large area of land or water that contains a geographically distinct assemblage of ecosystems and natural communities, and is differentiated by climate, subsurface geology, physiography, hydrology, soils and vegetation.

Osage Plains/Flint Hills Prairie Ecoregion



conservation project:

A set of strategies and actions undertaken by the Conservancy and/or an organized group of partners to achieve an agreed upon conservation result. Guided by global and ecoregional priorities, The Nature Conservancy establishes projects at multiple scales to develop and implement conservation strategies.

Tallgrass prairie and American bison are conservation targets in the Flint Hills landscape. Prescribed fire is one of several strategies used to maintain the prairie's ecological integrity.



Conservation by Design in Action

The Nature Conservancy applies Conservation by Design and our unique mix of organizational values and principles to resolve complex conservation problems around the world.

Everywhere we work, we strive to find common ground with others that will result in lasting solutions to complex conservation problems. We engage a range of partners, such as ranching cooperatives, fishing communities, governments, research institutions, other conservation organizations, private sector businesses and individuals. With these diverse interests and perspectives, we develop strategies and mobilize technical and financial resources at the scales appropriate to most effectively and efficiently reduce threats and improve conditions for biodiversity. Often the best solutions are those that improve conditions for people at the same time.

The following stories describe how Conservation by Design has been employed to achieve tangible, lasting and inspiring results at multiple scales.



San Miguel Watershed

Colorado, United States

Major Habitat Type: Temperate Coniferous Forests

Ecoregions: Southern Rocky Mountains and Colorado Plateau

Targets: Riparian vegetation and shrublands

Threats: Invasive species, hydrologic alteration

Strategy: Restore riparian habitat by eradicating invasive plants

Partners: local ranchers, federal, state and local government agencies, Terra Foundation

An ecoregional assessment of the Southern Rocky Mountains identified the San Miguel River in western Colorado as a priority ecosystem. Free-flowing, the San Miguel River is lined with high-quality riverside vegetation and three imperiled plant communities. Through Conservation Action Planning, the Conservancy identified invasive trees – primarily tamarisk – as the critical threat to the river system. Tamarisk, native to southern Eurasia, was well established on the San Miguel River and was beginning to displace the native cottonwood and willow forests,

reducing the amount and quality of habitat for birds and other wildlife. In addition, because tamarisk trees consume much more water than native trees do, as tamarisk increased in abundance, groundwater levels and river flows declined. Ranchers don't like tamarisk because it "steals" pasture and water from their livestock.

Tamarisk spreads easily and rapidly along river courses. To control tamarisk, we needed to treat the entire watershed. Working with local landowners and federal and local agencies, we drew together the people and financial resources to remove tamarisk from the most important areas that served as centers for its spread.

In the first year, tamarisk was removed along 25 miles of the river. Soon after, native plants began to regenerate. These early tangible results brought additional partners and funding to the project, helping it reach the goal of



complete removal of tamarisk along 90 miles within six years. Today, the San Miguel is the only river in the southwestern United States that is free of tamarisk. The partners continue to monitor the watershed looking for the return of tamarisk and observing how native plants, birds and invertebrates have responded to the absence of the tree.

The San Miguel project catalyzed regional and national action. Several watershed groups in the region have now organized for similar invasive species removal campaigns. The Conservancy used the project to jump-start an effort to secure federal funding for tamarisk removal throughout the western United States. Our government relations teams arranged briefings for Congressional staff members who were interested in tamarisk control legislation. In 2006, the U.S. House of Representatives passed legislation to provide \$80 million of funding for tamarisk removal in the western United States.

What started with thoughtful action on the part of a small local group will now have a lasting impact at a regional and national scale.

The Nature Conservancy at work around the world

- 1 million individual members
- Works in more than 30 countries and all 50 United States
- Has protected more than 102 million acres (41 million hectares) internationally and more than 17 million acres (6 million hectares) in the United States
- Has protected approximately 5,000 miles (8,000 kilometers) of rivers worldwide
- Has helped generate more than \$20 billion in public, private and corporate funding for conservation projects in the past two decades



The Mesoamerican Reef

Caribbean Sea

Major Habitat Type: Coral Reef System

Ecoregion: Mesoamerican Reef

Targets: Coral reef system, sea grass beds, mangroves, sea turtles, whale sharks, manatees, spawning aggregations of grouper, snapper and other fish

Threats: Unsustainable fishing, coastal development, water pollution

Strategies: Create a resilient network of protected areas

Partners: Amigos de Sian Ka'an, TIDE, Friends of Nature, Fundación Cayos Cochino, governments of Belize and Mexico

many species important to coral reef communities. The decline in fish stocks has had an economic impact on coastal fishing communities as well.

Guided by ecoregional assessments, we selected four priority sites that represent the most important biodiversity in this marine ecoregion. Across these sites and spanning four countries, we are working to bring together the best science and innovative strategies to address these threats. In partnerships with local fishing cooperatives, public agencies and scientists in Belize and Mexico, we identified key spawning aggregations of fish important to regional fisheries. Guided by science and empowered by this broad-based partnership, the Belizean government declared 11 new marine protected areas in 2004. This unprecedented protection of spawning aggregation sites

Spanning 625 miles along the coast of Mexico, Belize, Honduras and Guatemala, the Mesoamerican Reef is the second largest coral reef system in the world and one of the Conservancy's global marine priorities. Coral reefs, sea grass beds and mangroves provide near-shore habitats for sea turtles, manatees and fish, many species of which are important to commercial fisheries.

But the health of the entire system is threatened by overfishing, poorly planned coastal development, water pollution and coral bleaching caused by climate change. These threats have contributed to an alarming decline in



not only contributes to the long-term health of the reef system, but it also helps sustain the fishing sector for future generations.

We are also applying marine conservation strategies and science learned in other places to the Mesoamerican Reef. For instance, Conservancy scientists working in the Indo-Pacific's "Coral Triangle" are researching factors that make coral reefs resilient and resistant to bleaching – a damaging response to warming water temperatures caused by global climate change. In turn, the conservation strategies employed on the Mesoamerican Reef are contributing to international efforts to develop and manage resilient networks of marine protected areas that will survive in the face of climate change.

Tropical Forest Conservation Act

Major Habitat Types:

Tropical Moist Broadleaf Forests, Tropical Dry Broadleaf Forests, Tropical Coniferous Forests

Ecoregions:

296 ecoregions
Targets: Jaguars, macaws, flooded forests, giant swallowtail butterfly, yellow boa constrictor, red howler monkeys, cloud forests and hundreds of other conservation targets

Threats:

Agricultural development, infrastructure development, unsustainable logging

Strategies:

Raise significant sums of public and private money to finance conservation action

Partners:

U.S. Treasury Department, U.S. Congress, national governments, in-country and international conservation organizations

Tropical forests are well-known around the world for their extraordinary diversity of life, for absorbing carbon dioxide from the atmosphere and for the many benefits they afford people. For example, tropical forests store, recycle and replenish fresh water upon which both nearby communities and distant cities depend. But tropical forests are among the most endangered ecosystems on Earth. Deforestation and conversion of the forests to agricultural lands, among other threats, have led to impaired water quality, soil erosion and the loss of flora and fauna, which in turn exacerbates global climate change and can lead to harmful consequences for the people who rely on the forests for sustenance and livelihoods.

Around the world, vast reserves have been officially created to protect tropical

forests, yet many countries lack the resources to abate ongoing threats such as deforestation. Many countries in Latin America, Asia and Africa, in particular, have been burdened with repaying mounting debts owed to the United States and other foreign governments. As repayment has consumed more and more of their national budgets, the result has been less revenue for pressing in-country needs, such as conservation.

In 1998, the Tropical Forest Conservation Act was signed into law as a way of providing funding for tropical forest conservation while reducing developing country debt owed to the U.S. Treasury. Under the act, the U.S. Department of Treasury calculates the discounted value of a country's debt owed to the United States. Using funds that Congress appropriated for the act and private contributions raised by The Nature Conservancy and other conservation organizations, the discounted loan is repaid. In exchange, the country agrees to invest in forest conservation by paying into a trust fund or making direct payments to local non-profit conservation groups.

The Nature Conservancy was an early and active supporter of the act. When the legislation was being negotiated in Congress, the Conservancy recommended improvements to it and worked to enlist its co-sponsors. We lobby for annual appropriations to implement the act. We also



frequently assist in brokering agreements between the United States, other national governments and local conservation groups, and we provide crucial private dollars that allow the deals to come together. For example, Conservancy members in Maryland and Ohio contributed \$1.3 million in private funding to help finance an agreement in Belize that generated nearly \$7 million for conservation. The Belize deal was the first time that a private organization partnered with the U.S. government to finance a Tropical Forest Conservation Act agreement. The Nature Conservancy has invested \$6.9 million in several agreements under the act. These funds will generate almost \$90 million for forest conservation over the next 10 to 20 years.

The Tropical Forest Conservation Act enjoys the support of both political parties in the United States, and it has been supported by two U.S. Presidents, four Treasury Secretaries and passed the U.S. Senate by unanimous consent. Through its efforts on the Tropical Forest Conservation Act, the Conservancy has helped create a mechanism that benefits developing countries and furthers conservation, even when we are not directly involved in the individual projects. To date, agreements signed under the Tropical Forest Conservation Act have generated more than \$125 million for forest reserves and national parks in Bangladesh, Belize, Botswana, Colombia, El Salvador, Guatemala, Jamaica, Peru, the Philippines, Panama and Paraguay.





Our vision is not simply of a world in which nature is protected apart from people, but a world in which the ecosystems that sustain all life — people as well as plants and animals — are valued and endure for generations. Conserving ecosystems and the life they support around the globe is a daunting challenge.

Conservation by Design will continue to guide us along the way, helping us to see where to work and how to take action while sustaining the hope that global conservation efforts can succeed. The rewards are affirming: healthy lands and waters that give people what they need to survive and thrive, places teeming with biodiversity — a place for us all on this planet Earth.

Inspired by this challenge and by the wonder and beauty of the natural world that supports us all, we move forward together with many others, eagerly and with confidence.



Conservation by Design in Practice

Establishing Conservation by Design as a core business practice requires the adoption and effective application of the science-based conservation approach and key analytical methods across every Conservancy program and project. The Nature Conservancy has put into place a number of mechanisms to ensure the adoption and continual improvement of Conservation by Design, including Web-based resources, thematic conferences, peer-review workshops and practitioner networks to share lessons learned and improve our practices. An essential feature of Conservation by Design is working collaboratively with partners – communities, businesses, government agencies, multilateral institutions, individuals and other non-profit organizations. Our global conservation initiatives are focused on accelerating learning and advancing cross-cutting strategies to address widespread threats to biodiversity and across major habitat types. www.nature.org/conservationbydesign

For more information on our conservation approach, analytical methods and institutional mechanisms that support their development and application:

Conservation by Design Gateway www.conservationsgateway.org

Guidance, methods, tools and case studies for conservation practitioners, including Global Habitat Assessments, Ecoregional Assessments, Conservation Action Planning and Conservation Learning Networks.

ConserveOnline www.conserveonline.org

An on-line meeting place for the conservation community, open to anyone who wants to find or share information relevant to conservation science and practice, including Conservation by Design.



The mission of The Nature Conservancy

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*The Nature
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