

Although they are thousands of miles apart, the prairies of the Great Plains and the savanna of Brazil require ecological restoration through similar methods and techniques. The Nature Conservancy's Missouri program is working across borders – both within the United States and internationally – to achieve enduring conservation success.

This cross-border approach enables the Conservancy to work effectively and efficiently, while helping create and disseminate a greater understanding of international conservation issues and lessons that can be applied locally. For example, lessons learned from prairie restoration and weed processing at Wah' Kon-Tah Prairie and Dunn Ranch in Missouri provide conceptual models for restoration work in the grasslands of Brazil. Through this enduring partnership, programs assist each other in reaching their full potential.

The Upper Mississippi River

From the northern woods of Minnesota to the floodplain of Missouri, the Upper Mississippi River (UMR) is a crucial artery sustaining many of the nation's natural communities and its economic strength. The great river forms Missouri's eastern border, joining with the Missouri River at St. Louis. A majority of North American bird species use the Mississippi flyway as a stopover during migration. The UMR system supports 25 percent of the continent's fish species, including sturgeon and paddlefish, which co-existed with the dinosaurs. More than 30 million people live and work in the UMR basin and rely on it for power production and recreation.

Some agricultural practices have put the river system at risk. Levees have isolated more than 85 percent



Grande Sertao Veredas National Park, Brazil (©Bill Possiel)

of the floodplain, altering seasonal flows and habitat for native plants and animals. Excess fertilizer and sediment travel down the river to the Gulf of Mexico, leading to hypoxia – oxygen depletion – and creating a growing “dead zone.” Each summer, around the mouth of the river, the dead zone threatens commercial fishing and important marine habitat.

Given that two-thirds of the basin is used for agriculture, the UMR presents a challenge and an opportunity. The National Research Council named the Mississippi River as one of only three large floodplain rivers in the United States with sufficient opportunity for ecological recovery. The need for

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For More Information

The Nature Conservancy in Missouri
2800 S. Brentwood Blvd.
St. Louis, MO 63144
Phone: (314) 968-1105
E-mail: missouri@tnc.org

nature.org/missouri

action is urgent. If the management of the river doesn't change, some scientists predict its ecological collapse within the next 50 years.

The Conservancy is working to conserve natural areas and to develop, test and promote large-scale agricultural production and waterway transportation practices that are ecologically compatible. The ambitious plan includes three main components: water flow, restoring floodplains and implementing land use practices that balance economical and ecological needs. Conservancy programs in Missouri, Illinois, Iowa, Wisconsin and Minnesota are joining forces to reach these goals, along with universities, government agencies and private organizations.

The Missouri River

Two hundred years ago, the Lewis and Clark Expedition headed up the Missouri River to explore unknown territory in one of North America's most diverse and dynamic ecosystems – an ever-changing landscape of meandering channels, chutes, sloughs, islands, sandbars, backwater wetlands and woodlands. It has been greatly altered since then.

One-sixth of the nation's water eventually finds its way to the Missouri River, which flows 2,341 miles from its Montana headwaters to meet the Mississippi River at St. Louis. Today, the river plays an important role in the Great Plains economy. The 735 miles below Sioux City, Iowa have been engineered into a single swift, deep channel, eliminating sandbars and vegetation that wildlife need to feed, reproduce and rest. Habitat loss and altered water flows have contributed to the decline of paddlefish, sturgeon, flathead catfish and other species. Bald eagles lack nesting trees and continue to decline along the Missouri River.

The Conservancy is working along the Missouri River creating partnerships among public and private organizations that have united to protect and restore some of the landscapes that Lewis and Clark encountered in 1804. The Conservancy's goal is to catalyze community-based conservation efforts. Four

Conservancy states – Missouri, Iowa, Nebraska and Kansas – lie along the channeled stretch of the river from Yankton, South Dakota, to St. Louis. The Conservancy and the U.S. Army Corps of Engineers are working together to identify opportunities to cooperate on efforts that meet the goals of both organizations, including developing and managing water resources to meet human needs, protecting priority species and restoring natural habitat.

A highlight of the Conservancy's work along the Missouri River includes the 10,000-acre Big Muddy National Wildlife Refuge, which the Conservancy helped create in 1995 with the purchase and transfer of 1,200 acres of bottomland forests, lakes and sloughs. The refuge is eventually expected to encompass 60,000 acres along the river within the state of Missouri.

The Missouri-Brazil Partnership

The Cerrado, Brazil's Great Plains, spans 1.1 million square miles, or almost one-fourth of the country. This mix of forests, grasslands and veredas – dense, riparian palm plant communities – harbors 10,000 species of plants, 935 bird species, 298 mammal species and 268 reptile species. The Cerrado has the highest level of plant diversity of any savanna in the world. But with little more than one percent of its area protected, the Cerrado is experiencing habitat loss at a rapid rate.

To protect this array of biological riches, the Conservancy in Missouri and Brazil have joined together to find strategic answers to their common problems – large-scale agriculture, habitat fragmentation, ecologically inappropriate fire use and grazing practices, and altered water flows.