



# The Orinoco River

## A South American jewel

nature



WWF-Canon/Bruno Pambour



WWF-Canon/  
Juan Pratzginesos

source

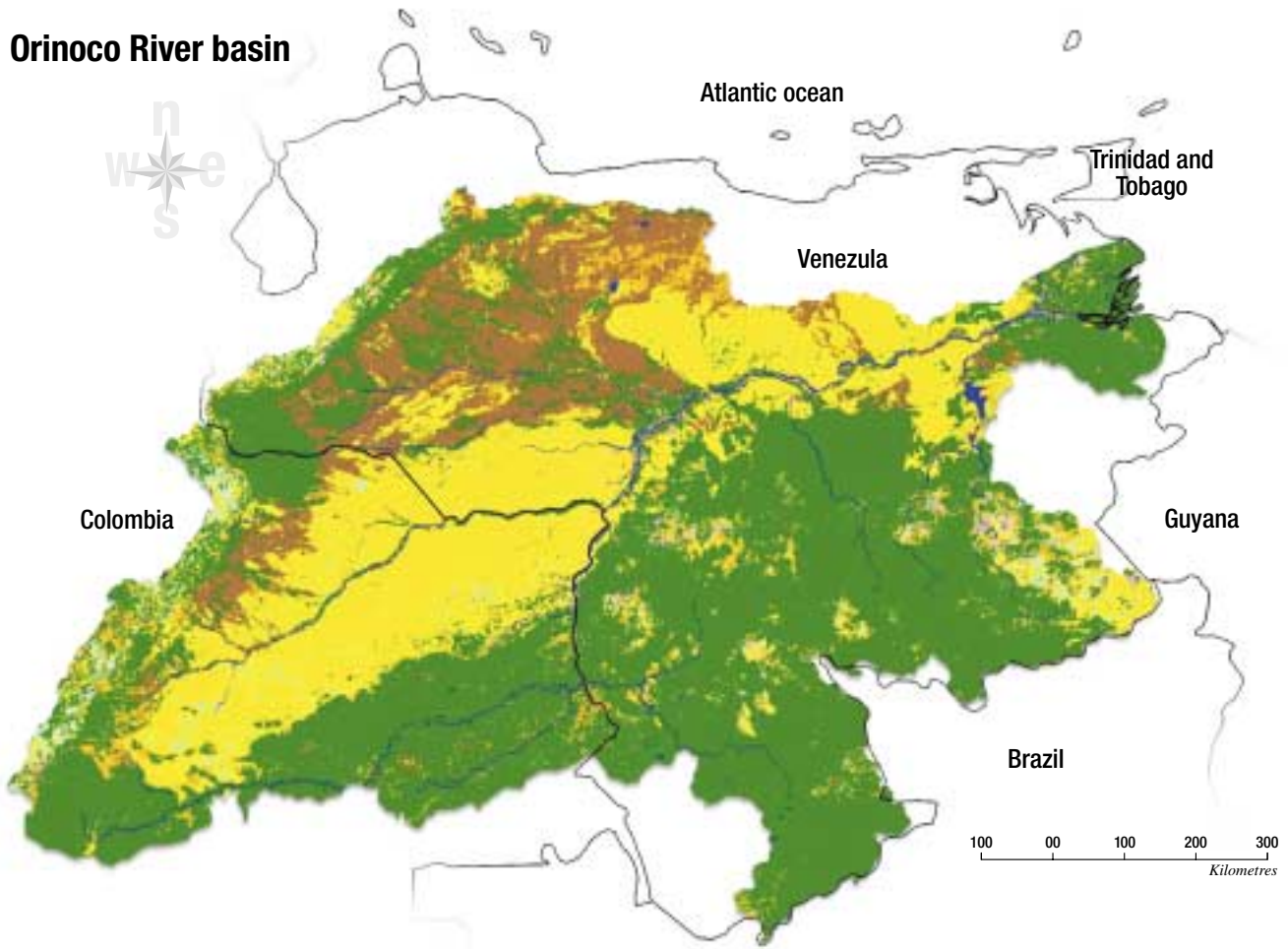
*The Warao people of the Orinoco River delta view their world as surrounded by water, which it nearly is. In the middle of their cosmic sea is the land mass on which they live, flat and shaped like a disk. Beneath their earth lies a lower world inhabited by a double-headed snake which encircles the earth, exposed at times like a sandy beach, with its two heads spaced apart to create an opening towards the east, just as the mouth of the Orinoco River creates an opening to the Atlantic Ocean. The snake's movements are believed to cause the ebb and flow of the tides.*

*From "An Ethnomusicological Survey of the Warao Indians of Venezuela: An Introduction to Warao Music and Culture" by Dale A. Olsen*

# Living Waters

Conserving the source of life

## Orinoco River basin



The lower Orinoco River was the site of some of the early Spanish settlers on the South American continent in the 1500's. The area was attacked by the Dutch throughout the 17th century and the town switched locations on the river no less than four times. Today, with the emergence of regional free trade agreements, the economic motivation to develop the Orinoco River basin is no less than it was in the days of cannons and piracy.

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### IGBP landcover

- Forest
- Shrublands/open savannas
- Woody savannas
- Grasslands
- Permanent wetlands and waterbodies
- Natural/human vegetation mosaic
- Croplands
- Urban and built-up

Geographic information based on 1-km AVHRR-Satellite data spanning April 1992 through March 1993

*From its headwaters in the Parima Mountains of South-eastern Venezuela to its vast delta, the Orinoco River – the world's third largest in water volume – traverses a distance of nearly 2,560 kilometres.*



WWF/Chris Elliott

## An Unsullied Masterpiece

The Orinoco River and its associated habitats remain relatively intact and provide the world with a wide range of vibrant habitat types. Two hundred major and six hundred minor tributaries flow into the Orinoco. Close to the Colombian border, three very different river systems meet: the sandy Guaviare

**The Orinoco delta, a remote wilderness of large rivers, tropical wetlands, dense jungle, savannah and coastal mangroves, is the world's seventh largest river delta.**

tropical forests; dramatic sandstone table mountains called Tepuis; the world's tallest waterfall; and spectacular mud volcanoes. The Orinoco delta, a remote wilderness of large rivers, tropical wetlands, dense jungle, savannah and coastal mangroves, is the world's seventh largest river delta.

The plants and animals inhabiting the river system are no less varied than the landscape. The giant Amazon turtle nests in the middle stretches of the river. The Orinoco crocodile, South America's largest predator, still inhabits the middle and lower river, though it is thought that only 250 are left in the wild. Two species of river dolphin, the Amazon River Dolphin and the Grey Dolphin or Tucuxi, inhabit the delta. River otters and manatees can still be found along the Orinoco's course, and the

River, which crosses the Colombian plains, the black-water Atapo, and the Orinoco proper, still running crystal clear from its sources in the mountains. The river's course is marked by the scenic Llanos plains of Venezuela; colourful

river and associated habitats are important centres of bird biodiversity.



WWF—Canon/Brano Pambour

## Emerging Plans for Exploitation

The Orinoco Delta has been largely shielded from severe anthropogenic pressures, but this is changing.

The region, in which two-thirds of the population is characterised as living in poverty and 45 per cent as living in extreme poverty, constitutes a high development priority for Venezuela. A variety of economic activities could intensify in various parts of the river basin, including agriculture, mining, urban growth, and petroleum development. In addition, the government of Venezuela has plans for navigation on the river. Construction of navigation facilities could not only severely disrupt the ecology of the river system, but also induce development in relatively pristine portions of the basin.

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## Blazing a Better Trail

**Many approaches and technologies for integrating biodiversity conservation with plans for economic development are available** to help communities in the Orinoco River basin maintain their natural heritage while improving their standard of living and connecting them with the global economy. These include:

**Ensuring the protection of important habitats and corridors.** Already, approximately 10 per cent of the Llanos ecosystem is conserved by families and corporations that mix ecotourism with cattle ranching in sustainable management schemes. This model can be expanded to form a privately owned conservation network for the Orinoco River system that will protect gallery forests and rivers and streams as biological corridors and maintain land in a natural state even as the economic uses of the area grow.



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### **Carefully evaluating development options and their potential impacts.**

Alterations of natural ecosystems, such as the channelization of a river for navigation purposes, can produce significant impacts far from the site of the disturbance. Potential impacts of channelization projects to enhance navigation include saltwater intrusion in the delta, degradation of aquatic and floodplain habitat, reduction of ecosystem capacity to reduce flood damages, channel erosion and siltation, and interference with groundwater systems. Many of the basin-scale impacts of development can now be simulated using hydrologic models, providing decision-makers with a tool to compare different outcomes.

### **Making use of technologies that minimize environmental impacts.**

Because the Orinoco River system is relatively pristine, it is possible to avoid many of the negative impacts and long-term costs of economic development by employing new approaches. Rather than altering the river system to accommodate large barges, for example, vessels could be designed specifically for use on the Orinoco system. This approach would reduce potential environmental damages and the financial costs of maintaining the waterway in the future.

**Living  
Waters**

Conserving the source of life

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption.

**Conserving the source of life**

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