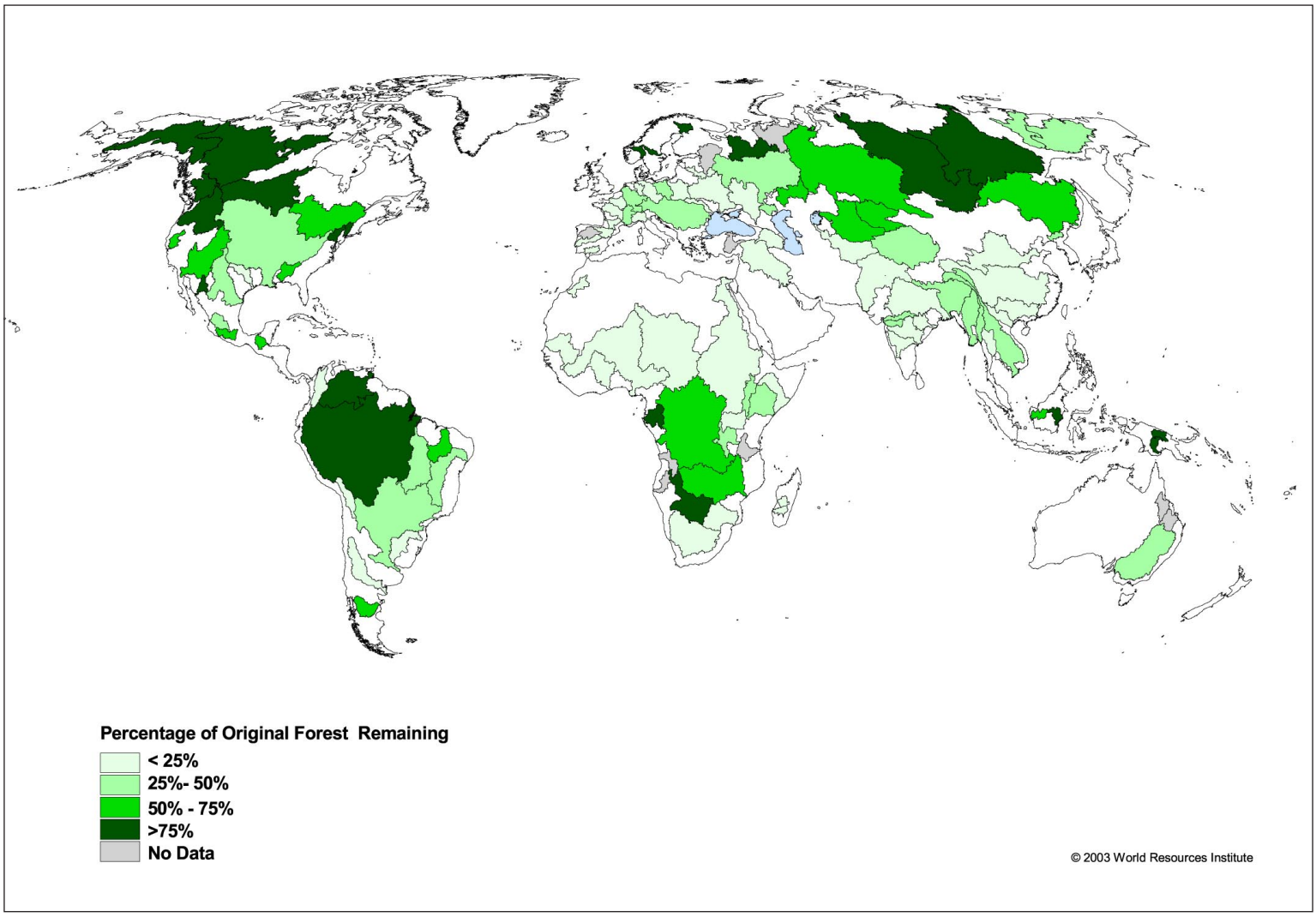
Watersheds of the World : Global Maps

09. Remaining Original Forest Cover by Basin



Map Description

Forests and other vegetation are crucial components of the watershed, as they maintain water quality and moderate water flows, reducing runoff during high-water periods and maintaining flow during dry periods. In addition, forests provide habitat for many terrestrial species. In many floodplain areas, forests also provide much of the food and breeding grounds on which fish and other species depend. The extent of historical deforestation is thus a useful indicator of watershed degradation.

This map shows the percentage of original forest cover remaining in each basin. This percentage was calculated by dividing the extent of current forest cover by the extent of original forest cover for each basin. Current forest refers to closed canopy forest in existence today. Original forest cover refers to an estimate of the extent of closed canopy forest in existence 8,000 years ago, assuming current climate conditions. Forty-two watersheds have lost more than 75% of their original forest cover. Fifteen of these have lost more than 95% of their original forests. Most of these basins, with the exception of the Tigris and Euphrates, are found in Africa, Central America, and Europe. In terms of area of forest loss, nine basins have lost more than 500,000 km^2 of forest, including among others the Mekong, Ganges, Amazon, Paraná, Ob, Volga, and the Mississippi River basins. The Yangtze and the Congo have lost more than 1 million km^2 of forest each.

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It is important to note that some areas denoted as having remaining original forest cover, particularly in Western North America, Mexico, and Scandinavia, are actually covered by intensely managed fiber plantations. The management practices in these plantations can have detrimental effects on water quality and terrestrial and aquatic species. Therefore, these data should be interpreted with caution.

Mapping Details

The map was created by calculating the difference between the original forest extent and the current forest extent and overlaying it with basin boundaries. The original and current forest extent maps were produced by the World Conservation Monitoring Center of the United Nations Environment Programme (UNEP-WCMC) in 1996 in collaboration with the World Wildlife Fund and the Center for International Forestry Research. The current forest cover map was created using many global and regional biogeographic maps and expert opinion. The original forest map is an indicator, not a direct measure of original cover. It depicts where forests might be expected to occur today in the absence of human impact, based on climate, topography, and other variables. These maps were developed for inclusion in the World Resources Institute report, *The Last Frontier Forests: Ecosystems and Economies on the Edge,* published in 1997.

Map Projection

Robinson

Sources

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Revenga, C., S. Murray, J. Abramovitz, and A. Hammond, 1998. Watersheds of the World: Ecological Value and Vulnerability. Washington, DC: World Resources Institute, based on data from Bryant, D., D. Nielsen and L. Tangley. 1997. The Last Frontier Forests: Ecosystems and Economies on the Edge. Washington DC: WRI.

World Conservation Monitoring Centre. 1996. The World Forest Map. Cambridge, UK: WCMC.