

Freshwater Ecoregions of the World

Advancing the science of freshwater conservation

feow.org

The first comprehensive framework of Earth's freshwater biodiversity

Freshwater habitats support more than 100,000 species and provide humans with critical services such as drinking water and fisheries. Yet freshwater habitats and species are among the most imperiled in the world and have often been left out of large-scale conservation planning.

Until now there were no data on global freshwater biodiversity mapped at a scale that was useful to conservation. Collected research tended to focus only on major rivers or select hotspots, leaving out many other freshwater systems. Plus, information was not easy to access and search. As a result, it has been difficult to gain a truly comprehensive understanding of patterns of freshwater biodiversity across the globe.

The Freshwater Ecoregions of the World (FEOW) project was created to address this need. A collaborative effort between WWF and The Nature Conservancy, the project brought together 200 leading freshwater scientists to create the first-ever comprehensive map and database describing the world's freshwater biodiversity. This extensive and easily searchable resource now provides access to information that can help ensure freshwater systems are well understood, promoted and protected.

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- 426 freshwater ecoregions
 - The combined expertise of more than 200 leading scientists
 - Distribution data and threat analyses for more than
 - 13,400 freshwater fish species
 - 4,000 amphibian species
 - 300 turtle species
 - 20 crocodylian species

Facts about every freshwater ecoregion. Just one click away.

Over a 10-year period, collaborators on the FEOW project have gathered and synthesized information about every freshwater ecoregion on Earth.

The collected results of this extensive effort are now available on the FEOW website, feow.org. The site features easy-to-use interactive maps that allow anyone, anywhere to



- Investigate the biodiversity of the Earth's 426 distinct freshwater ecoregions
- Identify exceptionally biodiverse and imperiled systems that require special attention
- Provide immediate information to conservation field programs who need to take action
- Collect comprehensive data to set conservation priorities, both globally and regionally
- Identify appropriate areas for broadscale freshwater conservation plans
- Consider biodiversity when making water resource management decisions

FEOW is designed to be a continually growing resource. As the study of freshwater biodiversity advances, FEOW will build this knowledge into the website.



The FEOW Map

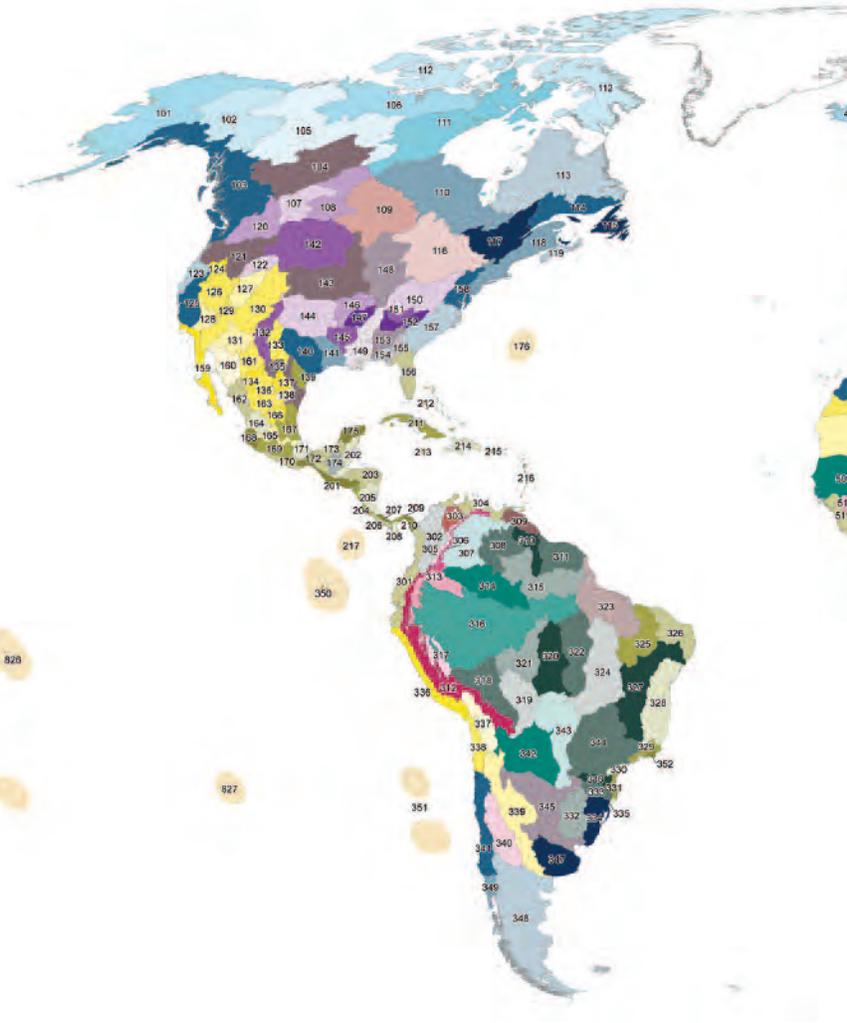
A central feature of the FEOW website is the freshwater ecoregion map. Designed to serve as a complement to both the Terrestrial and Marine Ecoregions of the World maps, the FEOW map outlines 426 freshwater conservation units across the globe. These units are defined as large areas encompassing one or more freshwater systems and containing distinct natural freshwater communities and similar species. FEOW used the distributions of freshwater species (primarily fish), as well as evolutionary and ecological freshwater processes, to delineate the ecoregions.

The FEOW map is available online at feow.org in an interactive format that allows users to learn quickly and easily about a specific ecoregion of interest or explore new ecoregions around the world.

Key Findings

FEOW project research has produced a number of key findings, all of which are available at feow.org. Visitors to the site can investigate

- Confirmations of previous global assessments on fish richness and/or endemism (relating to species found only in one ecoregion)
- First-time identifications of additional ecoregions with highly endemic or exceptionally rich faunas
- Relationships among richness and endemism levels for different freshwater animal groups
- Global patterns for a series of threat and status indicators
- Relationships among different threats for individual ecoregions
- Distinctive biodiversity features of individual ecoregions



A detailed look at the features of feow.org

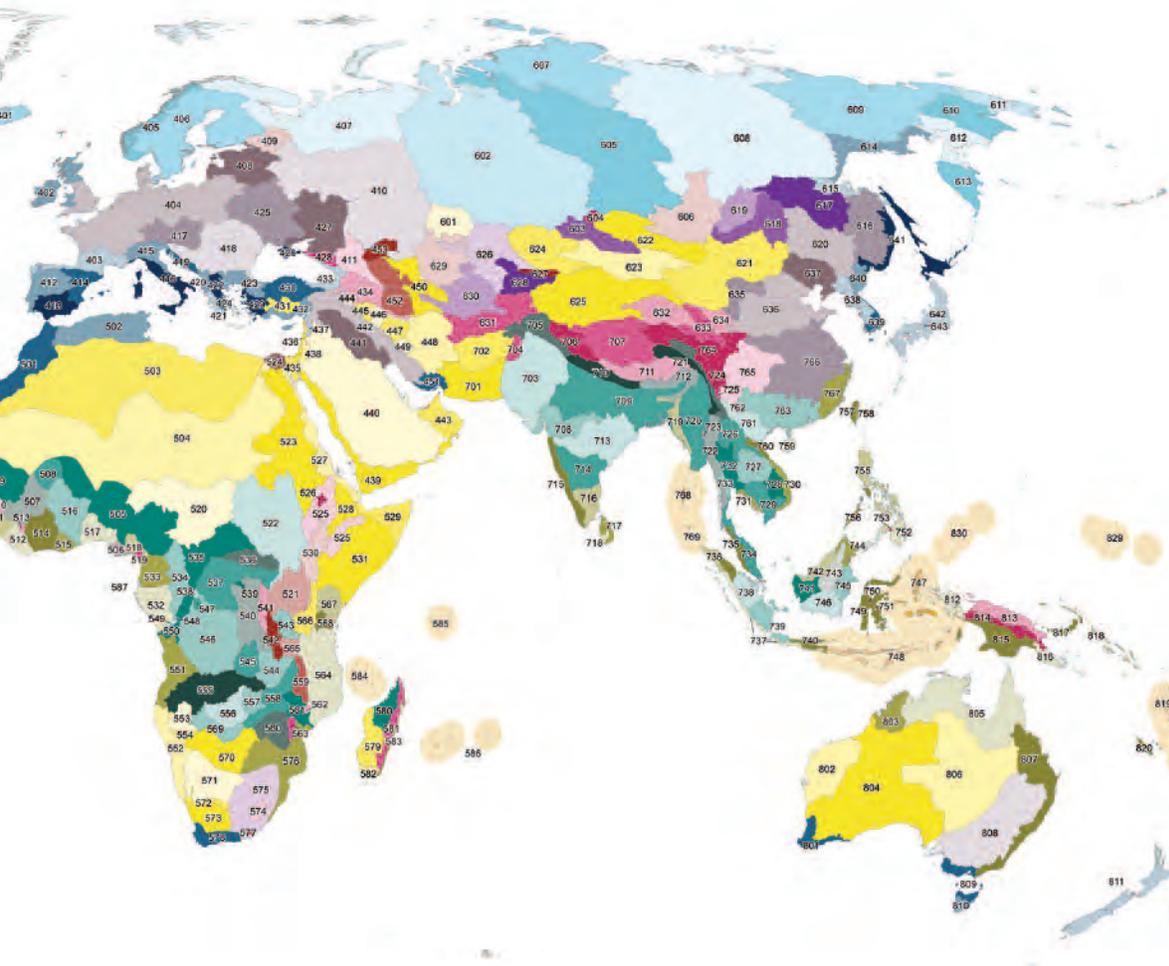
Biodiversity data

Freshwater systems make up only 0.01 percent of the Earth's water, but this small percentage supports more than 100,000 species, with many systems yet to be well studied. FEOW has now brought this rich diversity to light by gathering species data on the world's freshwater systems.

Species data have been compiled on all freshwater fish, amphibians, turtles and crocodiles. FEOW has calculated numbers of species per ecoregion and identified which species are endemic. These baseline data can assist in identifying which ecoregions are of greatest conservation concern.

Major Habitat Type Key

The freshwater Major Habitat Types are groupings of ecoregions that reflect the dynamics of ecological systems and the broad habitat structures that define them; they are roughly equivalent to terrestrial biomes.



Threat analyses

Because freshwater systems generally sit at the lowest point on the landscape, they are affected not just by disturbances to the water that defines them, but also by pressures on the terrestrial landscape within their watersheds. We have gathered data on a variety of threat indicators, including land cover conversion, the proximity of large cities, urban land cover, areas equipped for irrigation, human footprint, and consumptive surface water use. These data can expand understanding of regional impacts on freshwater systems and species and provide a foundation for designing conservation strategies.

Ecoregion descriptions

For many parts of the world, information describing individual freshwater systems and species has never before been compiled in one place or been

easily accessible to those outside the research community. With FEOW, anyone can immediately access this information for the ecoregion where he or she lives—or any other region in the world—via the website’s user-friendly search engine. We have compiled descriptions that include details on ecoregion boundaries, topography, climate, species groups, habitats, ecological and evolutionary phenomena, and other features.

Useful downloads

FEOW products are available for download from the website. These products include the global ecoregion map shapefile, which allows geographic information systems software users to create their own maps and data analyses; images of all biodiversity and threat maps; and scientific papers describing the project.

feow.org

Access a wealth of information on global freshwater biodiversity

A partnership between



Major funding for FEOW provided by



Additionally, over 200 scientists made invaluable contributions to this project.

A full list of our contributors can be found at feow.org



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