What is MACRO?

The **MACRO** project joins together a diverse group of scientists and students from Mongolia, the USA, and Europe – focusing on macrosystem ecology as it relates to river basins in major temperate steppe regions of the world.

Aquatic ecology is the study of relationships between organisms and their environment in a body of water, such as a river.

Macrosystem ecology is a hierarchical study of diverse ecological patterns at large scales, from ecosystems to ecoregions to continents.

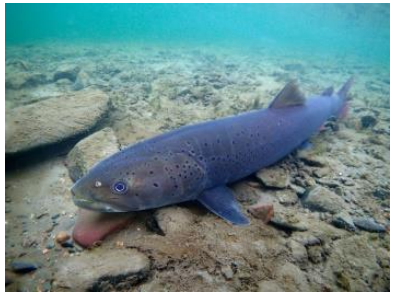
Hierarchical spatial scale is used to classify the different areas of the MACRO study based on their size (biomes, ecoregions, rivers, habitats).

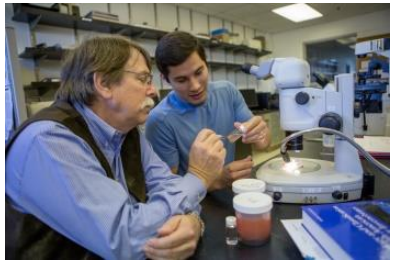
A **river is a macrosystem**, and is a network of connected habitats.

This brochure describes the hierarchical nature of the MACRO research in river macrosystems.

Getting Involved in MACRO!

Research, Conservation, Education





For opportunities and more information, check out our website:
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MACRO

MACROECOLOGICAL RIVERINE SYNTHESIS

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Temperate Steppe Biome

A **biome** is a large naturally occurring community of plants and animals occupying a major range. The extent of our biome MACRO studies is the shaded regions of the maps, including the Great Plains region of the American West and most of Northern Mongolia

Ecoregions
(3 per biome)

Within a biome there are **ecoregions**, which are areas with similar climate, soils and geology. The ecoregions MACRO studies include grasslands, terminal basins, and mountain steppes. The climate of these is fairly dry, with cold winters and hot summers.

Rivers
(3 per ecoregion)

Rivers carry water and nutrients to areas all around the earth. Rivers are a basic building block of our planet's physical landscape, and human societies everywhere are deeply influenced by their presence. Within each of the ecoregions, MACRO looks more closely at the rivers.

Habitats
(2-4 per river)

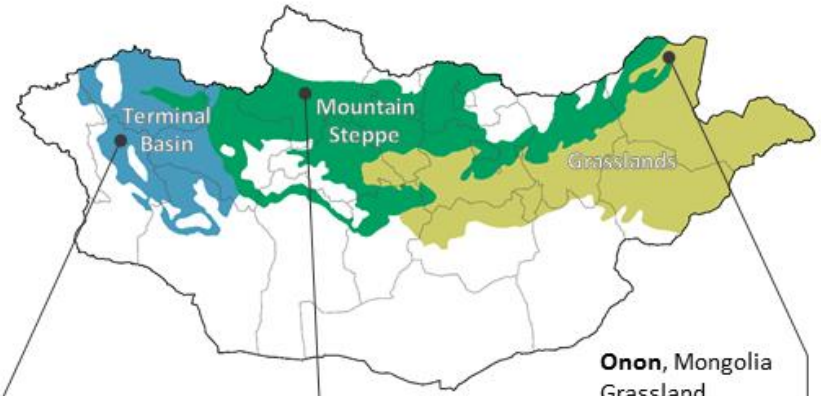
A **habitat** is the area or natural environment in which an animal or plant normally lives. A habitat can often be home to many different organisms. In MACRO, we look at many different habitats within a river.

Research Areas

Within each habitat, MACRO looks at different ecological aspects:

Biodiversity
Fish
Invertebrates
Plants
Food Webs
Gas Exchange
Hydrology
Geology

Where in the world is MACRO?



Carson, Nevada
Terminal Basin

Ten Sleep, Wyoming
Mountain Steppe

Niobrara, Nebraska
Grassland

Khovd, Mongolia
Terminal Basin

Eg, Mongolia
Mountain Steppe

Onon, Mongolia
Grassland