

Climate Change, Human Rights, Justice...

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**Water sustains
and nourishes
people and the
environments
on which they
depend**



United Nations sponsored study

Water, Cultural Diversity and
Global Environmental Change –
Emerging trends, sustainable
futures? (UNESCO/Springer 2012)

Koryak family, Russia's Kamchatka
Peninsula. Photo: A. Shemaev



Water is sacred...



Ganges River, India. Photo by Kelly Alley,

**Water culture - reproduces sociocultural values...
sustains societies, economies, environments**



Female campesina promotor training her fellows on water design, Ecuador
Photo credit, Rutgard Boelens

Water fuels the synergistic relationships that shape and sustain biocultural diversity

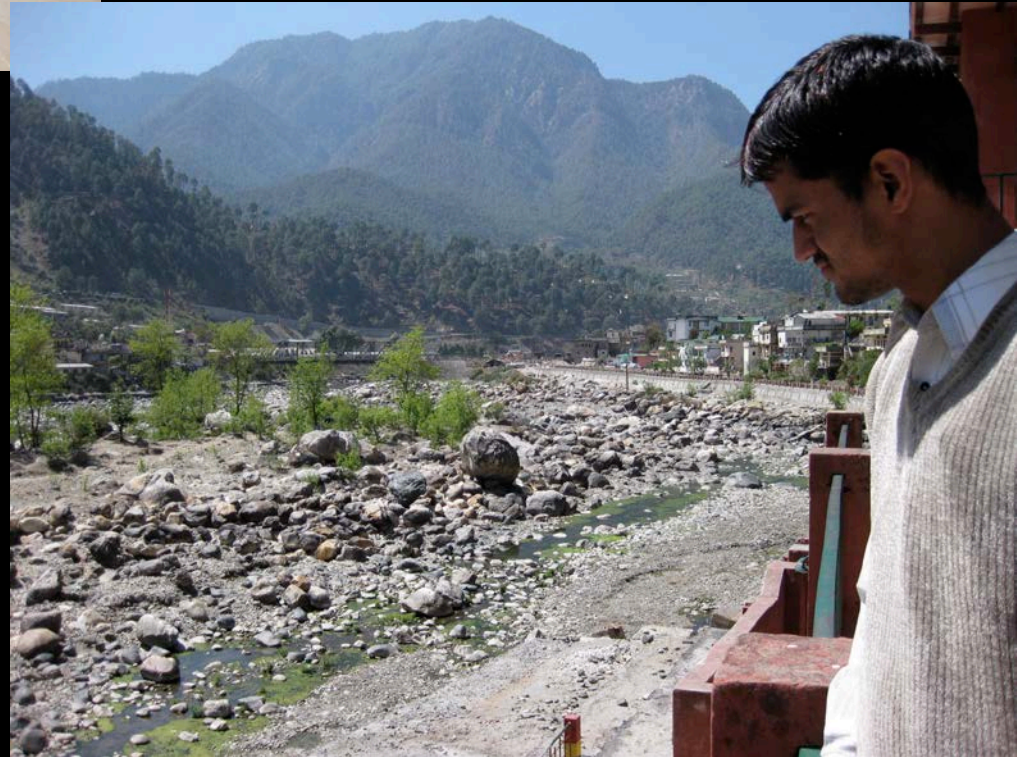


Indigenous fishing - annual migration up Pilcomayo River, Bolivia. Photo credit: Fundación Yangareko.



THREATS to
water and
biocultural
diversity?

***Dams, climate change
and declining flow
on the Ganges***



**A major contributing factor to
degenerative change in the
water/bioculturaldiversity
intersect?**

World War II - year 2000

54,000 large dams built...

20% of the world's electricity

**10% of the world's food grown with
irrigation.**

Who are these displaced people?



What has happened to these millions of people?



Infrastructure development as state-sponsored violence



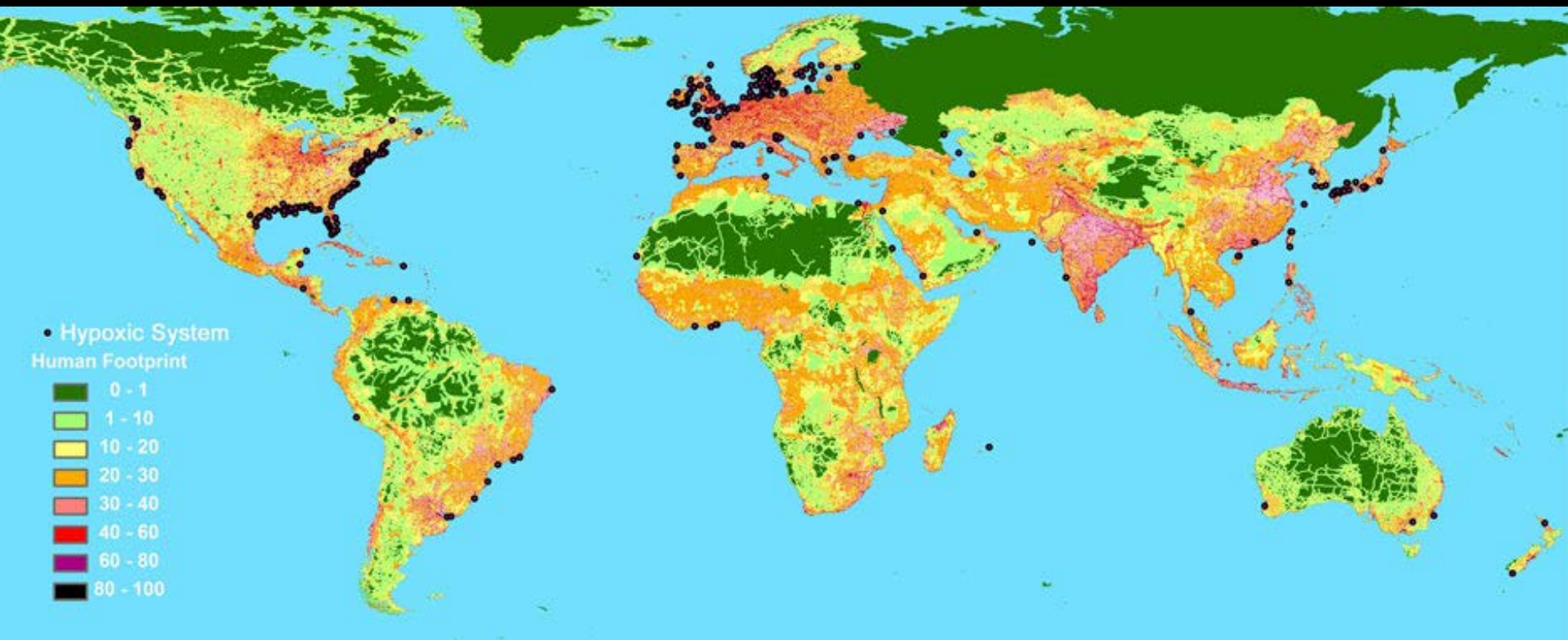
Chixoy Dam development, Guatemala



- Number of households who caught and sold fish dropped from 49% to 03%.
- Consumption of fish several times each week dropped from 74% to 23%.

Estuary discharge and dead zones.

Diaz and Rosenberg, Science, 2008



AFRICA



Indigenous peoples should be recognized as rightsholders who share in the benefits of hydrodevelopment and have the power to say no.



Murray River Band, Australia - traditional ecological knowledge & cultural flows

- **Implications for environmental change planning, assessment and management:**

sustainability = biocultural health

Water stewardship can be achieved when development and management is flexible, prioritizes environmental *and* cultural flows over other economic concerns, thus, sustains both the environment and humanity.

Local people must:

... Have access to the resources, information, and technical assistance to engage in the project planning at the earliest stages.

...respect indigenous peoples status as rightsholders – including the right to meaningfully participate in decisions that affect them, share in the benefits, and have the power to say no.