

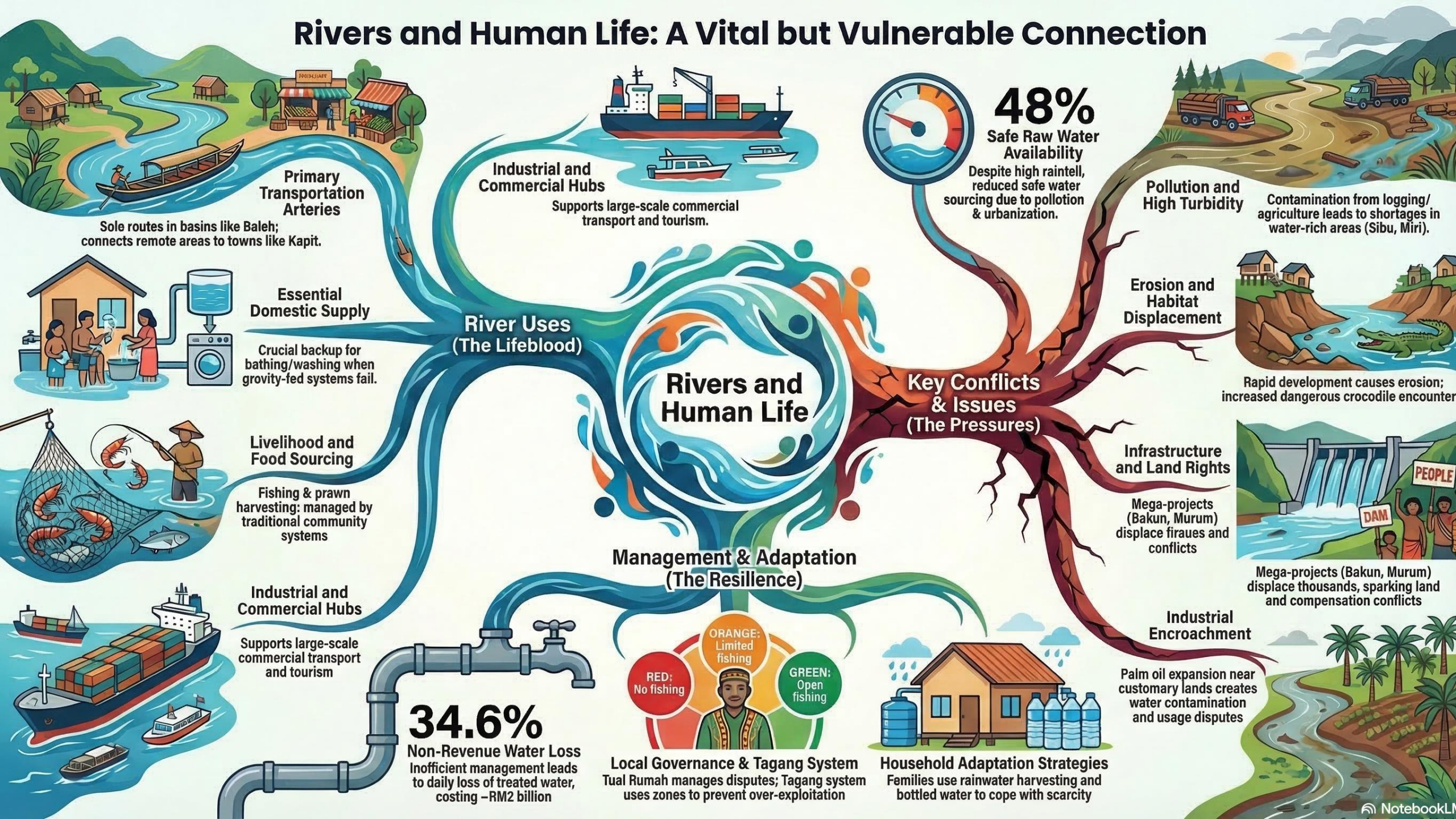
A photograph of three people in a small, dark-colored boat on a river. The person at the back is wearing a blue long-sleeved shirt, camouflage pants, and a blue cap. The two people in the front are wearing red life jackets; one is a woman in a hijab and sunglasses, and the other is a man with glasses. The water is brown and turbulent, suggesting rapids. The background is dark and out of focus.

Beyond GDP: Water and Human Conflict in Rivers

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Rivers and Human Life: A Vital but Vulnerable Connection



The Economic Lens: Navigating and Resolving Water Conflicts



Common Pool Resource (CPR) Theory

Views rivers as open-access resources prone to the "tragedy of the commons," where individual overexploitation leads to total resource depletion.



Negative Externalities

Occurs when upstream water use or pollution reduces the quality or availability of water for downstream users without any form of compensation.



Property Rights

Vague or nonexistent property rights are primary drivers of disputes; clearly defined and legally protected water rights are essential for stability.



Virtual Water Trade

Water-scarce regions can reduce pressure on local rivers by importing water-intensive goods rather than producing them locally.

Core Theories



Environmental Economics of Water Conflict

This framework uses economic logic to address water scarcity, pollution, and the optimization of resource allocation among competing agricultural, industrial, and domestic users.

Payment for Ecosystem Services (PES)

A mechanism where downstream beneficiaries pay upstream providers (residents or governments) to maintain conservation efforts.



Water Rights Trading

A system that redistributes water rights based on economic efficiency to resolve mismatches between water demand and availability.



Cost-Benefit Analysis (CBA)

A rigorous evaluation used to ensure the marginal costs of water treatment or provision do not exceed the total economic benefits.



Hydro-economic Modeling

Advanced simulations, such as the Global Change Assessment Model (CCAM), that combine hydrological, economic, and land-use data to test management strategies.



Beyond GDP: Navigating Water Sustainability and Conflict

