

APPLYING THE FRESHWATER HEALTH INDEX IN THE LOWER

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CONSERVATION
INTERNATIONAL



FRESHWATER HEALTH INDEX

1

Focus on “freshwater health” as the ability to deliver water-related **ecosystem services** sustainably and equitably

2

Maintenance of **ecosystems** central to freshwater health

3

Requires responsive **governance** and collective action of stakeholders

INDICATORS OF FRESHWATER HEALTH

- Combination of remotely sensed, monitored, modeled, and survey data
- Each indicator scaled from 0-100 for ease of interpretation
- Ecosystem Vitality and Ecosystem Services indicators can be modeled to assess scenarios

ECOSY STEM VITALIT Y

Water Quantity

- Deviation from natural flow
- Groundwater storage depletion

Water Quality

- Suspended solids
- Total nitrogen
- Total phosphorus
- Other quality parameters of concern

Basin Condition

- Bank modification
- Flow connectivity
- Land cover naturalness

Biodiversity

- Species of concern
- Invasive & nuisance species

ECOSY STEM SERVIC ES

Provisioning

- Water supply reliability
- Biomass for consumption

Regulation & Support

- Sediment regulation
- Water quality regulation
- Flood regulation
- Disease regulation

Cultural

- Conservation areas
- Recreation

GOVERNA NCE & STA KEHOLDE RS

Enabling Environment

- Water resources management
- Right to resource use
- Incentives & regulations
- Financial capacity
- Technical capacity

Stakeholder Engagement

- Information access
- Engagement in decision-making processes

Vision & Adaptive Governance

- Strategic planning & adaptive management
- Monitoring & learning mechanisms

Effectiveness

- Enforcement & compliance
- Distribution of benefits
- Water-related conflict



STAKEHOLDER ENGAGEMENT





LOWER MEKONG TES

Livelihoods of 60 million people depend on the wild fisheries and rice production

Stressors: Dams, deforestation, rice intensification, climate change

Stakeholders: Mekong River Commission, national government agencies, INGOs and local NGOs

ASSESSING PERCEPTION OF WATER

→ Groundwater abstraction guidelines are enforced

Examples include, but are not limited to: farmers or industries restricted from pumping more than a specified amount of groundwater.

Rating	Criteria
1	Enforcement is very poor <u>or no guidelines (formal or informal) exist</u>
2	Enforcement is poor
3	Enforcement is acceptable
4	Enforcement is good
5	Enforcement is very good



Very poor

Acceptable

Very good

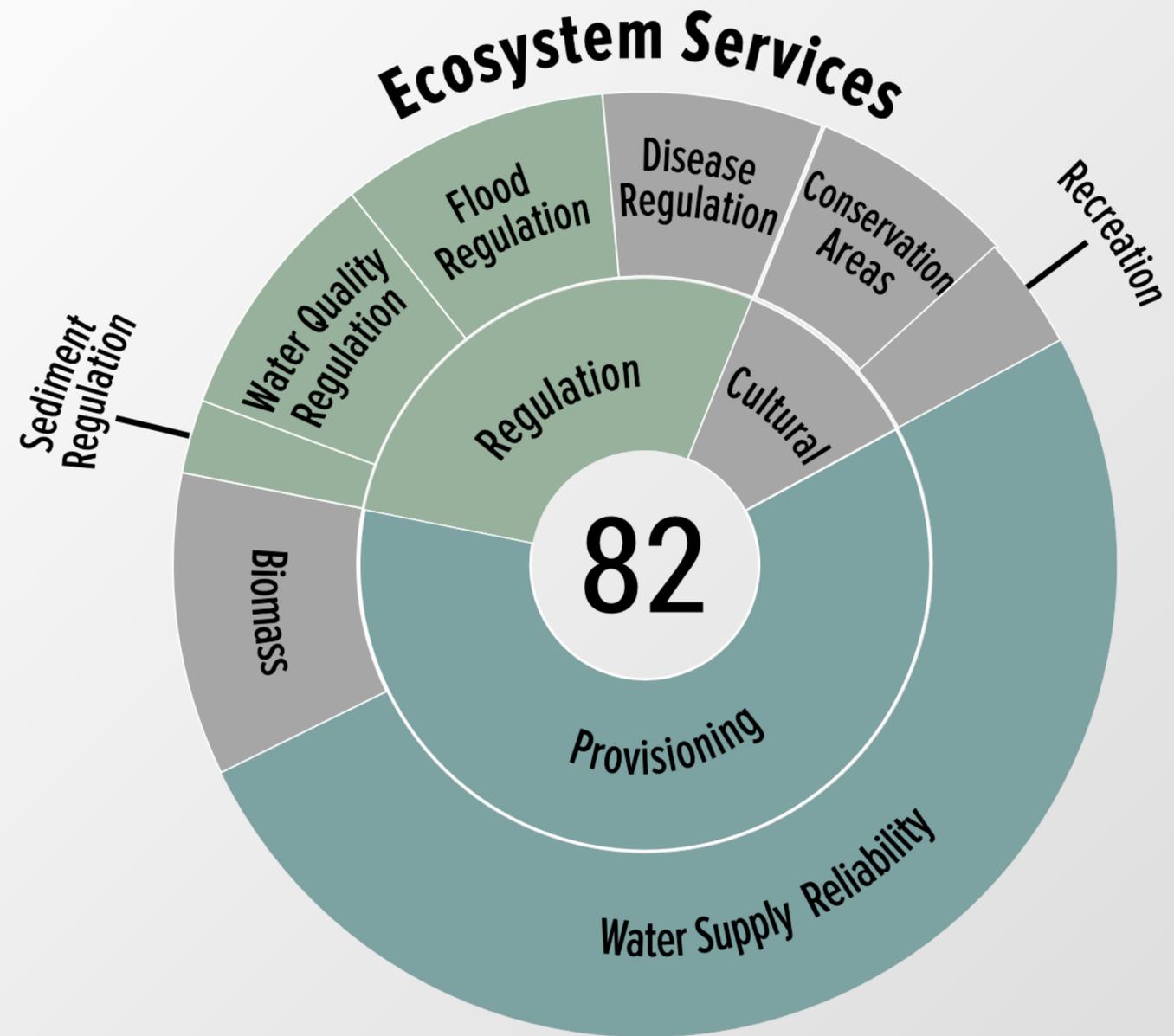
THREE TIERS OF INFORMATION AT BASIN SCALE



HEALTHS VARY BY STAKEHOLDER PREFERENCE



LOWER MEKONG
(LAO PDR, VIETNAM,
CAMBODIA)



DONGJIANG
(CHINA)

USING SCENARIOS TO ILLUSTRATE



EXISTING

56



+LOWER SESAN

27



+UNDER
CONSTRUCTION

26



+SEKONG

18



+FULL
DEVELOPMENT

4

FLOW CONNECTIVITY AND DAM DEVELOPMENT

- Dam location
- Connected stream
- - Disconnected stream

THANK YOU

FOR ADDITIONAL INFORMATION PLEASE VISIT
FRESHWATERHEALTHINDEX.ORG

