



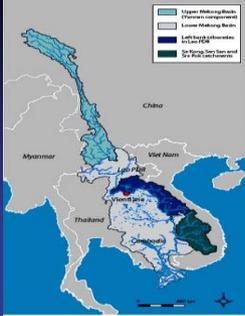
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Damming the Future? Why Science and Policies Have Failed For the Mekong River Thus Far

Ame Trandem



The Mekong - Lifeblood of the Region

Legend:
 Upper Mekong Basin (Upper Catchment)
 Lower Mekong Basin (Lower Catchment)
 Left Bank Sub-Basin (Left Bank)
 Right Bank Sub-Basin (Right Bank)

The Mekong's Endgame? The Mekong Mainstream Dams

- Mekong River Commission Established in 1995; to sustainably manage and protect Mekong River;
- Eleven Lower Mekong mainstream dams planned in Laos and Cambodia;
- September 2010, Laos initiates the MRC's prior consultation process (PNPCA) for the Xayaburi Dam, the first lower Mekong mainstream dam-
- "Prior consultation is neither a right to veto the use nor unilateral right to use water by any riparian without taking into account other riparian's rights."

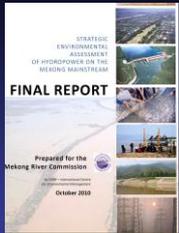


The MRC's SEA Report

Assessed the opportunities and risks of the 11 mainstream dams planned for the Lower Mekong River

Key Findings:

- Up to 60% of the total Mekong fish catch is at risk;
- Nutrient rich sediment loads will be cut in half by lower Mekong and 3S dams;
- Experience around the world indicates that these impacts cannot be mitigated
- Inundation of half of riverbank gardens
- Will affect livelihoods of approximately 40 million people in the Mekong Basin
- Food security of 2 million people at risk
- Benefit sharing and livelihood replacement highly problematic




Main Recommendation of SEA

"Decisions on mainstream dams should be deferred for a period of ten years."

Why?

- Serious Risk
- Scientific Uncertainty
- Countries unable to make informed decision
- More than 50 scientific studies are needed



The SEA states: "the decision to go ahead with the dams must be taken with the knowledge that the loss in biodiversity would be a permanent and irreplaceable global loss which could not be compensated."

The MRC's Contested Decision-Making Process

- Xayaburi Dam is first test of MRC's 1995 Mekong Agreement;
- Prior consultation process deemed a failure-demonstrated need for greater transparency, proper studies, and an inclusive decision-making processes;
- No accountability to the public;
- No adequate working dispute mechanism in place when one country can hold vetoing power.




Xayaburi: Setting a Bad Example for Regional Decision-Making

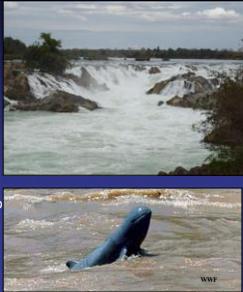
- Laos refuses to cooperate in good faith with neighboring countries ignoring requests for more study and consultation;
- Xayaburi is 40%+ complete with no regional agreement;
- Full impact of dam is unknown;
- The project's final design has not been made public despite repeated calls for it from international donors to the MRC.



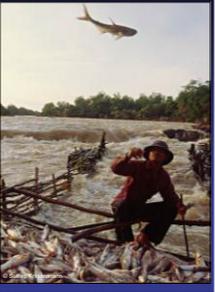
Construction of Xayaburi, February 2014

The Don Sahong Dam Follows Poor Trajectory of Xayaburi

- No transboundary impact assessment or consultation carried out despite being less than 2 km from Cambodian border;
- Laos has stated that Don Sahong will be built, construction to start at end of the month;
- No decision made over Don Sahong. In January 2015, Cambodia, Thailand and Vietnam requested further study and consultation. In June, the MRC stated decision to move discussions to the diplomatic level.
- Laos officials are currently visiting neighboring countries to discuss project.



Siphandone area: Globally Unique



- At Siphandone, the river drops 30 meters through a maze of channels and islands
- Name translates to "4000 Islands"
- The area is an ecologically rich and unique island-river habitat of global value
- Siphandone is a strong candidate for accession to the RAMSAR International Convention on Wetlands of International Importance
- More than 100 fish species rely on the Hou Sahong Channel



Risky Business: Unclear information on fishery impacts to date



The need for data

- Most quantitative information on Khone Falls fisheries is out-of-date (1990s) and tells us that fish are killed in large quantities downstream of the falls.
- A lot of information is based on old LEK of fishers.
- Many breeding fish are killed while migrating - before they can spawn.
- Some fish do migrate past the falls at certain times.
- **But there is no quantitative data at all on the proportions of fish that get past the falls (in total) or on the proportion that pass each channel at present.**
- **Nobody can quantify fisheries losses at this stage.**

07/05/14 DSPC Don Sahong Power Company 06/11

Gambling with Unproven Mitigation Measures

- The Mekong River Commission's Preliminary Design Guidance measures for Mekong dams require 95% fish passage effectiveness rate;
- Xayaburi Dam is 32 meters high. No fish passage over 30 meters has ever been successful in the world;
- Xayaburi's "transparent" sediment flows are solely "conceptual" according the Lao government's consultant CNR;
- Don Sahong Dam's fish pathways has been challenged by fish experts during the prior consultation process. MRC has noted that such a mitigation measure of this scale has never been tested in the basin.



Re-engineering Channels for Fish Pathways at the Don Sahong Dam



What happens if mitigation falls?



- The MRC's Preliminary Design Guidance Measures for mainstream dams require a 95% fish passage effectiveness rate;
- Who will ensure adequate oversight and compliance?
- Who will pay for the costs associated with the transboundary impacts with no mechanism in place?
- How will neighboring countries get compensated without baseline data or impact monitoring underway?



Next up for the Mekong?

Pak Beng (1,230 MW)



As shown on the cover of *Stakeholders' Feasibility Study*, Developer: Datang International Power Generation, China

- Uppermost dam in proposed LMB cascade
- Dam in Lao PDR
- Reservoir in Lao PDR

- Preparatory work advancing... resettlement looming... no Prior Consultation process yet...
- However, late September, it was announced that CNR reviewed project - now designed to 912 MW, 90% power to Thailand, 'compliant with PNPCA'

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Costs of Mainstream Dams vs A Healthy Mekong River

A 2011 Portland State University study found that impacts to the Mekong's ecosystem services from the mainstream dams could be ten times greater the revenue benefits of the dams.



-274 billion USD vs +33 billion USD





Planning Approaches for Water Resource Development in the Lower Mekong Basin

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Future Development Opportunities At Risk

Mainstream dams would devastate fisheries...

If planned mainstream dams are built, the likely loss in fish capture could be over 600,000 tonnes fish/yr

600,000 tonnes = 2X the annual livestock production of CAMBODIA & LAOS

Acquaculture can only replace potentially 10% of capture fisheries affected by dams

Huge amounts of land and water resources would be needed to replace lost fish protein and calories with livestock products

- +19-63% Increase in land used
- +4-17% Increase in water used

- 40 to 70% of people's animal meat protein and calories with livestock products from fish;
- Food security of 2 million people at risk;
- More than 100,000 people to be relocated;
- 40 out of 60+ million people impacted.

Data from MRC's SEA and 2012 WWF/ANU study

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What's needed?




- Reform to the PNPCA process to allow for regional decision-making processes by states and people;
- Transboundary EIAs and baseline data as standard for shared rivers;
- MRC Council Study and Mekong Delta Study to feed into planning processes;
- Comprehensive energy options assessed;
- A working mechanism for mediation and remedy.

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Recommendations

Stop all construction and decisions over Mekong dams until more informed decision-making can take place by ensuring that:

- A more participatory approach towards decision-making over the shared river is required between stakeholders, especially riparian people;
- Prior consultation *and agreement* should be sought for all hydropower projects on shared rivers;
- Science must trump politics in decision-making, baseline data, transboundary/cumulative impact assessments, and comprehensive energy options assessments must be a prerequisite;
- Rather than stakeholders having to demonstrate impacts; the burden of proof of impact and the effectiveness of mitigation should lie with the developers and be open to scientific scrutiny;
- **The Mekong River should no longer be seen as an economic commodity, but rather valued for the ecosystem services it provides.**

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Thank you!



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