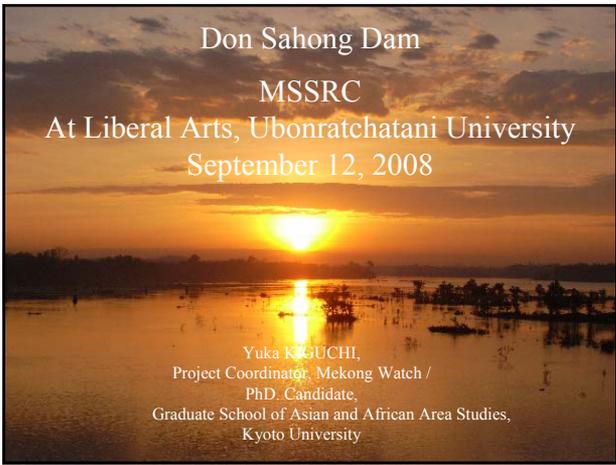
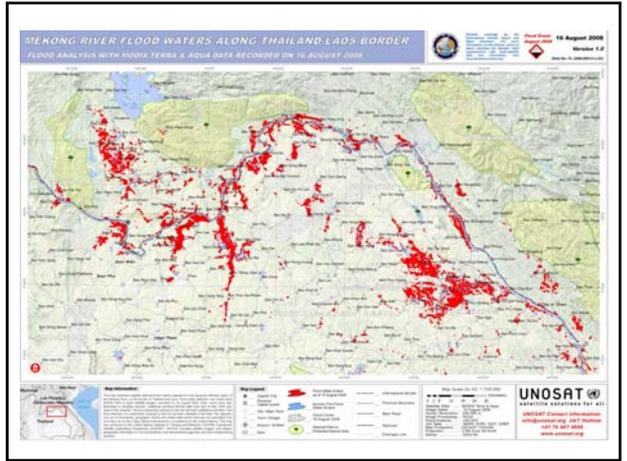
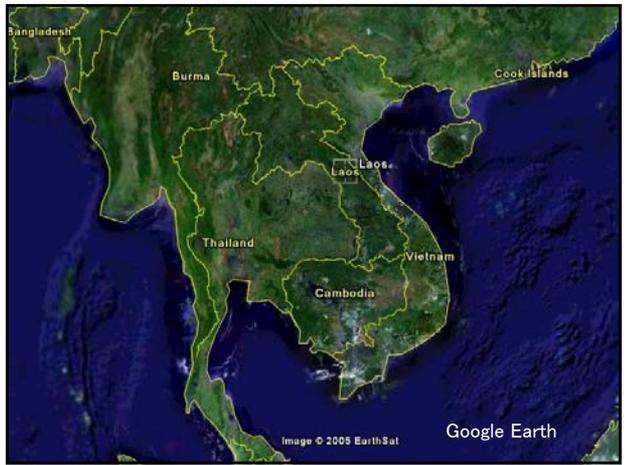


Don Sahong Dam
MSSRC
At Liberal Arts, Ubonratchatani University
September 12, 2008



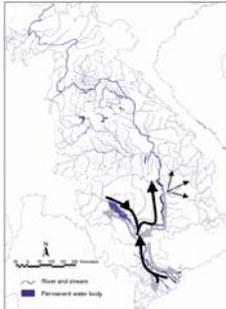
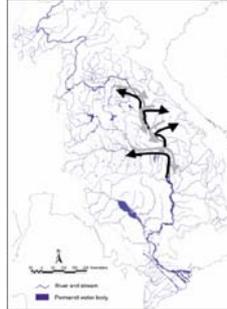
Yuka KIGUCHI,
Project Coordinator, Mekong Watch /
PhD. Candidate,
Graduate School of Asian and African Area Studies,
Kyoto University



Impact of Dam




Fish Migration in Mekong River

Mekong River Commission (2002)

Much water, more fish?

- λ In the Mekong Basin, 87 percent of species whose migration status is known including most of the commercially important species are migratory.
- λ Many fish species are sensitive to changes in water level as “triggers” to migration.
- λ Change of water level or block migration = Decreasing of fish (World Fish Center 2007)

Where does Scientific Data come from? e.g. Pak Mun Dam case

Thai Fisheries Gazettes issued by the Department of Fisheries Thailand from 1985 to 1994.

- λ Out of 23/476 papers/reports (4.8%) was about freshwater fish.
 - 8 papers/reports were survey reports on reservoir of dams, 2 papers/reports were about cultivable *Puntius gonionotus*, and 1 paper was about fish ladder.
- λ 25 per cent of the total were papers on fish cultivation while no reports concerning fisheries in the river basin was found.

Official Statistics

- λ An annual average catch in Ubon Ratchathani: 1968 to 1975 was 1,710 tons [Department of Fisheries 1977].
- λ The fisheries in Ubon Ratchathani in 1988 and 1989 were 3,629.89 tons and 3,836.74 tons respectively [Department of Fisheries 1991].
- λ Freshwater catch was corrected from swamps and reservoirs.

Scientific Knowledge about fish before the dam construction

- λ Environmental and Ecological Investigation (EEI) by Team Consulting Engineers 1982, 1984.
- λ The survey on fishes conducted twice by the Department Fisheries of Thailand.
- λ Fisheries Division of the Department of Fisheries conducted a survey on fish and fisheries in the area from Upper to Lower Mun River.

Reports of before dam construction

Report	Fish	Fishing gears	Length of survey
EEI 1982	73 species	13 Types	Feb., Apr., Jul. / 1981
EEI 1984	NA	NA	-
DoF 1991	68 species	6 Types	Dec./1990-Feb./1991, Jul./1991
DoF 1992	70 species	NA	Dec./1990-Dec./1991

Fish and fisheries recognized by governmental agencies

Fish species and fishery in the Pak Mun area had not been measured.

- λ Lack of scientific knowledge
- λ Lack of official Statistics
- λ Self-sufficient villages activities are disregarded by the formal measurement.

Background of lack of “knowledge”

Scott[1998] “Seeing Like a State”

λ Nation State:

- λ Nature > Natural Resource
e.g.) River > Water Resource
- λ Measurement for getting tax > Simplification
- λ Fish: Mobile, in water > Ownership?

λ Other factor

- λ Naturalist: Difficult to get Ph.D.
- λ Impossibility of prediction
>>> **Adaptive Management**

Fish: Important Protein Source

Amount of Consumption of Fish

λ Japanese < Laotian

λ 6.4 kg / year < 8-10 kg / year

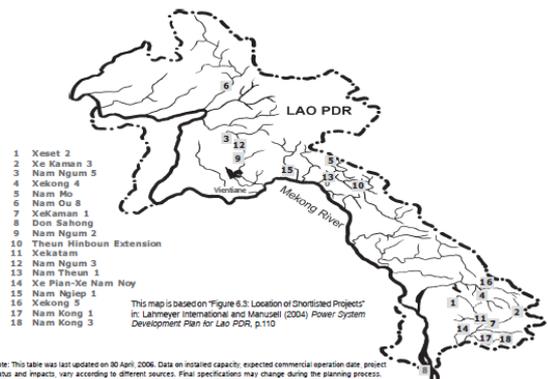
(Iwata. 2003)

Dam Project in Lao PDR

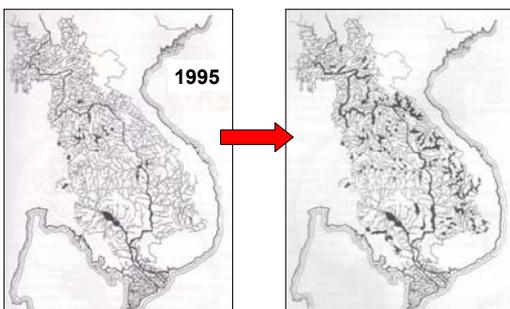


Operation 10, Construction 4, Plan 50

Dam Projects in Lao PDR



Future ?



TERRA (Matsumoto 1997)

Potential / Demand of People in Lao PDR



Electricity in Rural Area



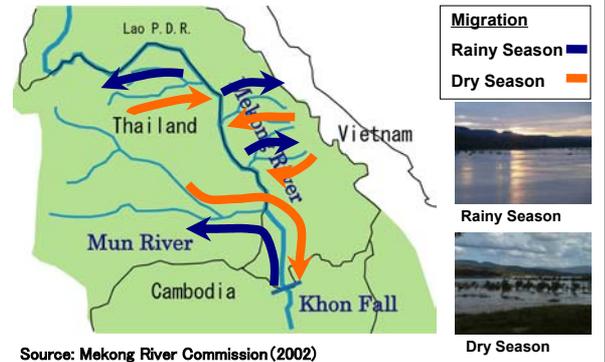
Don Sahong Dam



Fisheries around Don Khon

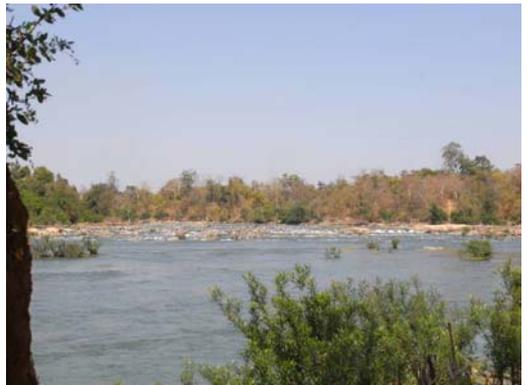


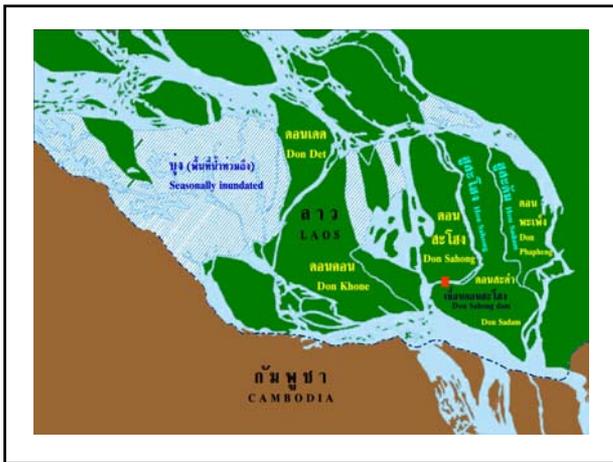
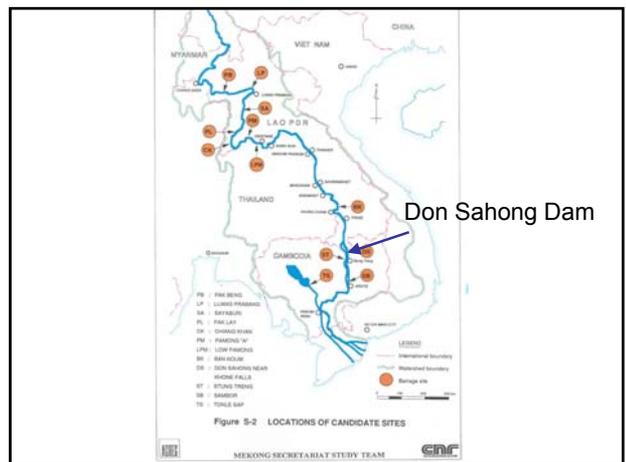
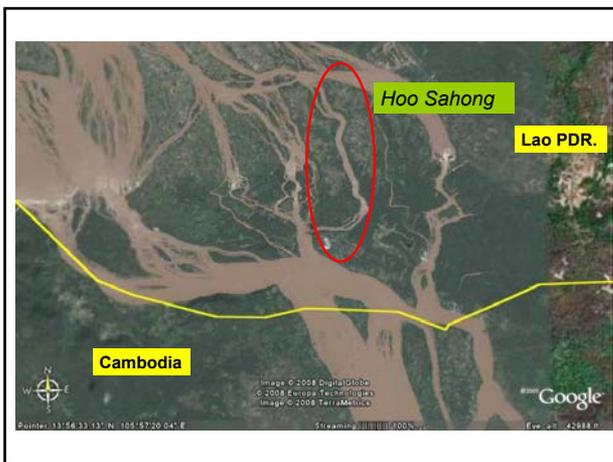
Fish Migration



Khon Falls

Hoo Sahong, Natural fish Pass





Don Sahong Dam

- λ Mekong Secretariat (the pre-cursor to the Mekong River Commission, or MRC) produced a study of "run-of-river" hydropower schemes for the lower Mekong (1994)
- λ 240 megawatt (MW) , Run of River Dam
- λ Located less than one kilometer upstream of the Cambodia border in Champasak Province
- λ Generate power for export to Thailand, Cambodia (or Vietnam)
- λ Don Sahong dam would be the first dam on the mainstream of the Lower Mekong River

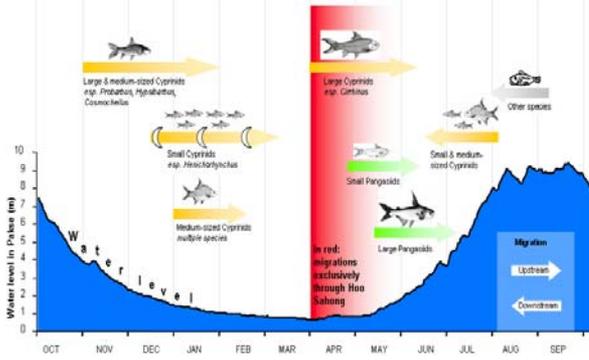
Present situation

- λ Mega First Corporation Berhard from Malaysia is conducting a feasibility study (March 2006)
- λ Project cost to be US\$300 million
- λ Review EIA by Australian Power and Water co. Ltd.?

Fishery around Hoo Sahong

- λ "The blocking of Hoo Sahong could devastate much of the most important Mekong River fisheries in Laos." (MRC 1996)
- λ The Hoo Sahong channel, the site of the proposed dam, plays an especially important role in fish migration basin-wide.
- λ The Lower Mekong Basin hosts the most productive freshwater fishery in the world
 - λ Contributing substantially to national and regional economies
 - λ Food security and rural livelihoods
- λ There are no effective measures in the region to mitigate the impact of dams on fisheries.
- λ The economic costs from lost fisheries production could outweigh the expected economic benefits of the dam.
- λ A comprehensive scientific assessment would be required to evaluate this. (World Fish Center 2007)

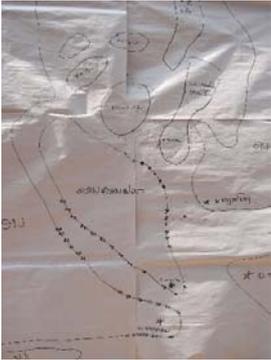
Fish Migration through Hoo Sahong



Fishing Ground *Luang* (Photo at *That Pho*)



Traditional fishing spots
Economic value 5000-
100,000/year



Mitigation the Impact of Dams on the Mekong

World Fish Center 2007

- λ Mekong Basin we know of only nine species that breed in reservoirs.
- λ At the Pak Mun Dam fish pass, fishing communities both upstream and downstream of the dam reported a 50 to 100 percent decline in fish catch.
- λ Many fish species disappeared, especially migratory and rapid-dependent species

Fail of Fish Ladder



At Pak Mun Dam



WWF **ເຂື່ອນດອນສະໂຮງ ແລະ ອະນາຄົດ ດອງປາຊ່າ**

THE DON SAHONG DAM AND MEKONG FISHERIES

Key messages

- Even the fish being bred for sale are at risk due to the restriction of the Lower Mekong River.
- The fish being bred are the size of the animals that have an average survival rate of 10%.
- The Lower Mekong Basin feeds the most people in the world. It is a source of food, income and jobs for 150 million people.
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- The Mekong Basin is a source of food, income and jobs for 150 million people.

INTRODUCTION

Over 100 million people benefit from some 60 million tonnes of fish and fish products, including 10 million tonnes of farmed fish, from the Mekong Basin. The basin is a source of food, income and jobs for 150 million people.

THE DON SAHONG DAM

The proposed dam will be built 2 km upstream from the third largest group of Irrawaddy dolphins in the Mekong Basin. The dam will be built 2 km upstream from the third largest group of Irrawaddy dolphins in the Mekong Basin.

THE IMPORTANCE OF THE KHONE FALLS AND HOI SAHONG

These two sites are the most important for Irrawaddy dolphins in the Mekong Basin. They are the only sites where Irrawaddy dolphins are found in Lao PDR.

for a living planet™

Irrawaddy Dolphin: Lao-Cambodia Border

Photo: © WWF (pang.org)

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Irrawaddy dolphins

- λ The proposed Don Sahong dam would be built <2 km upstream from the third largest group of Irrawaddy dolphins in the Mekong River.
- λ This group of 10 individuals represents 14% of the Mekong population and the only population of Irrawaddy dolphins in Lao PDR .
- λ Impacts to fish population and habitats in the Dolphin Pool caused by the proposed dam, could not be effectively mitigated.
- λ There is a risk that the proposed Don Sahong dam, when added to existing threats, would contribute to the extinction of the Irrawaddy dolphin in Lao PDR.
- λ The level of the threat calls for a specific component on dolphin survival in the Environmental Impact Assessment of the Don Sahong dam.



Affect to River line Field

Beans, Corn, Vegetables, Chill, Cotton

New Age? Nam Thuen 2 Dam

- λ World Bank supported dam project
- λ Lots of Studies, Mitigation Plan
- λ New environment Law / Regulation

Waiting for new houses in Sap Ha resettlement village. Photo by Shannon Lawrence, WWF

"Imperial Nature: The World Bank and Struggles for Social Justice in the Age of Globalization"

By M. Goldman Yale Agrarian Studies Series

- λ This probing study of the World Bank examines not its brute financial muscle but its "hegemony"-the rhetorical strategies, training programs and patronage networks that let the Bank frame debate and cajole even critics into endorsing its agenda.
- λ Gramsci and Foucault, about "power/knowledge regimes"
- λ Sociologist Goldman focuses on what he calls the Bank's "green neoliberalism," a fashionable development ideology that packages poor nations' public services, natural resources and environmental diversity as undervalued economic assets to be profitably managed and conserved through the market.
- λ Project in Laos that links construction of hydroelectric dams with the set-aside of nature preserves, and an ambitious initiative to privatize water utilities.

Information Disclosure

- λ Disclosure of full EIA report is required by the following three policies of the Lao Government
 - (1) National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR (No. 561/CPI)
 - (2) Regulation on the Environment Assessment in the Lao PDR (No: 1770/STEA)
 - (3) Public Involvement Guidelines.

Don Sahong Dam: Cost and Benefit

- λ Get: 240MW Electricity
- λ Lose: Fish resource, Dolphin, Clean Water etc.
- λ Cost of compensation (if it will pay)
- λ Reality of Information Disclosure
 - e. g. Environmental Impact Assessment of Xekatom Dam Case

