

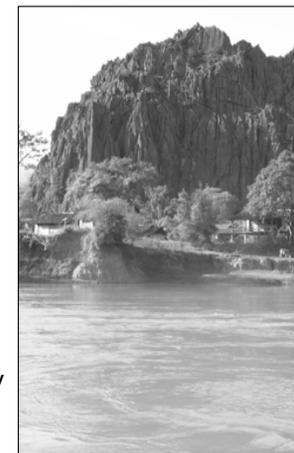


The Mekong River: FEEDING SOUTHEAST ASIA

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Key messages

- The Mekong region's rich river resources are central to regional food security, nutrition and economies, as well as cultural heritage
- Food *insecurity* catalyzes a downward spiral of poverty that is difficult to stop, and undermines wider development objectives
- Major development projects, such as Mekong mainstream dams, should be considered from the perspective of regional food security and wider development objectives, beyond economic factors alone



Defining 'Food Security'

- "all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life." (FAO, 1996)
- A moderately active adult needs an average of 2,100 calories per day
- Food diversity is important to ensure consumption of the right amount of carbohydrates, fats, proteins and micronutrients.

FOOD FOR ONE DAY

HOW MANY SERVINGS DO I NEED IN A DAY??

- GRAIN - 6 TO 12
- VEGETABLES - 4 TO 6
- FRUIT - 3 TO 5
- MEAT - 1 TO 2
- FISH/MEAT - 6 TO 12

BREAKFAST: RICE PORRIDGE AND FRIED FISH
1 SERVING GRAIN
1 SERVING DAIRY

LUNCH: SOM TOM, CHICKEN SKIN, RICE
2 SERVINGS FISH/MEAT

DINNER: FISH, VEGETABLES, RICE
4 SERVINGS MEAT/FISH
9 SERVINGS VEGETABLES
9 SERVINGS GRAIN

SNACK/DRINK: WATERMELON SMOOTHIE
2 SERVINGS FRUIT

SNACK: 1 SKINNER FISH BALLS
2 SERVINGS FISH/MEAT

DESSERT: MANGO STICKY RICE
1 SERVING GRAIN
2 SERVINGS FRUIT

Fish: Nutritious and delicious

- Fresh fish, dried fish, fermented fish....
- Fish are an important source of animal protein and an essential source of vitamins and minerals
 - Calcium deficiency: Weakened muscles and bones
 - Iron deficiency: Perpetual tiredness
 - Vitamin A deficiency: Decreased resistance to disease
 - Zinc deficiency: Body-wasting and memory-loss
 - Iodine deficiency: Mental retardation

Fish are also the main ingredient to many of the region's most popular dishes



Millennium Development Goals: Reducing Hunger is a Global Priority

- **MDG1: Eradication of extreme hunger and poverty** (by 2015)
- MDG 2: Achieve universal primary education
- MDG 4: Reduce child mortality
- MDG 5: Improve maternal health
- MDG 6: Combat HIV/AIDS, malaria and other diseases

“While people are hungry, all other development activities are thwarted” *World Food Program*



Food Security in Mekong Countries

- Rates of child malnutrition, child mortality and undernutrition in mainland Southeast Asia have dropped faster than the worldwide average, especially in Thailand and Vietnam
- An estimated 27.1 million undernourished people live in Cambodia, Laos, Thailand, and Vietnam (FAO, 2008).



Living Rivers Siam

Food Security Status: Cambodia

Cambodia

GHI Score: Alarming (61)
 26% of the overall population is classified as undernourished
 28% of children are malnourished

The Global Hunger Index (GHI), developed by the International Food Policy Research Institute, combines rates of calorie deficiency, child malnutrition, and child mortality, and is commonly used to measure MDG progress.



Food Security Status: Laos PDR

Laos PDR

GHI Score: Serious (51)
 19% of the overall population is classified as undernourished
 31% of children are malnourished



Food Security Status: Thailand

Thailand

GHI Score: Moderate (22)
 17% of the overall population is classified as undernourished
 7% of children are malnourished



Food Security Status: Vietnam

Vietnam

GHI Score: Serious (29)
 14% of the overall population is classified as undernourished
 20% of children are malnourished



The Mekong: Nature's Supermarket

- The Mekong supports the world's largest inland fishery
- Approximately 2.6 million tonnes harvested annually from the Lower Mekong Basin
- Mekong fisheries produce between 7% and 22% of the world's freshwater capture fish (Baran, 2010).
- Approximate division of catch between countries:
 - Cambodia 33%,
 - Thailand 32%,
 - Vietnam 29%
 - Laos 5%



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The Mekong: Nature's Supermarket

- Per year, the average person in the Lower Mekong Basin eats 56.6 kgs of freshwater fish products
 - This is over two times the average total fish consumption
 - 18 times the freshwater fish consumption in Europe and America (FAO, 2003).
 - In the Cambodian provinces bordering Tonle Sap Lake, people eat as much as 75.6 kg of fish each year
- Fisheries are important for local subsistence consumption and sale to region's urban areas
- Catch per fisher declining, but total biomass approximately the same



Mekong Fisheries and Food Security

• Cambodia

- Over 80% of those living nearby the Tonle Sap Lake derive some income from fish
- Approximately 65-75% of the animal protein average Cambodian households consume can be traced back to small-scale fisheries
- The average Cambodian living in the Mekong Basin eats 65 kg of freshwater fish per year



Mekong Fisheries and Food Security

• Laos

- Fish provide an average of 42.5% and up to 90% of consumed animal protein
- Laotians living in the Mekong basin eat an average of 42 kg of freshwater fish and fish products each year
- According to WFP, the most well nourished communities tend to be those that consume the most fish



Mekong Fisheries and Food Security

• Thailand

- Fish consumption is three times greater than chicken consumption, the next most important source of animal protein
- Average fish consumption is 52 kg per person per year
- Marine fish dominate the total catch, Thailand pulls around 209,404 to 303,000 tons of fish from inland capture fisheries in the Mekong Basin each year



Mekong Fisheries and Food Security

• Vietnam (Delta)

- Fish contribute an estimated 60% of animal protein consumed in Vietnam delta
- Average of 60 kg per person per year in Vietnam area of Mekong basin
- 40% of Vietnam's total wild capture fisheries is from the Delta
- While aquaculture is important, scientists have noted "In terms of poverty, the wild inland fishery is of greater importance than aquaculture" (Baran, 2005)



The Mekong: Natures Bank

- At first catch, the Mekong’s wild-capture fisheries have an estimated value of US\$2-3 billion
- Economic value = US\$5.6 and \$9.4 billion
- 8% of Lao’s GDP and 16% of Cambodia’s GDP have been traced to fisheries

Wild capture fisheries feed people and provide cash to some of the region’s poorest people – further increasing purchasing power and food security



From fisher to market place

- From fisher to market place, fish can pass through more than 12 actors.
 - Pla Daek from Songkhram River feeds Bangkok 500 km away
 - Tonle Sap Lake feed people locally, in Phnom Penh, and in Thailand
- In some cases, rivers reach where roads cannot, making fish protein critical to food security
 - In Laos, in 14 of 16 provinces, an average one-way trip to the nearest market takes more than four hours



Mekong mainstream dams: A threat to regional food security



- Around 70 percent of the Mekong River’s commercial fish catch migrate long distances, which is essential for their life cycle
- Building dams on the Mekong River’s mainstream will block these crucial migrations. Experience around the world indicates that these impacts cannot be mitigated
- Estimated that between 700,000 and 1.6 million tons of the Mekong fish – up to 62% of the total Mekong catch – is at risk
- Replacing the current contribution of wild-capture fish protein with other sources of protein, if possible at all, will be expensive and a daunting logistical challenge.

Conclusions: Wild-capture fisheries, Food Security and Development

- Mekong fisheries remain undervalued, as economic data on subsistence values are missing. There is some further potential to increase economic value.
- By 2025, population expected to increase by about two-thirds – presenting a significant challenge for regional food security
- Food security is a foundation on which other important forms of development are built, such as good health, education, and productive working life.
- Major development projects, such as Mekong mainstream dams, should be considered from the perspective of *regional food security and wider development objectives, in addition to economic factors*

Thank you for your attention



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