CPWF POLICY BRIEF

Water, people and food in the Mekong River Basin

The CPWF Mekong Basin Focal Project was conducted by a team of scientists from CSIRO, the Stockholm Environment Institute and the Mekong River Commission.

A RIVER BASIN UNDER PRESSURE

Three factors will drive great change in the Mekong area:

- Population is expected to increase from the current 60million to more than 90 million in 2050
- The proportion of urban dwellers will rise from about 20 % to about 40 %
- Economic growth is around 4.5 % per annum.

With an annual average rainfall of over 7km^3 per capita, the major issues concern not total water availability, but the impact of changed flows on ecology, fish production, access to water and food security.

THREATS TO FOOD PRODUCTION

The current rate of increase of agricultural production and productivity of rice is considerably greater than is required to feed the expected extra population to 2050, so crop production is not likely to be the main challenge. Food distribution and environmental impact of human activities will be the main challenges to poverty alleviation.

Fish are the major source of animal protein within Mekong communities, but fisheries face serious threats from changed water availability and quality, along with barriers to fish migration and overfishing.

Fisheries production is dominated by capture fisheries in Cambodia, Laos and Thailand. In Vietnam, aquaculture dominates production, and is concentrated around the delta and along the coastal strip. Aquaculture in the delta is growing strongly, whereas capture fisheries appear not to be growing.

It appears that production from capture fisheries increased relatively little from about 1995 to 2005 in all four Lower Mekong countries. As capture fisheries are unlikely to meet the projected growth in demand, due to rising population, alternative sources of fish must be developed.

PREPARING FOR CHANGE

Changes in flow are expected as a result of climate change, dam and irrigation development. Changes in the natural flow regime may alter the environment of fisheries. Lowered or altered flows may allow salinity intrusion in the delta, thus altering the balance of rice and shrimp production, which in turn may affect food security and incomes.

Changes will likely impact the poorest the most. Even though poverty is decreasing in the Mekong basin, the poorest communities do not seem to be sharing in the improvement.

A RESEARCH OUTCOME THAT YOU CAN USE

Analysis suggests that the amount of water required for full irrigation development is small compared to the amount of water flowing to the sea. However, the impact of such development on the overall water productivity could be significant. The impacts of deforestation and climate change are estimated to lead to small risks of failing to meeting projected irrigation demand during dry season months.

Yield of rice, the dominant crop, varies from 1.0 to 5.0 ton/ha with the highest yield in the Delta region of Vietnam. The yield is lowest in north-east Thailand. In general, yield has increased over the years, and there appears to be scope for continued increase.

Locally, especially in the drier NE Thailand, the impact of increases in demand, and the consequent demand for irrigation water, could be greater. While the hydrological impact overall is modest, the threat to aquatic ecology and the environment is yet to be fully understood and is likely to be very significant.

A CALL TO ACTION

The future development of fisheries will be primarily determined by political choices - whether capture fisheries are managed sustainably; whether dams, diversions for irrigation or other developments are allowed in a way that impacts downstream fisheries; whether aquaculture grows unchecked and is allowed to pollute or endanger other fish stocks.

There are difficult choices ahead. To solve water problems and reduce poverty, integrated solutions and interdisciplinary participation are required, involving national governments, local government and community-based organisations as well as villagers.

For this to occur, many call for greater sharing of information, decisions and benefits. They also call for strengthening of the Mekong River Agreement and the Mekong River Commission, to a level where they provide true basin-wide rules and management.

CGIAR Challenge Program on WATER & FOOD

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FOR MORE INFORMATION

Contact Dr Simon Cook
Basin Focal Projects Leader
CGIAR Challenge Program on Water and Food
s.cook@cgiar.org

The CPWF website:
www.waterandfood.org

The 2nd International Forum on Water and Food web portal:
www.ifwf2.org

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