



Economy and Environment Program
for Southeast Asia
22 Cross Street #02-55
South Bridge Court
Singapore 048421

Phone: (65) 6438 7877
Fax: (65) 6438 4844
E-mail: hfrancisco@idrc.org.sg
Web site: www.eepsea.org

The Economy and Environment Program for Southeast Asia (EEPSEA) was established in May 1993 to support training and research in environmental and resource economics across its 9 member countries: Cambodia, China, Indonesia, Laos, Malaysia, Papua New Guinea, the Philippines, Thailand, and Viet Nam. Its goal is to strengthen local capacity for the economic analysis of environmental problems so that researchers can provide sound advice to policymakers.

EEPSEA Policy Briefs summarize the key results and lessons generated by EEPSEA-supported research projects, as presented in detail in *EEPSEA Research Reports*.

EEPSEA Policy Briefs and Research Reports are available online at <http://www.eepsea.org>

Willingness to Pay for Marine Turtle Conservation in Asia: A Cross- Country Perspective

EEPSEA POLICY BRIEF • No. 2007-PB3

Marine turtles are important, not only for their economic and intrinsic value, but because an adequate population of marine turtles is often an indicator of healthy marine ecosystem. Of the seven species of marine turtles, four are critically endangered, while two are in the next-highest risk category. →

A summary of an EEPSEA-supported study in four countries, by: Jin Jianjun, Beijing Normal University; Anabeth Indab, Resources, Environmental & Economic Center for Studies, Philippines; Orapan Nabangchang, Sukhothai Thammathirat Open University, Thailand; and Truong Dang Thuy, University of Economics, HCMC, Vietnam. Co-researchers were Dieldre Harder, Resources, Environmental & Economic Center for Studies and Rodelio F. Subade, University of the Philippines in the Visayas. The corresponding author is O. Nabangchang, School of Economics, Sukhothai Thammathirat Open University in Thailand, Tambon Bangpud, Amphoe Pakkret, Nonthaburi 11120, Thailand. Tel. + 66 2 -9654737/9654738; Fax + 66 2 9654739. The original papers on which this Brief is based can be found at www.eepsea.org, Technical Papers.

“Mobilizing voluntary contributions...

→ The marine turtle's status in Asia is of interest for two reasons. First, human activity in the region presents a wide variety of threats, including excessive and illegal harvesting for meat, shells, skin and eggs; habitat loss from development of beaches; destructive fishing methods such as dynamite fishing and use of drift nets; and pollution from shipping and tourism. Many of these threats are increasing rapidly with economic growth. Second, marine turtles are a migratory species; their habitat is shared among a large number of countries such as China, the Philippines, Cambodia, Thailand, Malaysia, Vietnam and Indonesia. Coordinated policies to conserve marine turtles are thus more likely to be effective than those pursued by countries on their own. There is evidence of the willingness of countries in East and Southeast Asia to collaborate but so far the measures taken have not been adequate to the challenge.

A new study from EEPSEA explores this issue in a comparative framework in China, Thailand, the Philippines and Vietnam. It assesses the prospects

for increased regional or national efforts to conserve marine turtles in Asia; whether Asians value turtles more for their use as food, shells, etc., than for non-use values; whether Asians are aware of marine turtles and their plight; and whether there is sufficient local willingness to pay to support larger conservation efforts.

Using a common survey instrument, the research team applied the contingent valuation method (CVM) to assess the willingness of local populations to pay for the conservation of marine turtles. The survey explored how a variety of payment vehicles affected people's decisions to support national and regional conservation plans and included an extensive set of attitudinal questions. That allowed the researchers to assess the relationship between respondents' attitudes, socioeconomic characteristics and willingness to pay.

The surveys were administered by dropping off questionnaires at people's residences. Altogether 3,680 respondents participated in the survey; these were randomly selected across all administrative

districts in Beijing, Ho Chi Minh City, Hanoi, Bangkok and Davao City.

Do People Care About Turtles?

The researchers asked respondents to rank ten public policy issues: economic problems, poverty, education, health, crime/violence/inequality, government/good governance, infrastructure, environment, terrorism, and relations with other countries. The survey revealed that people in all four countries accord relatively low priority to environmental protection. Only in Beijing does it appear among people's top three concerns. While environmental concerns do not receive high priority, over 70% of the respondents in all four countries agree that environmental problems are not properly taken care of.

Many studies have highlighted that conservation efforts for less-known species have less public appeal than species that are more charismatic, cute or familiar. If this is the case, marine turtles may have fairly strong appeal – they are not an obscure species. Asians are familiar with them, although they may not have seen live turtles, or consumed their meat or eggs. These are, after all, urban populations with access to television, and as the survey results suggest, this may be more an important source of information about environmental issues than

Social and Economic Priorities

Rank	Beijing N=600	Davao City N = 847	Bangkok N=789	Ho Chi Minh City/Hanoi N=1,444
1	Economic problems	Economic problems	Economic problems	Economic problems
2	Good Governance	Poverty	Poverty	Good Governance
3	Environment	Good Governance	Good Governance	Education

N = the total number of respondents surveyed.

would be difficult."

The number of respondents saying 'Yes' to each bid under the Regional Mandatory Program

Bid (US\$/month/hh)	Beijing	Davao	Bangkok	HCMC&Hanoi
(.02 USD)	30 (75)	32 (56)	39 (67)	78 (81)
0.1		30 (56)		
0.25			37 (66)	
0.5	19 (48)			68 (69)
(1 USD)	16 (40)	17 (28)	20 (36)	44 (44)
2 USD		17 (31)		
2.5 USD			18 (33)	
(5 USD)	8 (20)	11 (20)	7 (13)	17 (17)
7.5 USD	2 (5)			20 (21)

The shaded rows are the three common bid values used in all four countries. However, Bids 2 and 4 are set differently. Figures in parenthesis are percentages of 'Yes' responses from the number of respondents in the split sample.

formal education.

However, an individual may be concerned about animals, without taking action to prevent their extinction. He or she may assume that someone else will or should solve the problem. There is some evidence of this in the survey results. Between 57% and 65% of respondents strongly agreed that "it is everyone's duty to ensure that plants and animals as we know them today will exist for mankind in the future". When making personal trade-offs, however, there was a notable drop in supporting opinions. Only 4% of the respondents in Davao strongly agreed that "governments should raise taxes for more endangered species

protection". The percentage of 'strongly agree' in the other cities was similarly low.

...And Are They Willing To Pay For Them?

In order to assess willingness to pay (WTP), the research team constructed a hypothetical marine turtle conservation program. They provided information about the importance of marine turtles to coastal and oceans ecosystems; described the threats and risks of extinction; and introduced a hypothetical marine conservation program. They then asked respondents whether they would be willing to contribute to the program by paying a monthly surcharge on their electricity bills

for a period of five years.

The researchers asked separate groups of respondents their willingness to pay for one of three marine turtle conservation packages: (i) a region-wide program financed through a mandatory charge, (ii) a region-wide program financed through voluntary contributions, and (iii) a national program financed through a mandatory charge.

While the respondents were familiar with marine turtles and believed them to be important, they were not concerned enough to make personal trade-offs through private contributions. Only the lowest surcharge (0.02 USD per household per month) would pass a referendum in all four countries. For Davao City, Bangkok, Hanoi and Ho Chi Minh city, the referendum would also pass at next lowest bid prices which were 0.1 USD, 0.25 USD and 0.5 USD respectively. At bids of 1 USD and above, the referendum would not pass in any of the countries.

In each city surveyed, respondents were willing to make only small payments. For the Regional Mandatory Conservation Program, the mean WTP for Davao City was 0.17 USD/household/month; for Ho Chi Minh City and Hanoi it was 0.83 USD/household/month. Mean WTP for the two higher income cities was 1.16 USD and USD 1.41/household/month (for Beijing and Bangkok respectively). The pattern of response to the

Regional Voluntary Program was similar.

A Role For Voluntary Contributions?

The results provide some support for the proposition that voluntary contributions could provide considerable sums for marine turtle conservation. The potential revenue, based on the percentages of respondents in the cities who would voluntarily pay 1 USD/month, would be around 50 million USD/year. This is much less than what could be mobilized were the mandatory payment referenda passed in the four countries surveyed (135 million USD). But it is more than the current global expenditures on marine turtle conservation of 162 conservation organizations combined, estimated at some 20 million USD per year.

Having said that, the harsh reality is that actually mobilizing these contributions would be difficult. The voluntary payment vehicle explored was a "check-off" for a marine turtle conservation program on a household's monthly electricity bill. While this

might work once, it is not feasible to put check-off boxes on utility bills for every species or environmental cause. In the long run, these efforts must be financed primarily out of general government revenue or "user-pay" schemes like environmental service payments.

Awareness Is Not The Problem

An important implication of these findings is that the traditional prescription of "raising awareness" is unlikely to yield results: people in Asia are already well-informed about the existence and plight of marine turtles. Efforts to develop conservation finance mechanisms should therefore be directed in a different and more difficult direction: improving the trustworthiness of government tax collection and expenditure systems. Conservation agencies might play a role in this by working with governments to set up trust funds in which public funds could be deposited with confidence. Charities could also explore the potential for voluntary

contributions revealed by this study; their efforts should go primarily into identifying the relatively small segment of the population that is willing to contribute and to developing cost-effective ways of collecting payments. Eventually, as incomes rise and governance improves, Asia's ability to pay for conservation will increase. In the meantime, contributions from the international community will continue to be important in conserving what is, after all, a global resource.

**EEPSEA is an international secretariat administered by Canada's
International Development Research Centre (IDRC) on behalf of EEPSEA's sponsors:**

 **Sida**
SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY

 **Canadian International
Development Agency** **Agence canadienne de
développement international**

IDRC  **CRDI**