

The Surveys Say ...

Willingness To Pay of Metro Manila Residents for Improved Watershed Management and Tourists for the Conservation of the Ifugao Rice Terraces

Metro Manila's Water Supply Problem

- ❖ The proper pricing of natural resources is an important component of the Philippine Strategy for Sustainable Development adopted in 1989
- ❖ Limited efforts to price and collect the fees for raw water in the Philippines
- ❖ Metro Manila (pop: >13 million) is experiencing problems in its water supply, especially during the dry season
- ❖ Demand for water is increasing, but water supply (quantity and quality) is not coping up
 - Deteriorating watershed health
 - Agencies do not have enough funds for effective watershed management
- ❖ Government is hesitant to collect water user fees for improved watershed management as it may become a political issue
- ❖ **The question is ...**
Is government correct in assuming that people, especially Metro Manila residents, are not willing to pay to help the government raise funds for improved watershed management?

The Study Areas



Watershed	Area (ha)	Estimated Cost of Watershed Management	
		P/ha/year	P/year
Angat	62,000	17,600	1,091,200,000
Ipo	6,600	17,600	16,160,000
Umiray	53,800	5,000	269,000,000
La Mesa	2,700	17,600	47,520,000
		Total	1,523.880,000

Potential Revenues: P730 million → 50% of costs
(P29/mo/HH*2.1 million HH)

Are Metro Manila residents willing to pay?

- ❖ 1,301 respondents (58%) were willing to pay, because they want reliable water supply (43%), want watersheds to continue producing environmental services (16%), and want reliable water supply for the future generation (13%)
- ❖ Mean WTP: P29/HH/month (on top of current water bill)
- ❖ 932 respondents (42%) were not willing to pay, because they could not afford the additional charge (9%), believed that it is the government's responsibility (9%), and found the water tariff to be already too high (4%)

Other Insights

- ❖ Only 16% of respondents were aware of what watersheds are, but 91% knew the role of forests in sustainable water supply
- ❖ La Mesa was the best known watershed (87% familiar), but only 11% knew that it was a watershed; Umiray was the least known
- ❖ Residents prefer the water user fee to be added to water bill, and volume of water consumed as basis of payment
- ❖ Residents do not want a government agency to collect the fee

Recommendations

- ❖ Heighten IEC activities
- ❖ Implement water user fee to capture WTP for improved watershed management
- ❖ Explore possibility of directly remitting revenues from water user fee to watershed managers, not to the National Treasury
- ❖ Multi-sectoral council to manage account to ensure transparency and accountability

Where it all began ...

I attended the 5th Regional Training Course in Environmental and Resource Economics in Los Baños in April 2002. Soon after, I submitted a research proposal to EEPSEA and by March 2003, our project entitled **“Improved Management of the Angat, Ipo, Umiray and La Mesa Watersheds in Luzon: A Contingent Valuation Study”** was approved. This was the first research project that I led, and it opened many doors not only for me but for the other members of our research team as well (namely Leni Camacho, Josefina Dizon, Myrna Carandang, Lucrecio Rebugio and Noel Tolentino). My second EEPSEA project was on the **“Development of a Sustainable Financing Mechanism for the Conservation of the Ifugao Rice Terraces”**, where I worked with Josefina Dizon, Asa Jose Sajise, Nathaniel Bantayan, Rogelio Andrada II, and Myranel G. Salvador.

UP cites study new taxes OK for clean water

BAGUIO CITY—MANY FILIPINOS LIVING in cities are willing to be taxed to finance the preservation of watersheds so they can be assured of their daily supply of potable water, according to studies discussed at a national convention on water conservation here last week.

The value of subsidizing watershed upkeep is starting to dawn on regional governments that used to resist the idea, said Margaret Calderon, forestry professor at the University of the Philippines Los Baños and one of the experts who attended the annual convention of the Water Environment Association of the Philippines (WEAP) here on July 24.

“Despite these developments, it can be said that there has been very little effort made to price and collect fees for raw water in the Philippines,” Calderon said.

What's a watershed?

The regional development councils in the Cordillera, Ilocos and Cagayan Valley are pursuing water valuation programs for 22 critical watersheds that supply water to farmlands and hydroelectric plants in Northern Luzon.

Primitivo Galinato, Cordillera director of the Department of Environment and Natural Resources, said the three regions have agreed to jointly manage upland forests.

He said the study was commissioned to help design a new approach to forest management.

Unlike upland communities, where environmental awareness is high, Calderon said Metro Manila households were less conscious of watersheds when UP proceeded “to look into people's attitudes towards and evaluate their willingness to pay for watershed conservation.”

Calderon said only 16 percent of 2,232 Metro Manila households knew what a watershed was, although 91 percent was aware of how important forests are to water supply.

The studies showed that 60 percent of the respondents agreed that a water user fee, which could add P29.11 a month to consumers' water bills, is essential to securing water supply.

UP drew positive responses from 54 percent of 1,521 households in Camarines Sur, where additional water fees could reach P55.14 month.

— Vincent Cobresia, Inquirer Northern Luzon

-Philippine Daily Inquirer, July 29, 2009



The Problems of the Ifugao Rice Terraces

- ❖ Rice terraces in four municipalities of Ifugao (Batac and Bangaan in Banaue, Hungduan, Kiangan and Mayoyao) were inscribed in the UNESCO World Heritage List in 1995 as the Rice Terraces of the Philippine Cordilleras under the category of organically evolved landscapes
- ❖ Terraces have deteriorated over the years
- ❖ Those inscribed in the World Heritage List have been reclassified to the World Heritage in Danger List in 2001
- ❖ Main Threats to the Terraces (UNESCO 2005)
 - Lack of an effective site management authority and adequate legislation
 - Lack of a finalized strategic site management plan
- Declining interest of the Ifugaos in their culture and in maintaining the terraces**
- Lack of human and financial resources**

Findings from Phase 1

- Water supply problems may be addressed by rehabilitating irrigation system
- Labor is sufficient, but farmers need subsidy to hire labor, especially for terrace maintenance
- Significant factors affecting abandonment: poor irrigation facilities and farm size
- Incentives: rehabilitation of irrigation system, labor subsidy for terrace repair and maintenance, additional livelihood opportunities
- Only 25% of high school students surveyed likely to be involved in agriculture; income, academic performance (-), age (+)
- Keeping the Rice Terraces on the Heritage List requires continuous substantial funds
 - Government funds limited
 - Need to tap sectors that benefit from the cultural and environmental values of the rice terraces
 - **Payment for cultural and environmental services**

Findings from Phase 2

- Mean WTP for the conservation of IRT:
 - P554 for local tourists, US\$73 for foreign tourists
- Potential revenues from tourists at P50 (local) and US\$20 (foreign): P6.65 million/year
- Low- and high- cost estimate of terrace rehabilitation:
 - P10.021 million and P1.122 billion, or annualized costs (10 yrs, i=10%) of about P1.600 million to P184.243 million a year
- ✓ **Revenues from tourists have the potential to significantly finance the rehabilitation of the terraces**
- Some municipalities are already collecting entrance fees from tourists, but collection is ineffective

Spreading the EEPSEA spirit: Fruits of the Watershed Study

- A parallel study for Mt. Isarog came up when a UNEP-funded project our College was working on required a study to assess water users' willingness-to-pay for the conservation of the Mt. Isarog Natural Park in Camarines Sur, based on our watershed study for Metro Manila
- Papers presented in 3 international conferences
- ... and in 5 conferences in the Philippines



- Involvement in the *Palawan Biodiversity Corridor Project* to estimate the total economic value of the Mt. Mantalingahan Range Watershed (2007), which contributed to the signing of Proclamation 1815, officially creating the 120,000-hectare Mt. Mantalingahan Protected Landscape (MMPL)

- Served as resource person in the training on Environment and Natural Resource Valuation, attended by more than 30 staff of the Palawan Council for Sustainable Development Staff; informed them about EEPSEA's activities, and one of the PCSDS staff applied for and was able to attend EEPSEA's 2008 Regional Training Course in Nonthaburi, Thailand

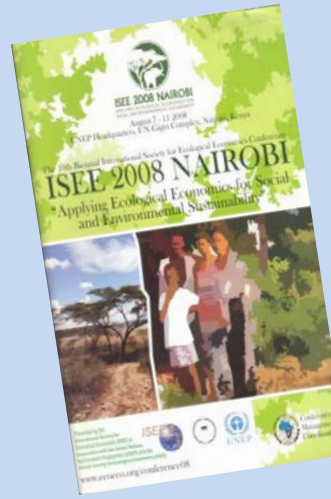
- With permission from EEPSEA, our ASEAN-Korea Environmental Cooperation Project used EEPSEA's mangrove valuation manual (Bann 1998) as a major reference during a training course held in Palawan (2008). This was attended by researchers from Indonesia, Thailand, Vietnam, Malaysia, Myanmar, Laos, Cambodia and the Philippines. Four EEPSEA researchers from UPLB (Asa Sajise, Leni Camacho and Jopay Dizon and myself) served as resource persons.

... And the Ifugao Study

- Presented papers derived from the Ifugao project in 2 international conferences
- Won the second prize in the best scientific poster competition of the National Research Council of the Philippines (March 2009)
- Bagged the Best Scientific Paper Award during the 2009 FORESPI Annual Symposium (December 2009)
- Awarded a grant by IDRC to develop a project proposal for Payments for Environmental and Cultural Services (PECS) of the Ifugao Rice Terraces (2009)
- Awarded a grant from SEARCA (2009) to capacitate farmers from Hungduan, Ifugao in preparation for PECS
- Presented findings during the Ifugao Rice Terraces Summit held in Banaue, Ifugao (August 2009); attended by the Philippine Ambassador to UNESCO, the Ifugao Governor and mayors of different Ifugao towns, farmer leaders, and other stakeholders

On a personal note

Personally, I can say that my training and research involvement with EEPSEA gave my career a much-needed boost. For more than 10 years, my research work was mainly supportive in nature. I did not think I had it in me to lead projects like the ones I had with EEPSEA. Our research outputs (paper presentations, journal articles) were a major reason why I was promoted twice since I became an EEPSEA researcher.



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