PRICING OF WATER AND SEWERAGE SERVICES IN METRO MANILA: The Contingent Valuation Method

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PROJECT BACKGROUND

World Bank Metro Manila Third Sewage Project:

The Taguig Sewerage System involves construction of 4 drainage/flood retention ponds into Sewage Treatment Plants (STPs) in line with the flood control project of the Department of Public Works and Highways (DPWH) in coordination with the Manila Waterworks and Sewerage Systems (MWSS).
STPs

- Treat sewage in Taguig and Tanay STPs before discharge to Laguna de Bay during the dry season

- Increase the wet weather drainage/sewage flow by at least 1.5 times the dry weather flow
METHODOLOGY

- contingent valuation method was used to come up with regulatory pricing of water and sewerage services in Metro Manila
METHODOLOGY

- **Ability to pay** analysis for sewerage services was based mainly on the 2000 Family Income and Expenditures Survey conducted by the National Statistics Office (NSO).

- Estimates of **willingness-to-pay** were based on surveys conducted in Barangays Wawa, Western Bicutan, Calzada of Taguig; and Barangay San Juan in Tanay in November 2007.
MODE OF COLLECTION OF PAYMENT

- Both water and sewerage fees are collected in one bill by the MWSS.
ABILITY TO PAY ANALYSIS:
FAMILY INCOME AND EXPENDITURES FOR WATER
### Average Annual Income (PhP) in Taguig and Tanay Compared with Other Areas in the Philippines

<table>
<thead>
<tr>
<th>Area</th>
<th>Average Family Income</th>
<th>Average Family Income in Taguig and Pateros as a Percent of Other Regions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taguig</td>
<td>230,719</td>
<td>100</td>
</tr>
<tr>
<td>Tanay</td>
<td>246,286</td>
<td>100</td>
</tr>
<tr>
<td>All Philippines</td>
<td>144,039</td>
<td>166</td>
</tr>
<tr>
<td>National Capital Region</td>
<td>300,304</td>
<td>79</td>
</tr>
</tbody>
</table>

Source: NSO. 2000. Family Income and Expenditures Survey
Comparison of Average Annual Family Income and Expenditures (PhP) for Water

<table>
<thead>
<tr>
<th>Average Family Living in</th>
<th>Average Annual Income</th>
<th>Annual Expenditure for Water</th>
<th>Monthly Expenditure for Water</th>
<th>Percent of Income Spent of Water (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taguig</td>
<td>230,719</td>
<td>2,504</td>
<td>209</td>
<td>1.09</td>
</tr>
<tr>
<td>Tanay</td>
<td>246,286</td>
<td>2,064</td>
<td>172</td>
<td>0.84</td>
</tr>
<tr>
<td>National Capital Region</td>
<td>300,304</td>
<td>2,504</td>
<td>209</td>
<td>0.83</td>
</tr>
<tr>
<td>All Philippine Families</td>
<td>144,039</td>
<td>1,936</td>
<td>161</td>
<td>1.34</td>
</tr>
</tbody>
</table>

Source: NSO. 2000. Family Income and Expenditures Survey
fuel, light and water comprised 6.3% of family expenditures

Previous studies assumed that water rates represent 1/3 of 6.3 % or 2.1% of family expenditures
Future Ability to Pay for Water and Sewerage Services

Taguig (PhP 209)

Ability to pay (year 2000)

• income growth rate
• proportion of income spent for water

Future ability to pay (2007)

10.2%
Tanay
4.8%
Taguig

Tanay (PhP 172)

0.84% Tanay
(PhP 340)

Taguig
1.09%
(PhP 291)
Willingness to Pay for Sewerage Services

- Prior to project construction, 50% of water charge went to sewerage fee though none of the respondents were aware of this.

- Most were not aware how the water fee was computed, although the amount of water consumed is incorporated in their bill and MWSS has posted it in newspapers.
When asked how much they were willing to pay for an increase in the price of sewerage services: 42% of consumers are willing to pay PhP 20 a month more for sewerage, 48% were not in favor (2003 survey)

If adjusted at 6.3% inflation, this would amount to PhP 25.54 in 2007 per household connection which is .10% (Taguig) and .06% (Tanay) of income spent for water and sewerage.
Willingness to Pay for Sewerage Services

- In 2000, sewerage fees: Taguig-Php 104, Tanay-Php 86.
- By 2007, half of their water bill which would go to sewerage fees: Taguig- .95% (or PhP 146 in 2007) and Tanay-.42% (or PhP 170).
- As long as the combined payment for water and sewerage services does not exceed 0.84 % and 1.09 % of average family income of households in Tanay and Taguig, respectively, most families will be able and willing to pay for sewerage.
ABILITY AND WILLINGNESS TO PAY FOR STP fees

Ability & Willingness to Pay

YEAR
2003 2004 2005 2006 2007
PhP/mo
0 5 10 15 20 25
Taguig Ability
Tanay Ability
Willingness

- Taguig Ability
- Tanay Ability
- Willingness
Willingness to Pay for Sewerage Services

- Initial increase of PhP 20 a month in 2003 is not affordable to most families. However, the annual increase from 2004 onwards is affordable.
General feeling of respondents about price increase

- 15% were happy
- 63% were not happy
- 21% were neither happy nor unhappy
- the rest (1%) did not comment
Among the respondents who admitted they were happy with the price increase in their water bill to accommodate sewerage services

- 57% reasoned out that the price increase would mean better quality service
- 12% said it was low with respect to their incomes
- 12% declared that the current charge is low
Of the respondents who were unhappy with the price increase

- 44% disagreed with any price increase
- 28% said there was no increase in family income and the price increase would lessen their household budget
- 13% thought that the MWSS would just pass on its expenses to its customers. Other reasons indicated were: no budget allocation, additional household expenditure, while some said that the it is the obligation of the government to shoulder the price increase.
CONCLUSIONS

- Historically water bill payments accounted for 1.09% of average family income in the Taguig, and 0.84% in Tanay. Of these, half go to payment of sewerage service. This is an indication of their ability to pay.

- The willingness of families to pay for the proposed increase is still within the limits of what they can really afford.
CONCLUSIONS

- Low priority is given by the affected families to sewerage in their household expenditures. –stems from lack of understanding on the importance of sanitation to health.

- Need to stimulate demand for sanitation through Information education campaign and awareness on the benefits that they will gain from safe piped-water and sanitation services in order to change their perception and willingness to pay for such service.–became a component of this project.
CONCLUSIONS

- To remain within stated limits of willingness to pay expressed as percent of the average family income, the average payment for sewerage services should be approximately 0.84% and 1.09% of the average family income in Tanay and Taguig, respectively.

- Public consultation is important in coming up with a new pricing scheme. They should be properly informed.
CONCLUSIONS

- The results of willingness to pay studies can be linked to the financial/economic analysis of the project.

- The WTP scheme can be used in projects where public participation is deemed necessary and when they are direct consumers.
CONCLUSIONS

- Aside from the government, different entities are also be active in disseminating information about watershed management, as well as awareness activities on the sewerage system.
Thank you!!!