COST COMPARISON
Urban EcoSan and Simplified Sewerage

Estimated EcoSan costs in urban and rural areas in different regions of the developing world are given by the Stockholm Environment Institute (SEI, 2005); these are reproduced in Table 1 as per household and per capita costs (using the same household sizes for urban and rural households, as done in the original report).

Table 1. EcoSan costs (USD) per household and per person for the nine UN regions of the developing world[1]

UN Region	House-hold size	Urban areas		Rural Areas	
		Cost per household	Cost per person	Cost per household	Cost per person
Sub-saharan Africa	**4.29**	**$350**	**$82**	**$35**	**$8**
Southern Asia	**5.08**	**$440**	**$87**	**$40**	**$8**
East Asia	**2.73**	**$650**	**$238**	**$50**	**$18**
Eurasia	**2.25**	**$725**	**$322**	**$55**	**$24**
Southeast Asia	**3.81**	**$800**	**$210**	**$60**	**$16**
Oceania	**4.78**	**$875**	**$183**	**$65**	**$14**
North Africa	**4.80**	**$900**	**$186**	**$65**	**$14**
Latin America & Caribbean	**3.53**	**$1000**	**$283**	**$70**	**$20**
West Asia	**4.95**	**$1200**	**$258**	**$80**	**$17**

[1]Costs include capital costs and O&M costs for the first year.
Source: Tables 4-4 and 4-5 in SEI (2005).

Note that there is an order-of-magnitude difference between EcoSan costs in urban and rural areas. The rural costs are low but the urban costs are very high − this is important as the SEI report notes that 'the sanitation challenge will become primarily an urban one' [title of section 4.5.1] and thus most of the MDG sanitation costs are expected to occur in urban areas.

The SEI report compares EcoSan costs with the costs of conventional sewerage, but not with those of simplified (or condominial) sewerage. There are good costs for condominial sewerage in Brazil and also for low-cost sewerage (essentially the same as simplified sewerage) in 'slum networking' projects in India.

(a) Brazil

Costs for simplified/condominial sewerage are shown in Table 2. They are much lower than the EcoSan costs for urban Latin America and the Caribbean given in Table 1 ($1000 per household). Table 2 also shows that the cost of condominial sewerage in Brazil is less than the cost of EcoSan in urban Sub-saharan Africa given in Table 1 ($350 per household).

Table 2. Condominial sewerage costs per connection (USD) in Brazil

City (State)	Cost per household	Reference
Natal (Rio Grande do Norte)	**$325**	**Sinnatamby *et al*. (1985)**
Brasília (Distrito Federal)	**$110−170**	**Sarmento (2001)**
Recife (Pernambuco)	**$147−346**	**Sarmento (2001)**
Parauapebas (Pará)	**$56**	**Melo (2005)**

(b) India

Tripathi (1999) gives the sewerage cost in 1996 for the slum networking project in Sanjay Nagar, Ahmedabad as ~INR 1600 per household (~USD 45, using the average 1996 exchange rate from www.oanda.com/convert/fxhistory), which is much lower than the EcoSan cost in urban southern Asia given in Table 1 (USD 440).

More recently, Himanshu Parikh Consulting Engineers (Ahmedabad, India; personal communication, September 2006) report that **'the cost of providing complete infrastructure [in periurban India] is about INR 16,000 [~USD 350] per family. This includes house-to-house sewerage, water supply, roads, stormwater drainage, solid waste hardware and landscaping. Out of this the sewerage component is ~USD 130 (~USD 87 for the networks and ~USD 43 for treatment per family of 5 people).'** Again, *much* lower than the costs given for urban southern Asia in Table 1.

References

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