

# THE ECONOMICS OF SANITATION INITIATIVE

Presented at the Philippine Symposium on Sustainable  
Sanitation and Global Hand washing Day, Makati , 15  
October 2009

# OUTLINE

- **Overview of Economics of Sanitation Initiative (ESI)**
- **ESI 1**
- **ESI 2**
- **The road ahead**

# OVERVIEW OF THE ESI

## The Economics of Sanitation Initiative (ESI)

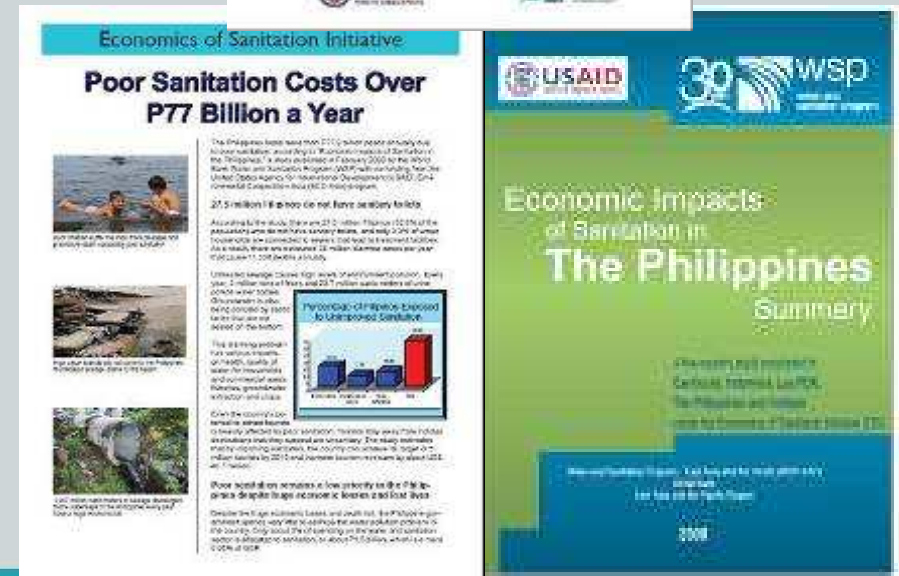
- Led by the Water and Sanitation Program in EAP region, with the aim to compile and generate socio-economic evidence for improved sanitation advocacy and policy making



- **Two phases:**
  - (1) Sanitation economic impact study
  - (2) Sanitation options cost-benefit study

# ESI 1: IMPACTS STUDY

- Used secondary data to evaluate the impacts of sanitation
- Impacts included: health, water, environment, tourism, and other welfare (time loss)
- Completed more than a year ago for the Philippines



# Outputs for the region and other participating countries

The collage displays several key outputs from the WSP program:

- Economic Impacts of Sanitation in Indonesia** (Research Report, June 2009)
- Economic Impacts of Sanitation in Vietnam** (Research Report, February 2009)
- Economic Impacts of Sanitation in Lao PDR** (Research Report, April 2009)
- Economic Impacts of Sanitation in Cambodia** (Research Report, February 2009)
- Economic Impacts of Sanitation in Southeast Asia** (Research Report, February 2009)
- Economic Impacts of Sanitation in Southeast Asia Summary** (Summary, February 2009)
- Economic Impacts of Sanitation in Vietnam Summary** (Summary, February 2009)
- Economic Impacts of Sanitation in Cambodia Summary** (Summary, February 2009)
- Cambodia The World Bank Newsletter** (February 2009)
- Poor Sanitation Costs Indonesia Over Rp 58 Trillion Per Year** (Infographic, February 2009)

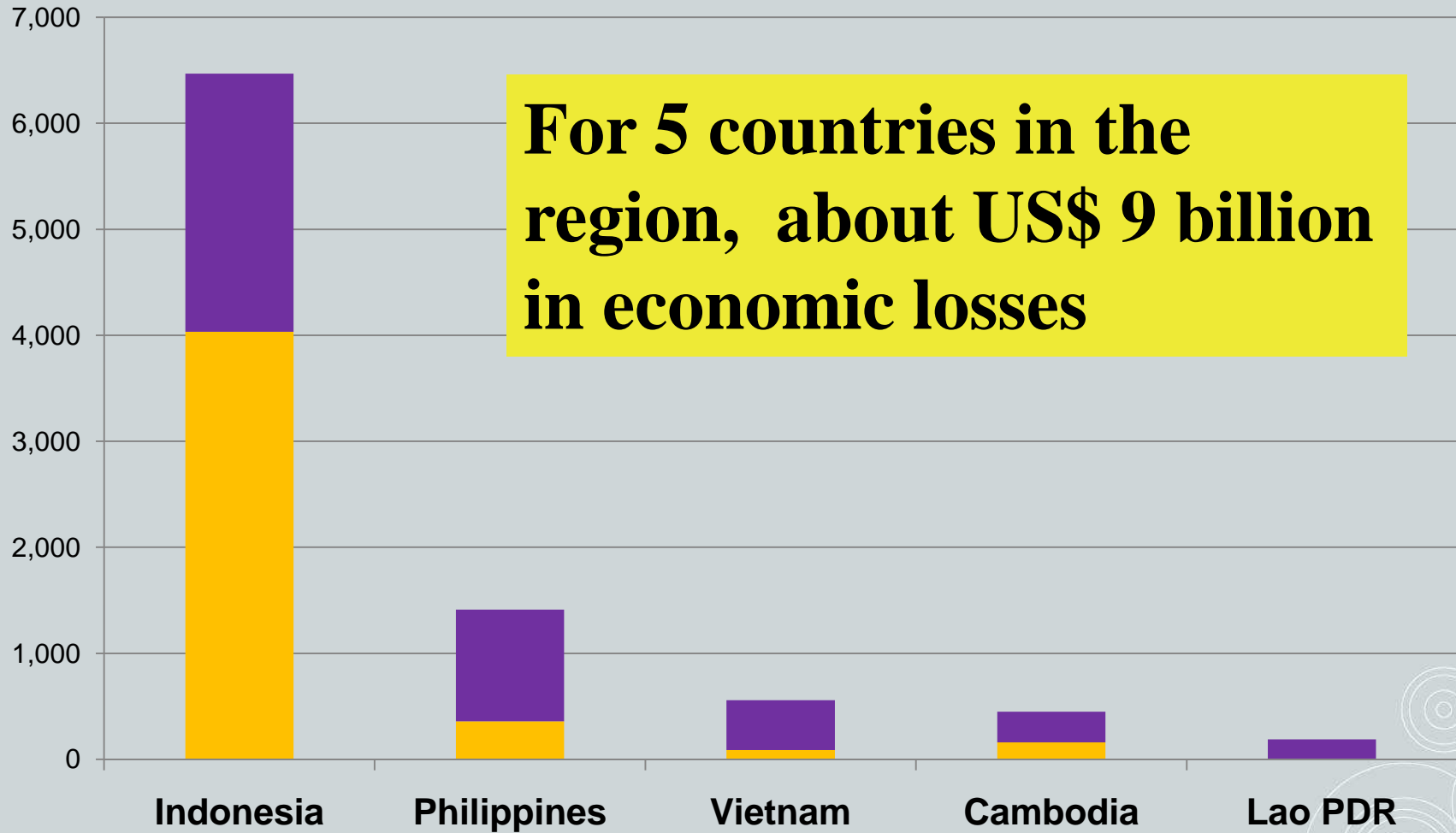
The infographic titled "Poor Sanitation Costs Indonesia Over Rp 58 Trillion Per Year" includes the following data:

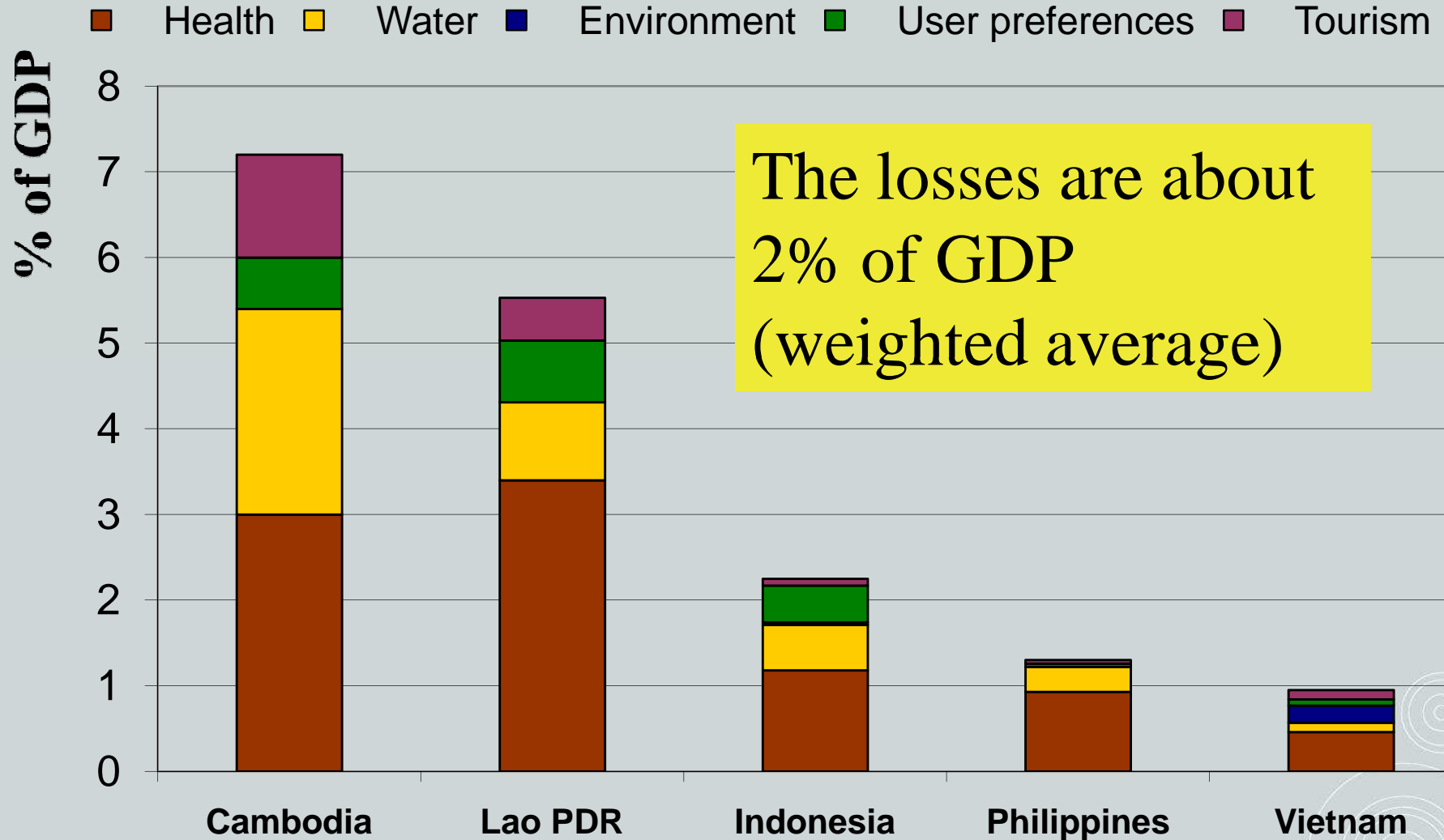
Category	Value
Estimated loss from poor sanitation in Indonesia	Rp 58 trillion per year
Estimated loss from poor sanitation in Cambodia	Rp 1.5 trillion per year
Estimated loss from poor sanitation in Vietnam	Rp 1.5 trillion per year
Estimated loss from poor sanitation in Lao PDR	Rp 1.5 trillion per year
Estimated loss from poor sanitation in Cambodia	Rp 1.5 trillion per year

# ESI 1: Key results

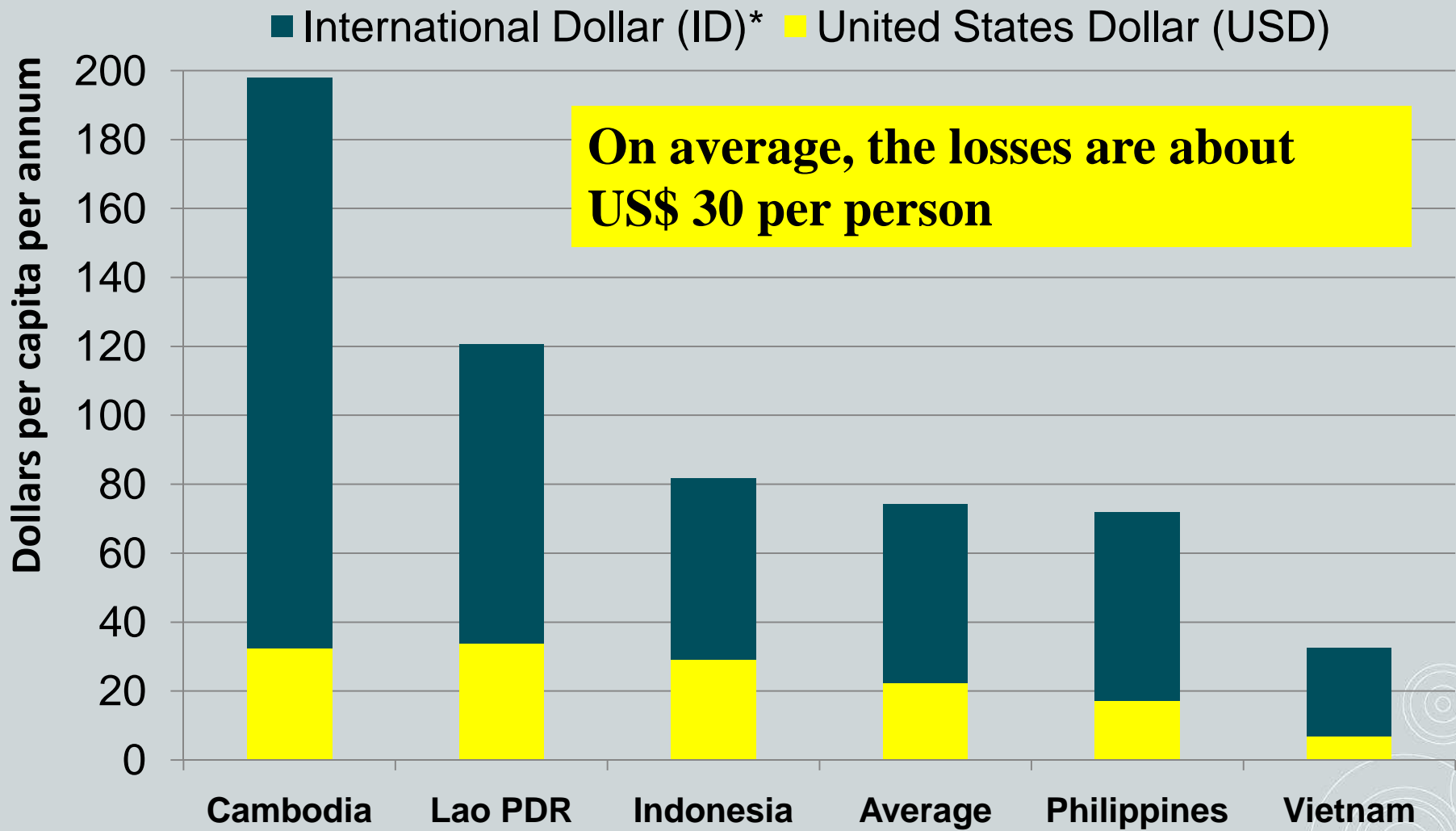
Million US\$

■ Financial ■ Economic





# Per Capita Impact



# A closer look at the Philippines



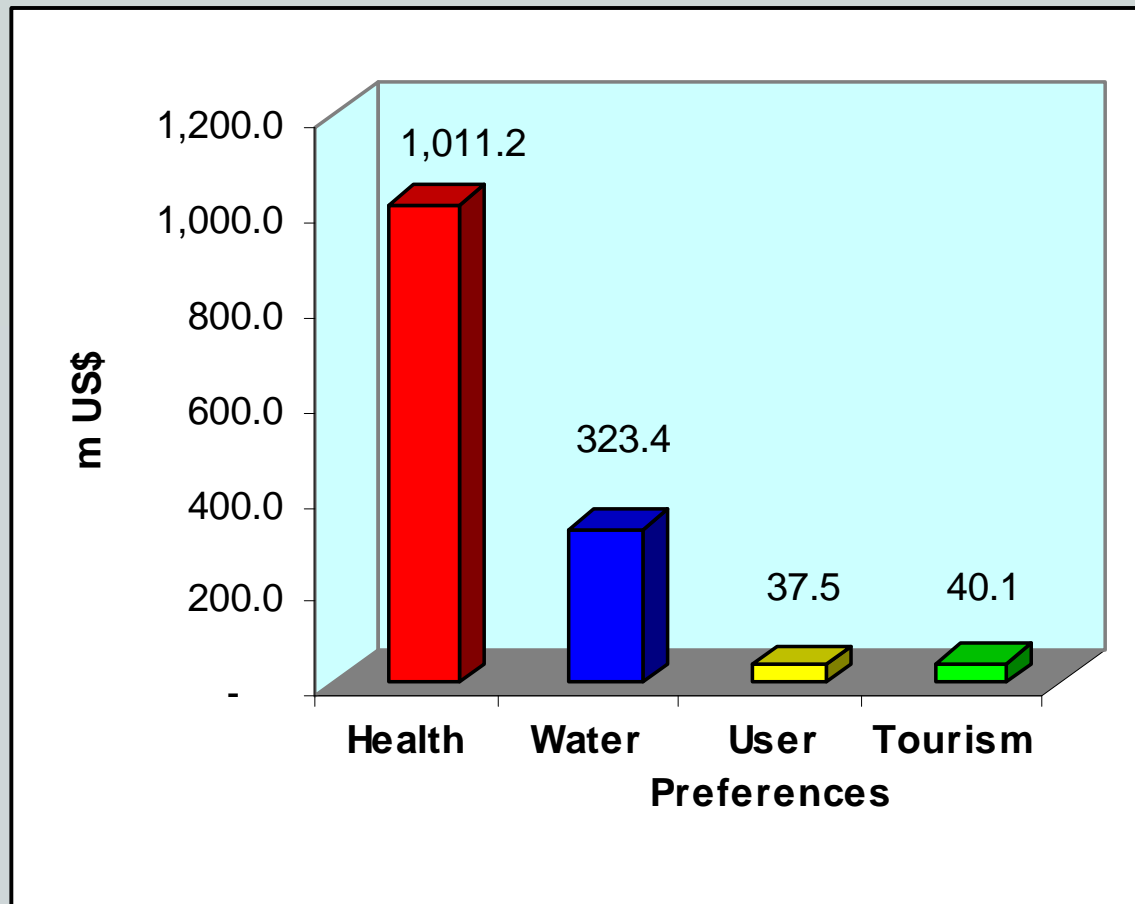
**Annual losses:**

± US\$1.4 b

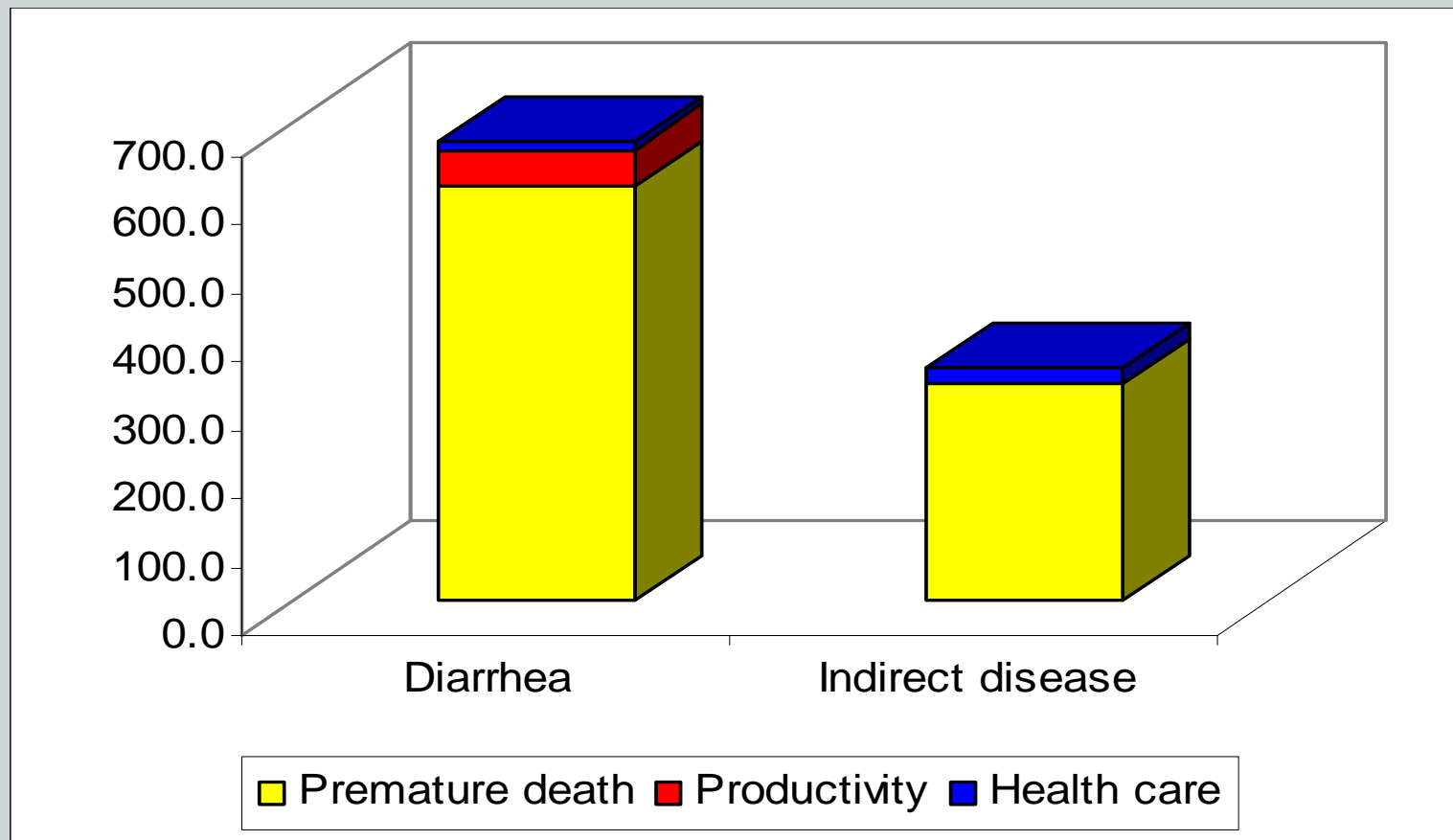
± 1.5% of GDP



**Per capita:  
US\$16.8**



- **Costs associated with diarrheal diseases are about 2 times larger than other diseases covered in the study**



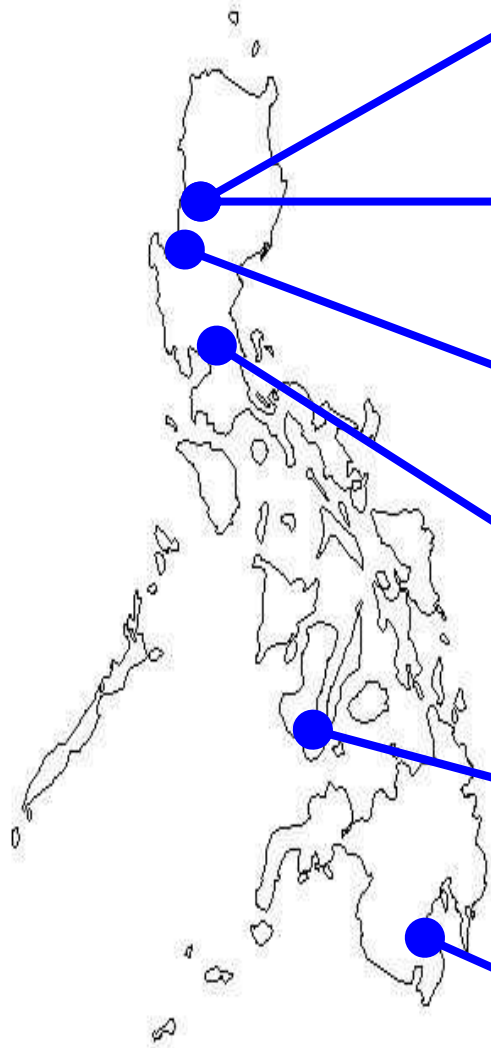
# ESI 2: OPTIONS STUDY

- **Evaluates the economic efficiency of various sanitation options**
  - **CBA/ CEA**
  - **Program approach analysis**
- **Phase 2 is on-going and is expected to be completed mid-2010 in the Philippines**
  - **Currently in the process of compiling and analyzing collected information**

# ESI 2 INFORMATION BASE

- **Site-specific surveys**
  - **Households**
  - **Physical location and market**
  - **Health facilities**
  - **Water quality**
- **Other surveys**
  - **Tourist surveys – implemented at the airport**
  - **Business – selected firms in the NCR and Southern Luzon**
- **Focus group discussions**
- **Secondary data**

## ESI 2 Survey sites



**San Fernando, La Union: upland region**

**San Fernando, La Union: coastal region**

**Bgy. Pugaro, Dagupan, Pangasinan**

**Taguig, Metro Manila**

**Bayawan, Negros Oriental**

**Alabel, Sarangani**

# Interventions and sample sizes

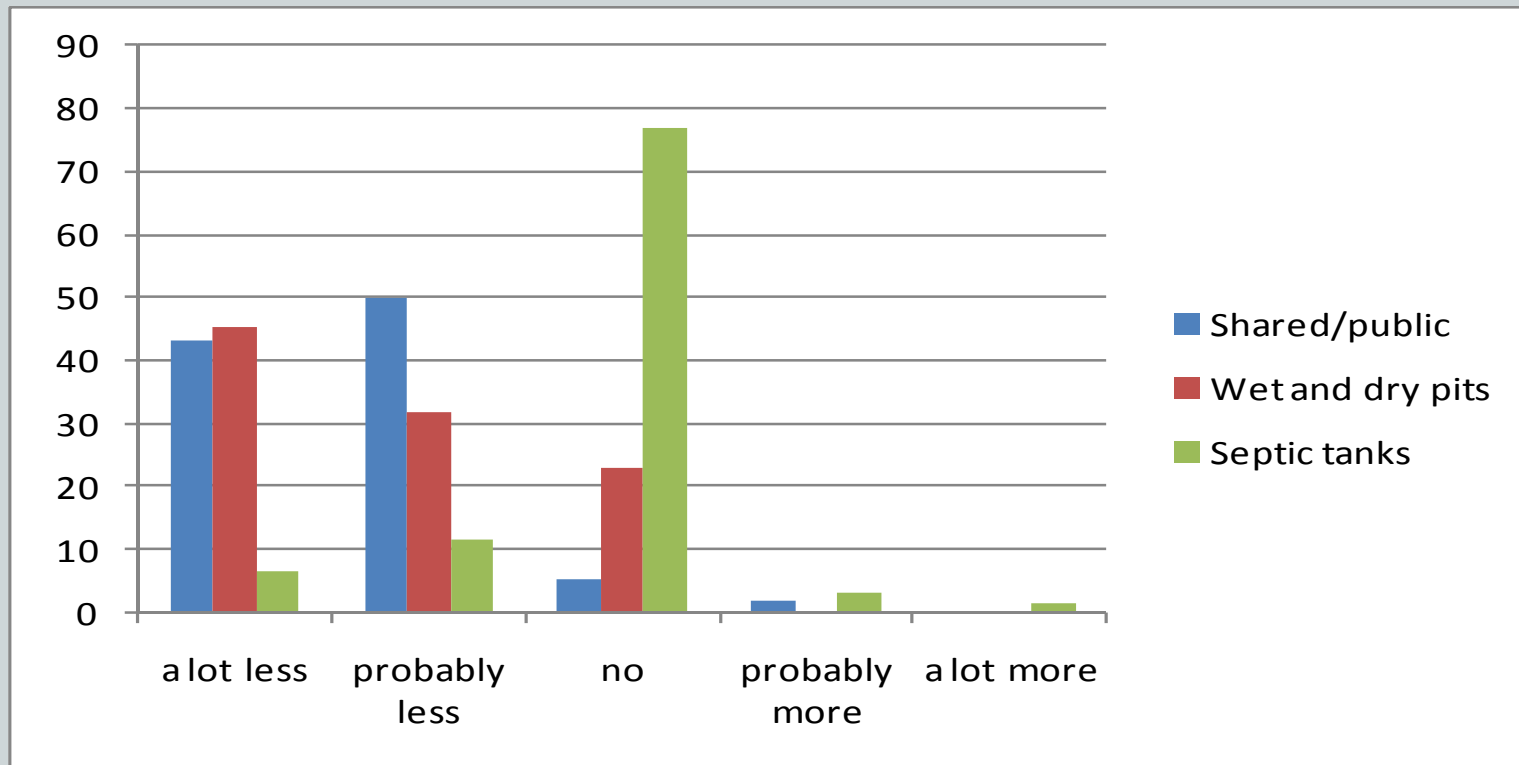
<b>Location</b>	<b>Intervention (vs Open defecation)</b>	<b>Sample size (HH survey)</b>
<b>Alabel</b>	<b>wet pit latrine, septic tanks, desludged septic tanks</b>	<b>225</b>
<b>Bayawan</b>	<b>constructed wetland</b>	<b>217</b>
<b>Dagupan</b>	<b>shared &amp; public toilets, private toilets</b>	<b>223</b>
<b>San Fernando - coastal</b>	<b>public toilets, wet pit latrines (private), EcoSan</b>	<b>182</b>
<b>San Fernando – upland</b>	<b>shared toilets, dry pit latrines (private), EcoSan</b>	<b>80</b>
<b>Taguig</b>	<b>septic tanks, desludged septic tanks, sewers</b>	<b>343</b>
<b>TOTAL</b>		<b>1270</b>

## ESI 2: SELECTED RESULTS

- **Most of the information gathered are better interpreted in the context of the CBA/CEA. Only results which might be relevant on their own will be presented here.**
- **Will present results generated from surveys and FGD on**
  - **Perceptions regarding diarrheal incidence**
  - **Access time**
  - **Intangibles**
  - **Tourism**

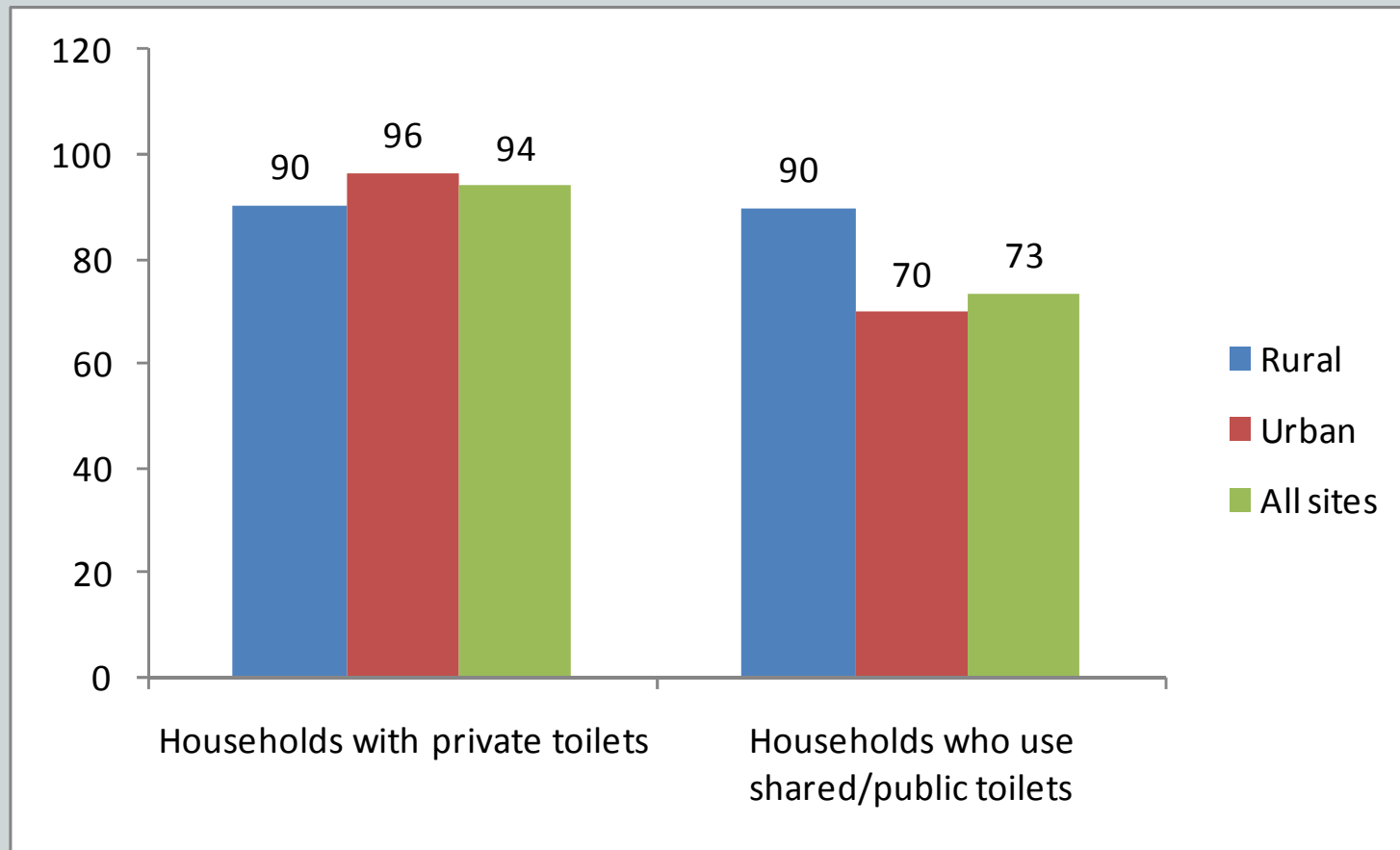
## Perceptions regarding diarrheal incidence

- **Question: Have you noticed an observable change in diarrheal disease rates in any household members since you received the new latrine? (% of total responses)**

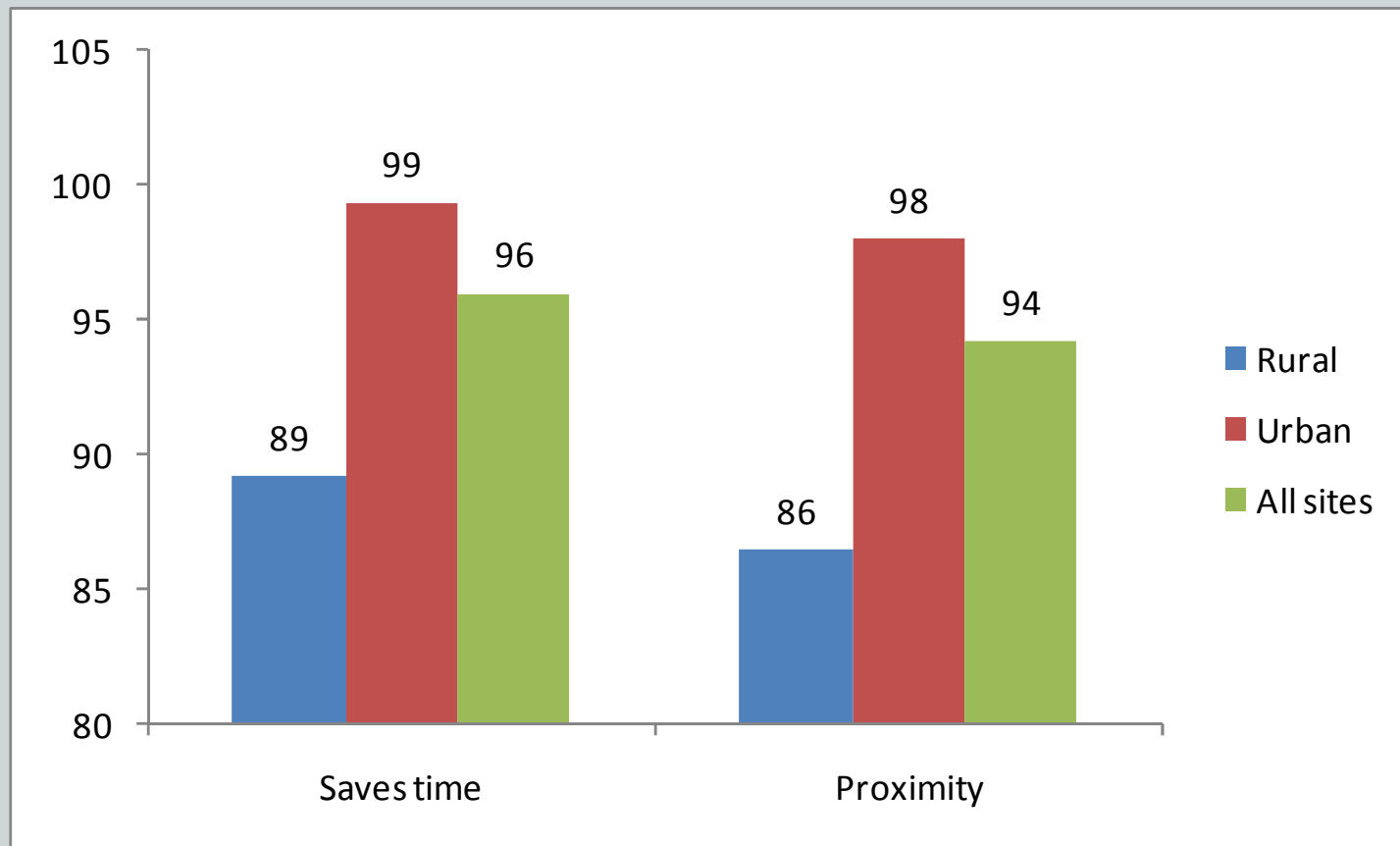


# Satisfaction with current toilets

- Percentage of households who are satisfied or very satisfied with the proximity of their toilets

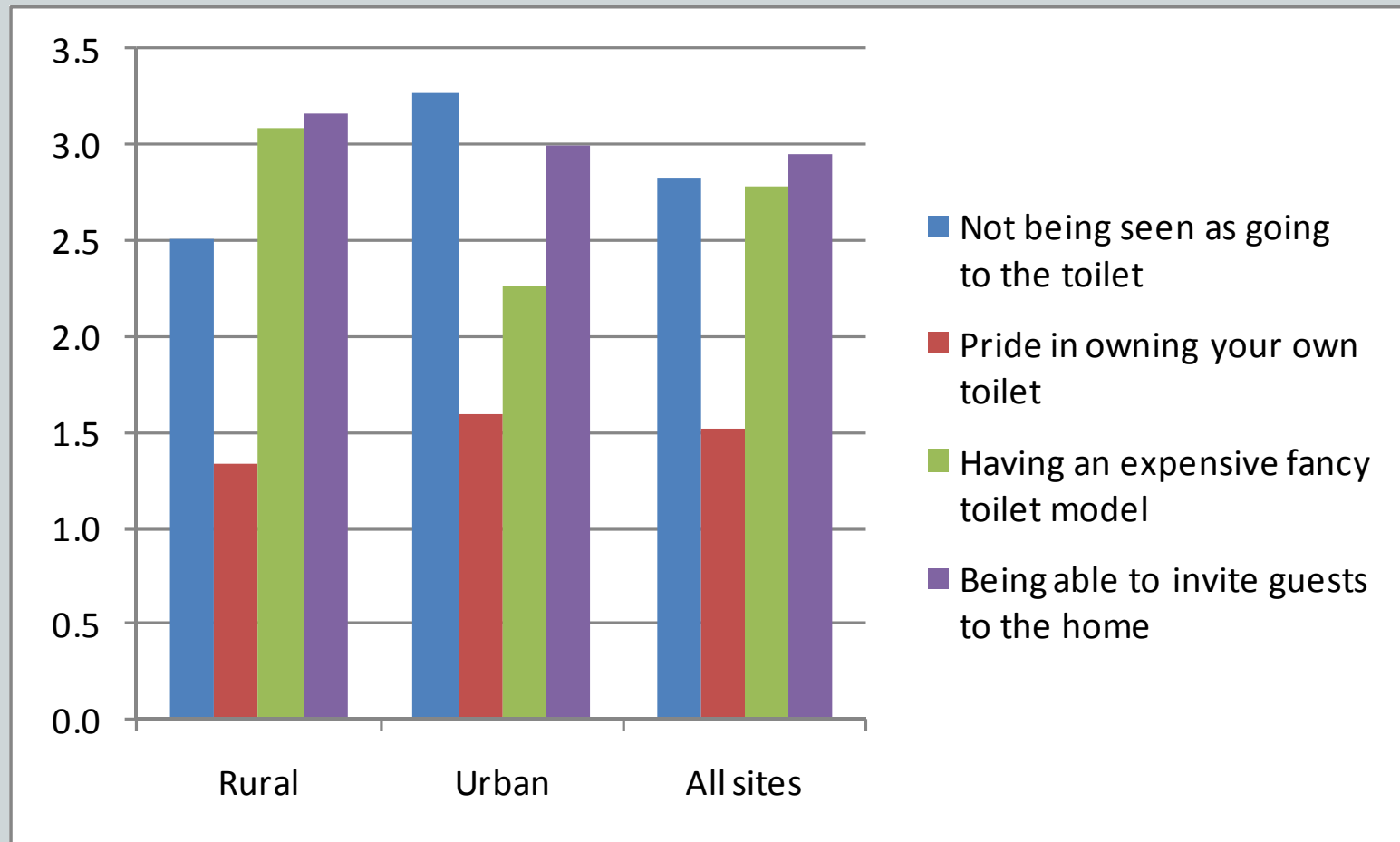


- **Percentage of households without toilets who say that time savings and proximity are important characteristics for toilets**



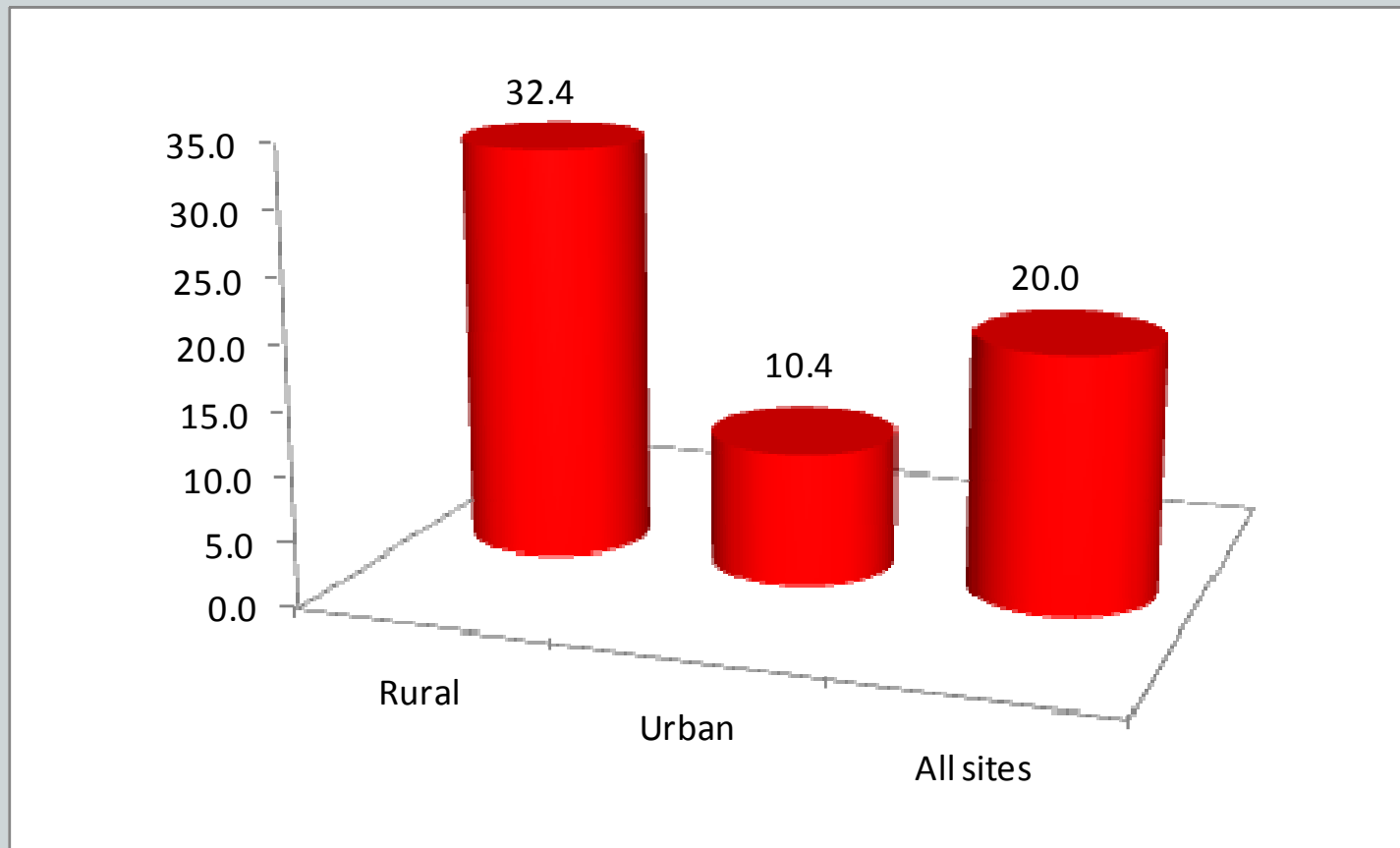
# Psychic dimension to owning toilets

- Based on FGD (1 = highest)

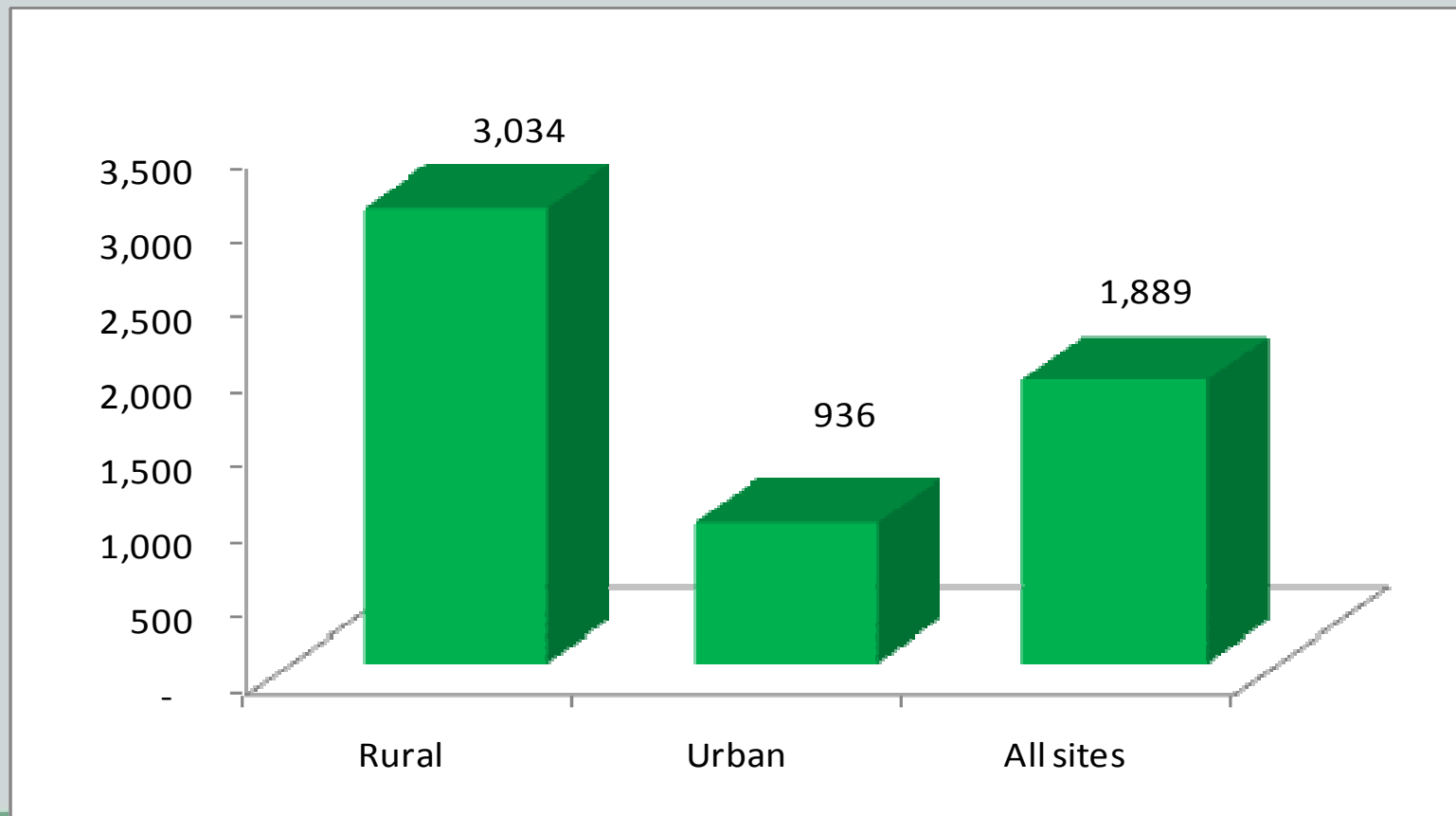


# Time loss

- **Time loss for households who do not own toilets: travel and waiting time per household (days in a year)**

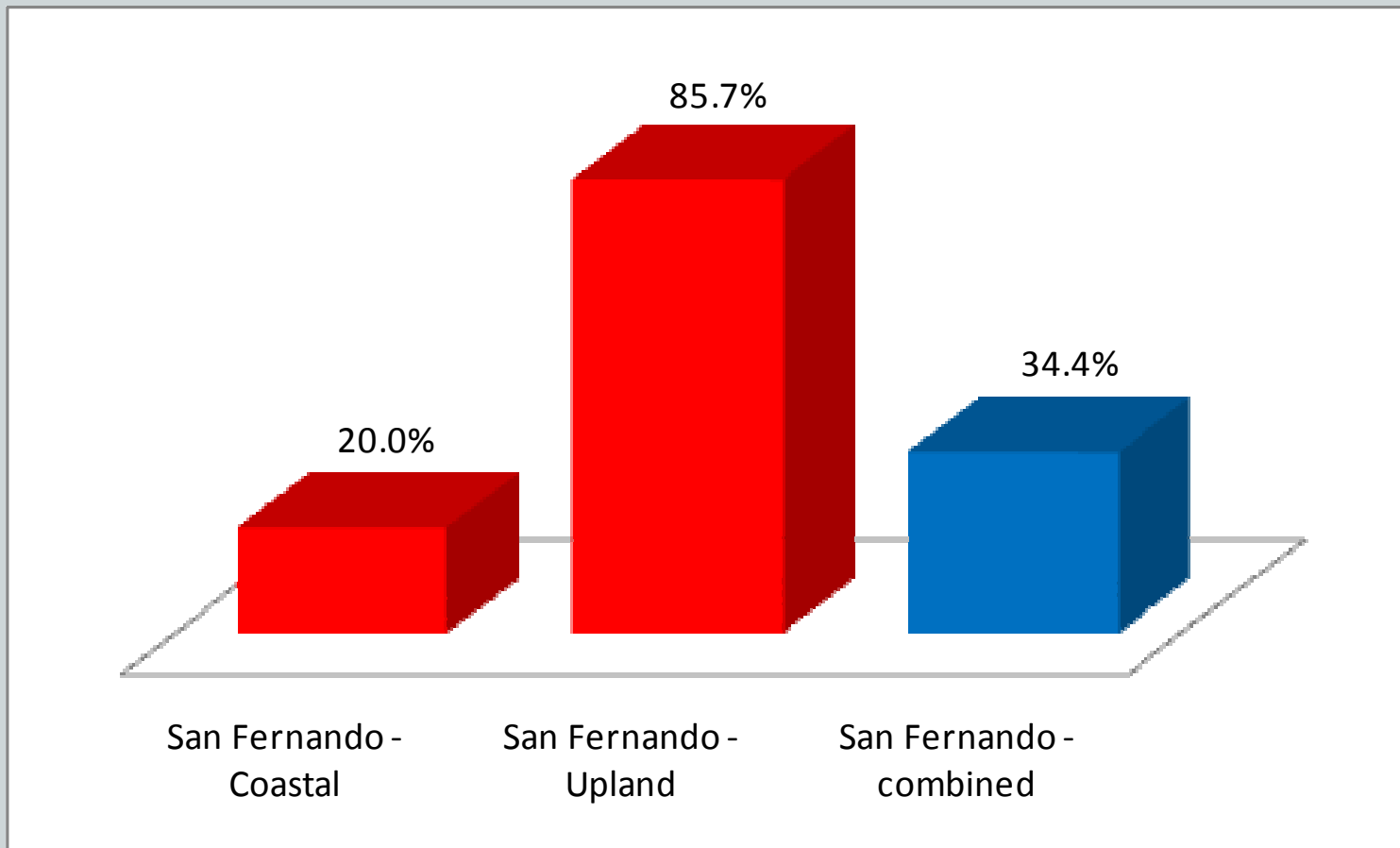


- **Time loss in pesos: per household in a year, 2008 prices**
  - **Value of time: adults = 30% of GDP per capita/day; children = 15% of GDP per capita/day**

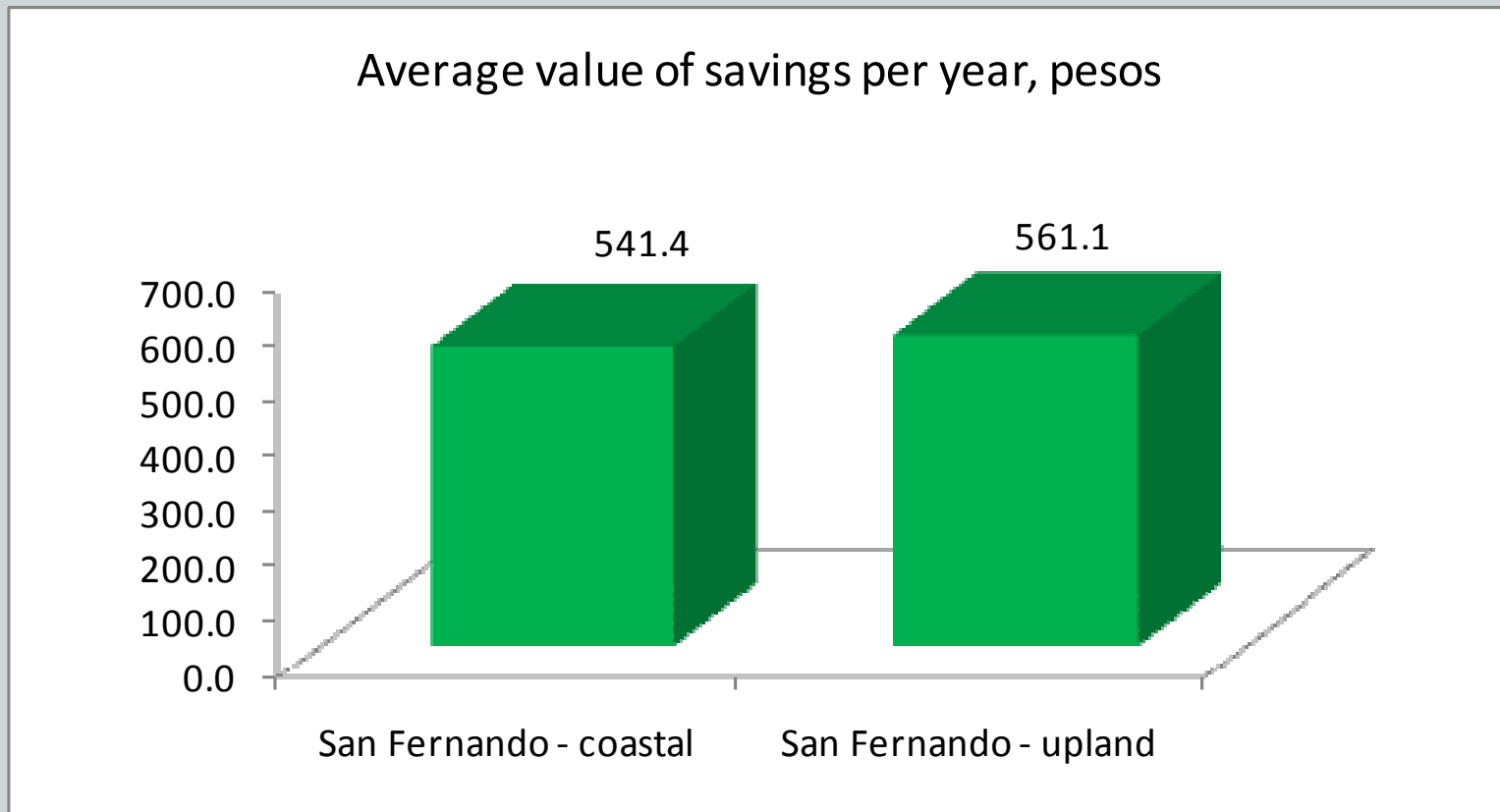


## Re-use of excreta and urine

- **EcoSan: Percentage of households re-using excreta and urine**

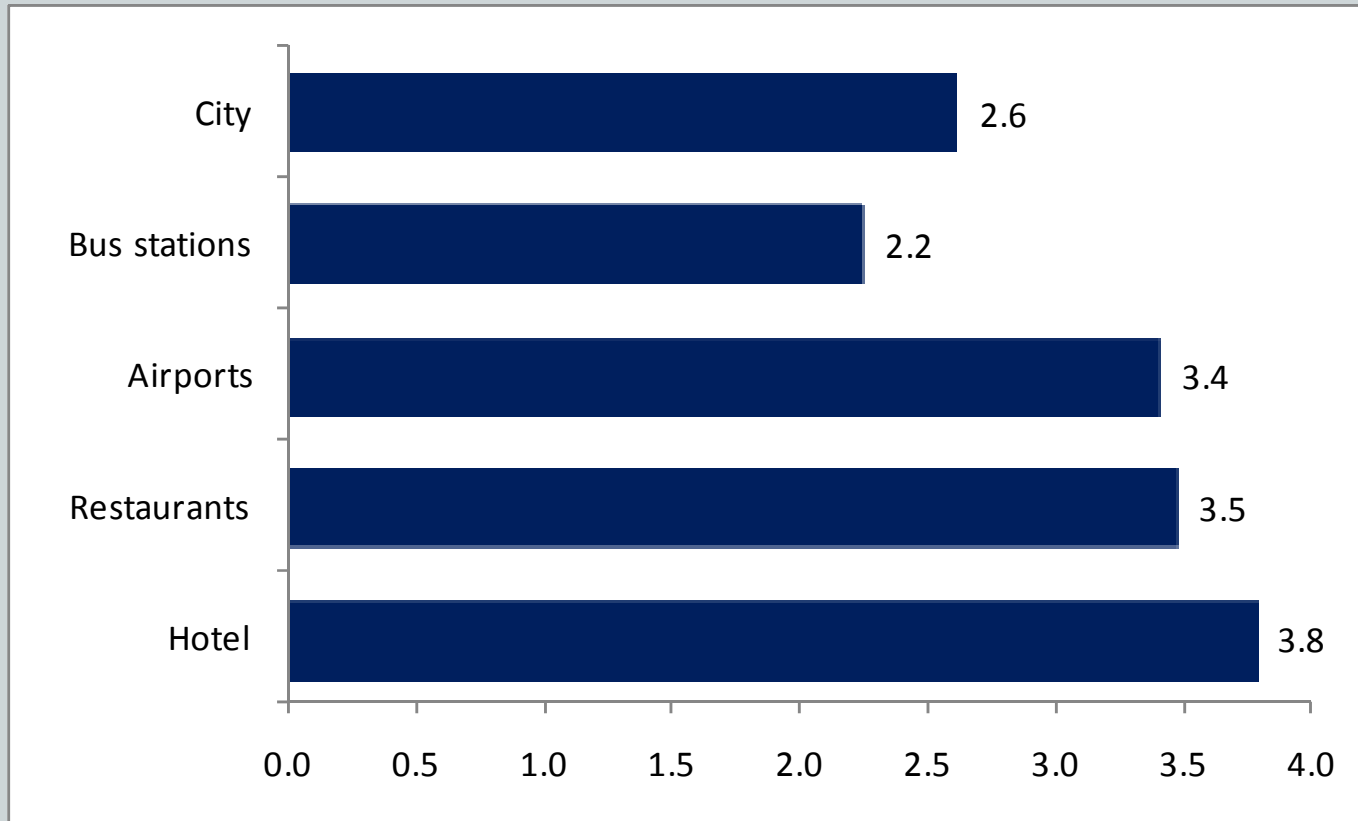


- **Value of savings per year, pesos, 2008 prices**



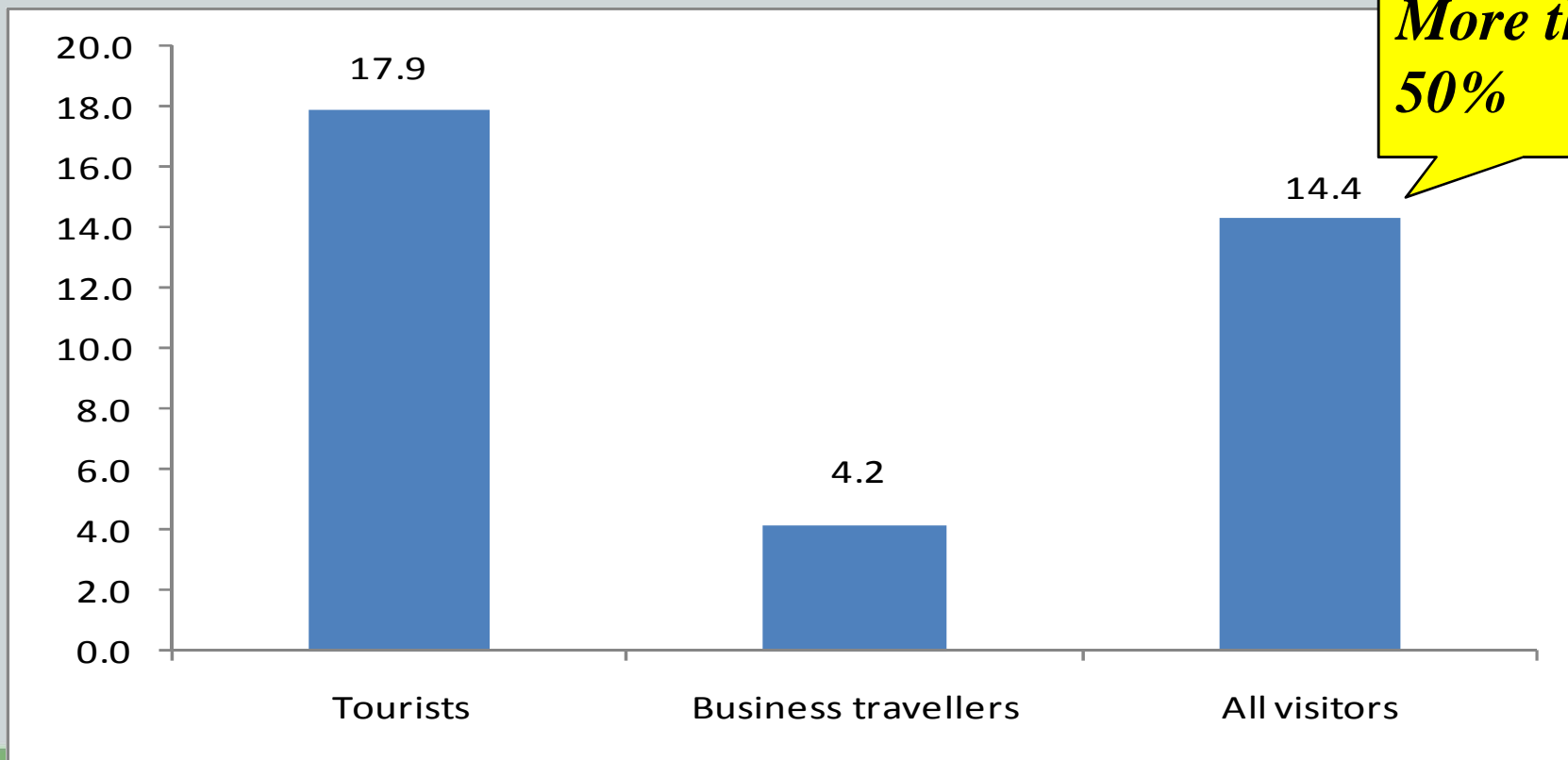
# TOURISM

- 189 respondents at the NAIA
- Average rating of sanitary conditions in selected sites (5=very good, 1 = very bad)



- **When you were traveling by road or walking in the town, were there times you needed the toilet but could not find one?**

- **% of visitors who said “yes, frequently”**



***Indonesia:  
More than  
50%***

# • Health related results

Visitors who experienced gastro-intestinal problems (%)	25.4
Average number of days in which symptoms were felt	4.4
incapacitated	2.9
Average cost of treatment (USD)	17.8

***Indonesia: Between 30-35% of visitors experienced gastro-intestinal problems***

# The road ahead

- **Process and analyze results**
- **CBA/CEA**
- **Report preparation (due mid-2010)**
- **Dissemination activities**

**MARAMING SALAMAT**