

Welcome to

Ecological Sanitation: A hope for sustainable environmental Sanitation in Bangladesh

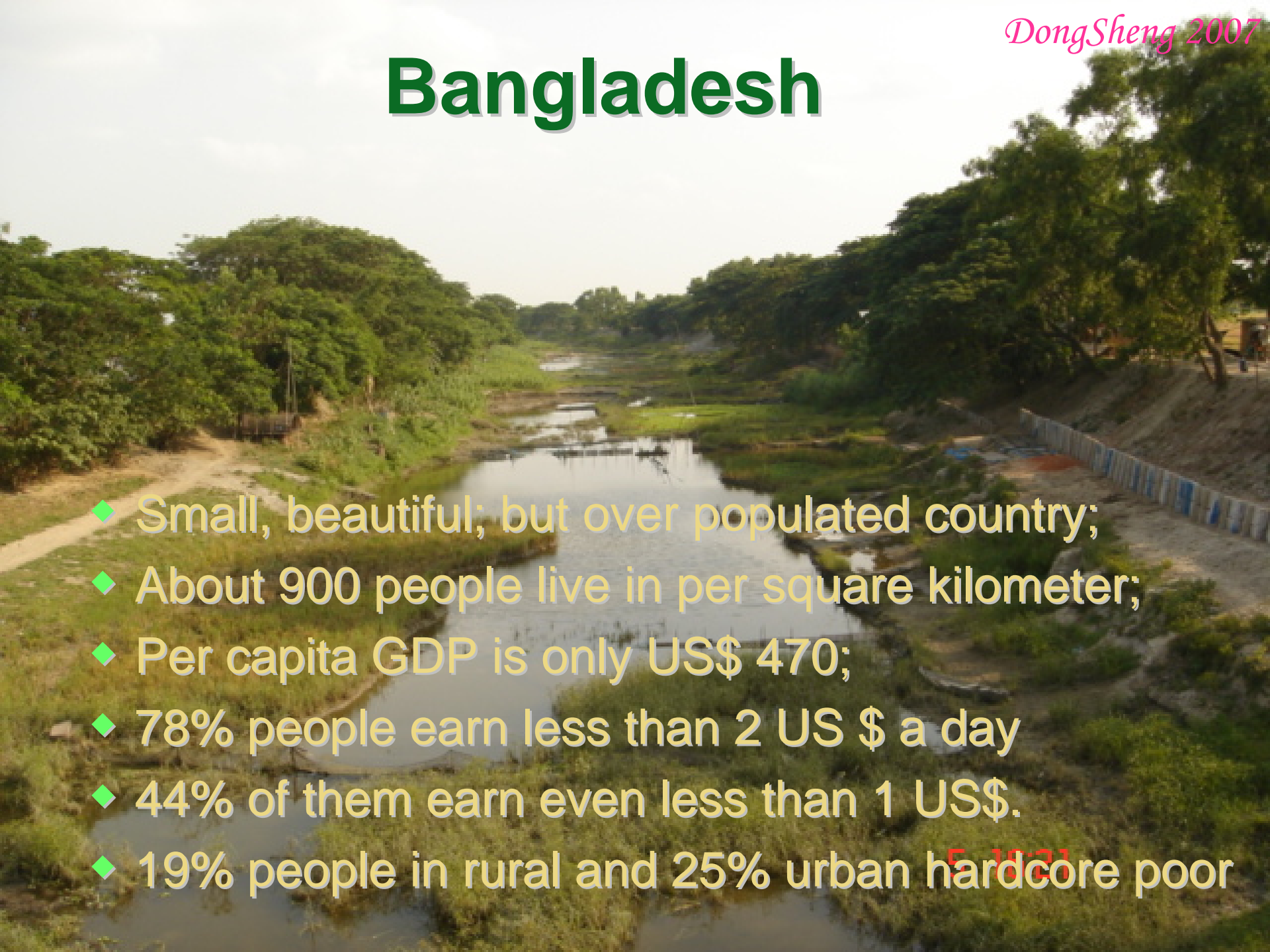


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Major contents

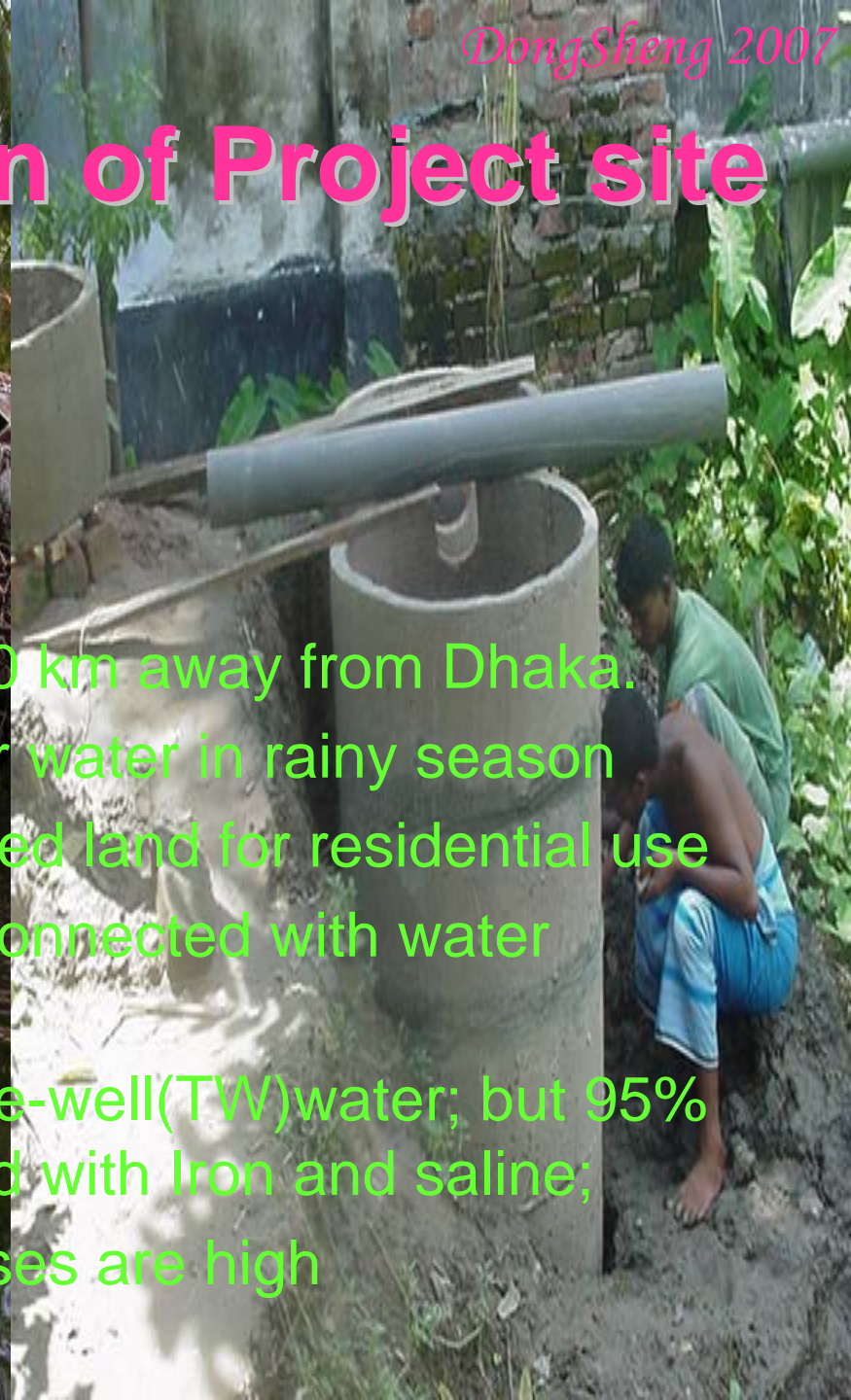
- ◆ Bangladesh;
- ◆ General Information of Project site
- ◆ Role of conventional sanitation
- ◆ Problems with present sanitation;
- ◆ EcoSan as best solution
- ◆ Social acceptance
- ◆ Reuse and benefits;
- ◆ Learning
- ◆ Major challenges;
- ◆ Recommendations;

Bangladesh

- 
- ◆ Small, beautiful; but over populated country;
 - ◆ About 900 people live in per square kilometer;
 - ◆ Per capita GDP is only US\$ 470;
 - ◆ 78% people earn less than 2 US \$ a day
 - ◆ 44% of them earn even less than 1 US\$.
 - ◆ 19% people in rural and 25% urban hardcore poor

General Information of Project site

- ◆ Locates in south at Srinagar 30 km away from Dhaka.
- ◆ It's a low-land area goes under water in rainy season
- ◆ Villagers have to make mounded land for residential use
- ◆ All families have latrines; but connected with water sources;
- ◆ All families have access to tube-well(TW)water; but 95% TW affected with arsenic mixed with Iron and saline;
- ◆ Frequency of diarrhoeal diseases are high



Role and **Problems** involved in conventional sanitation

- Rapid latrine coverage countrywide;
- Developed people's practices in fixed defecation;
- People are also aware of hygiene and O&M;

but

- Needs much water for flushing and cleaning;
- Needs for emptying and replacing
- No reuse and recovery that continuously storing human wastes in environment

Threats of conventional options

- Break gooseneck during dry season
- Emptying during rainy season
- Floods and drought reason for damaging
- Found always dirty
- Reasons for environmental pollution
- Create health hazards

End Results !!!

- ◆ People damage latrines
- ◆ Do not again construct
- ◆ Comeback again to traditional practices

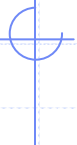


SPACE finds



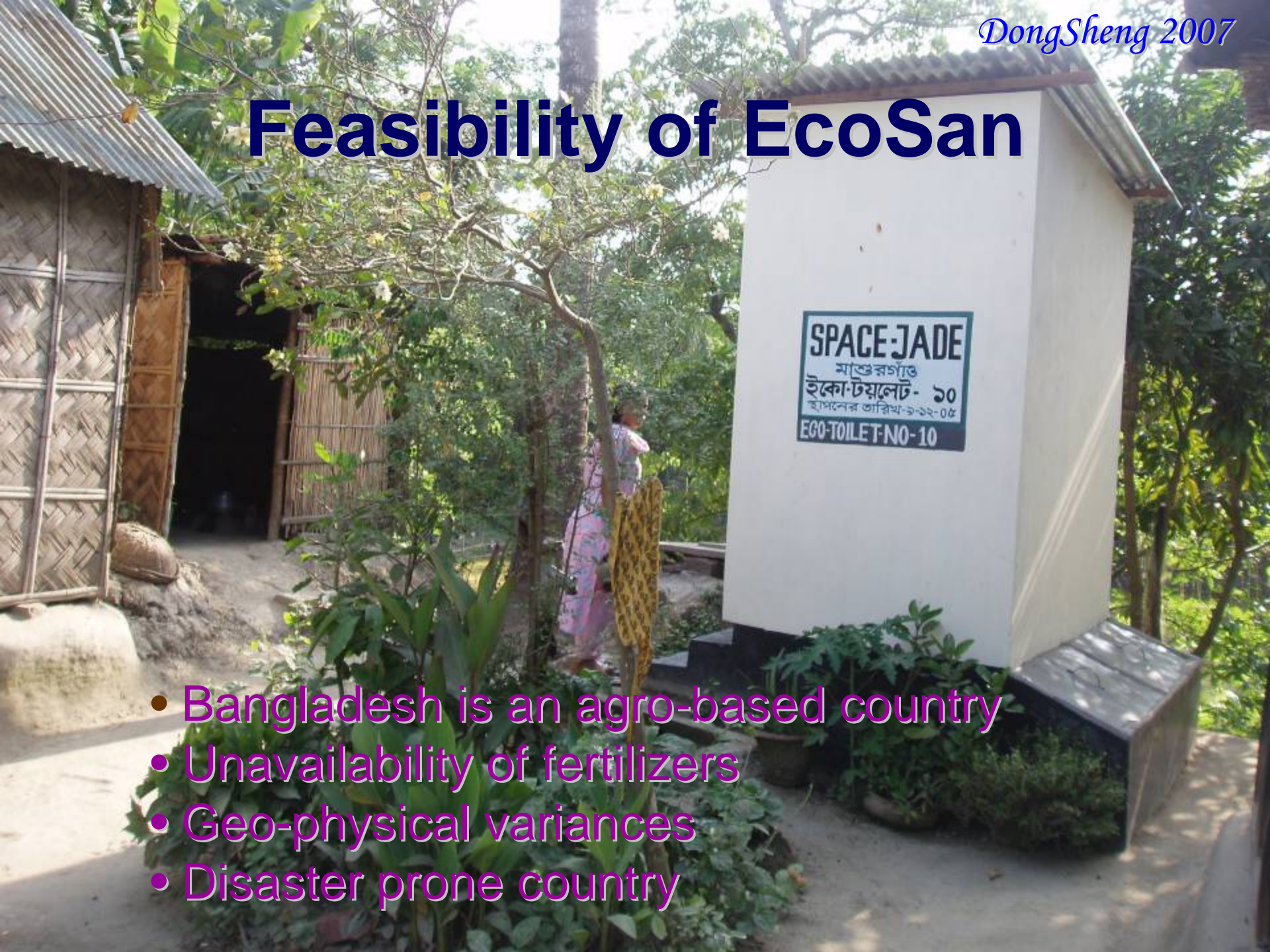
**Ecological Sanitation as sustainable solution
for the environmental sanitation problems in
Bangladesh**

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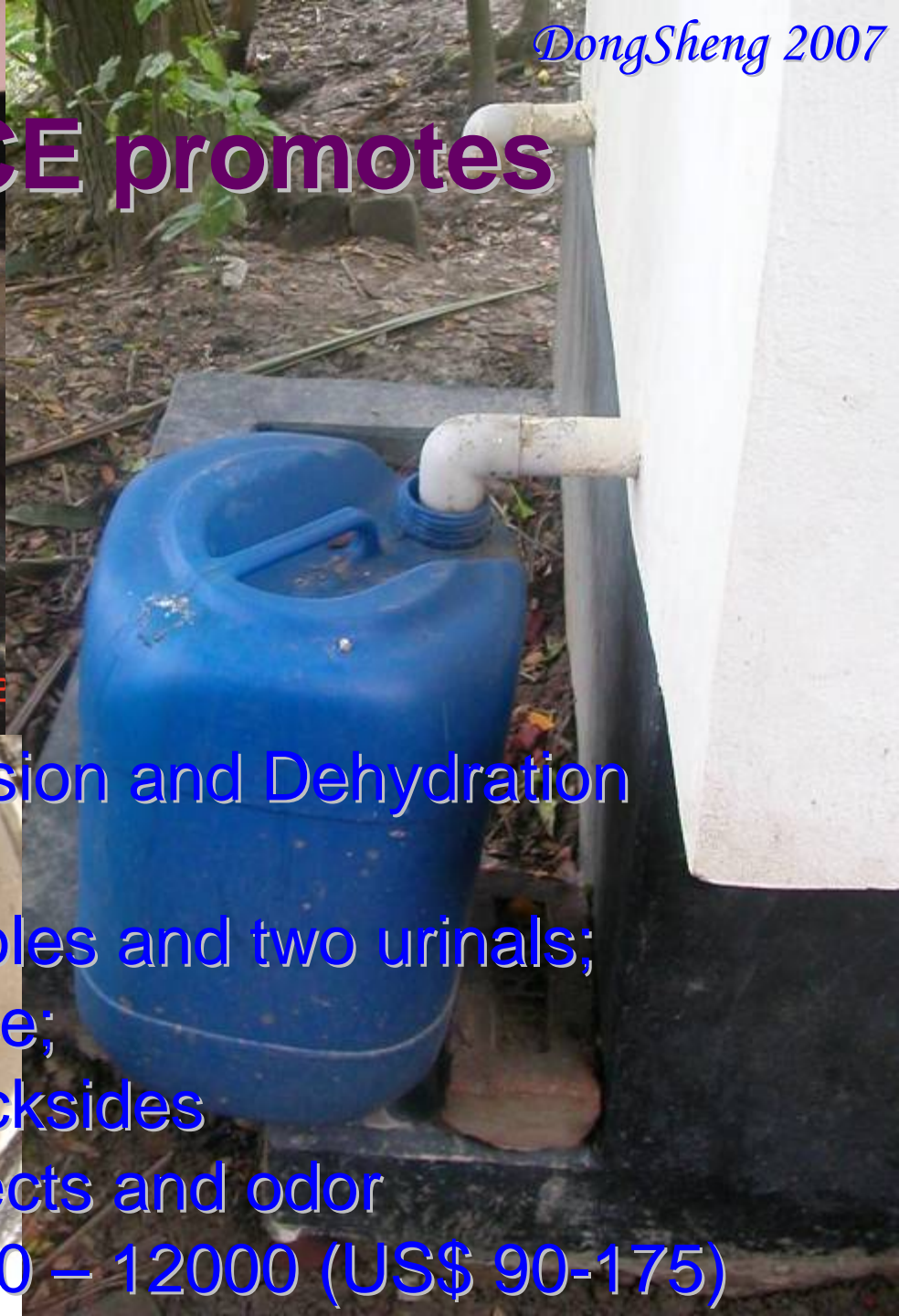


Feasibility of EcoSan

- Bangladesh is an agro-based country
- Unavailability of fertilizers
- Geo-physical variances
- Disaster prone country



Options SPACE promotes



- Two- vault Urine Diversion and Dehydration (UDD) toilet;
- Two-Vaults with two holes and two urinals;
- One anal washing place;
- Two heat panels in backsides
- Use ash to protect insects and odor
- Cost is around Tk. 6500 – 12000 (US\$ 90-175)

Owners in cost paying

- ◆ 25% for 25 toilets under pilot project (Tk. 4500)
- ◆ 100% of 45 replicated toilets (Tk. 6500 –12000)
- ◆ Several demands from people
- ◆ Gradually increasing the numbers



Preliminary problems

- ◆ Few people reacted roughly
- ◆ People did not agree to construct toilets and share cost
- ◆ Did not use sufficient ash;
- ◆ Few users washed with water in chamber;
- ◆ Did not clean toilet properly
- ◆ Owners annoyed for regular monitoring by project staffs
- ◆ Users annoyed for more disciplined use, O&M
- ◆ Poor maintenance and management of faeces

Actions to overcome problems

- 
- ◆ Awareness rising;
 - ◆ Operation and maintenance training;
 - ◆ Involving LGI and local power structure;
 - ◆ Routine monitoring

Present status

- ◆ 100% toilet-owners use toilets properly;
- ◆ In and out side of 100% toilets found neat & clean;
- ◆ 100% toilet owners use urine in farming and plantation;
- ◆ 100% owners manage feaces in specified ways;



Social acceptance !!

- ◆ Owners have become confident that it ensures privacy;
- ◆ They feel more comfortable while use;
- ◆ Owners feel empowered;
- ◆ Users have taken up O&M of UDD toilets as routine work
- ◆ The owners manage urine and faeces efficiently
- ◆ Men-women decide and work together in reuse excreta



Reuse & benefits

- 100% owners have made kitchen gardens
- 100% owners use urine in plantation
- 100% owners use organic fertilizers of human feaces;
- 100% families getting fresh foods;



Learning

- ◆ Can ensure sustainable environmental sanitation
- ◆ Awareness raising and capacity building as key-issues
- ◆ Need to innovate various options of UDD toilet ;
- ◆ Implementation strategies should be based on local contexts

Major Challenges

- ◆ Addressing to poor and hardcore poor people
- ◆ Convincing key-actors & resource mobilization
- ◆ Waste and wastewater management
- ◆ Scaling up and wider replication

Recommendations

- ◆ Undertaking mass awareness
- ◆ more initiatives for capacity development
- ◆ Undertaking more research on EcoSan
- ◆ Strengthening global partnership;

DongSheng 2007

Thank



You