JICA - ADB Financing Sanitation, Tokyo, 01/2010

Financing Sanitation in Vietnam

Assoc. Prof. Dr. Nguyen Viet Anh
Vice Director, Institute of Environmental Science and Engineering (IESE),
Hanoi University of Civil Engineering
Add. 55 Giai Phong Rd. Hanoi, Vietnam. Tel. 04-3628 45 09, Fax 04-3869 3714, MP. 091320.9689,
Email. vietanhctn@gmail.com; www.vietdesa.net

Content

1. Introduction
2. Efforts at National level
3. Case studies and lessons
4. Conclusions

2

1. Introduction

3

Vietnam Urban Sanitation

- 11/2009: 754 cities and towns, with 30% population
- 40 - 70% population have access to sanitation service (sewerage and drainage network)
- Access to toilets: > 90%
- Only <10% of urban wastewater is treated

Hanoi, Vietnam

4

Industrial Wastewater Treatment

- (2009) 219 IZs, total area 61,500 ha.
- 250.000 m^3 wastewater/day
- Only 30% of industrial wastewater treated!

Nomura IZ, Hai Phong

- Forecast:
  - 2015: 70,000 ha for IZs
  - 2020: 80,000 ha.

5

Vietnam Rural Sanitation

- In average, USD 100 - 170 mio. spent per year for RWS&S
- More attention on household sanitation in NTP2 vs. NTP1
- Wastes from live-stock breeding farms and trade villages: big concern. So far, there are only some ‘’demonstration’’ projects, with limited comprehensive and successful results.
- Coverage of adequate sanitation:
  - NCERWASS data (12/2008): 60%
  - UNICEF – MOH data (2007): 18% ***!!!***
- In some rural areas, and particularly in ethnic minority communities, hygienic latrines coverage rates are only 2 – 4%. Open defecation is still existing.

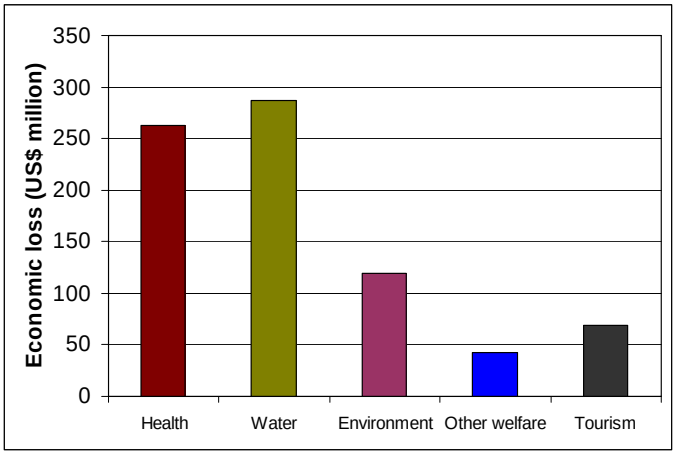
6

Economic loss due to poor sanitation in Vietnam

Annual loss:
US$ 780 mio.

Per capita:
US$ 9.38

1.3% GDP



Source: Evaluation of the Economic Impacts of Sanitation in Vietnam (WSP, 2007)

8

2. Efforts at the National level

- NRWSS: By 2020, 100% of the rural population should have access to adequate sanitation ***!***
- By then (MOC):
  - 100% of large urban centers will have adequate wastewater treatment systems
  - The total urban sewerage service coverage will be 80 - 90%.
- Urban sanitation projects are gradually covering centers of the cities and towns of different categories (special, 1st, ..., 5th).
- Active donors: JICA, ADB, WB, AFD, Danida, Finnida, KfW and GTZ, Ausaid... Number of NGOs.

9

Financial need for Sanitation in Vietnam

- Over last 20 years: USD 2 bio. have been invested for WS&S (not including household contribution). Among those: 80% is from ODA.
- Sanitation need for Urban + Rural Area (our calculation):

  2010: 2,9 ... 10,7 bio. USD
  2020: 4,3 ... 16,2 bio. USD

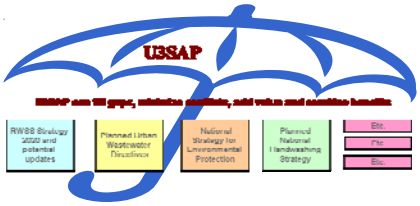
- Industries (MOIT's calculation):

  2010 and beyond: > 7,6 bio. USD

10

Government Policies and Programs

- Law on Environmental Protection (revised) (2005)
- Government Decree No. 67/2003, followed by Decree no. 04/2007: Environmental fee for industrial wastewater
- Government Decrees No. 59, 88, 115/2007
- Prime Minister's Decision No. 1929 & 1930: Orientation for Urban and Industrial Water Supply, Wastewater Development (2009)
- U3SAP: Initiated in 2005, Proposed to GoV in 2007, Commenced 2010 – 2012.



11

Financing mechanism for sanitation projects

- Water supply: Loans. Full recovery policy.
- Sanitation: State budget subsidiary for investment.
- Decision No. 181/2007QD-TTg - issuance of regulation on On-lending from the sources of foreign borrowings and grant of the Government.
- Circular No. 108/2003/TT-BTC - Guiding the financial mechanisms applicable to environmental sanitation projects funded with ODA capital sources.
- Projects on water drainage and treatment of wastewater in urban centers and population quarters, ODA capital shall be wholly allocated from the central budget, while their reciprocal capital shall be apportioned from the local budgets.
- Advantage and disadvantage...

12

Financing mechanism for sanitation projects

- Work order for O&M: paid by city's budget. Part of it: collected wastewater fees.
- Urban wastewater fee: 10% surcharge to water bill. Hai Phong city: 15%. Other cities are preparing to increase.
- For not connected households: environmental fee (10%). (Decree No. 67/2003 to be revised).
- Industrial wastewater charges: Decree No. 67/2003, followed by Decree No. 04/2007 (kg of COD, BOD, SS, heavy metals discharged)

13

Financing for Rural Sanitation

- Household contribution: ~ 40% vs. 60% from central and local government budget and donors (WB, 2003).
- Trying to increase budget spent for rural (household) sanitation improvement projects up to 30% of total NTP2 budget.
- 2010: from annual budget US$ 170 mio., 85 mio. is for provision of low interest loans to farmers via Bank of Social Policies, for improvement of household water supply and sanitation facilities
- School sanitation improvement: more attention since 2006, under the School Building Enhancement Program.

14

Mobilization of new resources

- The Government is seeking to mobilize both financial and technical resources from various sources.
- A set of reforms and measures have been initiated to attract foreign private participation in infrastructure. These efforts have concentrated on issues related to the implementation of Build, Operate and Transfer (BOT) projects as well as to institutional competence and capacity.

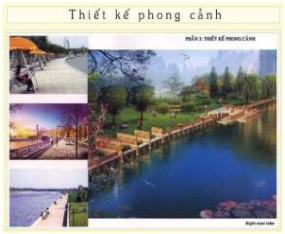
15

3. Some case studies and lessons

16

Hanoi city

- Hanoi: Yen So WWTP – by Gamuda Berhad (Malaysia), US$ 400 mio., Q = 200.000 m^3/day (2008 – 2012).
  - Build – Transfer (BT) after 1 year.
  - In the 324 ha (including 280 ha water surface) new commercial area: Yen So Park, US$ 1 bio.
- Hanoi is inviting private sector to participate in restoration of 45 city's lakes. Est. cost: US$ 80 mio. (2010 – 2015).



Binh Hung Hoa WWTP, HCMC

- Q = 46,000 m^3/day
- F = 37 ha
- K = EUR 2.5 + 5.5 mio.
- Low O&M costs

18

Buon Ma Thuot WWTP, Dak Lak

- Danida fund: DKK 109.7 mio. (2001 – 2009)
- Design capacity: 8,000 m^3/day
- 5,500 households connected
- Reuse of treated wastewater for irrigation of 186 ha of Coffee
- Near future:
  - wastewater fee and irrigation fee
  - phase 2 for more connections





Micro-financing for construction of hygienic toilets in rural areas




- *Micro-finance via Banks*
- *Revolving fund (local Women's Unions)*
- Hygienic toilets (NTP2, NGOs, WSPST, etc.)
- Biogas digesters (SNV)

20

Community Sanitation with Low-cost Technologies

BASTAF + CW for 160 HHs, Kim Chung, Hoai Duc, Hanoi

For 400 HHs, Xuan Mai town, Hanoi

2600 HHs, Cho Moi town, Bac Kạn

BASTAF for w/w treatment in Food Processing Villages

100 HHs, Lim town, Bac Ninh

Q = 100 m³/day, VFV, Tu Liêm, Hanoi

Private Sector Participation in Sanitation

Septage sludge management

Solid waste collection and disposal

Solid waste treatment and utilization

Pre-fabricated septic tanks

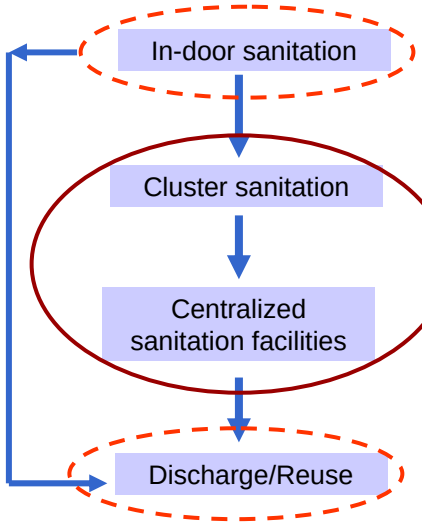
Reuse of wastewater and sludge in agriculture – economic values and health risks

25

4. Conclusions and recommendations

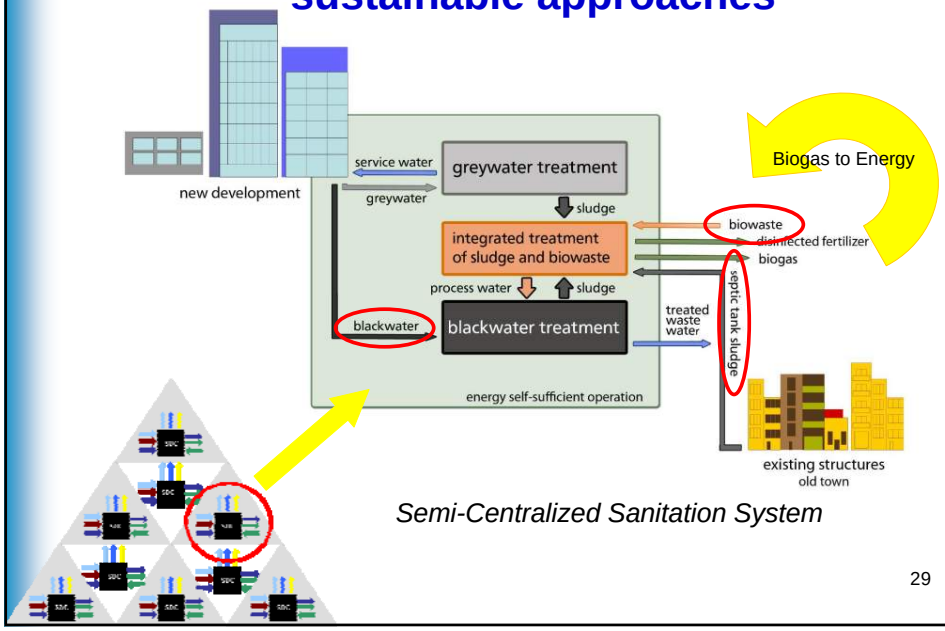
26

To start Sanitation from Household !



Sustainable Environmental Sanitation

Innovations are needed: integrated, sustainable approaches



Semi-Centralized Sanitation System

29

- A transition to alternative financing modalities for local authorities (decentralization process). Graded subsidy models for financially weaker authorities.
- More budget allocation for urban water supply and sanitation - crucial need. Other sources but overseas development aid and government funds are to be mobilized.
- To date, most sanitation investment has been by household self-provision. An incentive system for attracting private sector engagement in the financing and provision of sanitation services (land use and investment opportunities, favour tax and tariffs settings, etc.) would increase private sector investment.
- Involvement of the private sector will also contribute to the improvement of operational efficiencies and customer service.

30

- Tariffs should cover both O&M costs and the depreciation of short lived assets. Financial models are required at all levels to achieve this.
- Affordability for Low Income Groups is also to be considered
- Transformation of local wastewater and urban environmental companies into limited liability companies.
  - More capacity and independence to provide services and to do business.
  - More capacity building on operation, maintenance and financial management.
- Transfer of investment and O&M to commercialized operation divisions. Implementation of the policy of cost recovery for O&M of drainage and sewerage / wastewater treatment system.
- Appropriate, affordable technologies for different contexts: geographical, urban centers/peri-urban/rural, etc.

31

Thank you very much

for your attention

Assoc. Prof. Dr. Nguyen Viet Anh
Vice Director, Institute of Environmental Science and Engineering (IESE),
Hanoi University of Civil Engineering
Add. 55 Giai Phong Rd. Hanoi, Vietnam. Tel. 04-3628 45 09, Fax 04-3869 3714, MP. 091320.9689,
Email. vietanhctn@gmail.com; www.vietdesa.net