New approaches for water management and sanitation in rural areas

Jan van der Zwan
27th of October 2007

Water Management and Sanitation

Safe drinking water

Adequate sanitation

Sustainable environment

enbe A4 for all

Water management and sanitation includes:

Sanitation, collection, sewerage and treatment

Storm water drainage, flood management, river management

Water resources-management

Key water problems

- Water demand growth
- Ground water (over) exploration
- Pollution of fresh water sources
- Water stress

Ecomomical stress

Climate change:

Floods, droughts

Finances, economics:

Investments, capacity building and affordability

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Water Management and Sanitation: A global challenge

Awareness
Appropriateness
Sustainability

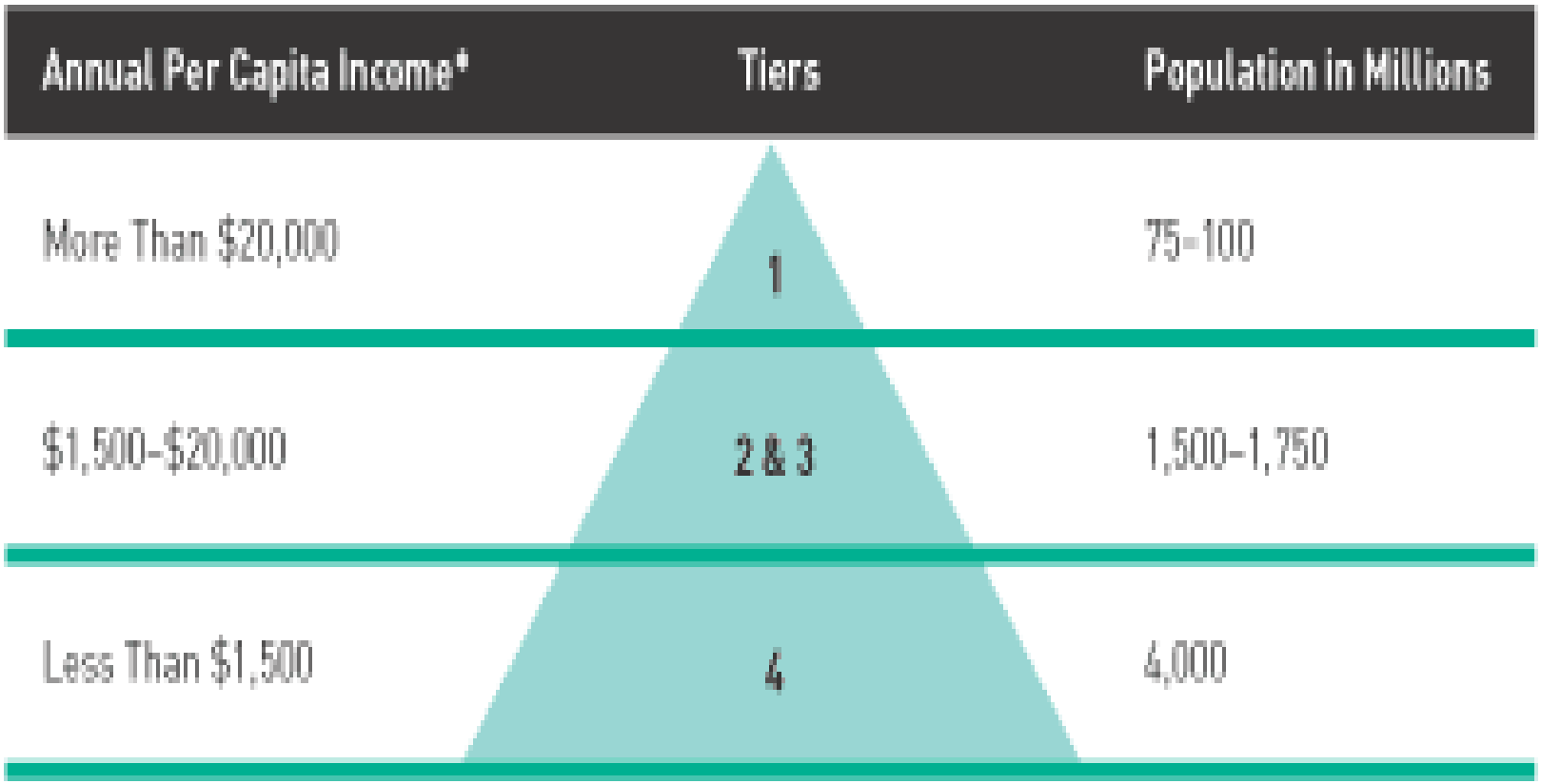
- **Population growth (2012: 7 billion people)**
- **Industrialization (growth in water demand and environmental load)**

- **Water shortage claims water re-use and (salt) water treatment**
- **Risk of over-exploration of ground water**
- **Pollution of resources**

- **Risk of shortcuts of latrines/septic tanks with water wells in peri-urban and rural areas**

- **Increase in vision on social responsibility**

Exhibit 1: **The World Economic Pyramid**



* Based on purchasing power parity in U.S.$

Source: U.N. World Development Reports

Innovative water/sanitation solutions

- Water technology (re-use, desalination, sustainable sources, preventing contamination, removal of toxics, pathogens, ……..)
- Appropriate Technology (small treatment units, ceramic filters, eco-sanitation, ……)
- Demand driven, social entrepreneurship

Rural areas

- **Copying urban solutions is <u>not</u> appropriate**

Rural areas

- **Copying urban solutions is <u>not</u> appropriate**
  - **It's the most ineffective way of sanitation in rural areas in developing countries**

Rural areas

- Copying urban solutions is not appropriate

- **How to come to acceptable WatSan situations?**

Rural areas

- Copying urban solutions is impossible
- How to come to acceptable WatSan situations
- **Search for low cost, tailor-made appropriate solutions (Fitted for Purpose)**

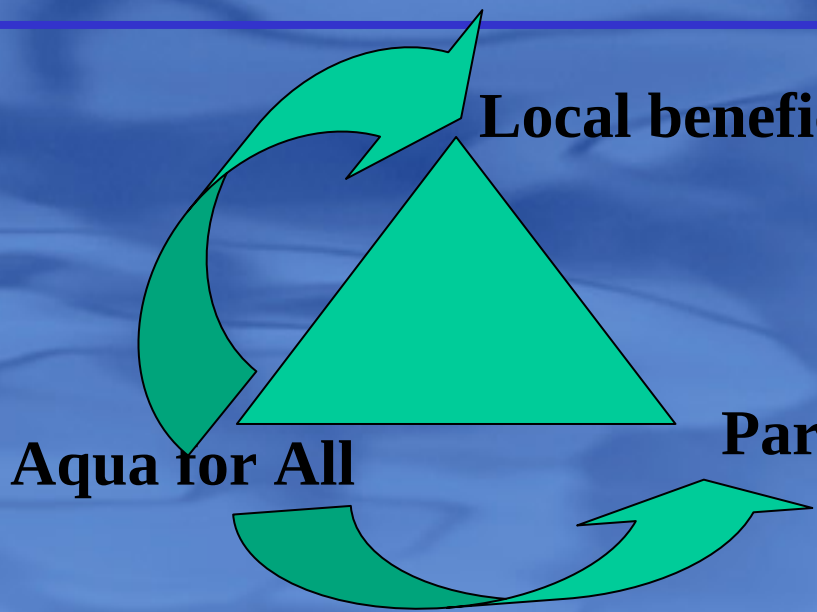
Rural areas

- Copying urban solutions is impossible

- How to come to acceptable WatSan situations
- Search for low cost AT solutions)

- **Social responsibility is not only a Governmental task**

Aqua for All as match maker



A4A:

*** Mobilizes money and expertise from Dutch water sector**

*** Supports programs of NGO's and their local partners**

*** Promotes tri-partite partnerships with a NGO as third partner**

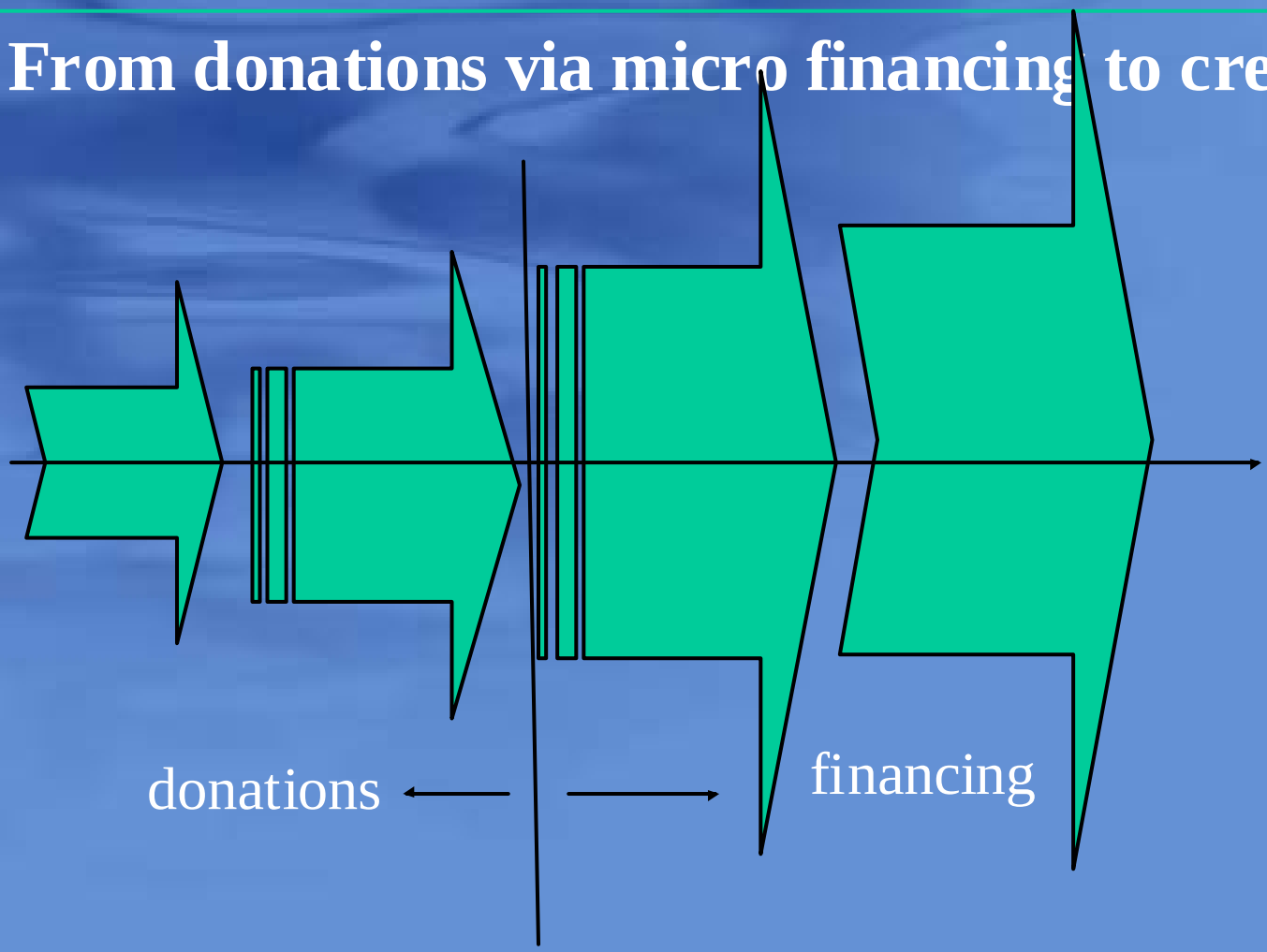
*** Stimulates Business development of AT:**

(accessible, sustainable, manageable, empowering)

Aqua for All

Empowerment as basis for business development

- **From donations via micro financing to credits**



NGO's and the private sector

Enemies become partners

NGO's:

- **have market intelligence**
- **play an intermediating role between public and private entities, between supplier and 'customer'**
- **help to develop Appropriate Technology**
- **share common values on sustainability with the private sector**
- **can support community based approaches**

NGO's as third partner

- Market intelligence
- Common values with social responsible and motivated business
- Communication channels

- National/local governance
- Regulation/legislation
- Community management

- Business culture
- Market professionalism

Sanitation remarks

Low cost, local production, eco-sanitation opportunities, well applicable in peri-urban and rural setting, low water demand, re-use of minerals in gardening and agriculture, ..…

Link with hygiene promotion, waste prevention, small business development, community involvement , ..…

From old to new

Capital of a water company

Capital of a water company

- **Finances**

Capital of a water company

- Finances
- **Assets**

Capital of a water company

- Finances
- Assets
- **Methods**

Capital of a water company

- Finances
- Assets
- Methods
- **Employees**

Capital of a water company

- Finances
- Assets
- Methods
- Employees
- **Customers**

Capital of a nation

- **Finances**
- **Assets:**
  - **Water resources**
  - **Institutional infrastructure**
- **Methods:**
  - **Legislation & Regulation**
- **Employees**
- **Tax payers**

Capital of a small communal water system

- **Finances**
- **Assets:**
  - **a well, a pump, a water kiosk, some spare parts**
- **Methods: simple O&M guidelines**
- **Selected community members, some external advice, back-up**
- **Customers**

Water and sanitation projects

Require:

- **Fitted for Purpose solutions**

Water and sanitation projects

Require:

- **Appropriate technology :**

  besides technology attention to be paid to accessibility to devices, functionality and quality, manageability and improvement of the environment

Water and sanitation projects

Require:

- **Essential capacity building: organization + methods + working instructions + back-up provisions**

Water and sanitation projects

Require:

- **Paying customers**

Water and sanitation projects

Require:

- **Paying customers**
- **If unavoidable, minimal additional subsidies/financial support**

Conclusions

- **Copying urban WatSan solutions in rural areas is nonsense**
- **Low cost AT has an enormous market**
- **An integrated approach to all ‘capital’ elements is needed**
- **An integrated approach requires also partnerships**