

A new approach to Water management and Sanitation in rural areas

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Millenium Development Goals on Water Management and Sanitation



Safe drinking water



Adequate sanitation



Sustainable environment



Key water problems

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

Economical stress



Climate change:
Floods, droughts



Finances, economics:
Investments, capacity building and affordability

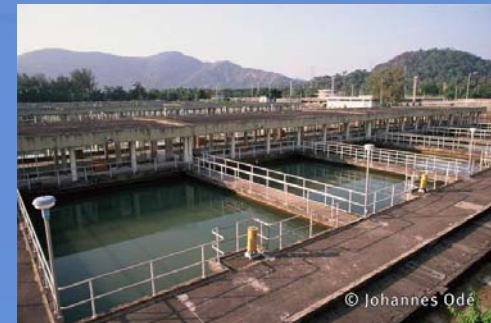
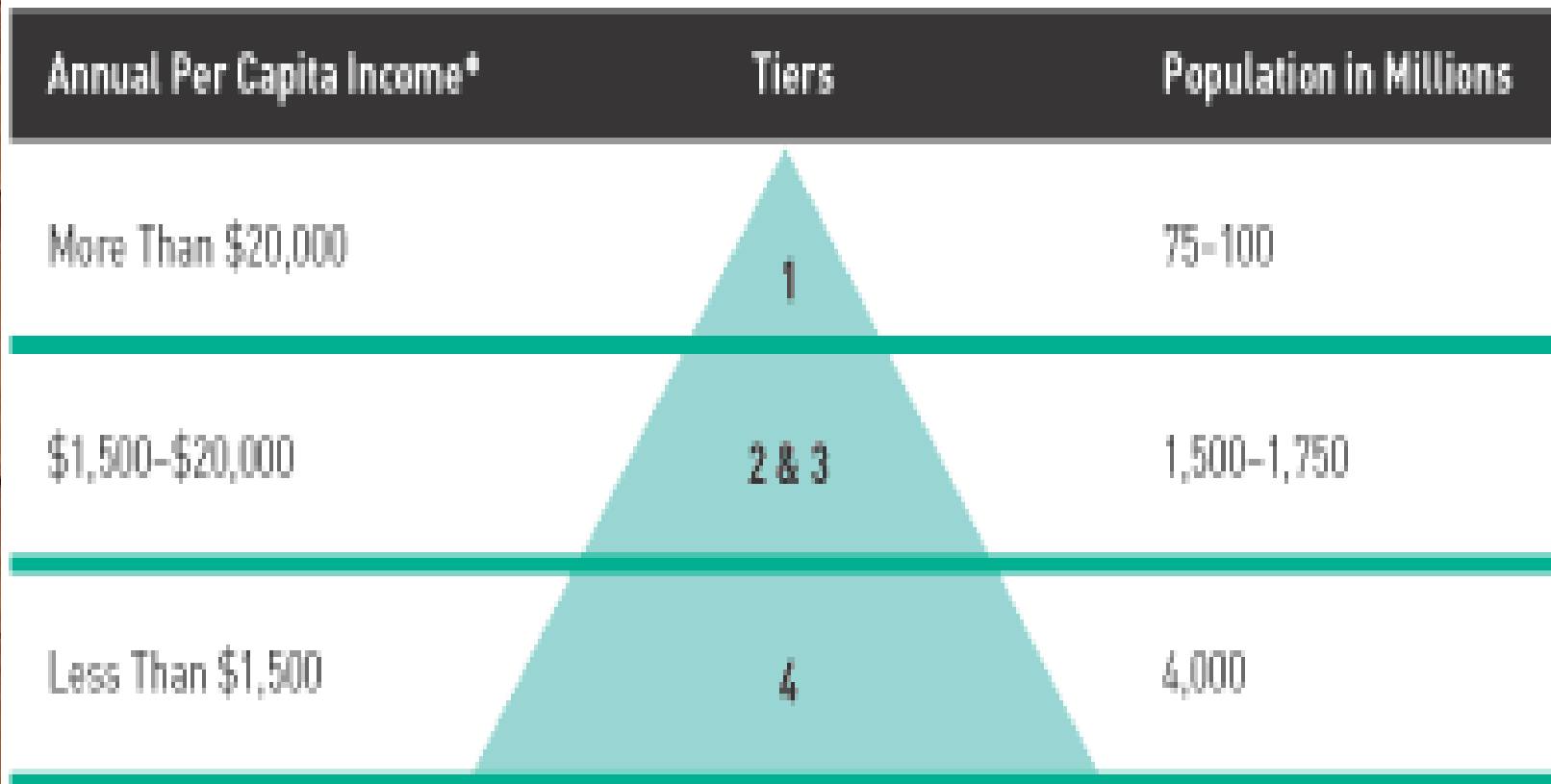


Exhibit 1: The World Economic Pyramid



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

Source: U.N. World Development Reports

Innovative water/sanitation solutions

Ongoing R&D:

- Water technology (re-use; desalination; sensing; removal of toxics, pathogens,)

Innovative water/sanitation solutions

Ongoing R&D for simple, but still effective:

- Appropriate Technology (small treatment units, use of solar energy, ceramic filters, eco-sanitation,)

Innovative water/sanitation solutions

Huge new market for low cost technologies:

- Demand driven, social entrepreneurship



Rural areas

- Copying urban solutions is not appropriate

Rural areas

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 - 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?**

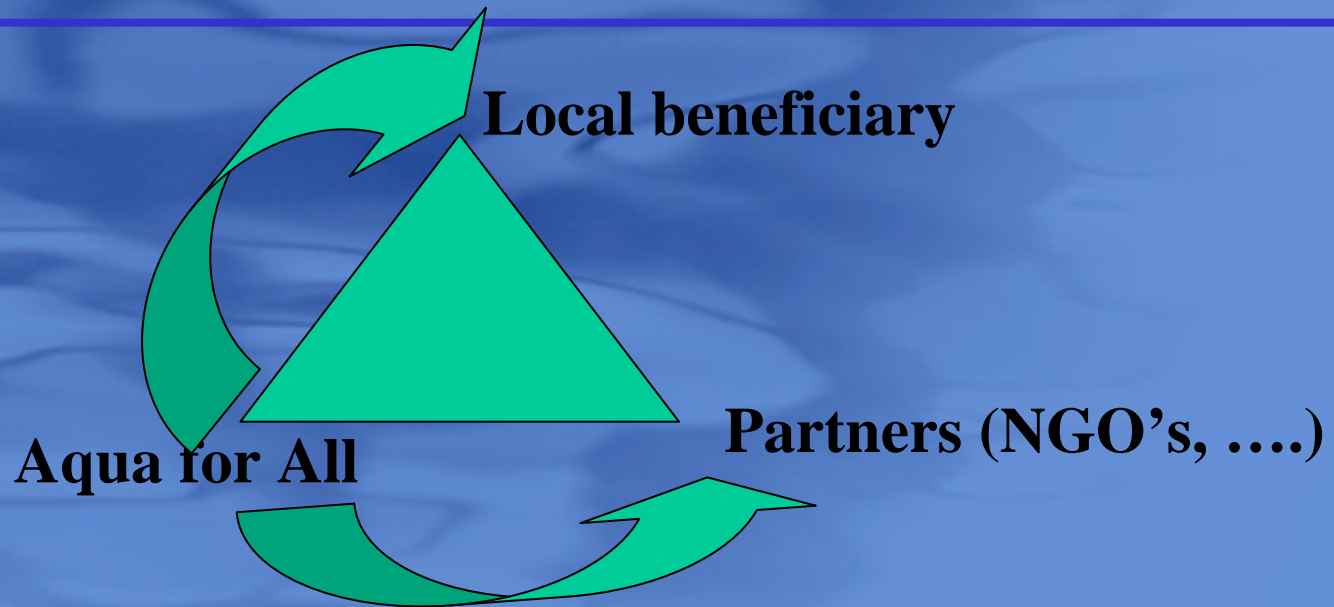
Rural areas

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

Rural areas

- Copying urban solutions is impossible
- Low cost AT solutions
- **Social responsibility is not only a
Governmental task**

Aqua for All as match maker



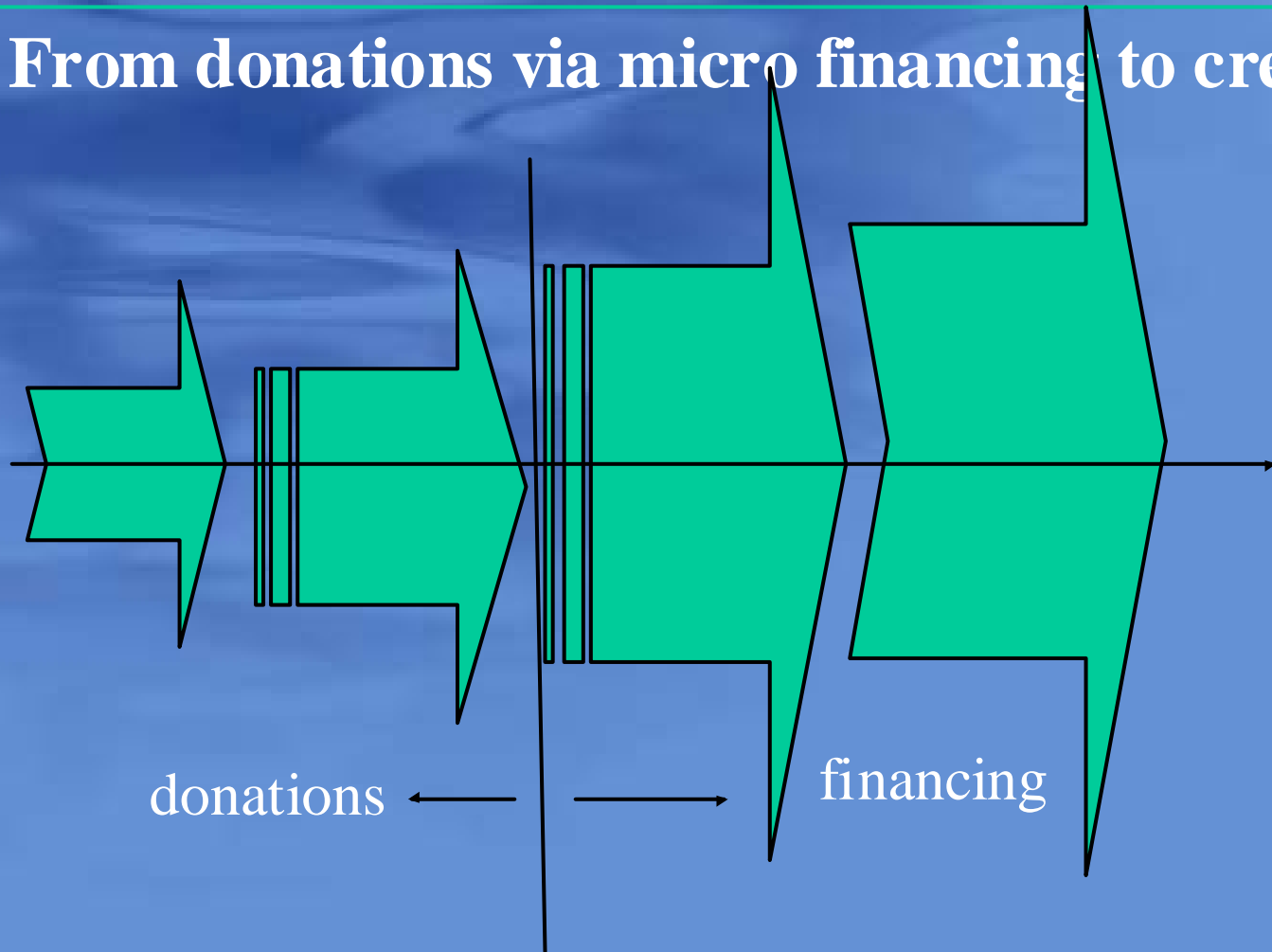
A4A:

- * 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 (AT)
- share common values on sustainability with the private sector
- can support community based approaches

NGO's as partner for Government and Private sector

- 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 opportunities of minerals in gardening and agriculture,

Link with hygiene promotion, waste prevention, community involvement,

Link with small business development,

From old to new



Capital of a water supply company



Capital of a water supply company

- **Finances**

Capital of a water supply company

- Finances
- **Assets:**
 - land, wells, wtp's, reservoirs, pumping stations, networks, buildings, equipment

Capital of a water supply company

- Finances
- Assets
- **Methods:**
 - **guidelines, operational procedures, working instructions, manuals**

Capital of a water supply company

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

Capital of a water supply 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:



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 + replicable 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

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- Low cost AT in principle has an enormous market
- An integrated approach to all 'capital' elements is needed
- An integrated approach requires also partnerships