The SWITCH project in Accra – process and main findings

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Background on SWITCH

• EU-sponsored project on Integrated Urban Water Management

• Consortium of 33 partners from 13 countries

• The project carried out research and demonstration on Urban Water Management in a number of large cities, including Accra.
  – Promoting sector coordination through learning alliances
  – Promoting social inclusion
SWITH Accra Process

• SWITCH city coordinator brings together wide range of actors – city and national – in SWITCH ‘learning alliance’
• SWITCH team carries out research – feeds information into learning alliance
• Learning alliance discusses findings, makes decisions, takes action
... In practice

• Ability of stakeholders to take meaningful decisions/actions extremely limited
  – Lack of finance
  – Weak enforcement
  – Lack of coordination
  – Weak capacity

• Some progress towards defining a common vision ... a basis for further work
Defining Accra

Accra used to only cover AMA, but because of population growth, it has sprawled into the Ga districts and the Tema area.

GAMA: Greater Accra Metropolitan Area (made up of 8 districts)

Source: IWMI
Findings from SWITCH RIDA

- Water
- Sanitation
- Drainage
- Solid Waste
- Institutional

Source: IWMI
Water
Sanitation
Infrastructure

Design capacity: unknown (36,630 m³/day + capacity of 35 institutional treatment plants)

Actual amount treated: unknown (4 institutional treatment plants operational)

Municipal sewerage system

- UASB sewage treatment plant
  - Design capacity: 16,080 m³/day
  - Actual treatment: 0 m³/day
- Accra Central Sewage System
- Tema Treatment plant
  - Design capacity: 20,000 m³/day
  - Actual treatment: 0 m³/day
- Tema Sewage System

35 institutional waste water treatment plants

35 institutional sewerage systems

Number of operational treatment plants: 4

3 faecal sludge treatment plants

Public latrines

Private pit latrines

Septic tanks

Demand

Estimated waste water production: 212,938 m³/day

Estimated waste water production 2007: 212,938 m³/day

Estimated waste water production in case of optimal water supply (2007): 268,754 - 306,580 m³/day

Projected waste water production in case of optimal water supply (2030): 587,454 - 1,422,999 m³/day

Access

<table>
<thead>
<tr>
<th>Type of sanitation facility</th>
<th>% Pop with access (source: GSS 2008)</th>
<th>Human excreta transport</th>
<th>Average (equivalent) monthly expenditure (GHC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WC</td>
<td>33.2%</td>
<td>Sewer</td>
<td>4.60 - 6.00</td>
</tr>
<tr>
<td>KVIP / VIP</td>
<td>20.8%</td>
<td>Pit emptier</td>
<td>0.87</td>
</tr>
<tr>
<td>Public latrine</td>
<td>41.3%</td>
<td>Septic tank emptier</td>
<td></td>
</tr>
<tr>
<td>Pan / bucket Latrine</td>
<td>3.2%</td>
<td>Manual</td>
<td>48</td>
</tr>
<tr>
<td>Open defecation</td>
<td>1.1%</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Drainage
**Resources**

- Sakumo I Lagoon
- Panbros saltpan
- Chemu Lagoon
- Korle Lagoon
- Kpeshie Lagoon
- Mokwe
- Songo Lagoon
- Sakumo II Lagoon

**Infrastructure**

- Lafa drain (not lined)
- Chemu drain (partly lined)
- Odaw drain (partly lined)
- Kpezie drain (partly lined)
- Mokwe drain (not lined)
- Sango drain (partly lined)
- Sakumo II drain (not lined)

**Demand**

- Peak run-off
  - Densu Basin (downstream of Weija): 1432 m³/s
  - Korle basin: 2432 m³/s
  - Kpeshie Basin: 341 m³/s
  - Mokwe-Songo Basin: 218 m³/s
  - Sakumo II Basin: 3230 m³/s

**Reality**

- Flooding Flood risk map:

  - Use of storm drainage water and (grey and black) waste water in urban agriculture: 4.4 million m³/year
Other related issues

• Nearly half of the solid waste in Accra is not collected.
• A large part of this uncollected waste finds its way to storm drains
• Many houses are built in flood plains
Cross-Cutting Institutional Issues

- Weak Institutional framework and inadequate coordination
- Weak enforcement of bye-laws
- Ineffective implementation of policies
  - Fragmentation of implementation approaches
- Ambiguity of administrative and service-delivery boundaries
  - Responsibility for un-served is unclear
  - ‘Upstream/downstream’ issues
  - Inter service linkages (water<->sanitation/sewerage<->solid waste<->drainage)
The challenge

- Poor water supply
- Low sanitation coverage
- Open defecation
- Pollution of water bodies
- Use of polluted water for Agriculture
- Flooding

Pics: Courtesy O.Cofie (IWM)
Recommendations from SWITCH Learning Alliance Stakeholders

- Water Supply
- Sanitation
- Institutional Issues
Improving Supply through GWCL system

- Enhancement of the capacity of the piped system to increase water quantity
- Improving management in order to decrease physical and commercial losses
- Increasing decentralized storage to improve continuation of flow in the piped system
- Rehabilitation and expansion of the piped distribution network

- Although not an immediate priority for the city of Accra, demand management at user level (household, hotel, public institutions) is a feasible strategic direction to increase equitable distribution of water through the GWCL system
Recognition of Different service delivery levels (short – medium term)

There is a need for the acknowledgement and formalization of (informal) service delivery models beyond household connections

• Reviewing mechanisms to recover the O&M and capital investment costs for different service delivery models (cross subsidizing etc)

• Improving regulation of alternative service delivery models
Improving Sanitation

• Promoting different options for sanitation for different areas e.g.:
  • Public facilities in high density areas
  • Sewered public toilets
• Rehabilitation and tailor-made upgrading of existing sanitary infrastructure
• Use of natural systems for waste water treatment; advanced treatment options as a final resort
Storm Water

- Is Demolition the only solution?
- A large part of uncollected solid waste finds its way to storm drains
- Capacity of storm drains are limited
- Storm drains have also been converted to "sewers"
- Settlements in flood plains
- Adoption of SUDS options – low cost-high impact solutions
Institutional Issues (City Level)

• Creation of a “Greater Accra Metropolitan” coordination platform
  – city wide planning for the development of water and sanitation services
  – promote interaction among key city level stakeholders
  – platform to coordinate, harmonise and monitor the overall strategic vision for the city
• Inter-Municipal level planning should be encouraged
• Resolve ambiguities on responsibilities for service provision
Climate change and adaptation

- Adaptation to climate change ... or any other change .. implies
- Ability to carry out planning that is
  - Integrated
  - Rational
- Ability to enforce
- Ability to budget and spend
- Ability to monitor
- Ability to analyse
- ..... Ability to adapt
Analyse

Plan/adapt

Monitor

Implement

$$$$
Climate change and adaptation

• Ability of city stakeholders to work with ‘scientific’ data ... limited
  – Need for ‘mediation’ ... user friendly information that can help to make ‘real-world’ decisions
  – Narrative scenario building ... to go with computer based scenario building

• Weak planning and coordination capacity
  – Need for slow but steady .....‘bottom up’ ... facilitation heavy approach

• Weak enforcement capacity
  – Need for creation of broad based awareness of reasons for recommendations and still .....
Climate change and adaptation

• ‘Strategic planning’ in MMDAs undermined by lack of budgets to ‘do things’
  – Medium-Long Term – lobby for increased budgets
  – Short term - need to link with relevant ‘projects’
    • World Bank Urban Sanitation and Water Programme (Greater Accra)
    • Netherlands Urban Water and Sanitation Services programme (within IWRM framework) – ‘West Accra’ and Densu
    • ASIP
    • UESP II
    • UWP
    • …..

• Solving the general problem of planning for (water) service delivery ... will provide a basis for adaptation to climate change (if & when necessary)

• But ... this is a long term process .... the central challenge is therefore finding an institution with the technical and process (facilitation) skills in which to embed knowledge (on research – and on facilitation)
Thank You

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