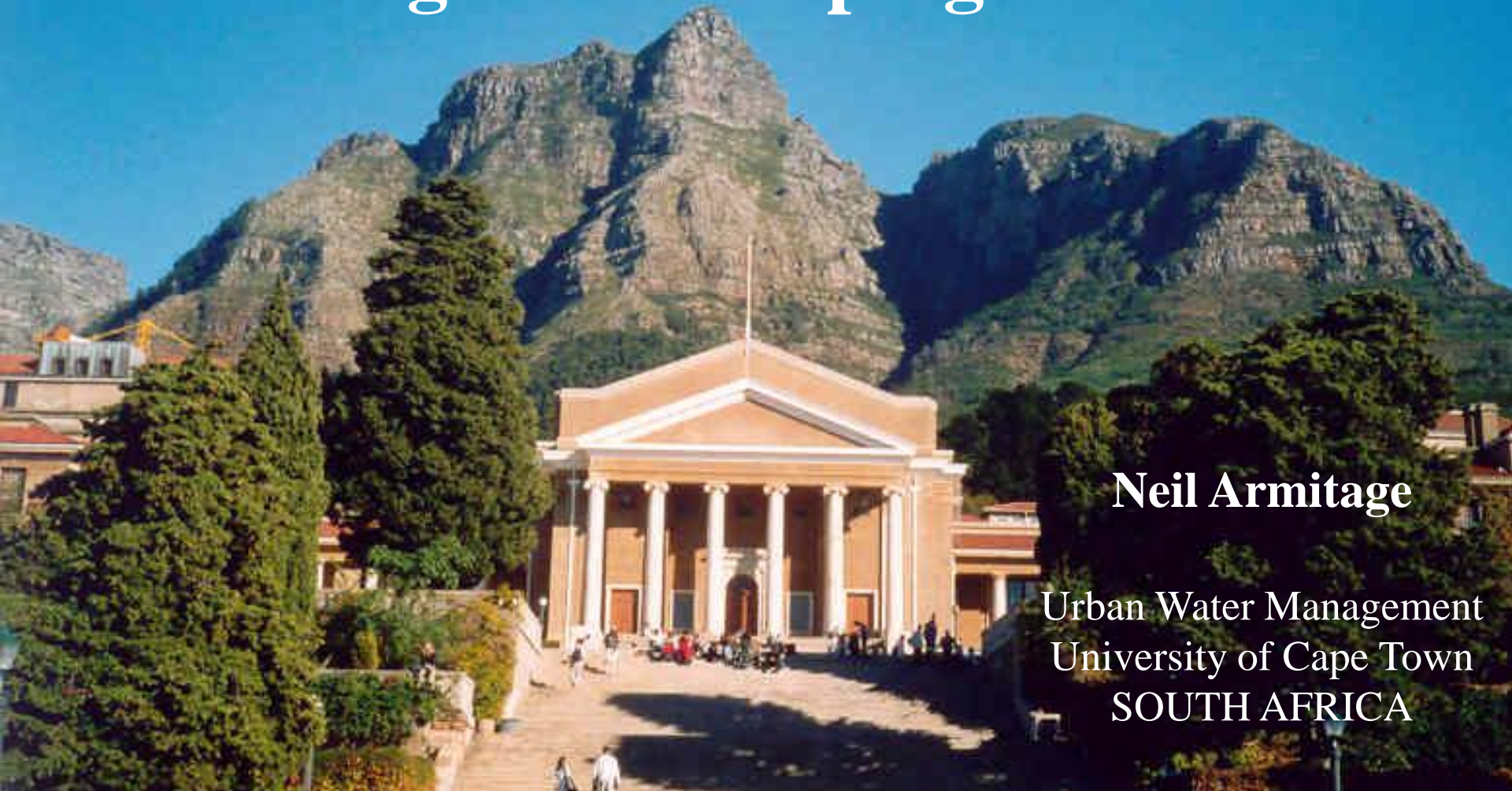


SWITCH Conference 2011, Paris: “The future of urban water”

The challenges of sustainable urban drainage in developing countries



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The challenges of sustainable urban drainage in developing countries

- Introduction
- The situation in informal settlements
- Why things are like they are
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Introduction

- Most people live in “developing countries”
- Many live in urban informal settlements
- Set to miss the MDG target for sanitation (2.4 billion still without by 2015)
- In dense urban slums, the need to dispose greywater makes sewerage a priority
- Poor drainage has a severe health impact
- Existing texts focus on engineering
- The bigger problem is social and institutional
- A holistic approach is required

The situation in informal settlements





Informal settlements are often very dense



In the absence of an efficient solid waste collection service, litter quickly ends up in the drainage system



In the absence of proper control, communal sanitation quickly fails; whether dry (left) or wet (above). Individual toilets for each household are seldom feasible.



It is relatively easy to get potable water into an informal settlement; it is much harder to get the surplus safely away.



In the absence of sewerage, residents have no option but to pour greywater into the roads (left) or the ground (right)



Stormwater drainage is almost always a problem...

... And the receiving waters are often heavily impacted.



Why things are like they are

- Poor people flood to the cities in the hope of a better life
- The only open land close to job opportunities is usually unsuitable for housing
- As the settlements are generally illegal, the local authorities are reluctant to provide more than the most basic of services
- The shacks are built with little thought for flooding
- Waste (solid, liquid and faecal) finds its way into the stormwater drainage system

Why things are like they are (cont.)

- Even if the settlement is “legalised”, it is often difficult for the local authorities to put in services. They are also reluctant to invest too much in “temporary” settlements
- Even when homes are regularly flooded, residents are reluctant to move
- Residents appear unable to organise themselves at a settlement level. “Strongmen” are quick to claim assets for themselves
- “Condominiums” not easy to set up (culture of entitlement?)

The failure of local government

- Skills shortages in all professions
- “Silo” mentality
- Decisions made on grounds of political expediency; focus on “form” rather than substance”, houses prioritised over services, short-term versus long-term
- Small tax base; those who pay resent “their” money going to others
- Inadequate attention paid to maintenance
- Hence, mistrust of local government

The sustainable provision of urban drainage in informal settlements

- Aid?
- Trade?
- Borrowing?
- Privatisation?
- Professional support?
- NGOs?
- Abolition of the settlements?
- *In-situ* upgrading?

Conclusions

“It is not about the sewer...!”

The biggest problem is the failure of local government stemming in the main from:

- Inadequate numbers of skilled personnel
- Inadequate funding

The best forms of international assistance are probably the secondment of professional personnel and the financial support of key NGOs