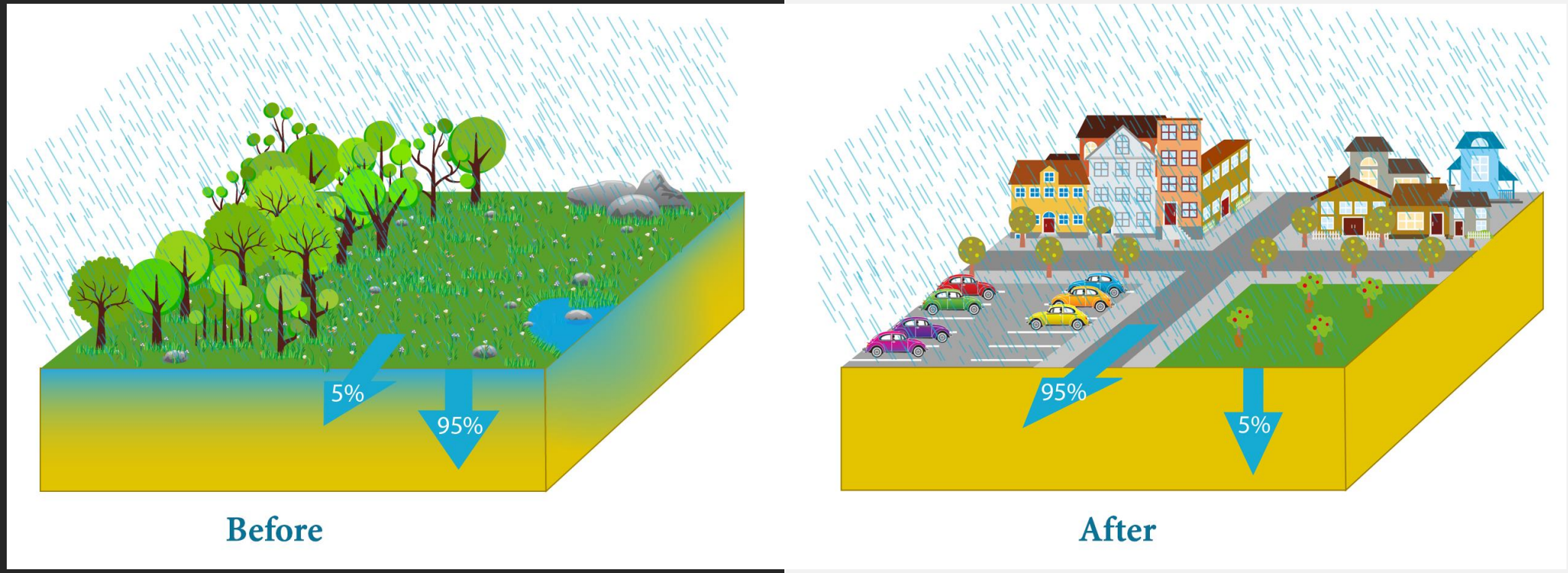


Capacity Building for SuDS Implementation

From policy to practice

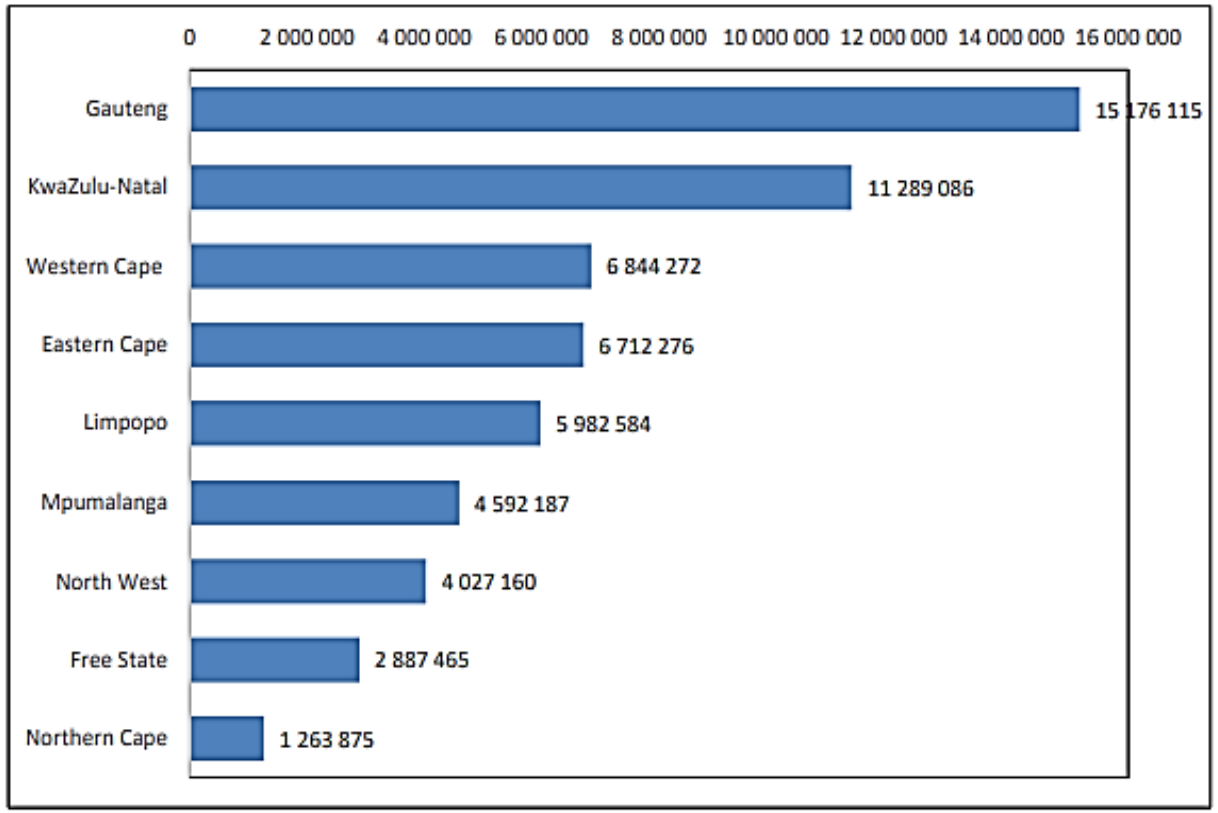
Dr Demilade Fayemiwo

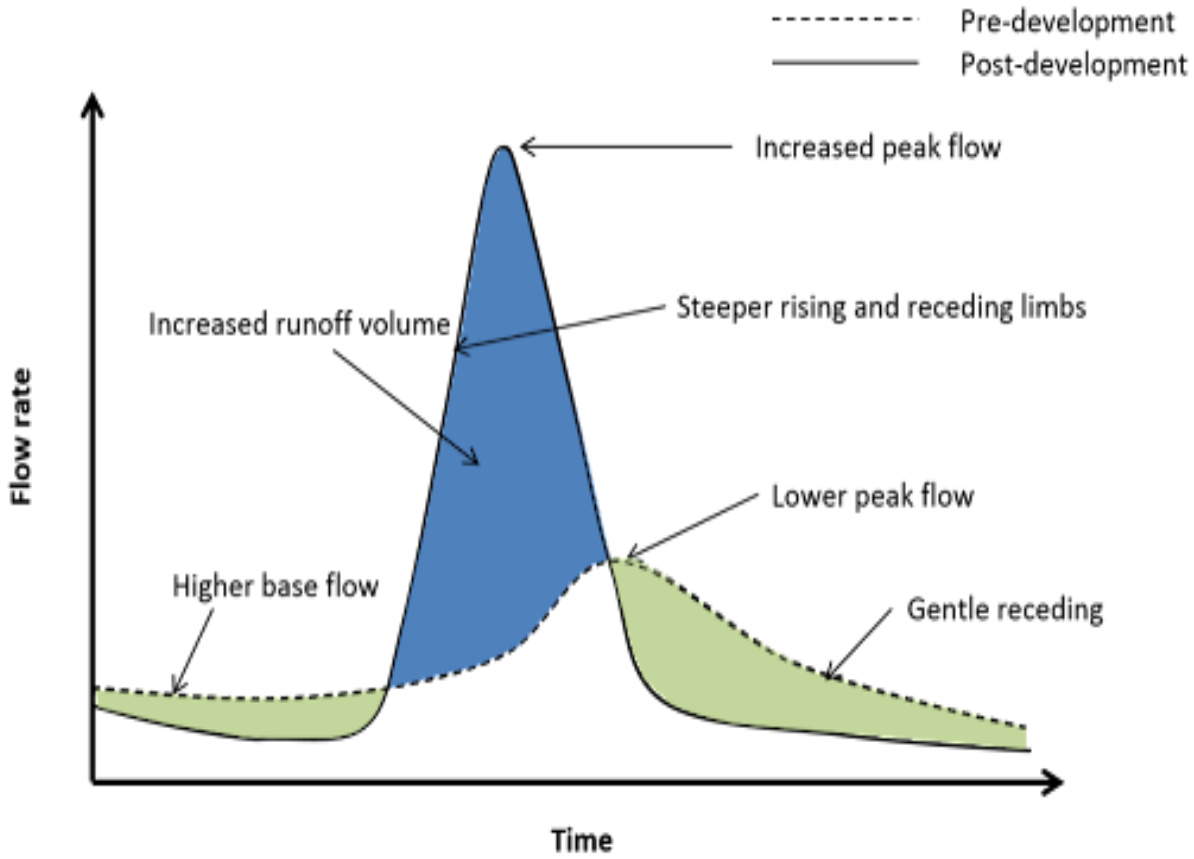
On behalf of

Future Water Institute, University of Cape Town, South Africa

Sustainable Urban Drainage Systems (SuDS) for Gauteng

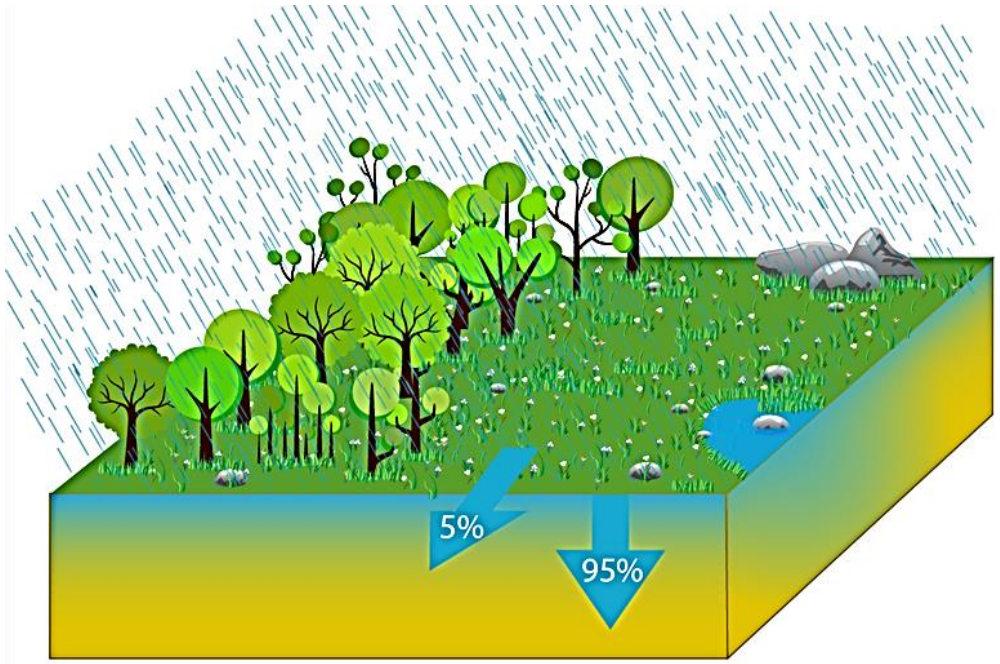
Figure 1: Mid-year population estimates for South Africa by province, 2019



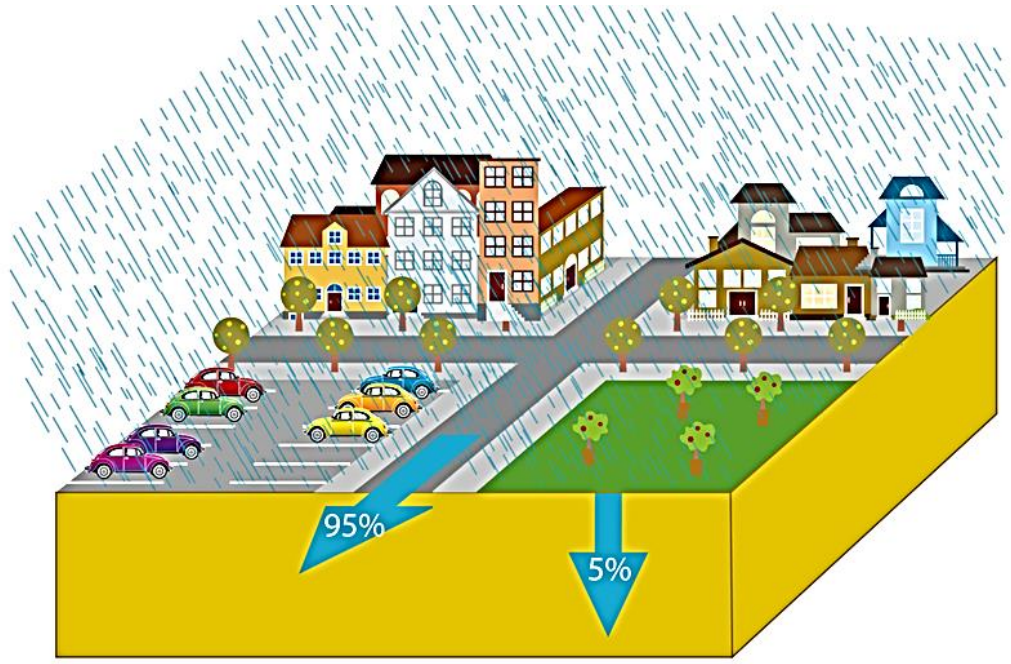


Stats SA, 2019

UCT urban water management



Before



After

Image from http://www.hidrologiasostenible.com/sustainable-urban-drainage-systems-suds/

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

UNIVERSITY OF JOHANNESBURG

peets
PROCESS ENERGY & ENVIRONMENTAL TECHNOLOGY STATION

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FUTURE WATER

Background

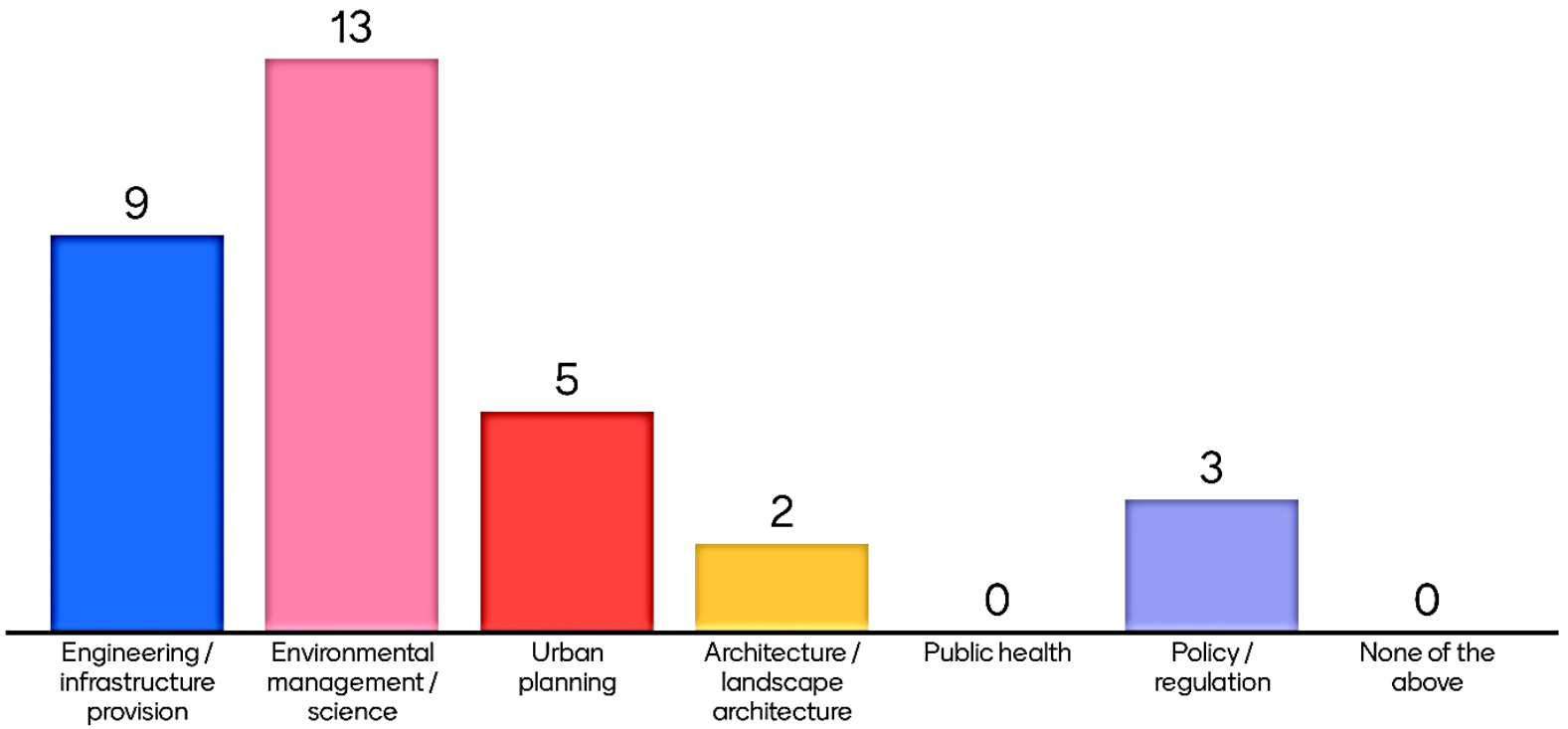
Background

- **Stormwater management manual**
  - Identifies key stakeholders in stormwater management, considerations for designing infrastructure for minor and major storms and the steps to follow when planning, designing and implementing stormwater management systems

- **SuDS implementation manual**
  - Proposes a strategic process design that begins with the consideration of catchment objectives to the development of detailed SuDS designs for new developments.
  - Also highlights the importance of community involvement in SuDS installations

Gaps between Policy and Implementation

SuDS 101 Workshop



Parties Involved in SuDS Implementation and key considerations

Policy and strategic planning

Government institutions (GDARD, JRA, DWS, DHS, DFFE, JCPZ, CoJ
Consider goals of environmental protection legislation (to be expanded in report)

Land use planning

Urban and town planners; catchment management specialists in government institutions (DHS, DoT, DFFE, JRA, GDARD, DWS,JCPZ, municipalities)
Consider overall goals of SuDS

Developers and Master Planning

Local and regional authorities (e.g. municipalities), drainage specialist, landscape architects, EIA specialists and EAPs
Consider climate change impact, catchment management and community engagement

Parties Involved in SuDS Implementations and key Considerations

EIA Process and Approvals

EIA specialists in planning team and in government institutions
Consider climate change impact, catchment management, land use, waste management

Detailed Planning

Stormwater engineers (stormwater drainage plan, runoff plan), hydrologists, road engineers, landscape designers, senior engineers and consultants for design checks. Plan submitted to Development Control Department (DCD) for approval. DCD must ensure compliance with SuDS

Installation and Maintenance

Installation falls under project team selected by developers. For maintenance, community members, municipalities? Regional authority?

Stakeholder Engagement

- **Stakeholder 1: Developer**

Comments: Struggle with EIA approval process for SuDS design at new development. Design was rejected by GDARD because it did not conform to conventional stormwater management design. There is an attachment to old policies that negate SuDS implementation. Discourages including SuDS in designs because the process is tedious and expensive

Stakeholder 2: EIA consultant and applicant

Comments: Never seen SuDS included in an EIA application. Most applications still include conventional stormwater management. Suggests developers and engineers are not including SuDS. Might be for reasons mentioned by stakeholder 1.

Stakeholder 3: EIA assessor at GDARD

Comments: EIA assessment checklist is outdated and does not include checking for SuDS. Increases possibility of SuDS designs being rejected and needing to go through an appeal process

Gaps between Policy and Implementation

- Need to develop capacity for SuDS implementation in EIA assessment

- Next steps:
  - Focus group discussion with stakeholders in the EIA process to further determine gaps in understanding of SuDS principles and low/high-level obstacles to implementation at EIA level

  - Stakeholder groups identified for the focus group:
    - EIA reviewers – GDARD and representatives from the cities (5 people)
    - EIA applicants (consultants) – (2 people)
    - Developers – 2 people
    - Designers/Engineers – 2 people
    - Academia – 2 people
    - Presenters – 2 people

Focus Group Discussion format

- **3 sessions of 30 minutes each**
  - Session 1: Understanding the importance of EIAs in SuDS implementation
  - Session 2: A case study of SuDS implementation in Gauteng. The EIA process
  - Session 3: General discussion -Barriers to SuDS implementation: current practices in EIA assessments and what needs to change
- Development of a training manual aimed at EIA assessors within GDARD and the cities using information gleaned from the focus group discussion to suggest improvements to the EIA process