

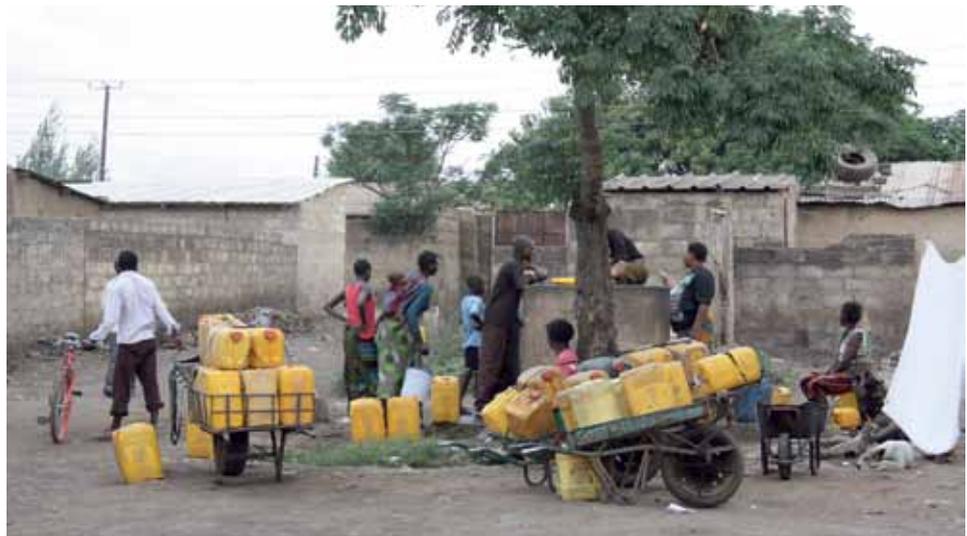


# Climate change impacts and adaptation: urban centres

More than half the population of southern Africa will be living in urban areas by 2030, says UN Habitat. Urban areas suffer from particular vulnerabilities to climate change — from lack of water and poor sanitation, to flooding, health threats and any number of other disasters.

## Changes in climate will affect urban areas

Urban areas in sub-Saharan Africa are already experiencing changes in climate in the form of more frequent and intense tropical storms, especially along the east coast. It is seeing more intense drought periods, changes in rainfall patterns, more intense rainfall when it does occur and a general increase in temperature, although the latter varies widely from one area to the next. Sea-level rise is already affecting all coastal settlements to a greater or lesser degree.



Water services are inadequate in most urban settlements.

### Slum dwellers

Sixty-three percent of urban populations in Africa live in slums. Of these, 27% are severely deprived of urban services (Pieterse, 2010).

### Africa has the highest % of urban dwellers in slums and the highest incidence of severe slum deficiency

Region	% Slums	Moderated (1-2 deficiencies)	Severely (3-4 deficiencies)
Sub-Saharan Africa	62	63	27
LAC	27	82	8
Southern Asia	43	95	5

Urban vulnerability in southern Africa is largely driven by high levels of informality. (Source: E. Pieterse, 2010)

## Climate change impacts on urban areas

- Flooding is the most common current and anticipated impact. Factors that worsen floods are storm surges along the coast, upstream deluges for urban areas on rivers and high winds. Not only are floods life threatening, they also destroy buildings and transport and sanitation infrastructure. This reduces access to clean water for survivors, leading to health threats such as diarrhoeal diseases.
- Drought leads to water shortages, which in turn puts pressure on sanitation services, which results in deteriorating water quality and ultimately pose serious health threats (diarrhoeal diseases).
- Sea-level rise results in saltwater intrusion (movement of salt water into freshwater sources) and flooding of coastal infrastructure.

Climate change and variability are exacerbating what already constitutes crises in many Southern African cities. The greatest impact will be on the most vulnerable sectors of society who are least able to cope with additional shocks and stresses brought about by climate change.



The greatest impact of climate change will be on those least able to cope.

## Why are climate change threats so significant for urban areas?

Urban areas suffer from various existing vulnerabilities, which climate change will only make worse:

- **Increasing informality and slums:** Slums are the fastest growing urban land use, and this is shaping African cities.
- **Increasing urban growth and sprawl:** Southern Africa is now experiencing its own trend of urbanisation. But unlike Europe and North America in the 18th and 19th centuries, this trend is not driven by rapid industrial growth, while the rate of urbanisation continues apace at 2.5 times as rapidly as theirs. This boils down to urban areas in the region experiencing poverty-led growth: increasing demands for urban services without the ability to pay for these. The result is rapid growth of low-density, peri-urban areas.
- **Overburdening of decaying infrastructure:** In an era where national governments have reduced their spend on infrastructure in favour of social services, growing infrastructure needs cannot be met and infrastructure gradually collapses.
- **Increasing poverty:** Poverty is measured not only by income levels, but by levels of access to infrastructure, services, credit, assets and decision-making processes and forums. Progress has been made in some urban areas towards basic service provision, but the number of people living in urban poverty is growing in absolute and relative terms, and inequality has increased.

- **Increasing impact of HIV and AIDS:** This overburdens already inadequate healthcare systems, reduces the workforce and has strong sociological and psychological effects that will last for generations.
- **Weakening urban governance and financing:** Inadequate institutional arrangements, delegated powers, financing, national policies and weak civil society can all exacerbate existing problems by constraining local governments from taking significant action to cope with these challenges. Add climate change into the mix and an already stressed situation becomes much worse.

### Urban area

An urban area is a concentrated permanent human settlement, from a small town to a city to a conurbation. Also “an area in which a majority of the people are not directly dependent on natural resource-based occupations.”

(Source: [www.mhhe.com/biosci/pae/glossaryu.tml](http://www.mhhe.com/biosci/pae/glossaryu.tml).)

## Areas of opportunity

Urban areas enjoy characteristics that can be harnessed to address some challenges:

- They are areas of innovation and creativity
- They provide economies of scale that create opportunities for markets as well as social mobilisation
- Where they have their own form of government with significant powers, they are able to ‘shape their own destiny’ with the right leadership
- They are able to attract and generate resources to meet their needs
- Many organisations focus on urban areas, for example the UK’s Department for International Development (DFID), UN Habitat, ICLEI – Local Governments for Sustainability, the Cities Alliance and Slum Dwellers International.

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