

Climate change from an urban perspective

Cities are growing, and it is here that the climate change battle will be won or lost in the coming years. Cities concentrate those most at risk from climate change and the poor are most vulnerable. Cities in industrialised countries emit most greenhouse gases (GHG) but the poor in developing countries are most affected. Good urban governance supported by a strong national framework is key to addressing the problem.

Key issues

Environment and health

Many cities are on risky sites – near rivers or harbours – while others, established on safer ground, have expanded onto riskier land like steep hillsides or floodplains. Thus many cities are at risk from climate change impacts such as sea-level rise, floods and extreme weather. When cities flood, access to safe drinking water, food and sanitation is difficult, particularly for the poor. Children can drown, and disease outbreaks are rife.

Many coastal cities are at risk from sea level rise, storm surges and high tides, and others are at risk from typhoons and hurricanes. Sea level rise can undermine buildings and contaminate groundwater. Half of Africa's large cities are coastal. Banjul, Lagos, Abidjan and Alexandria are among those most at risk.

Many non-coastal cities, particularly in Asia, are on floodplains. The ten million inhabitants of Dhaka have suffered three devastating floods in the last twenty years.

Unplanned urbanisation can aggravate flooding. Natural drainage is blocked, floodplains built upon, and large hard surfaces such as roofs and roads make water run quickly to rivers. As climate change brings rain in shorter but stronger



PHOTO: ACTION AID

Floodwater cascading into the Kroo Bay Community, Freetown, Sierra Leone.

Climate change – what to expect

The Intergovernmental Panel on Climate Change reports with 'very high confidence' that human activities since 1750 have caused global warming. In the next two decades about 0.2°C warming per decade is projected.

With this we can expect:

- Contracting snow cover and sea ice
- More frequent heat waves, heavy precipitation, drought
- More intense tropical cyclones
- Precipitation increase at high latitudes and decrease in subtropical regions
- Sea level rise by up to 59 cm by 2100

bursts, floods will worsen. In Kampala, slums such as Katanga experience run-off six times greater than natural terrain. Floods are increasingly severe, often followed by outbreaks of diarrhoeal diseases.

Cities are experiencing the 'urban heat island' effect. Built-up land surfaces reach higher temperatures than surrounding areas, and city activities increase the air temperature, with health impacts – particularly for the elderly and the young. Warmer temperatures may expand the ranges of tropical diseases like malaria.

Social issues

Climate change threatens the homes, livelihoods and health of the urban poor. When disasters strike, their homes may be damaged or destroyed and they may be unable to travel to work, losing money for food and other basic needs.

Around one person in six worldwide lives in slums. In the least developed

nations, slums house 70% of the urban population. Droughts and floods in rural areas have increased migration to cities.

Poor people often live in illegal settlements on land susceptible to climate change – floodplains, coastal lowlands or unstable hillsides. Drains and culverts are frequently blocked with rubbish. Slum dwellers often lack secure tenure, proper shelter, water, sanitation, electricity and other services. Most have no insurance. Climate change will add to their problems.

Infants and older people will struggle to cope with the effects of climate change. In many countries, men control income distribution, property, access to credit and decision-making. This exacerbates the vulnerability of women in disasters.

Institutional issues

The quality of government, at national and city levels, has a major influence on the number of people at risk from climate

change, and on future levels of city GHG emissions. Poor governance greatly increases risk. Urban governments' inability to implement appropriate building regulations and local development plans makes prevention of building on risky sites difficult. Cities need good water supplies and good infrastructure, such as drains, to limit flood damage.

Climate change must be factored into all development plans and investments. Urban growth must be more resilient to climate change through adaptation. Good disaster preparedness and response systems are needed, and good planning and enforcement to stop development in risky areas and on areas such as wetlands. Poor people may be prepared to move from high risk sites, but only if they are involved in the decision-making process. Many slum dwellers cannot vote because they lack a legal address. They are usually excluded from city planning and decision-making. Women are also largely excluded, which may impact on planning priorities related to climate change.

Enterprises and consumers are major contributors to GHG emissions. Measures are needed to reduce emissions through mitigation. Governments need to support low carbon technologies, better designed housing and office buildings, better public transport and provision for walking and cycling, adjustments to building regulations and land-use plans, and incentives and regulations for industrial energy efficiency. The close proximity of people and services in cities provides many economies of scale for reducing energy and providing efficient public transport.

There is little evidence so far of governments incorporating climate change into development plans. Many city policy makers do not see climate change as an important issue. And climate change models cannot provide robust city-specific predictions for the next few years.

Urban governments who do try to respond often receive little support. Good urban governance supported by a strong national framework and international agencies is key.

Strategic areas for support

- Develop and share climate change knowledge from an urban perspective, particularly with city decision-makers.
- Build financial and human resources at local, city and national government levels.
- City level initiatives to reduce GHG emissions and climate change risk, supported by higher levels of government and international agencies.
- Better integration of climate change into national and city development strategies, including poverty reduction.
- Capable, transparent and efficient urban land-use planning and management.
- 'Climate-proof' water, sanitation, energy, transport and solid waste management services in urban areas.
- Support for the urban poor to obtain safe housing and services.
- Focus on disaster risk reduction, rather than response.
- The use of energy-efficient transport systems, buildings and technologies.
- Involvement of the urban poor, women and youth through participatory processes.

To be aware of

Poor nations have contributed very little to GHG emissions, yet they are most at risk from climate change and most vulnerable to its impacts. Climate change policies and practices in urban areas need to pay particular attention to the urban poor.

Due to high GHG emission levels, cities in high-income countries must take the lead in reducing emissions. But successful cities in India, China and Brazil

are developing fast and must also reduce their carbon footprint and decouple economic growth from high levels of GHG emissions.

Sida believes climate change to be so important that it should be considered in all Sida support. And prevention is better than cure.

Examples of Sida support

Sida supported the Greenhouse Gas Emission Reduction from Industry in Asia and the Pacific project. It aimed to help Asian businesses become more energy-efficient, reducing GHG emissions and costs. An energy guide is available at www.energyefficiencyasia.org/

Sida supports the Sustainable Urban Mobility in Asia project, addressing air pollution, GHG emissions and traffic safety.

Sida supports Tiempo, a bulletin on climate and development, www.tiempo-cyberclimate.org

Swedish resources

Swedish municipalities and companies have extensive experience of measures to reduce GHG emissions, while the expertise for adaptation to climate change is being developed.

Sida references

Available at www.sida.se

Fighting Poverty in an Urban World, Sida Policy (2006)

Urban Issue Papers: Air pollution, Urban transport, Industrial environment, Urban solid waste management, Urban development planning, Urban water supply and sanitation

A Favourable Climate for Development (2005)

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Tannerfeldt, G and Ljung, P (2006) *More Urban – Less Poor, An introduction to urban development and management*, London, Earthscan

REMINDERS

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| ☐ Do city development policies and practices increase or decrease the vulnerability of city dwellers to climate change related events? | ☐ Are women and youth empowered to participate in decision-making? | ☐ Are city planners and decision-makers given enough support to ensure cities grow in a 'climate-proof' and 'climate-friendly' way? |
| ☐ Are the needs and vulnerabilities of the urban poor, children and elderly given the attention they need? | ☐ Do development policies and practices increase or decrease cities' carbon footprints? | |