

## Women's action towards climate resilience for urban poor in South Asia



# CLIMATE CHANGE AND POVERTY

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In 2000, the World Bank's Managing Disaster Risk in Emerging Economies (Kreimer and Arnold 2000) concluded that a major development imperative was to reduce disasters in order to reduce poverty, since "poverty plays a big role in keeping people vulnerable to disasters." There

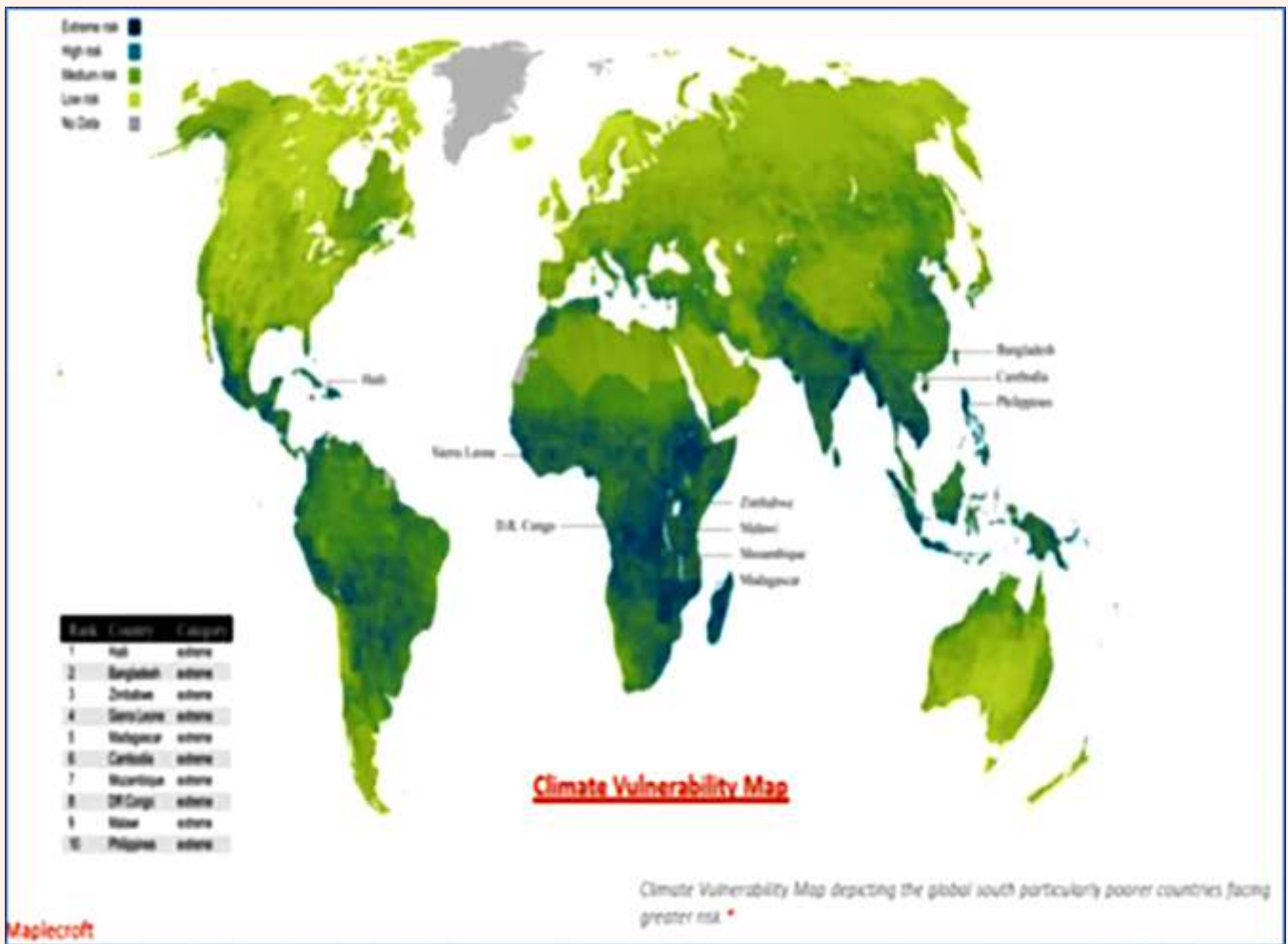
is general consensus, however, that the poor are vulnerable because they lack basic safety and protection from physical harm. Spatial analysis techniques have revealed that the poor in urban areas tend to live in low-income settlements that are highly vulnerable to disasters (Pillai et al 2010; Hoffman 2009; Lall and Deichmann, 2009). More crucially, the urban poor have limited access to basic services such as drinking water, sanitation, drainage, solid-waste management, transport, food and energy security, and health, among other welfare services.

*Evidence suggests that climate change and climate variability worsen existing poverty, and trigger both new vulnerabilities for individuals and communities. Climate change interacts with non-climatic stressors and entrenches structural inequalities to shape vulnerabilities.*

Hazard risk is not evenly distributed geographically in an urban area or socially amongst different groups. Their ability to access different resources determines their degree of vulnerability. Studies have shown a direct relationship between poverty and the countries most

vulnerable to climate change and the risks that come from it. While a lot of the study focusses on building community resilience to adapt to natural disasters, it is important to document, study and eventually mitigate the everyday struggles or impacts of climate change which many believe can result in a negative cycle or poverty trap for the poor.

Differences in vulnerability and exposure arise from non-climatic factors and multidimensional inequalities often produced by uneven developmental processes. People who are socially, economically, culturally, politically, institutionally



*The map above outlines the world from a vulnerability perspective demonstrating the level of risk faced by communities across geographies.*

or otherwise marginalized are especially vulnerable not only to climate change effects, but also to many adaptation and mitigation responses.

While research on the impact of climate change on vulnerable populations is still in early stages, the link between urban poverty and ill-health is already well established. The report also predicts that adverse health impacts of climate change will be greatest in low-income countries, and the urban poor in all countries will be at greater risk apart from the elderly, children and coastal populations (IPCC, 2007). The urban poor are more prone to diseases such as diarrhea, tuberculosis, dengue, malaria, pneumonia, cholera and HIV/AIDS (Montgomery 2009, Harpham 2009, Mercaso et al 2007, Cattaneo et al 2007). In cities, the poor tend to live in low-income settlements or slums with inadequate access to clean water and sanitation facilities, drainage and solid-waste management, which exposes them to a “double burden” of both communicable and non-communicable diseases causing disability and death (Harpham 2009).

## Adaptive Capacity to Climate change:

According to a World Bank publication, there are several factors related to the characteristics of the urban poor that affect their sensitivity and adaptive capacity to climate change and disaster risk, ultimately impacting their overall vulnerability. Among these are:

### 1. Security of tenure:

More than a quarter of the world's urban populations experience various levels of tenure insecurity, ranging from some level of legality to full illegality (for example, unauthorized squatting) (UN-HABITAT 2007). Insecure tenure and protection from forced evictions are key factors to obtaining public infrastructure services. With the constant threat of evictions, government agencies, NGOs and donors are reluctant to invest capital in erecting permanent structures that residents may stand to lose if



evicted (World Bank 2005). This has obvious implications on vulnerability.

## 2. Employment and financial insecurity:

While the urban economy provides many income and employment opportunities, the poor tend to be marginalized on many fronts and often face low incomes, limited (mostly informal) sources of livelihood, lack of social insurance, and limited access to credit markets. Climate change and natural hazards could significantly affect access to livelihoods for the urban poor. For example, slum entrepreneurs operate outside formal markets and do not have insurance against their assets. Hazards such as floods, mudslides, hurricanes and storms, especially if increasing in frequency or severity, can easily destroy the physical assets of these businesses as well as homes, leaving residents destitute.

## 3. Social networks:

Some of the coping mechanisms used by the poor also reflect a short-term perspective by individuals or communities who may be accustomed to living with risk from recurrent hazards and cannot rely on government protection (Douglas et al 2008). While ad hoc adaptation may save lives and assets in the short term, its unregulated nature creates the possibility for maladaptation, where a shift in vulnerability from one group to another may deliver a short-term gain at the cost of creating long-term, higher vulnerability such as impacts on future generations.

To rise above poverty, one needs to not only improve overall quality of life but also have access to appropriate opportunities that improves social and economic well-being. Lack of access to basic resources (including energy access) denies people of appropriate opportunities, better incomes, education and a decent standard of living. Furthermore, underserved communities are seen as a risk by financial institutions, thereby making it harder for them to avail loans and adopt decentralised renewable energy.

The world today needs solutions, to eradicate poverty, in a holistic and sustainable manner that lie in better technology, affordable finance or induced market linkages. The poor should be a part of the solution and not the problem. This is where a country like India can play a leadership role. India is a microcosm of the world's poverty and environmental problems and has the talent and capability to solve those problems that can then be replicated in other parts of the world.

Lastly, energy poverty keeps the poor locked out of the global economy, not only because they can't access schools, health care or jobs, but because their time and labour is consumed in foraging for the rudimentary sources of power – from wood to dung – that their families require. Women are most often responsible for energy-related activities within the home, and so uplifting the female household heads out of energy poverty is one of the fastest routes to overall economic growth.

## Resilience as a Capability Approach

In his papers, Jisung Park states that, on an average, hotter countries tend to be poorer. His research on distributional impacts of labour productivity channel remains thin, but there are ex ante reasons suggesting significant impacts on the world's poor:

### ■ High geographic exposure:

- Poorer households are located in more heat-prone areas, across and within countries
- An additional degree increase in average temperatures causes a disproportionately higher incidence of extreme heat days in already heat-stressed regions.

### ■ High occupational vulnerability:

- Poorer households also tend to work in occupations with greater exposure (outdoors, manual labour)
- These occupations generally pay lower wages ( eg., construction workers in US : 25% below median wages)

### ■ Low adaptive capacity/ realistic limits to adaptation

- The poor have less access to physical and financial capital in response to environmental shocks
- Even if they are able to access known adaptive technologies (eg., air conditioning), what are the realistic limits to adaptation (i.e financial limits, space limits, etc.)?

### ■ Adaptive Capacity: access to capital

Poorer individuals tend to have reduced access to adaptive capital, which can protect against temperature stress:

- Stock of climate control equipment (eg., air conditioner)
- Flow of climate control services (eg., electricity)

High quality in urban contexts:

- Correlation between income and housing quality
- Poorer individuals tend to live on top floors in buildings without elevators

When the underprivileged community is affected by natural hazards, their collective loss can be smaller than that of wealthier households, but they stand to lose a larger fraction of their wealth and income. This can keep them trapped in a cycle of poverty. Thus, the aim has to be to tackle the dynamics that limit the poor's choices to cope with and adapt to crises, and enhance their capacities for change.

## In Conclusion:

The above conclusions by Park's (2015) research are instrumental in understanding the way our cities and societies are currently adapting or build their capacities to deal with climate change. To adapt to climate change, our society has been increasingly taking a product-based approach. For example, increasingly our pattern of urbanization alongside changing technologies of construction. While we concretize our land, and build with concrete and glass, our cities are increasingly becoming heat islands, where risks from climates are magnified and amplified every day.

While the urban poor are more vulnerable due to their geographic location in the city, they are further being sucked into a lifestyle that is only partially accessible to them. They trade-off between environmental risk and employment opportunities to settle on unsafe, unstable land, drainage basins, and dense city centres. The

concrete buildings trap heat and need for cooling technologies such as air conditioners to keep them cool in the summers only rises. This is true for all city dwellers, yet the urban poor continue to live in concrete boxes, with no windows or other means of ventilation. Since these cooling technologies are too expensive and not accessible to the poor, they are more vulnerable to heat stress and other effects of rising temperatures in cities.

Thus, extreme weather such as heat and cold waves and changing drainage patterns in the urban environment are expected to produce shifts in energy demand due to building design and internal temperature control. Also, we need to approach these issues with solutions that are sustainable as well as energy efficient. It is important that the climate change problem is seen through the lens of a 'capability approach,' where the poor are seen as partners in the fight against poverty. There is a need to increase their capacity to fight against the outcomes of climate change, give them the power of information, make them aware, as well as increase their capacity to participate in their development. Social, political and economic solutions need to be designed to make the poor asset holders, thus, indirectly decreasing their vulnerability and increasing their capabilities.

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*"Mahila Housing SEWA Trust (MHT) aims to build capacities of women from slum communities to take lead in resilience action against heat stress, extreme precipitation events, water scarcity and contamination and vector borne diseases. The proposed community based resilience model will be women-led, integrated; evidence based, and will focus on innovative communication strategies to promote a culture of resilience action."*