

Household vulnerability to climate change: examining flood risks and perceptions of households in Georgetown and Paramaribo

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Climate change and coastal cities

- Climate change: aggregate of several different hazards and risks
- Cities in low elevation coastal zones at risk from both sea level rise and extreme weather events
- Coastal cities contain 10% of world population, 13% of urban population

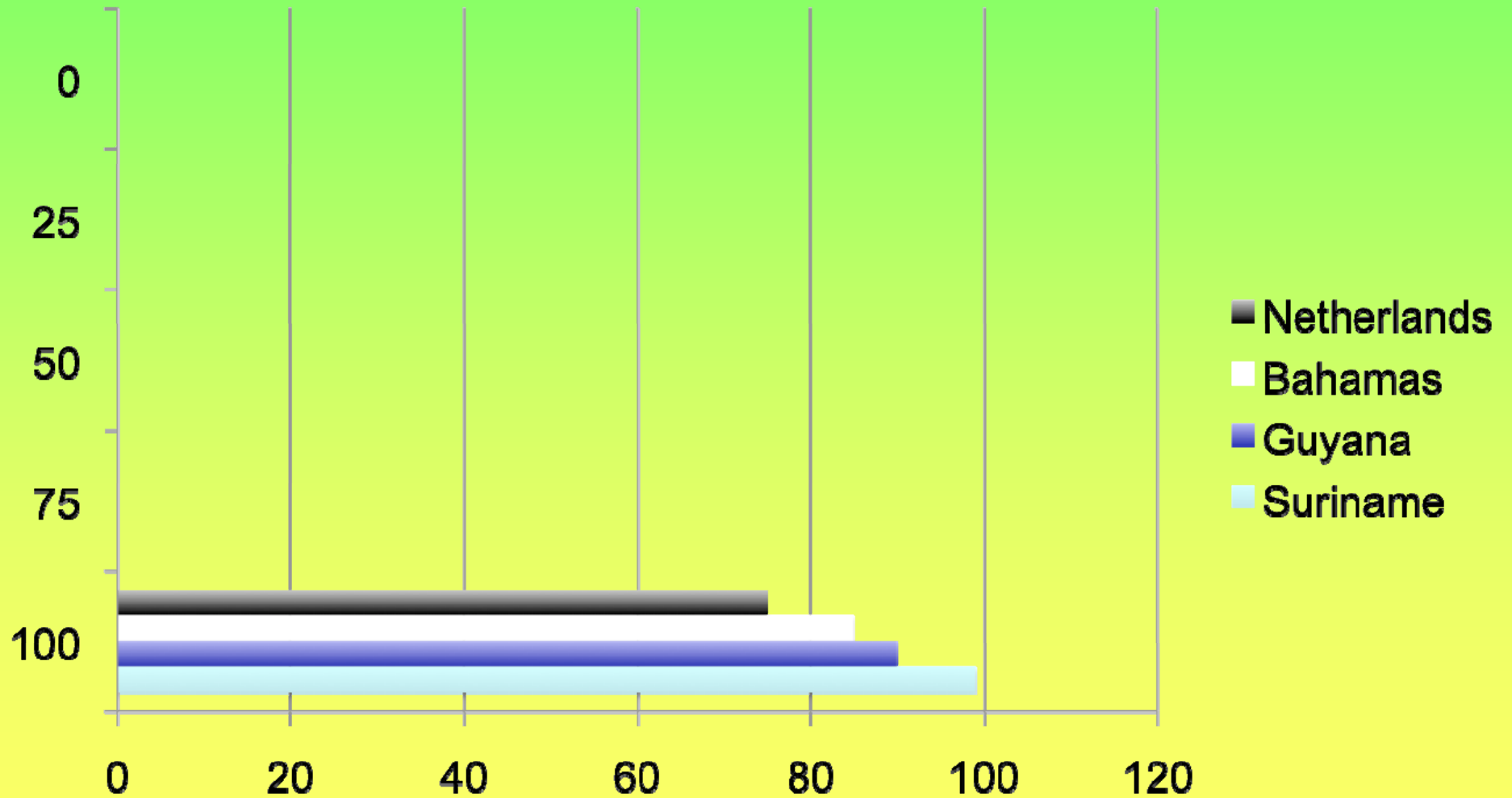
Risks from climate change

- Sea level rise
- Changes in rain fall patterns
- Flooding
- Temperature rises (air pollution)
- Extreme weather events - storm surges
- Less opportunities for agriculture in region

Who is at risk?

- Countries with high proportion of urban population in LECZ
- Countries with lower income levels
- Countries with lower (government) awareness and preparedness for dealing with impacts
- Particular population groups within countries

Nations with highest proportion of urban population in LECZ



Vulnerability to climate change

- Vulnerability as lack of entitlements and assets, i.e. effects time lost from work, isolation, stress, house damage, expenses, health - However
- Resistance – capacity of households to withstand shocks and stresses
- Adaptive capacity – individual or collective strategies to cope and mitigate risks

Methodology

- Exposure of households in two cities (Paramaribo and Georgetown)
- Comparing low-income and high-income neighborhoods
- Examining exposure and coping strategies

Flood exposure

- **Paramaribo**
- **Sign. differences in nos. of floods /length of floods, experienced by households**
- **Poor households more negative effects (time lost), stress (uncertainty and fear for damage**
- **Georgetown**
- **Flood exposure high in both areas (>90%)
Nno. of floods > in LI area**
- **More severe in LI area**
- **Buildings in LI area better adapted (stilts)**

Resistance of households

- **Paramaribo**
- **Raising yard**
- **Cleaning, repairing house after flood**
- **Contacting government services for cleaning canals**
- **Georgetown**
- **Yard raising, cleaning canals**
- **Some investment in/to housing**
- **Building neighborhood social capital**

Adaptive capacity

- **Paramaribo**
- **Low-income hhs. more measures than H-i hhs**
- **Cleaning drainage canals by H-i hhs**
- **During floods neighborhood assistance, i.p. Low income wards**
- **Georgetown**
- **Pro-active at hh level**
- **L-i hhs better adapted housing**
- **Community participation low and informal**
- **Collective action only reactive**

Conclusions

- **Exposure of low and high-income households similar**
- **Impact flooding longer and deeper on low income wards in both cities**
- **Resistance mainly at household level**
- **Collective action limited; mainly reactive during and after floods**
- **Floods not only attributed to climate change, but also to insufficient government policies with regard to services (Drainage)**