

Regional and Global Perspectives on climate change and health: focusing on solutions for Africa
Consortium of Universities for Global Health
3rd March 2021

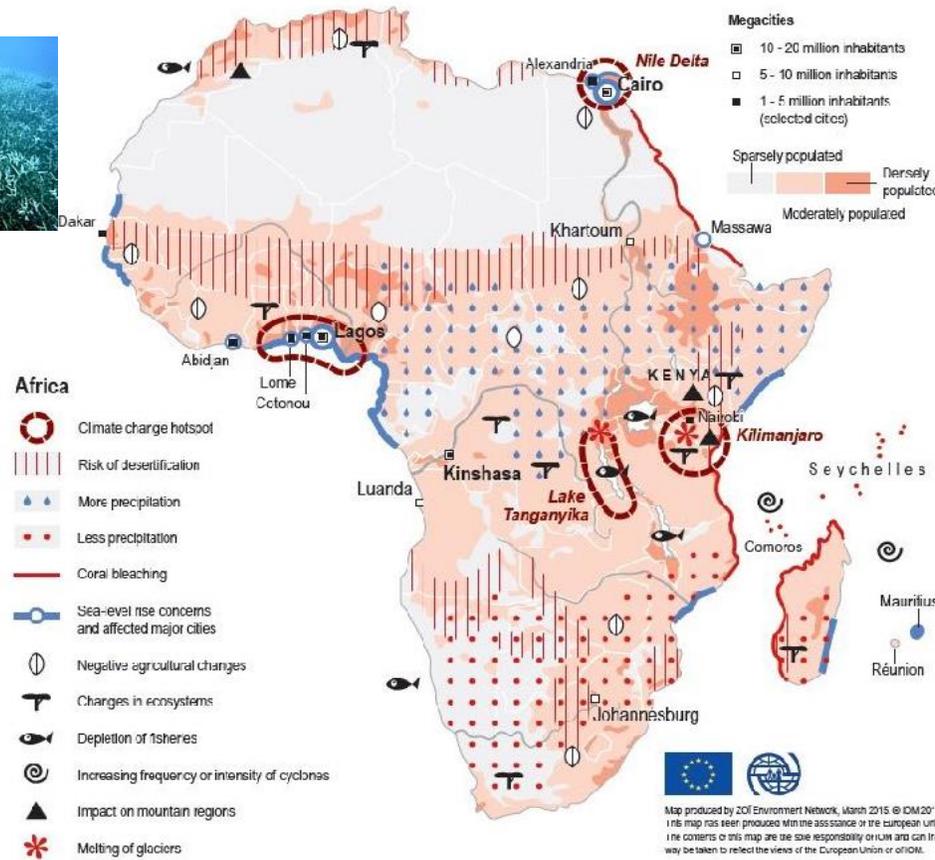
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“Africa remains the most vulnerable continent to the impact of climate change, despite being the least emitter of greenhouse gases”



Vulnerability

- 60% land mass is dry lands
- 38% of which is desert
- 50% of the population live in the arid, semi-arid, dry sub-humid and desert lands
- low adaptive capacity caused by high rates of poverty and technological constraints



Climatic hazards

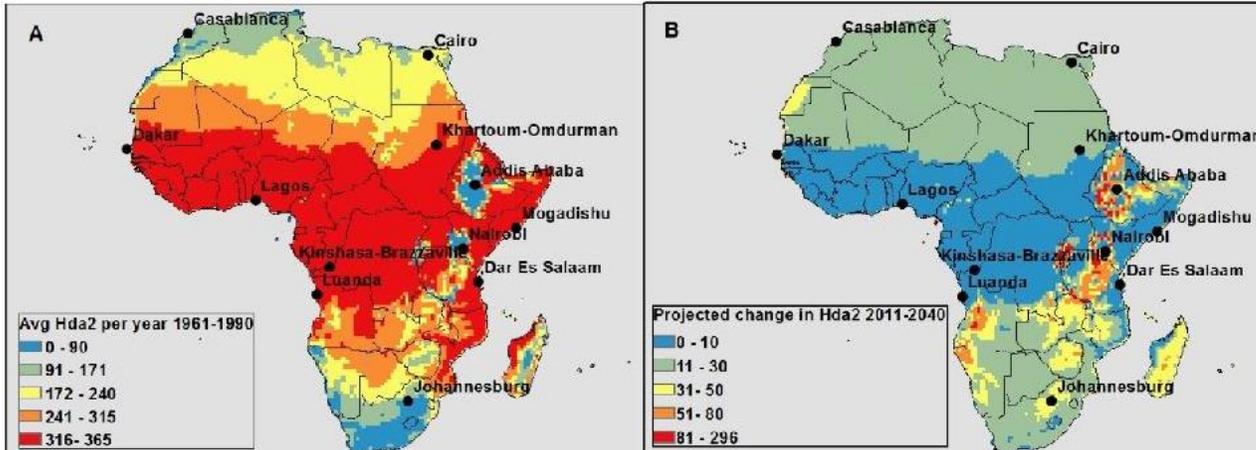
- Rising Temperature
- Extreme weather conditions
- Sea-level rise

Health consequences

- Cardiovascular diseases
- Infectious diseases
- Undernutrition
- NCD, etc.

(<http://ipcc.ch/pdf/assessmentreport/ar5/wg2>, <http://www.undp.org/content/dam/disaster>)

Impacts of Rising temperatures “Africa a continent on fire”



Major health Impacts
 cardiovascular diseases
 increased occupational hazards to outdoor jobs
 -mining, agriculture and outdoor services
 Decreases human productivity/Exacerbates poverty

Projected deaths due to climate change

| Region | 2030 | 2050 |
|------------------------------|----------------------------|------------------------------|
| North Africa/Middle East | 4997 (3184 to 5837) | 18 688 (12 122 to 22 936) |
| Oceania | 52 (44 to 71) | 217 (177 to 341) |
| Sub-Saharan Africa, central | 921 (717 to 1119) | 4107 (3399 to 5277) |
| Sub-Saharan Africa, eastern | 3266 (2828 to 4448) | 13 713 (10 055 to 19 295) |
| Sub-Saharan Africa, southern | 671 (384 to 911) | 1970 (1469 to 2700) |
| Sub-Saharan Africa, western | 2529 (1716 to 3391) | 9971 (7890 to 13 365) |
| World | 92 207 (64 458 to 121 464) | 255 486 (191 816 to 364 002) |

Solutions:
 Modelling for projecting impacts
 Insulate houses and public buildings with green technologies
 Institute Early Warning Systems
 Strengthen health system to cope with heat-related conditions

Garland R, Matoaane M, Engelbrecht E, Bopape M-J, Landman W, Naidoo M, van der Merwe J and Wright CY. Regional projections of extreme apparent temperature days in Africa and the related potential risk to human health. *Int J Environ Res Public Health* 2015, 12(10): 12577-12604 and WHO 2014.

Impacts on Vector-borne diseases

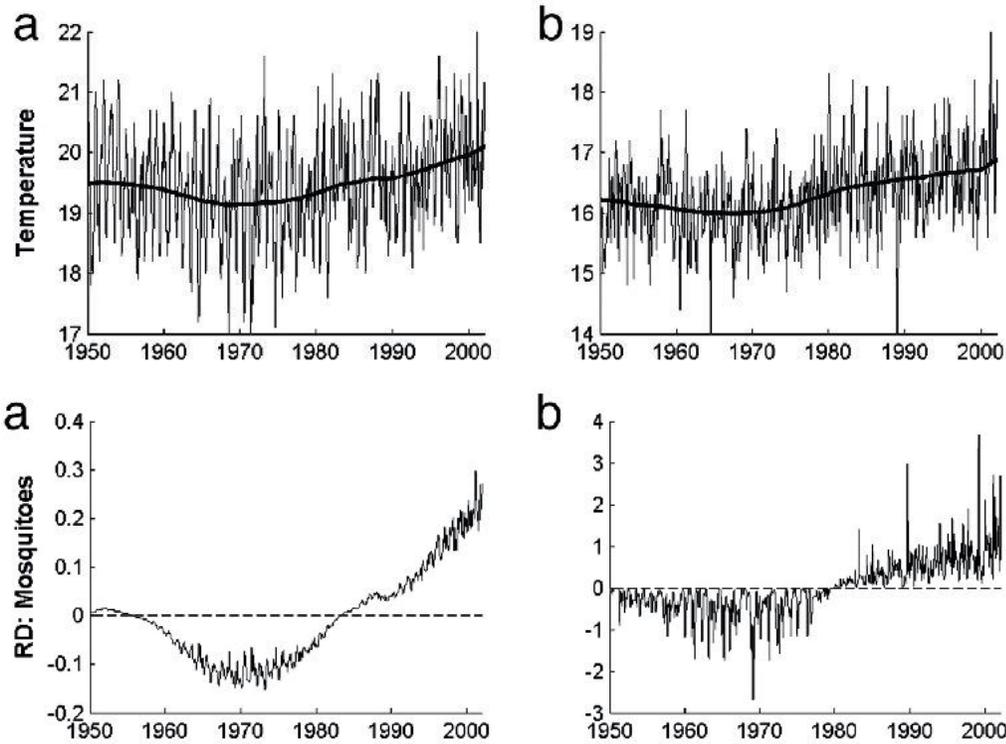
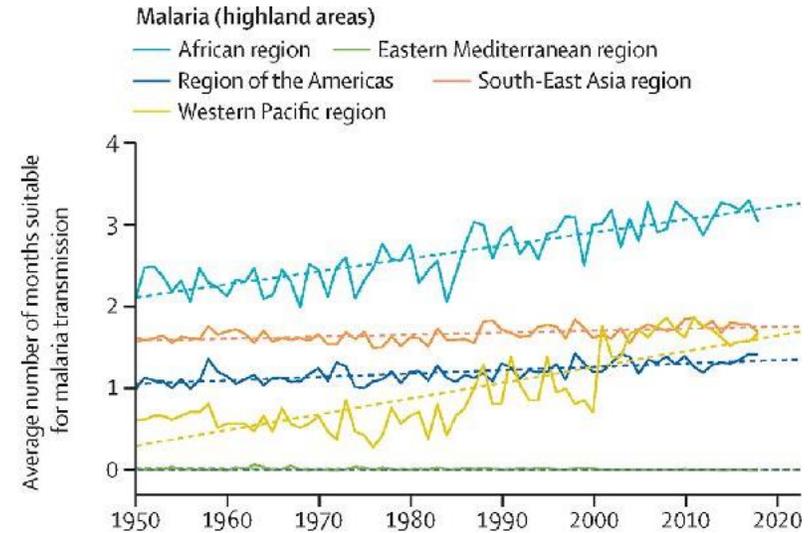


Illustration of malaria

M. Pascual, J. A. Ahumada, L. F. Chaves, X. Rodó, and M. Bouma
PNAS April 11, 2006 103 (15) 5829-5834; <https://doi.org/10.1073/pnas.0508929103>
and Lancet Planet Earth

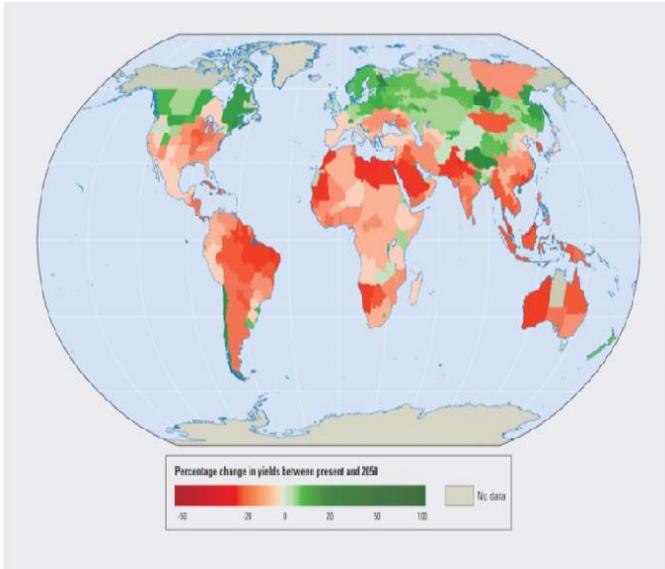


Impacts expected on zoonosis and other VBDs-yellow fever etc.
Rift Valley fever that can make both people and cattle sick.
Affects livelihoods and food security/ Exacerbates poverty

Solutions:
Modelling for impacts
HiAP for integrated management of vectors
Institute Early Warning Systems
Strengthen health system

Agriculture and food security

60% of the food supply are locally grown and the rest from food imports or food aids



Model shows negative impacts on food crop production for Africa by 2050

World Bank Publishers
World bank Development report 2010
<http://wdronline.worldbank.org/>

Flood , drought and pest lead to crop failure

Impacts:

Affects livelihoods and food security

Exacerbates poverty

Malnutrition deaths attributable to climate change for 2030 will increase SSA-E, W regions

Reliance on energy-dense food by year 2030

Will put 118 million people at increased risk for all NCD

Solutions:

Change in farming practices

Change in dietary habits

Reduction in consumption of animal proteins

New sources of food, insects and mycoproteins

Cross-cutting themes identified



Use Modelling

- Baseline data-exposure assessment
- Vulnerability assessment

Collaborative Research

- Co-benefits of mitigation and adaptation strategies
- Generate local data on the health impacts

Public Health Package

- Health system strengthening
- Institute Early Warning System

Disaster Risk Reduction

- Promote health impacts of climate change
- Incorporate Health in National Adaptation Plans

Alternative technologies

- Plant fire-resistant trees
- Reduction in use of domestic solid fuel

Policy support

- HiAP for intersectoral collaboration
- Advocacy at all level

Persistent Challenges

Weak health system

- Limited resilience to detect, monitor and treat climate-sensitive diseases

Limited Experts

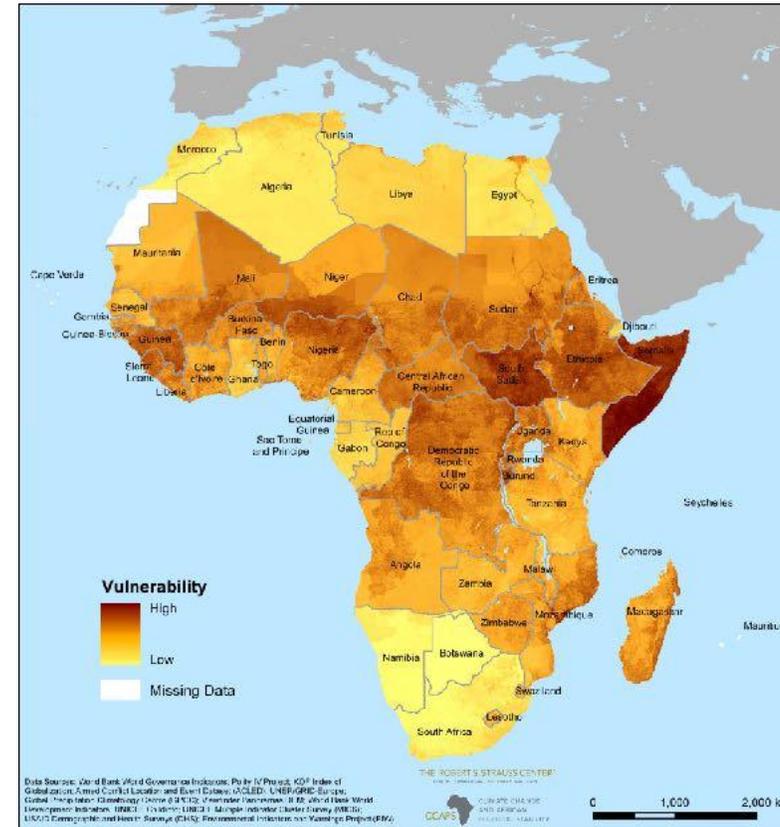
- Most experts outside Africa
- Promote partnership and research

Emerging threats

- Impacts of Ebola, Cholera, COVID-19
- Rebuilding green economy

Conclusions

- Climatic hazards and health impacts are present to harmful levels in Africa
- Our strategies to mitigate and adapt are limited
- Unmitigated climate change will:
 - widen the inequity gap
 - hamper attaining universal health coverage
 - slow down attaining SDGs
- we need to partner in this quest



Thank you for your attention!

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