

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

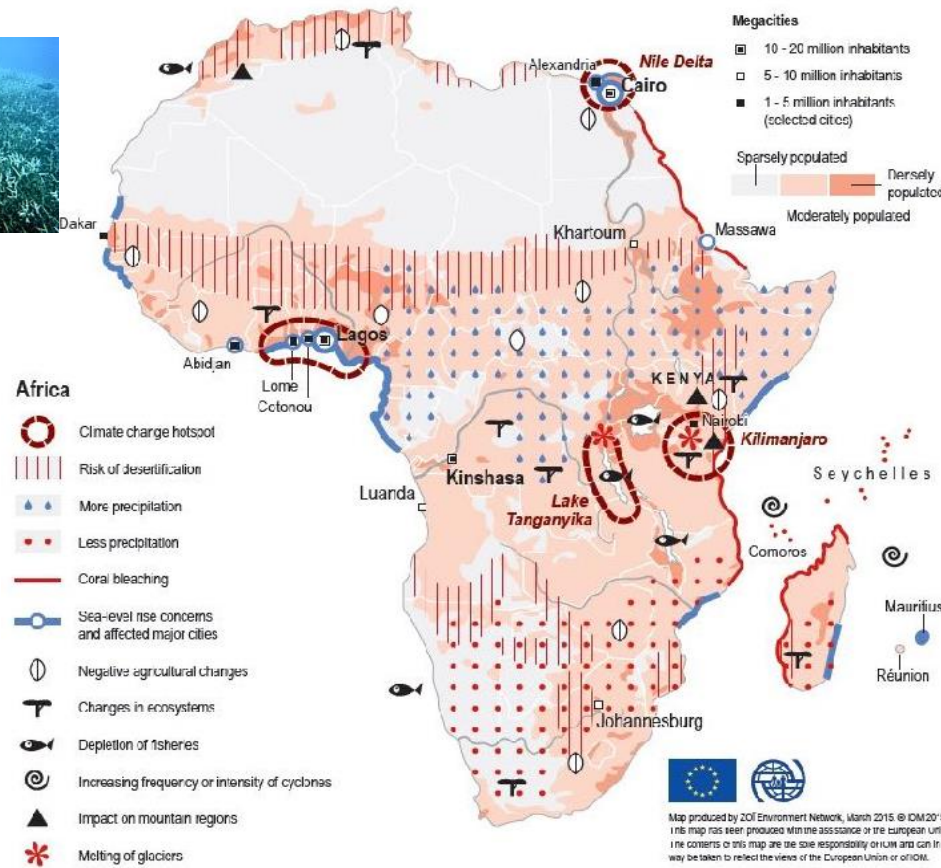
Dr. Deoraj Caussy, Consultant Epidemiologist,  
Integrated Epidemiology Solution  
<https://www.drdeorajcaussy.com>  
[drdeorajcaussy@gmail.com](mailto:drdeorajcaussy@gmail.com)

“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

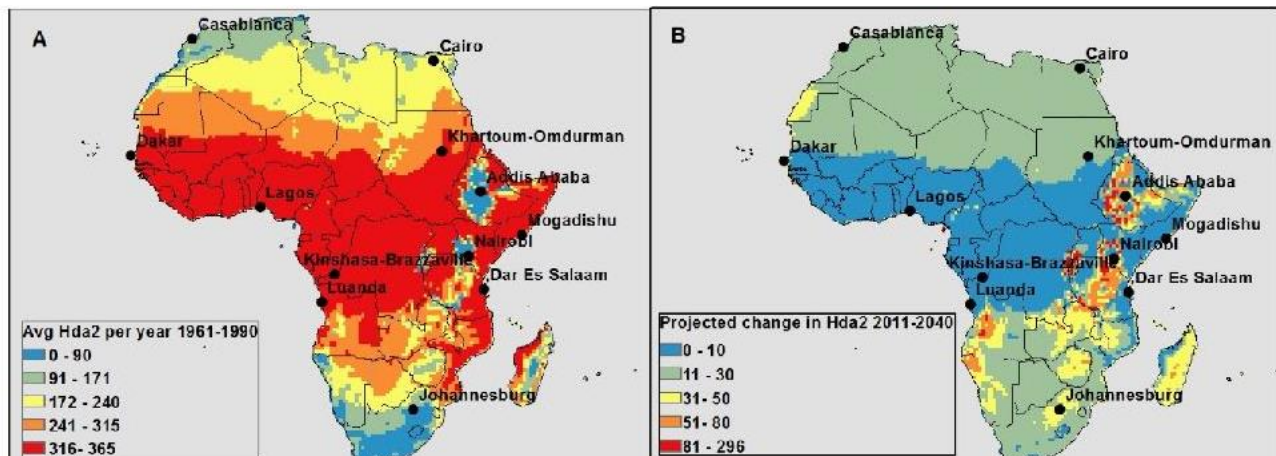
**Health consequences**

- 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

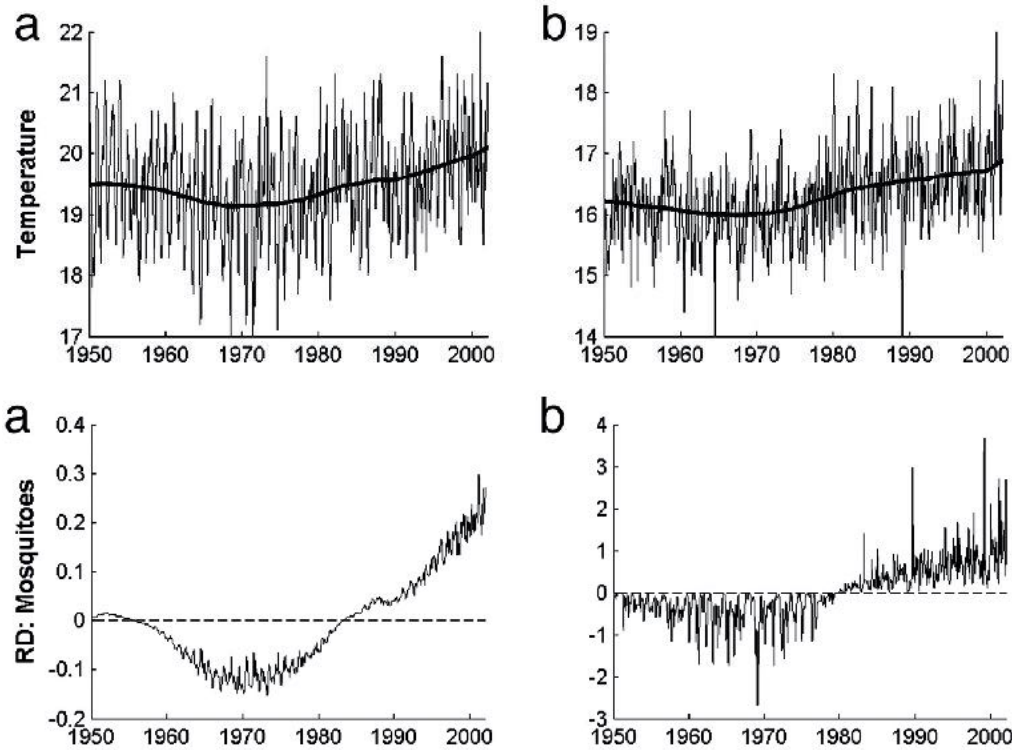
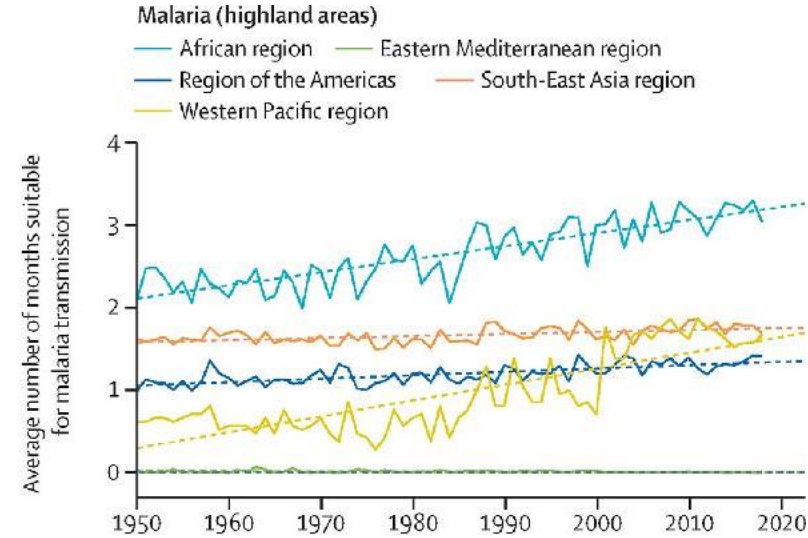


Illustration of malaria

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

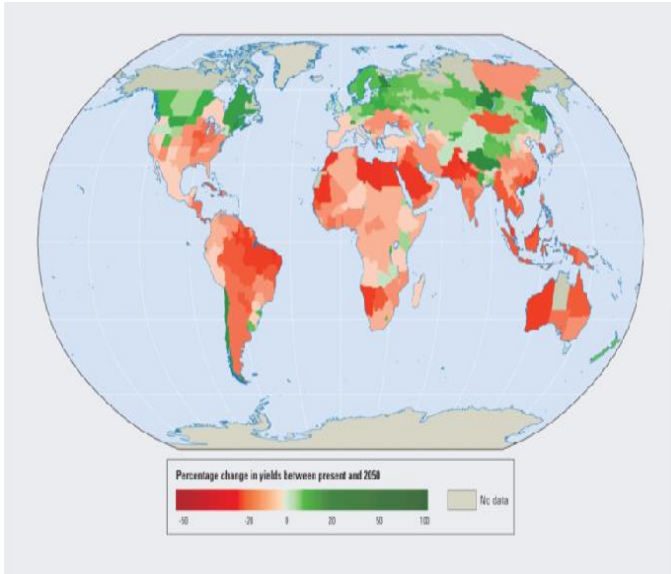


Impacts expected on zoonosis and other VBDs-yellow fever etc.  
Rift Valley fever that can make both people and cattle sick.  
Affects livelihoods and food security/ Exacerbates poverty

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





# Thank you for your attention!

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