



Climate change and violence

Caradee Y Wright (PhD) and Thandi Kapwata (PhD)
South African Medical Research Council

10 February 2020

ILITHA LABANTU WEBINAR: CLIMATE CRISIS, GBV AND MENTAL HEALTH DURING COVID TIME

**World Health Organization
definition of health:
“a state of complete
physical, mental and social
well being and not merely
the absence of disease or
infirmity”**

Table 2: Percentage of deaths by cause for persons, males and females, South Africa, 2000 - Revised

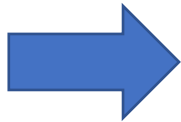
Persons			Males			Females		
Rank	Cause of death	%	Rank	Cause of death	%	Rank	Cause of death	%
1	HIV/AIDS	25.5	1	HIV/AIDS	23.5	1	HIV/AIDS	27.8
2	Ischaemic heart disease	6.6	2	Interpersonal violence	8.4	2	Stroke	8.2
3	Stroke	6.5	3	Tuberculosis	6.8	3	Ischaemic heart disease	6.7
4	Tuberculosis	5.5	4	Ischaemic heart disease	6.5	4	Hypertensive disease	4.6
5	Interpersonal violence	5.3	5	Stroke	4.9	5	Lower respiratory infections	4.6
6	Lower respiratory infections	4.4	6	Lower respiratory infections	4.2	6	Tuberculosis	4.1
7	Hypertensive disease	3.2	7	Road traffic accidents	4.1	7	Diabetes mellitus	3.5
8	Diarrhoeal diseases	3.1	8	Diarrhoeal diseases	2.9	8	Diarrhoeal diseases	3.2
9	Road traffic accidents	3.1	9	Chronic obstructive pulmonary disease	2.9	9	Low birth weight	2.2
10	Diabetes mellitus	2.6	10	Low birth weight	2.3	10	Chronic obstructive pulmonary disease	2.0
11	Chronic obstructive pulmonary disease	2.5	11	Hypertensive disease	1.9	11	Road traffic accidents	1.9
12	Low birth weight	2.2	12	Diabetes mellitus	1.8	12	Interpersonal violence	1.8
13	Asthma	1.3	13	Trachea/ bronchi/ lung cancer	1.7	13	Cervix cancer	1.4
14	Trachea/ bronchi/ lung cancer	1.3	14	Suicide	1.5	14	Asthma	1.4
15	Nephritis/nephrosis	1.3	15	Oesophageal cancer	1.3	15	Nephritis/nephrosis	1.4
16	Septicaemia	1.2	16	Asthma	1.3	16	Septicaemia	1.3
17	Oesophageal cancer	1.1	17	Cirrhosis of liver	1.2	17	Breast cancer	1.3
18	Protein-energy malnutrition	1.1	18	Nephritis/nephrosis	1.2	18	Inflammatory heart disease	1.1
19	Suicide	1.0	19	Protein-energy malnutrition	1.1	19	Protein-energy malnutrition	1.0
20	Cirrhosis of liver	1.0	20	Septicaemia	1.1	20	Trachea/ bronchi/ lung cancer	1.0
	All causes	100		All causes	100		All causes	100

Climate Change

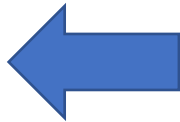


A quadruple burden
1- dominated by HIV/AIDS
but also has conditions
associated with
2- under-development (e.g.,
communicable diseases,
maternal, malnutrition),
3- chronic diseases related to
unhealthy lifestyles
4- injuries.

**Climate
Change**



**Climate
Change**



Climate Change



**“Climate Change is the greatest
global health threat of the 21st
Century”**

Lancet Commission on Climate Change

**“Climate change can be expected to cause
an additional 250 000 deaths every year
by 2030:**

38 000 heat exposure in elderly people

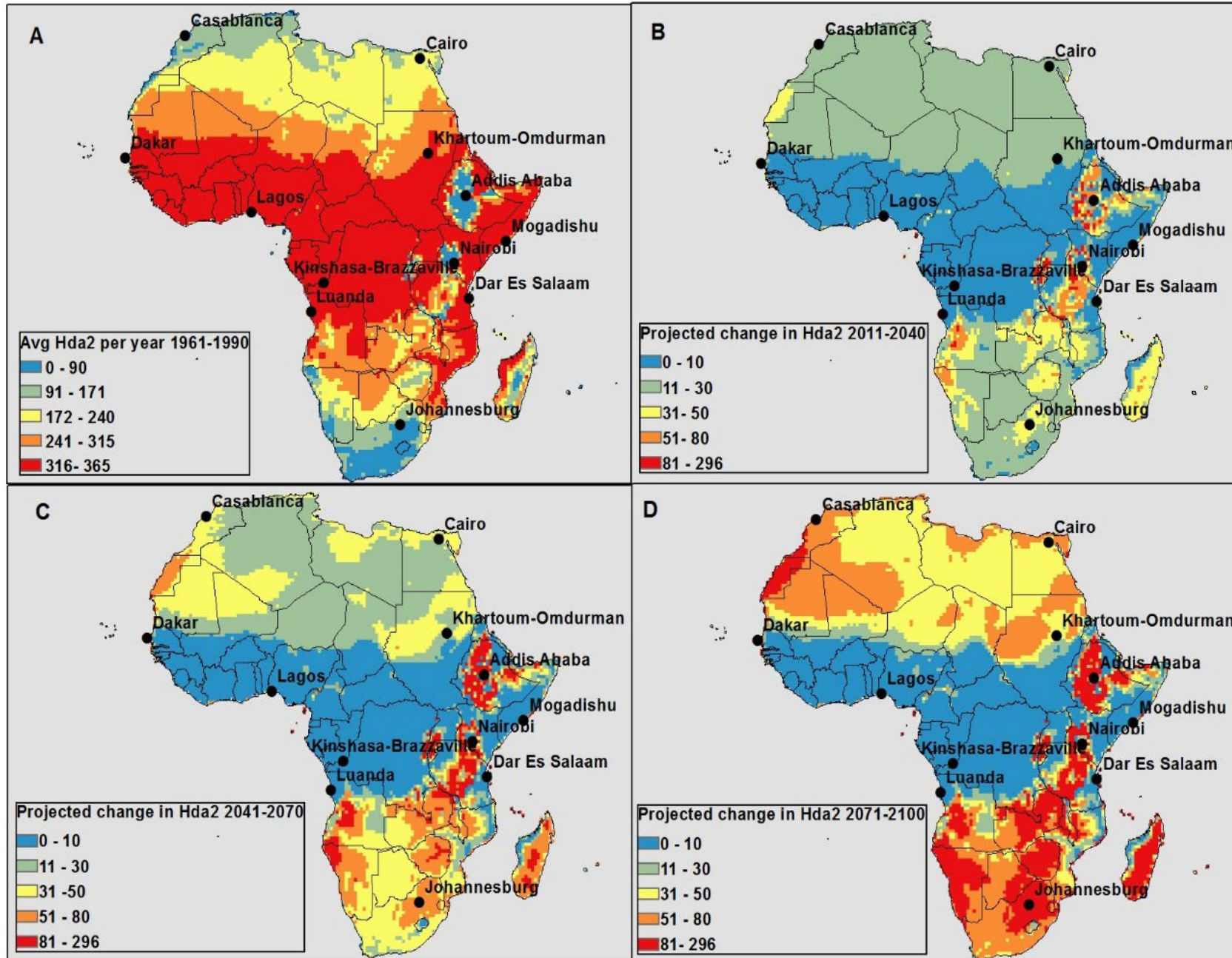
48 000 due to diarrhoea

60 000 due to malaria

95 000 due to childhood undernutrition”

WHO, 2015

Increase in hot days and very hot days



Extreme events: heat and heatwaves

Heat stroke death toll rises to 11

Sunday 10 January 2016 07:15

SABC



The North West health department says there are a number of other patients suffering from heat stroke. (REUTERS)

TAGS:

[Heat Stroke](#) [Weather](#) [Heat-wave](#)
[South Africa](#) [Water](#) [Deaths](#)

morning," says Lekgethwane.

The North West health department says 11 people have now died in the province as a result of heat stroke.

The deceased were aged between 22 and 58 years. The department reported earlier that 10 people had died at the Mahikeng Provincial Hospital.

The department says nine people have died there and another two in the Taung Hospital.

Spokesperson Tebogo Lekgethwane says there are a number of other patients suffering from heat stroke.

"In this hospital Mahikeng Provincial Hospital we have admitted about sixteen people since on the seventh due to heat wave, unfortunately there are about nine people who died, five of those were dead on arrival and there are about three who died on our casualty, one died on Saturday

2016-01-08 21:15

News24 correspondent

news24

North West - Nine people have died from heatstroke in the North West, the provincial health department said on Friday.

They died at the Mahikeng Provincial Hospital, where another 16 people were receiving treatment for heatstroke, spokesperson Tebogo Lekgethwane said.

Of the nine, five were declared dead on arrival. All the patients had come from around Mahikeng. They were aged between 22 and 58.

Symptoms of heatstroke included hot, dry skin, profuse sweating, hallucinations, chills, throbbing headache, high body temperature, confusion/dizziness, and slurred speech.

People were urged to ensure they stayed out of the sun and hydrated. Large parts of the country have been experiencing a heat wave, with temperatures exceeding 40°C in places.



Hospital bed. (Duncan Alfreds, Fin24)

[Multimedia](#) · [User Galleries](#) · [News in Pictures](#)

[Send us your pictures](#) · [Send us your stories](#)

What To Read Next

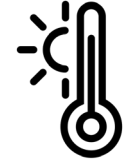
Climate change and GBV – UNDP **Ugandan** study

- In periods of prolonged drought, women and girls make more frequent and longer journeys to obtain food or water, which makes them vulnerable to sexual assault.
- Some food vendors, farmers or landowners at times insist on trading sex with women in exchange for food or rent; even attempts by women to negotiate providing labour in exchange for food are sometimes rejected, and these men with power insist on sex.
- In families where men leave home to seek a living elsewhere, women and children were left to fend for themselves, which made them vulnerable to violence and sexual exploitation.
- Poor harvests, livestock loss, lower earnings and food insecurity put pressure on men's traditional role as providers. They often turned to alcohol to cope and can become more violent, especially in disagreements with their wives.



(<https://www.undp.org/blog/why-climate-change-fuels-violence-against-women>)

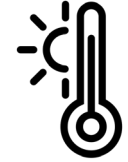
South African studies



- Mortality data was from **South Africa**'s civil registration system and includes all recorded deaths in the country from 1997 to 2013 (17 years).
- Daily temperature was from the National Oceanographic and Atmospheric Association of the United States and South Africa's Agricultural Research Council. Data were analyzed using a time stratified case-crossover design with conditional logistic regression.
- A one-degree Celsius increase in same-day maximum temperature was associated with a **1.5%** (1.3–1.8%) increase in definite homicides and a **1.2%** (1.1–1.3%) increase in total (definite + probable) homicides.

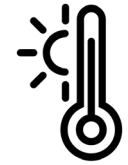
(<https://ehjournal.biomedcentral.com/track/pdf/10.1186/s12940-019-0549-4.pdf>)

South African studies



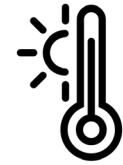
- We investigated the association between three weather parameters (temperature, relative humidity and rainfall) and three categories of crime in the developing township of **Khayelitsha**, in the Western Cape Province of South Africa.
- Distributed lag non-linear modelling was used to identify temporal relationships between temperature, relative humidity and rainfall, and violent, property and sexual crime over a 10-year period (2006–2016).
- We found hot days (defined as ≥ 25 °C) increased the **cumulative relative risk of violent crime by up to 32%** but were also found to be associated with a lagged increase in violent crime for at least a week thereafter.

New South African-led study



- Background: Studies have shown that extreme heat is associated with increased heat-related morbidity and mortality, inter-personal violence and peer violence and worsened mental health, including feelings of emotional distress, anger and feelings of helplessness
- Aim: Understand how excessive heat can impact on health (including mental health) and violence in households and schools in **Thohoyandou, Limpopo**
- Objectives:
 1. To investigate changes in climate in Thohoyandou over the last decade and engage local communities about these have impacted key health and education outcomes
 2. Investigate how heat impacts on public health, violence and mental health in homes and schools, and the mechanisms through which this happens
 3. To co-develop interventions to address the intersection of heat and violence and mental health in households and schools
 4. To assess interventions to address the intersection of heat and violence and mental health in households and schools

Way forward



- Collaboration: all stakeholders and role players
- Gather and analyze data
- Understand heat-violence pathways and violence ‘hot spots’
- Possible early warning system for the SAPS
- Understand heat-aggression pathways
- Support GBV initiatives with climate / heat understanding
- And your ideas?

Thank you

Caradee Wright

Email: cwright@mrc.ac.za

Thandi Kapwata

Thandi.Kapwata@mrc.ac.za

