



Climate Change and Health Webinar, Knowledge Hub



**Ms Bono Nemukula
National Department Of Health, South Africa**



05 November 2024



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Health
REPUBLIC OF SOUTH AFRICA



OVERVIEW OF THE PRESENTATION



- **Climate change guiding document**
- **Synthesis Report / Risk and Vulnerability Assessment**
- **Climate Resilient Health System**
- **Capacity Building**
- **Stakeholder engagement**
- **RCCE**
- **Research**
- **Small wins**
- **Reflections**



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Climate change guiding documents



Government Gazette

REPUBLIC OF SOUTH AFRICA

Vol. 709

Cape Town
Kaapstad

23 July 2024

No. 50966

THE PRESIDENCY

No. 5050 23 July 2024

It is hereby notified that the President has assented to the following Act, which is hereby published for general information:—

Act No. 22 of 2024: Climate Change Act, 2024

VHUPRESIDENDE

No. 5050 23 July 2024

Zwi khou divhadziwa henefha uri mupresidende o tendelana na uyu mulayo une wa khou andadziwa hu u itela ndivhadzo kha tshitshavha:—

Nom 22 ya 2024: Mulayo wa Tshanduko ya Kilima, 2024

ISSN 1682-5845



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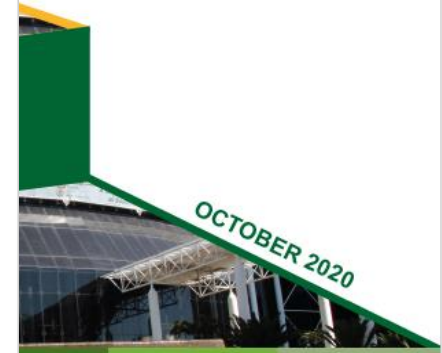


AIDS HELPLINE: 0800-0123-22 Prevention is the cure

HEALTH GUIDELINES

Heat planning in
human health sector

OCTOBER 2020



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Synthesis Report / Risk and Vulnerability Assessment



INTERACTION BETWEEN CLIMATE CHANGE AND BURDEN OF DISEASE

Interaction of climate change exposures on the Communicable, Maternal, Perinatal and Nutritional category of burden of disease

BoD Sub-category	Climate Change Parameters						Reasoning
	Very Hot days	Relative Humidity	Extreme precipitation days	Flood	Drought	Fire	
Lower respiratory tract Infection	No Effect	No Effect	Increase	Increase	No Effect	Increase	Wet and humid conditions or flood or smoke particulates could aggravate
Diarrhoeal diseases	Significant Increase	Increase	Significant Increase	Significant Increase	Increase	No Effect	High temperatures, humidity and flood will encourage spoiling of food, growth of bacteria, or contamination with waste or faeces
Preterm birth complications	Increase	No Effect	Significant Increase	No Effect	Increase	No Effect	Heat may impact maternal conditions and stress
Septicaemia	Increase	Increase	Significant Increase	Increase	No Effect	No Effect	All except fire could contribute to runaway infections
Meningitis/encephalitis	No Effect	No Effect	No Effect	No Effect	Increase	No Effect	Typically occurs in cold dry climate conditions
Sepsis/other newborn infections	Significant Increase	Increase	Significant Increase	Increase	Increase	No Effect	As for septicaemia - all except fire could create conditions for infections or aggravate them
Other perinatal conditions	No Effect	No Effect	Significant Increase	Increase	Increase	Increase	As for septicaemia - all except fire could create conditions for infections or aggravate them
Malaria	Significant Increase	Increase	Significant Increase	Increase	No Effect	No Effect	Extreme precipitation and flooding provide extra breeding grounds, and, along with heat, leads to rapid replication of mosquitoes and malaria parasites

Synthesis Report / Risk and Vulnerability Assessment

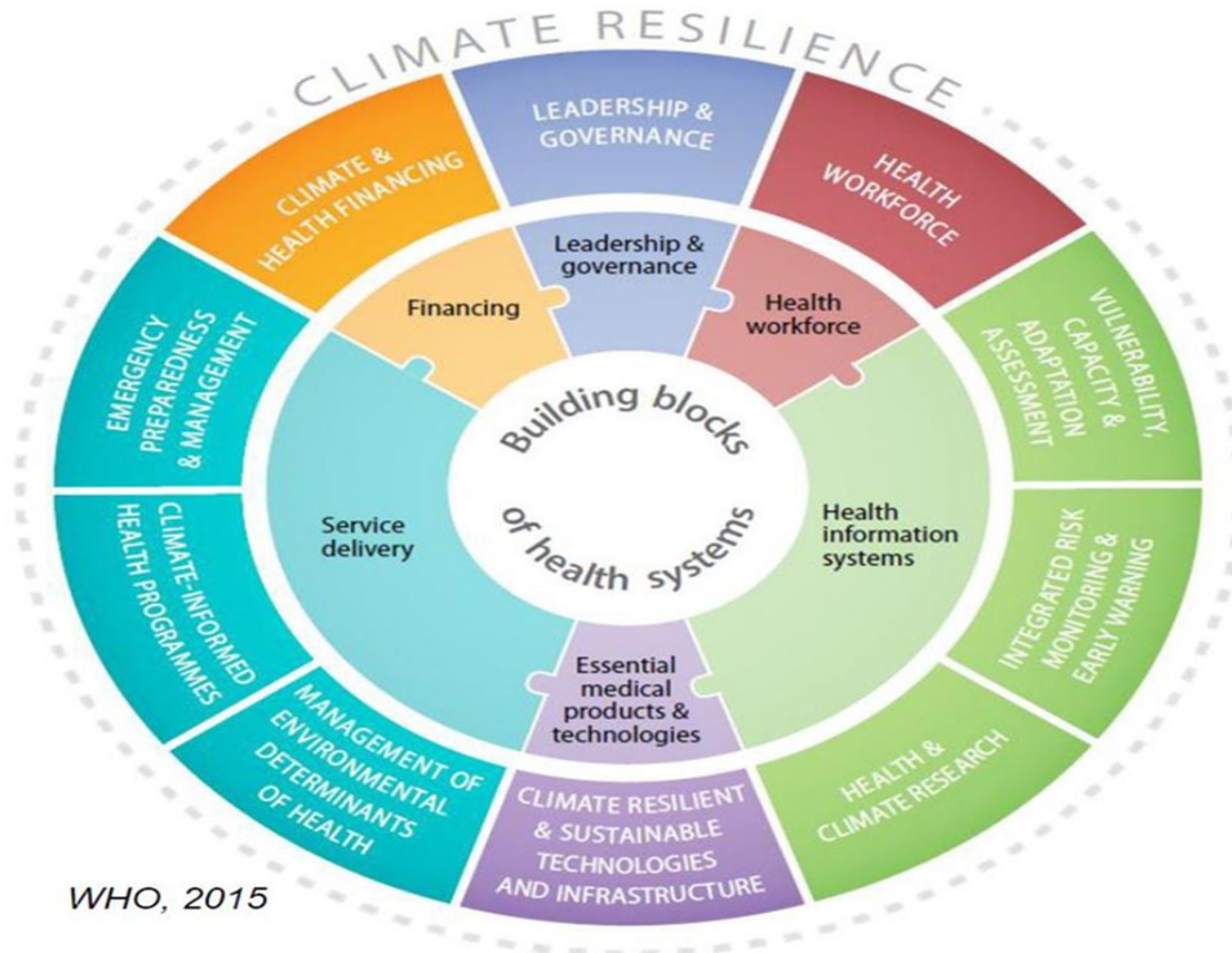


INTERACTION BETWEEN CLIMATE CHANGE AND BURDEN OF DISEASE

Table 10. Interaction of climate change exposures on the Non-Communicable Diseases category of burden of disease

BoD Sub-category	Climate Change Parameters						Reasoning
	Very Hot days	Relative Humidity	Extreme precipitation days	Flood	Drought	Fire	
Cardiovascular disease	Significant Increase	Significant Increase	No Effect	Increase	No Effect	Increase	Could cause stroke via stress or aggravate cerebral perfusion insufficiency via drought conditions with dehydration. Also heat exhaustion and heatstroke.
Diabetes mellitus	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No relationship
Hypertensive heart disease	Significant Increase	Significant Increase	No Effect	No Effect	No Effect	No Effect	Could aggravate and reduce cardiac output through venous pooling and dehydration
Ischaemic heart disease	Significant Increase	Significant Increase	No Effect	No Effect	No Effect	No Effect	As for hypertensive heart disease
Endocrine, nutritional, blood, immune system	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No relationship
Chronic obstructive pulmonary disease	Increase	Increase	No Effect	Increase	No Effect	Increase	Aggravate via the work of breathing, growth of mould and fungus in damp/humid conditions and via smoke particulates
Nephritis/nephrosis	Increase	No Effect	No Effect	No Effect	Increase	No Effect	No relationship
Epilepsy	No Effect	No Effect	Increase	No Effect	Increase	No Effect	No relationship
Asthma	Increase	Increase	Significant Increase	Increase	No Effect	Increase	Hot and humid conditions could promote allergens such as pollens and mouldy fungal growth indoors
Prostate	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No relationship

Climate Resilience Health System



WHO, 2015



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Capacity buildings



CLIMATE-CHANGE-AND-HEALTH,-DOMESTIC-INDOO (2022--202

PROPOSED-DATE	TIME
01-to-03-February-2023	09:00--15:00
16-March-2023	09:00--16:00
15--17-February-2023	09:00--16:00
3-March-2023	13:00-16:00
8-March-2023	09:00--16:00
14-March-2023	13:00-16:00



DRAFT-CLIMATE-CHANGE-AND-HEALTH,-AIR-QUALITY-AND-VECTOR-CONTROL-TRAINING-SCHEDULE-(2023--2024)

PROVINCES	PROPOSED-DATE	TIME	ACTIVITY
Quarter-1			
Western-Cape	10-May-2023	09:00--15:00	Domestic-Indoor-Air-Quality-guidelines-&-Vector-Control-Workshop
Western-Cape	11-May-2023	09:00--15:00	Risk-Vulnerability-Assessment-&-Heat-and-Health-Action-Guidelines
Free-State	30-May-2023	09:00--15:00	Risk-Vulnerability-Assessment-&-Heat-and-Health-Action-Guidelines
Free-State	31-May-2023	09:00--15:00	Domestic-Indoor-Air-Quality-guidelines-&-Vector-Control-Workshop
Quarter-2			
Kwa-Zulu-Natal	11-and-13-July-2023	09:00--15:00	Domestic-Indoor-Air-Quality-guidelines-&-Vector-Control-Workshop
Kwa-Zulu-Natal	12-and-14-July-2023	09:00--15:00	Risk-Vulnerability-Assessment-&-Heat-and-Health-Action-Guidelines
Eastern-Cape	27-July-2023	09:00--15:00	Domestic-Indoor-Air-Quality-guidelines-&-Vector-Control-Workshop
Eastern-Cape	26-July-2023	09:00--15:00	Risk-Vulnerability-Assessment-&-Heat-and-Health-Action-Guidelines
Northern-Cape	14-and-15-August-2023	09:00--15:00	Domestic-Indoor-Air-Quality-guidelines-&-Vector-Control-Workshop
Northern-Cape	17-and-18-August-2023	09:00--15:00	Risk-Vulnerability-Assessment-&-Heat-and-Health-Action-Guidelines
Quarter-3			
Mpumalanga	11-October-2023	09:00--15:00	Vector-Control-Workshop
Mpumalanga	12-October-2023	09:00--15:00	Risk-Vulnerability-Assessment-&-Heat-and-Health-Action-Guidelines
Limpopo	8-November-2023	09:00--15:00	Domestic-Indoor-Air-Quality-guidelines-&-Vector-Control-Workshop
Limpopo	9-November-2023	09:00--15:00	Risk-Vulnerability-Assessment-&-Heat-and-Health-Action-Guidelines
Western-Cape	September-2023	TBA	World-Environmental-Health-Day
Quarter-4			
North-West	13-February-2024	09:00--15:00	Domestic-Indoor-Air-Quality-guidelines
North-West	14-February-2024	09:00--15:00	Risk-Vulnerability-Assessment
Gauteng	28-February-2024	09:00--15:00	Domestic-Indoor-Air-Quality-guidelines
Gauteng	29-February-2024	09:00--15:00	Risk-Vulnerability-Assessment-&-Heat-and-Health-Action-Guidelines

Bono Nemukula (Bono.Nemukula@health.gov.za) is signed in





Capacity Buildings / support

- Different platforms – invited or planned
- Support for provinces / municipalities (Urban Heat programme done by World Bank – City of Johannesburg, City of Ekurhuleni and City of Tshwane) Heat Early Warning System project – includes learnings from India
- Webinars – proposal to have monthly webinars on different topics



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URBAN HEAT ENGAGEMENT WITH WORLD BANK



FIGURE 3.3. GREEN APARTHEID: CONTRASTING GREEN SPACE ABUNDANCE AND HOUSING QUALITY BETWEEN NEIGHBOURING CITY QUARTERS (KYA SAND AND BLOUBOSRAND).

Source: Google Earth.





Stakeholder engagements

- National Climate Change and Health Steering Committee – quarterly basis since 2022
- Subcommittees: Training, Indicators, Community Engagement, Mobilising resources and research and technical
- Working Groups



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Risk Communication and Community Awareness (RCCE)



How to keep babies and children safe when it's hot

when it's hot



When the weather is hot, babies and children should be kept in a cool, shady place. Give them clean, cool water to drink, and get them out of the sun.

Babies and children have thin skin and can suffer from sunburn. They should be kept out of the sun and wear hats that allow the air to move through them.

How to prevent heat illnesses

Heat illnesses, such as heat stroke, can be very serious and may even cause death. How to avoid heat illnesses:

1. Take hot weather warnings seriously
2. Drink lots of clean water

This is one of the best ways to prevent dehydration.

Breastfeeding moms

Breastfed babies may need extra feeds in hot weather. If your baby is older than 6 months and growing well, you can give small amounts of cool boiled water between feeds, especially if the baby is having other foods. Breastfeeding moms should also drink water.

Formula fed babies

If you are bottle feeding your baby, you can give her extra formula or small amounts of cool boiled water.

Children

Give children water to drink often throughout the day. Don't give any coffee or tea, sugary or fizzy drinks, too much sugar, fatty or salty foods.

3. Rest

Help babies and children rest as much as possible, or participate in quiet activities such as reading stories and solving puzzles. They can rest indoors or outside, so long as they are in the shade. They should not do any strenuous physical exercise, if possible, between 11.00 and 15.00 on hot days.

4. Keep cool indoors

- Try to cook when it is cooler.
- Keep windows open but close curtains or blinds during the day.

5. Stay in shade outside

Keep babies and children in deep, cool shade when they are outside.

Signs of heat illness

Serious signs of heat illness:

- unconscious
- irritable, restless and confused
- floppy body and no energy
- can't breathe easily
- dizzy
- sore head
- the soft spot on top of a baby's head (fontanelle) may be lower (sunken) than usual
- sunken 'soft spots', eyes or cheeks
- vomiting
- dry mouth or tongue
- thirsty at first, but as baby gets weaker they may drink less
- dry eyes and baby or child doesn't have many tears when crying
- temperature going up but no sweating
- drier skin but, as heat illness gets worse, skin becomes cool and moist
- skin is cool when you touch it, but then becomes hot and red
- fewer wet nappies than usual
- dark yellow or smelly urine
- muscle cramps in legs or stomach

What to do

If you see a baby (or anyone) is showing signs of heat illness, get medical advice. The baby or child may need to be taken to hospital in the meantime:

- settle your child in a cool place
- wet their clothes with cool water, or wet their skin
- talk with your baby or child in a calm way
- if your baby or child can still respond to you, give them something to drink
- give the baby plenty of breast milk or for 6 months or older, a little water
- don't give your baby or child medicine – healthcare workers decide what is best.

Tell people in your community about the signs of heat illnesses, and how to prevent them.

PREVENT HEAT RELATED ILLNESSES THIS SUMMER!



Be cautious and Observant! Keep an eye out for signs of heat illness.

If you think, you, your child, partner, family member, colleague or community member is suffering from heat illness, get medical help as soon as possible.



Recent Researches

- SAMRC and ACDI – Heat Adaptation Benefits for vulnerable groups in Africa (HABVIA) – Thohoyandou (Vhembe DM) and Khayelitsha (City of Cape Town) – 5 years project (Ghana and SA)

Shortlisted interventions



Cooling Roof Paints
Ceiling Insulation
Evaporative Cooling
Air Bricks
Fans
Cooling Clothing



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Recent Researches

- HIGH Horizons Heat and Maternal, Newborn and Child Health Indicators SA and Zimbabwe - Wits RHI – influence on **indicators**

Impacts of high temperatures on child health



International Journal of
*Environmental Research
and Public Health*



Review

The Effect of High and Low Ambient Temperature on Infant Health: A Systematic Review

Darshnika Pemi Lakhoo ^{1,*}, Helen Abigail Blake ^{2,3}, Matthew Francis Chersich ¹, Britt Nakstad ^{4,5} and Sari Kovats ⁶



International Journal of
*Environmental Research
and Public Health*



Article

Temperature Variability and Occurrence of Diarrhoea in Children under Five-Years-Old in Cape Town Metropolitan Sub-Districts

Gentile Musengimana ^{1,*}, Fidele K. Mukinda ^{1,2}, Roderick Machezano ³ and Hassan Mahomed ^{1,4,*}



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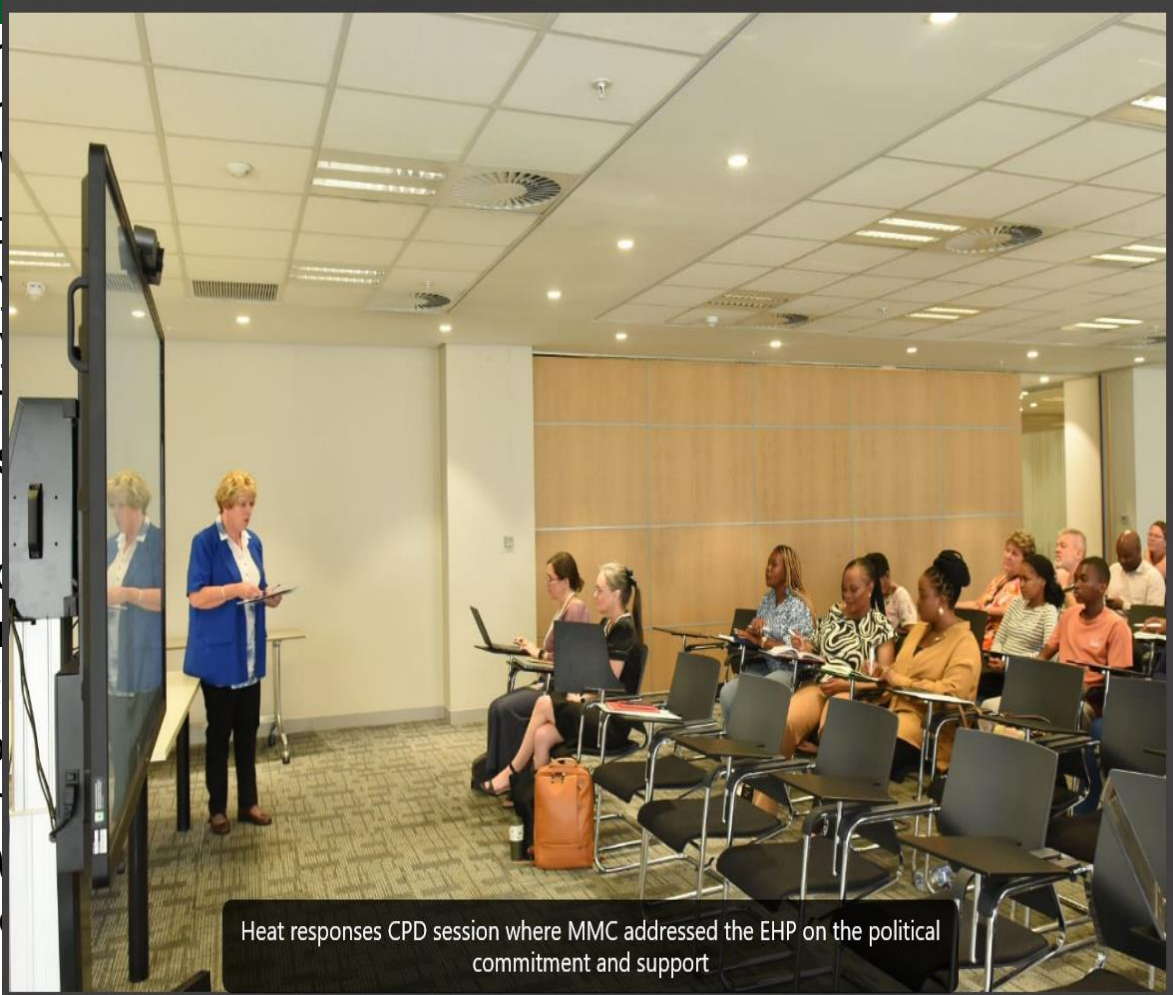
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Small wins

- Research
- Support and EV
- Provincial strategy
- strategy
- Western
- Establish
- Health
- Identific
- Northern
- Educat
- Contrib
- Learnin
- **Review**
- **Climat**



Heat responses CPD session where MMC addressed the EHP on the political commitment and support



...e change. Emphasis on providing shadi... Read more

Reflections



SABC Questions – May 2023 for a special series

SABC May 2023: Special series investigating the countries commitment to Net Zero and the impact climate change has on human health.

1. Any statistics around deaths/hospitalization due to extreme heat? Check for the past 5 years. In which area were these deaths recorded and dates.
2. Highlight challenges in terms of stats – for instance comorbidities.
3. Accepting that climate change is a reality – what measures does the department have in place to educate the vulnerable communities.

“All hands on deck”



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NGIYA THOKOZA!

ro livhuwa!

dankie!

ke a leboga!

ENKOSI!

thank you!

udo livhuwa!

inkomu!

ke a leboha!

ngiyabonga!

siyabonga!



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