



Vicente Y. Belizario, Jr.

- President, Philippine Academic Consortium for Public Health
- Member, Scientific Working Group WHO TDR Special Program for Research and Training in Tropical Diseases
- Vice Chair, Forum for Ethics Review Committees in Asia and Western Pacific
- Former Professor and Dean College of Public Health
Former Vice Chancellor for Research and Executive Director National Institutes of Health University of the Philippines Manila
- Former Undersecretary Department of Health Republic of the Philippines

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Maximizing Benefits through Responsible Conduct of Research

Ethical Considerations in Climate Change and Neglected Tropical Disease Research

VICENTE Y. BELIZARIO, JR.

CHRISTIAN JOSHUA V. CACATIAN

*College of Public Health, University of the Philippines Manila
SEAMEO TROPED Regional Centre for Public Health,
Hospital Administration, Environmental and Occupational Health
Philippine Academic Consortium for Public Health*



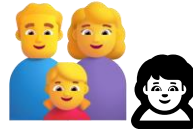
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Climate Change and Health

- Climate change refers to long-term shifts in temperatures and weather patterns, since the 1800s; **human activities have been the main driver** of climate change, primarily due to the burning of fossil fuels like coal, oil and gas (UN, n.d.)
- Anthropogenic climate change is directly contributing to **escalating humanitarian emergencies** such as heatwaves, floods, tropical storms, and typhoons, which are intensifying in scale, frequency, and severity (WHO, 2023a)



Coverage: 3.6 billion people live in areas highly susceptible to climate change (WHO, 2023a)



High risk population: Areas with weak health infrastructure - mostly in developing countries - least able to cope without assistance to prepare and respond (WHO, 2023a)



Health cost: Direct damage costs to health estimated over US\$ 2-4 billion per year by 2030 (WHO, 2023a)

Myanmar



**>95 per cent of the damages and fatalities occurred in 2008.
Cyclone Nargis killed as many as 100,000 people.
1 million people homeless, many towns and villages washed away.**

Vietnam

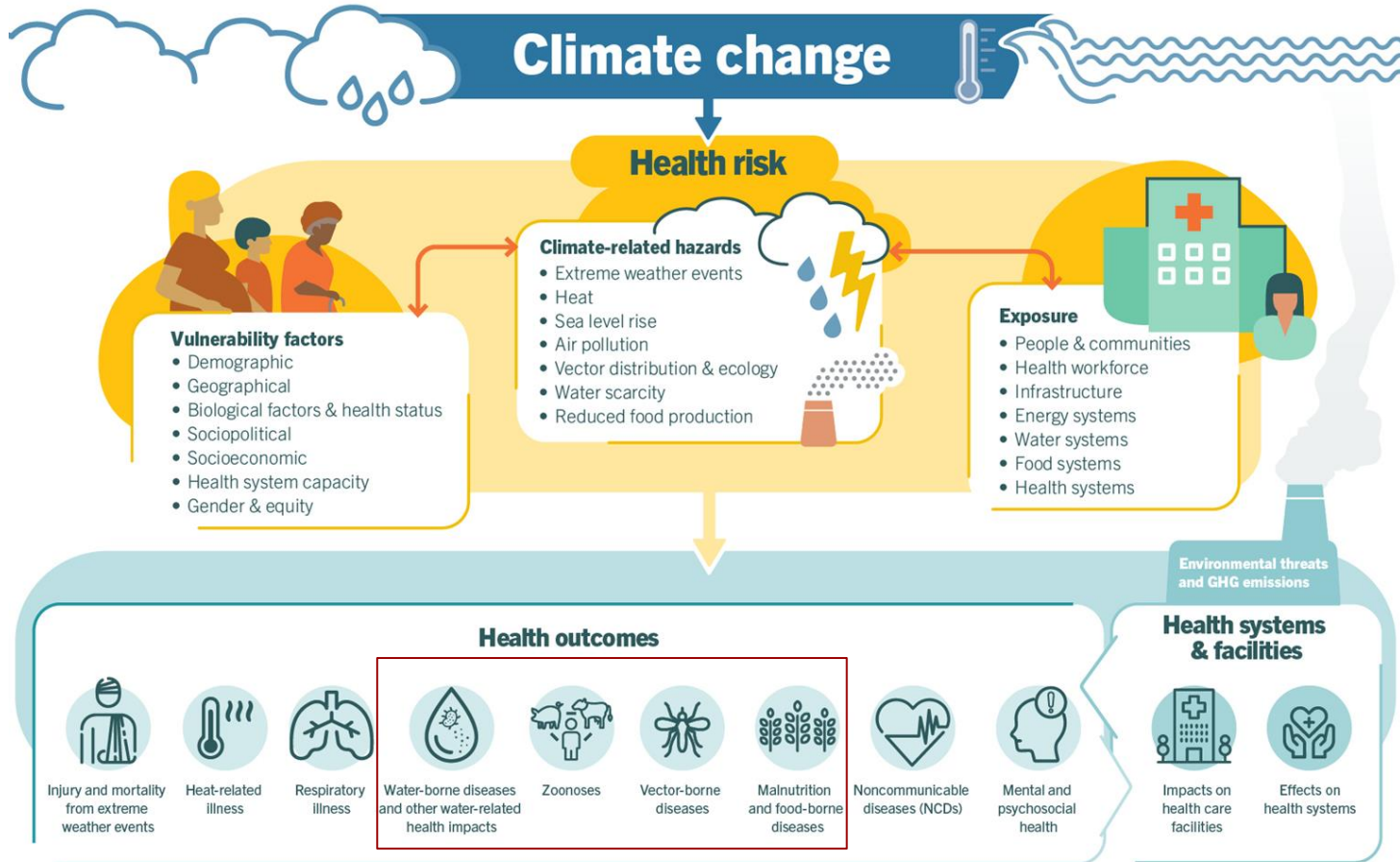


Over the last decade, the frequency and severity of drought and floods have intensified, increasing their impact on living conditions. Many people affected by cyclones and hailstorms

The Philippines



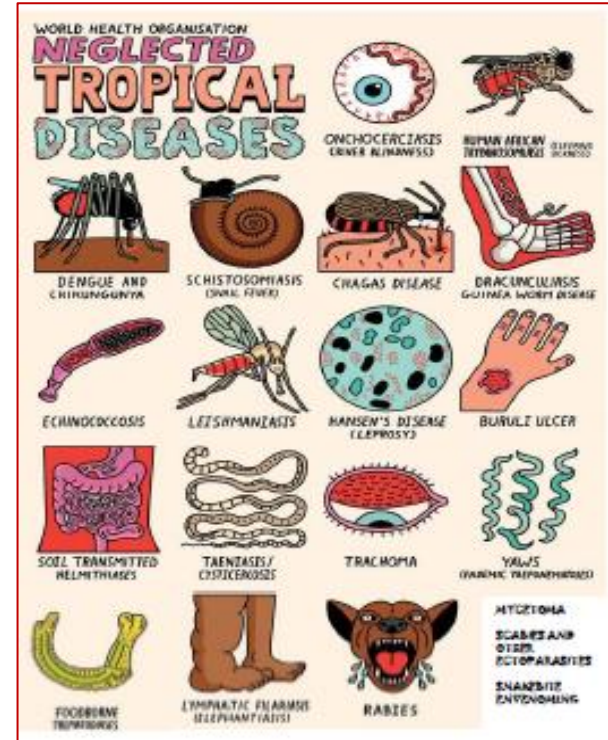
**A disaster-prone country, recurrently hit by natural disasters: typhoons, earthquakes
Average of 20 typhoons each year**



An overview of climate-sensitive health risks, their exposure pathways and vulnerability factors₇ (WHO, 2023a)

Neglected Tropical Diseases (NTDs): Infectious Diseases of Poverty

- Diverse group of infectious diseases of poverty predominantly seen in tropical and subtropical areas among **most vulnerable, marginalized populations** (WHO, 2024)
- Afflicting over 1 billion people globally, posing **profound human, social, and economic burdens** (WHO, 2021)
- “Ending the epidemics of NTDs” included in the Sustainable Development Goals by 2030 (UN, 2016)
- Soil-transmitted Helminthiasis (STH), Schistosomiasis (SCH) and Foodborne Helminthiasis (FBH) among the major NTDs in Southeast Asia



(WHO, 2018)

Climate Change and Neglected Tropical Diseases

- Climate change may influence the **emergence and re-emergence of NTDs** (Short et al., 2017; Tidman et al., 2021; Klepac et al., 2024)
- Impact of climate change on NTDs not well understood due to **lack of evidence** (Utaaker & Robertson, 2015; Klepac et al., 2024)
- Climate change may lead to **favorable environmental conditions for reproduction of pathogens, contact of humans and pathogens, and may lead to future outbreaks and epidemics** (Gupta et al., 2021; Mora et al., 2023)
- **Shifts in prevalence, incidence, range and intensity of NTDs may be felt hardest in communities already disproportionately impacted** (Campbell-Lendrum et al., 2015; El-Sayed & Kamel, 2020; Klepac et al., 2024)
- Effective mitigation and adaptation strategies for climate change need to be **multidisciplinary and evidence-based** (Lu, 2022; Tsheten et al., 2023; Klepac et al., 2024)



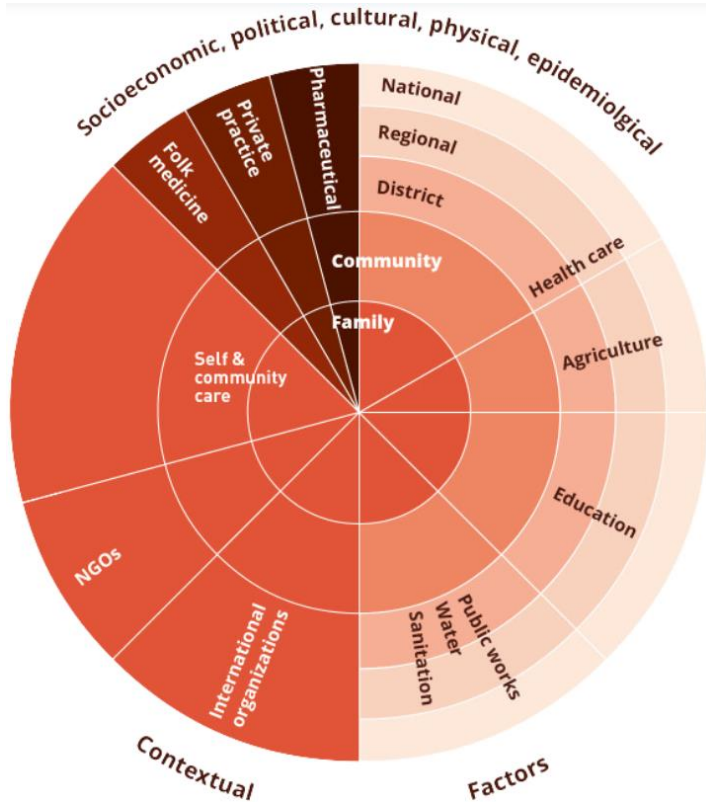
Challenges in Climate Change and NTD Research

- Difficulty predicting future NTD trends due to complex interactions between climate, environment, and human behavior
- Data gaps, limited understanding of how climate change impacts NTDs
- Competing priorities for the health system:
 - Addressing climate change requires resources that could be used for NTD control
 - Balancing immediate needs for NTD control with long-term climate change strategies
 - **Issues arising:** Health equity and climate justice

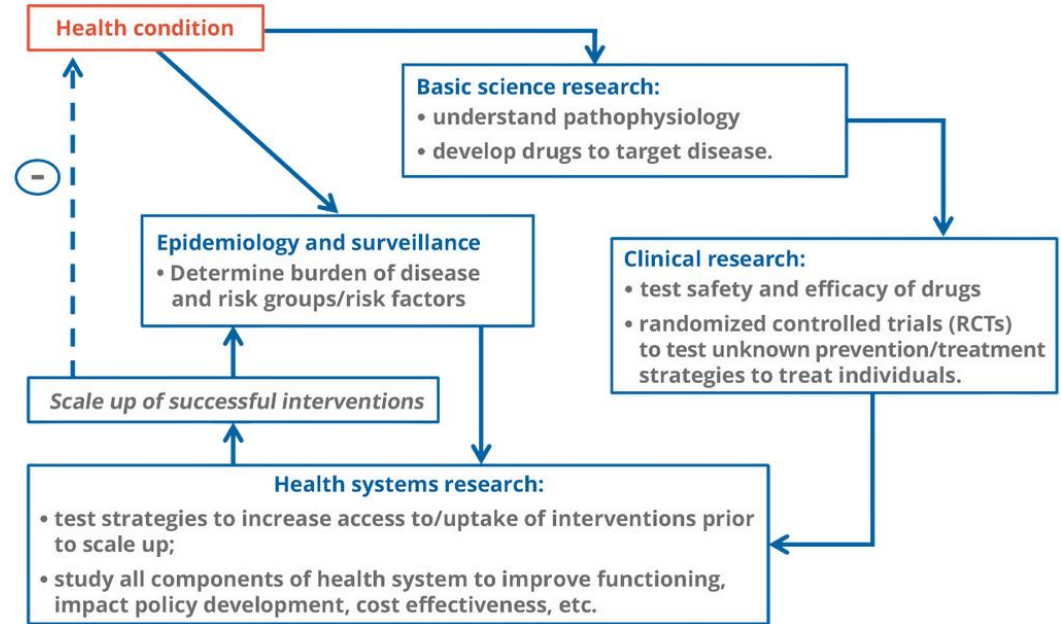


*NTD Road Map 2021-2030
(WHO, 2020a)*

Health system is complex, the usual health-related research may not be enough

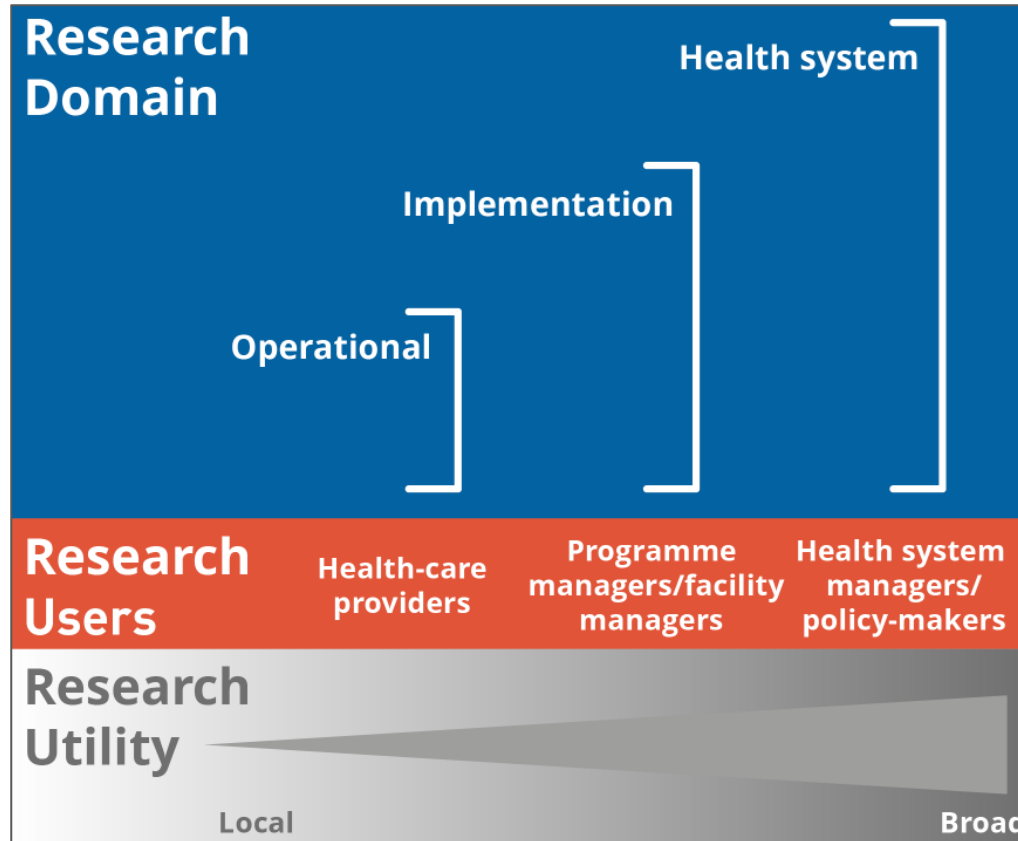


Components of a Health System (WHO/TDR, 2014)



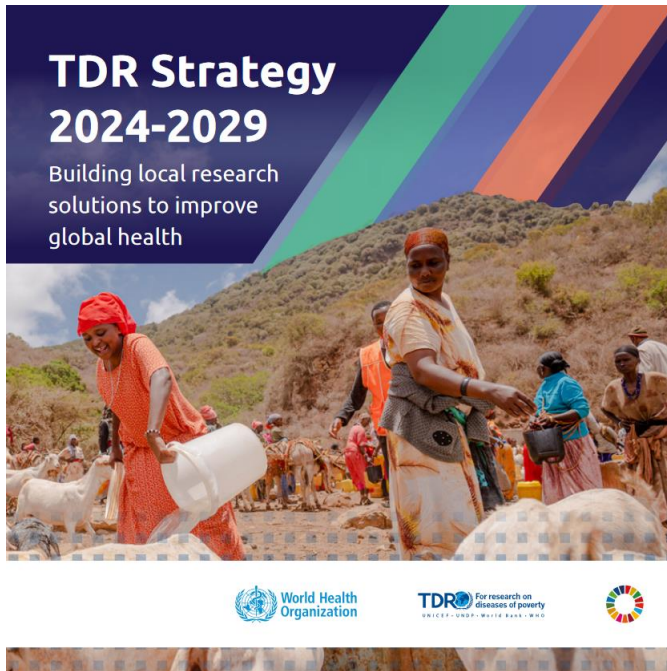
Health-Related Research (WHO, n.d.)

Health System Research may be key to bridging evidence to policy



Domains of Health System Research (Remme et al., 2010)

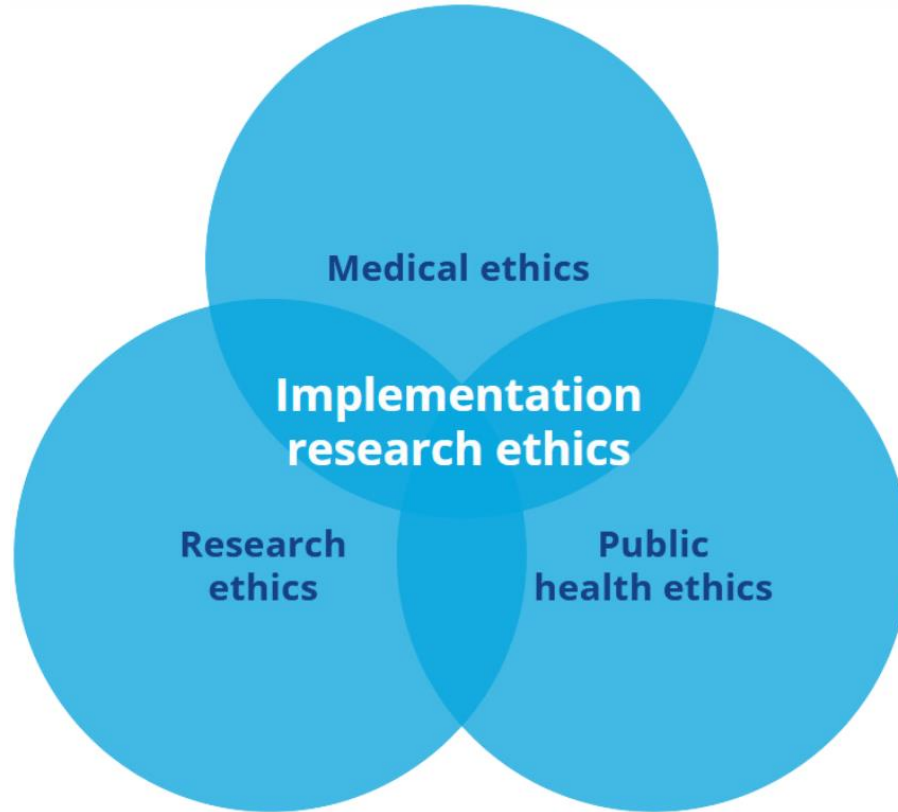
Implementation Research integrating best practices to policy and enhanced service delivery



TDR Strategy 2024-2029 (WHO/TDR, 2023)

- A systematic approach to understanding and addressing barriers to effective implementation of health interventions, strategies, and policies (WHO/TDR, 2014)
- Framework focuses on:
 - Acceptability
 - Appropriateness
 - Feasibility
 - Effectiveness
 - Cost
 - Coverage
 - Sustainability
- Provides evidence to support policy changes and scale-up of interventions

Researchers, ERCs and other stakeholders...for your consideration



Cardinal ethical principles relevant to Medical Research

Justice

Beneficence

Respect for Persons

Non-maleficence

(World Medical Association, 2013)

Ethical Challenges in Climate Change and NTD Research

**Scientific Rigor
and Professional
Competence**

**Quality of ethical
review process**

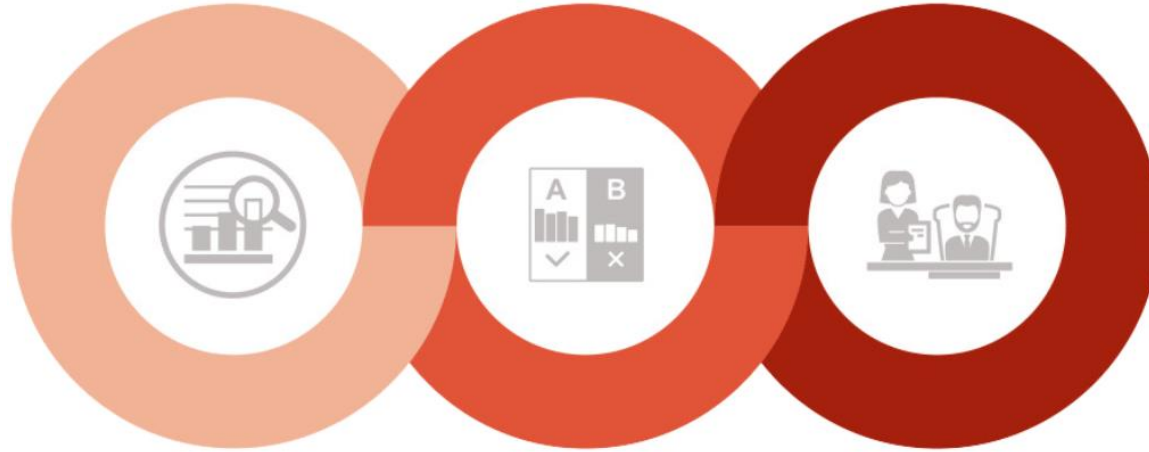
**Inequitable
burden***

Distributive justice*

**Dissemination
and utilization
of results***

(Chuan, 2009; WHO, 2017; Addiss et al., 2021; Sheather et al., 2023)

Phases of Implementation Research and Ethical Considerations



Planning phase

- Responsiveness to local needs and priorities
- Equipoise
- Study design
- Stakeholder and community engagement (CE)
- Balance between risks and benefits

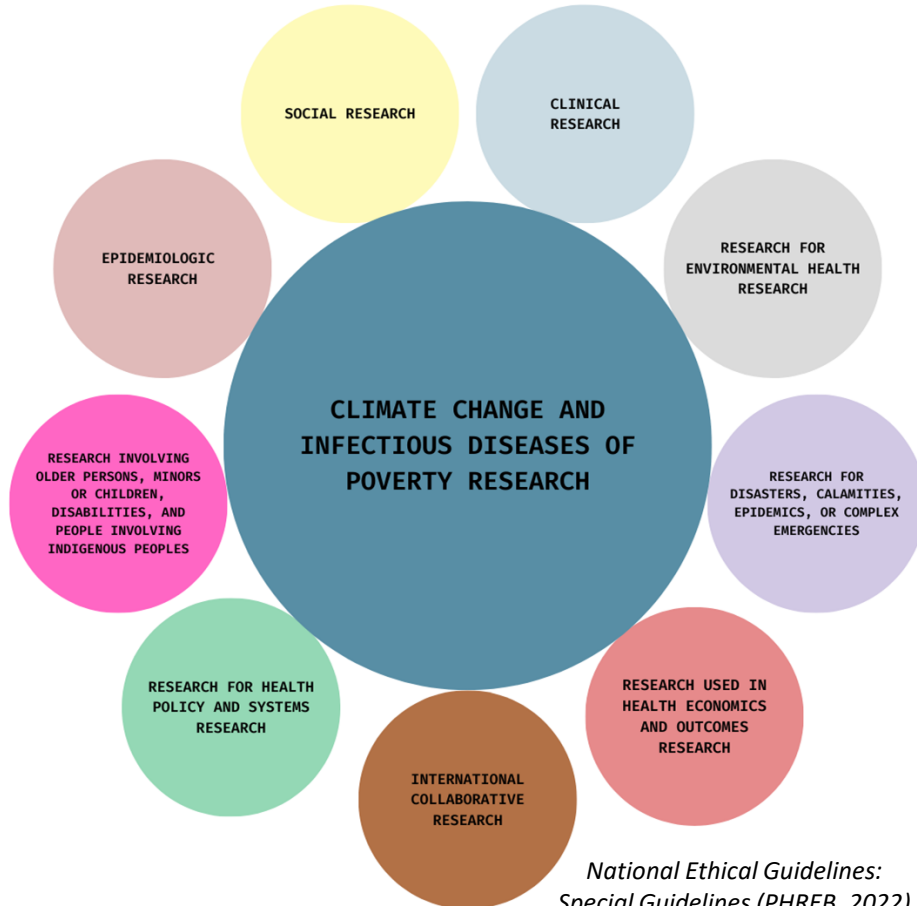
Implementation phase

- Autonomy and informed consent
- Privacy and confidentiality
- Standard of care
- Ancillary care
- Community/health system empowerment

Post-research phase

- Dissemination of research findings
- Data ownership
- Translating findings into public health action
- Scalability and sustainability
- Benefit sharing

Ethics in climate change and NTD research cuts across many research areas



- Ethical concerns on climate change include **collective action**, **intergenerational justice**, **dispersed responsibility**, **perceived futility of individual actions**, and **value of the non-human world** (Sheather et al., 2023)
- NTD prevention and control are grounded by **social justice**, **solidarity**, and **health equity** (WHO, 2020a; Addiss et al., 2021; Hoefle-Bénard & Salloch, 2024)
- More discussions on critical health topics in research like climate change and NTDs are highly recommended

Summary

- Climate change may influence the emergence and re-emergence of NTDs, infectious diseases of poverty
- Need for more research and generation of evidence on the impact of climate change on NTDs
- Consider ethical considerations like inequitable burden, distributive justice, and dissemination and utilization of results
- Importance of multidisciplinary and more discourse on ethics in climate change and NTD research

*Partnership and collaboration
in climate change and NTD research
are needed more than ever*

*Thank you
vybelizario@gmail.com*

*Bayanihan (Collaborative Spirit)
Botong Francisco*



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