Session 12:
Climate Change in Health - key messages from COP28

The 6th Meeting of the Greater Mekong Subregion

Working Group on Health Cooperation

14 December 2023

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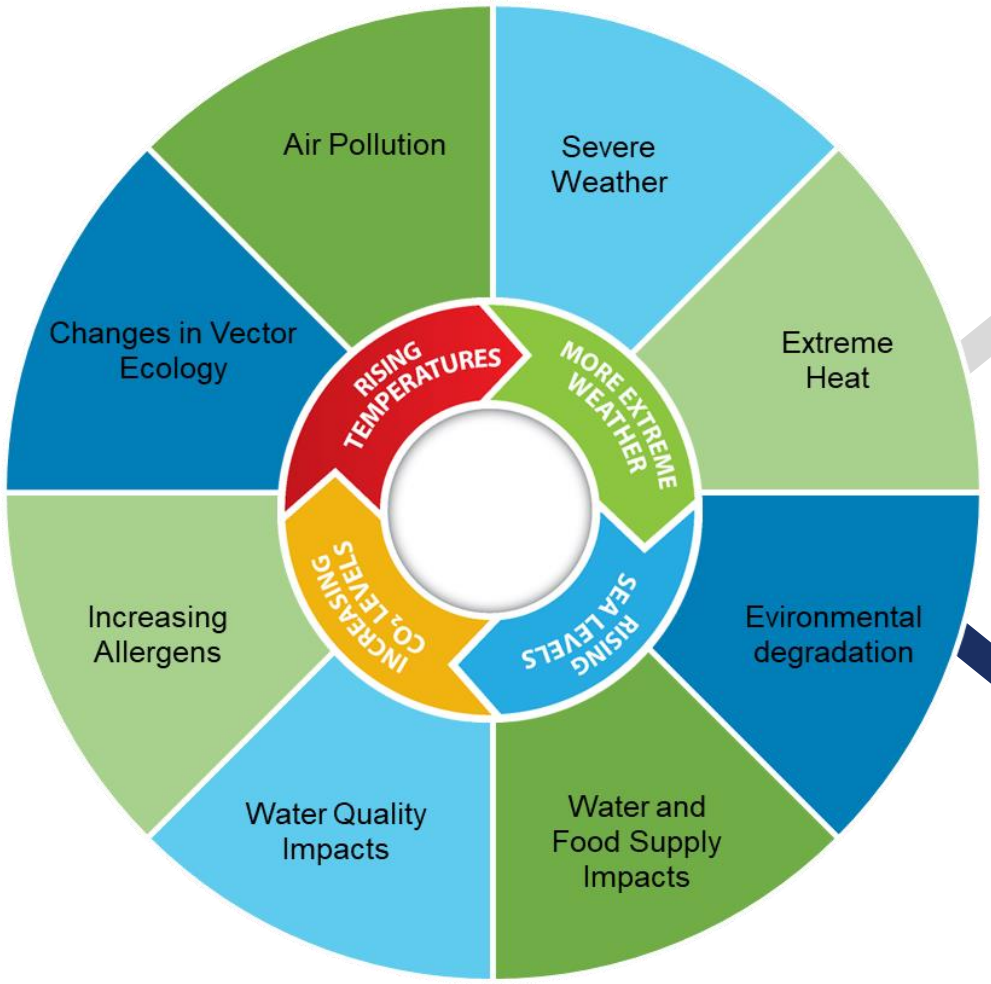
Overview: Intersection between Climate Change and Health



Climate change could push 100 million+ people into extreme poverty by 2030

Direct impacts on healthcare may cause losses of $2-3 billion per year by 2030

Indirect impacts on food systems, water quality, air pollution etc.

Health sector is a major contributor to climate change

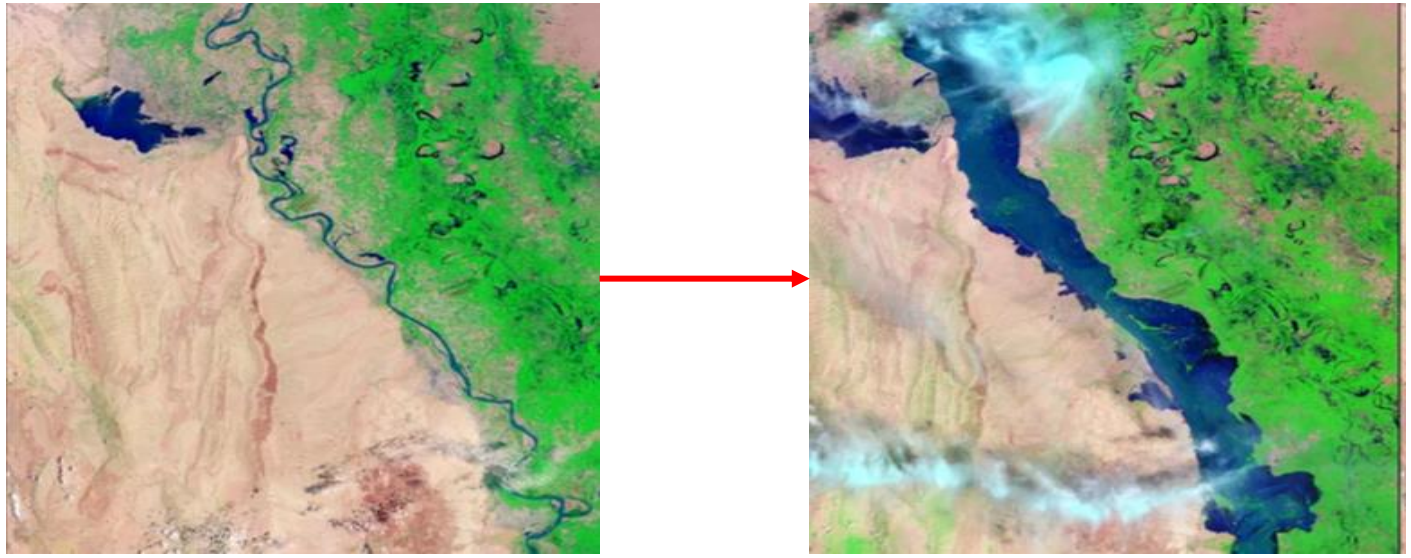
Health carbon footprint ~5% of global emissions

If the health sector were a country, it would be the 5th largest emitter on the planet
1. USA, 2. China, 3. EU, 4. Japan, 5. Health Sector, 6. Russia, 7. Brazil

Centers for Disease Control and Prevention

Momentum builds for health-care climate action
https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(23)01079-6/fulltext

Pakistan Floods (2022) – Single Extreme Weather Event



Before floods

After floods

- 33 million+ people affected
- 2,000 health facilities damaged
- 5.5 million+ people without access to safe drinking water

Immediate

- Damage to infrastructure including health facilities
- Lack of clean water supplies
- Lack of sanitation
- Loss of farmland & livestock

Medium Term

- Water-borne diseases surge
- Disrupted vaccination programs
- Disrupted care for NCDs, longer-term infectious diseases, food insecurity

Longer Term

- Severe malnutrition
- Persistent food insecurity
- Resurgence of Vaccine Preventable Diseases
- Increased NCDs and mental health issues

Bangladesh- Increasing Burden of Infectious Diseases

- Health systems are on the front lines of the climate crisis.
- Bangladesh has witnessed the deadliest outbreak of dengue :
  - 274,444 hospitalizations, 1327 deaths*
  - More than 2000 cases reported daily
  - More than 750,000 suspected cases**

As of 28 October 2023

Climate Change Responsible for Seasonal Diseases Becoming Endemic

Climate Change Exacerbates Wildfire Risk- Australian Bushfires 2019-20

Photo by: AAP Image/James Ross via REUTERS

- 2019-2020 wildfires in Australia - 30% more likely due to climate change
- More than 19 million hectares of land burnt, 3,000+ homes destroyed and 33 people died
- USD 23 billion in direct economic damages
- Exposure to particulate matter led to several excess human deaths and hospitalizations

Globally, Area Burned due to Wildfires is Projected to Increase by 19% by 2050 Compared to 2000

- Ten impacts of the Australian bushfires, UNEP Link: https://www.unep.org/news-and-stories/story/ten-impacts-australian-bushfires
- Taming Wildfires in the Context of Climate Change, OECD Link: https://www.oecd.org/climate-change/wildfires/policy-highlights-taming-wildfires-in-the-context-of-climate-change.pdf
- Cowled, B. D., Bannister-Tyrrell, M., Doyle, M., Clutterbuck, H., Cave, J., Hillman, A., Plain, K. M., Pfeiffer, C., Laurence, M., & Ward, M. P. (2022). The Australian 2019/2020 Black Summer Bushfires: Analysis of the pathology, treatment strategies and decision making about burnt livestock. Frontiers in Veterinary Science, 9. https://doi.org/10.3389/fvets.2022.790556

Heat Stress in India

55% rise in deaths between 2000-2004 and 2017-2021

More than **11,000 deaths** between 2012 and 2021

Loss of 167.2 billion labor hours in 2021 equivalent to 5.4% GDP

Heat waves **30X more likely due to climate change**

Health impacts of exposure to extreme heat:-

Direct Impacts

Heat Illness
- Dehydration,
- Heat cramps
- Heat strokes

Accelerated Death
- Respiratory
- Cardiovascular

Hospitalization
- Diabetes
- Renal Disease
- Stroke

Increased Transmission
- Food and
- Water borne diseases

Indirect Impacts

Health Services
- Increased admissions
- Lack of medicines

Agriculture
- Reduced agricultural productivity

Increased Infections
- Increased livestock and wildlife infections

Increased Accidents
- Drowning
- Work related accidents

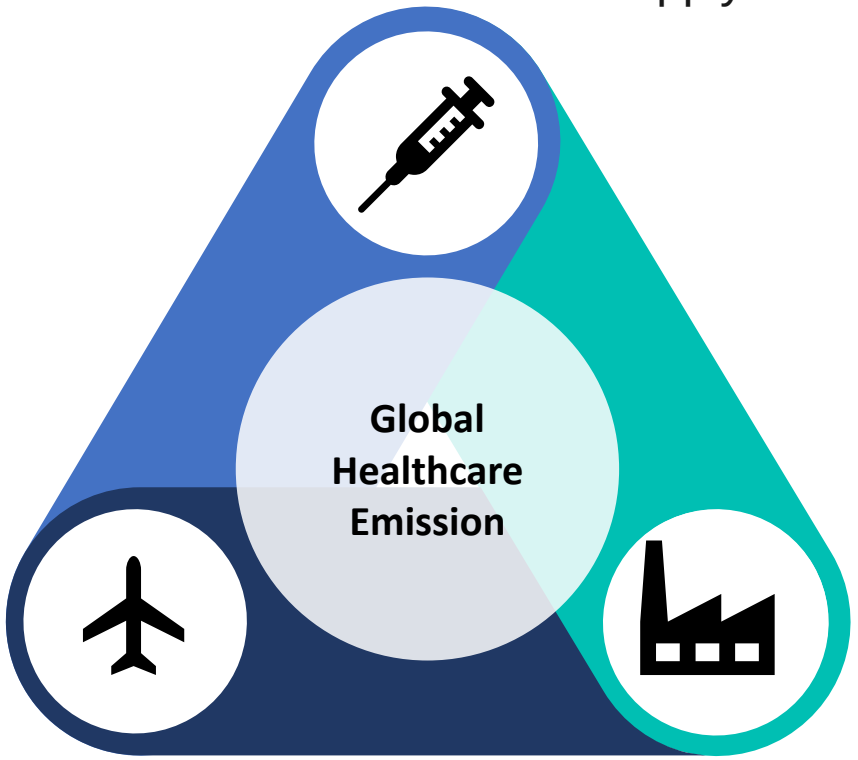
Indian Heatwaves could Cross the Survivability Limit by 2050

- National Crime Records Bureau, Ministry of Home Affairs
- The Lancet Countdown on Health and Climate Change, 2022
- Debnath R, Bardhan R, Bell ML (2023) Lethal heatwaves are challenging India's sustainable development. PLOS Clim 2(4): e0000156.

Global Healthcare Emissions – Supply Chain Contributions

71% emissions

Derived from healthcare supply chain



17% emissions

Directly from health care facilities and health care owned vehicles

12% emissions

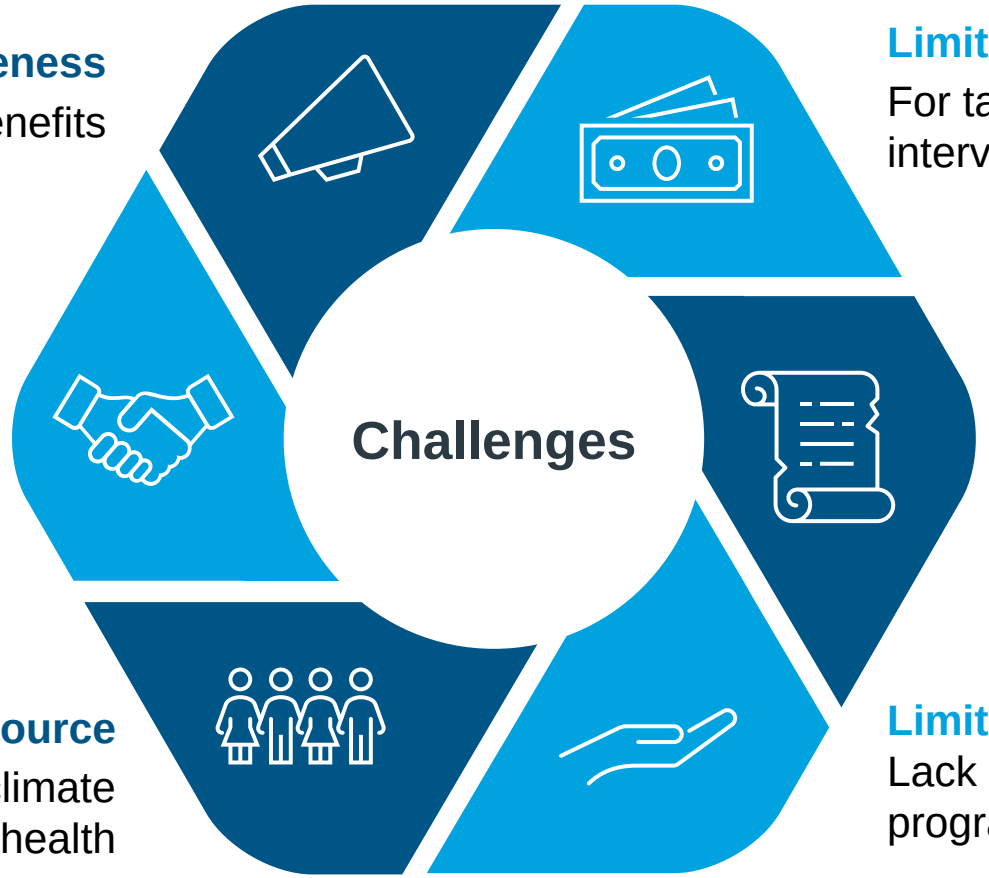
Indirect emissions from purchased energy sources such as electricity, steam, cooling, and heating

Key Challenges for Climate and Health Action

Lack of awareness
On health needs and co-benefits

Increased Fragmentation
Between governments, development institutions, experts, and practitioners

Limited Human resource
Needed to prepare for the effects of climate change on health



Limited development financing
For targeted climate-health policies and interventions

Inadequate Policy Frameworks
For low-carbon climate-resilient sustainable health systems

Limited Technical Expertise
Lack of TA support for policy development, program preparation, and implementation

ADB's Commitment to Climate-Resilient Health Sector Development

G20 Health Working Group meetings

April 2023

- **Climate Change and Health** mainstreamed as **Priority 1** in the Health Working Group agenda

G20 Health Minister's Declaration

August 2023

- Commitment to **prioritizing and mobilizing resources** for resilient, low-carbon sustainable health systems.

G20 New Delhi Declaration

September 2023

- **Emphasized ccollaboration with MDBs** and alignment with WHO-led Alliance for Transformative Action on Climate and Health (ATACH)

Climate and Heath Initiative (CHI)

October 2023

- CHI established under India's G20 presidency to **amplify policies and practices at the nexus of climate change and health**

Development Bank Working Group

Ongoing

- ADB and World Bank co-convening the **Development Bank Working Group** to identify and mobilize additional resources and finance climate and health actions

G20 Health Ministers Meeting Outcome document highlighting (Para10)
https://www.g20.org/content/dam/gtwenty/gtwenty_new/document/G20_HMM_Outcome_Document_and_Chair_Summary.pdf

Climate and Health Initiative (CHI) Overview

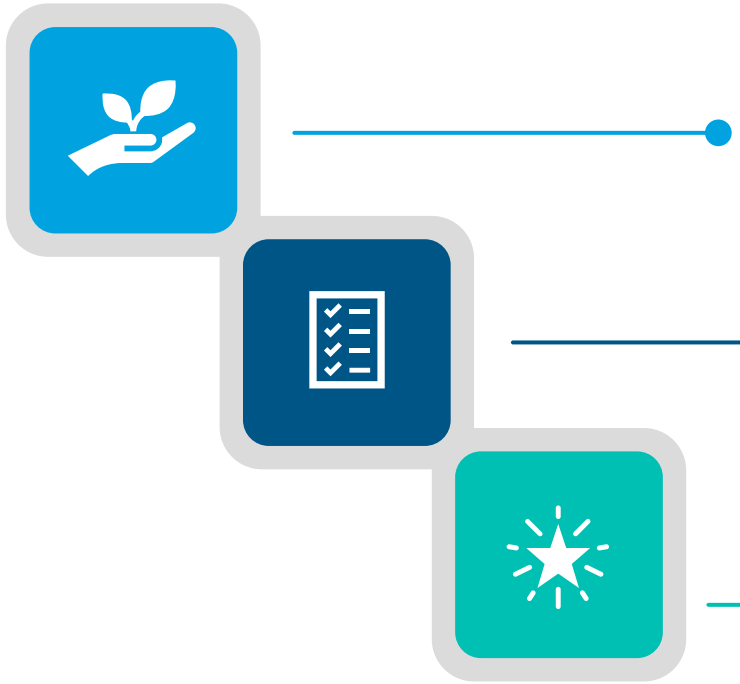
OBJECTIVE

Strengthen climate and health policies and practices to deliver climate-resilient and low-carbon healthcare systems

- **Knowledge Generation**
- **Novel Financing**
- **Forging Partnerships**
- **Incubating Innovations**
- **Capacity Building**
- **Championing Advocacy**

Initial $7 million seed funding to catalyze at least $10 for each $1 through co-financing and co-investments

Prioritizing the Climate and Health agenda



Climate and Health Initiative (CHI)

- To be housed initially at ADB
- Leverage investments through co-financing and co-investments
- Build capacity and expertise for country diagnostics and assessments

Climate Change Action Plan (CCAP) 2023 – 2030

- CHI has been prioritized under ADB's Climate Change Action Plan 2023-30.
- CCAP secured $120 million in climate finance

Commitment to Climate- Focused Projects

- ADB to commit at least 15% of annual health portfolio to support climate-focused projects

G20 Climate and Health Principles and Actions

Prioritize climate resilient health development

Manthan
Ideas and Implementation through Science Technologies and Innovations

- Early Warning Systems
- Disease and climate sensitive surveillance systems
- Resilience to heat stress

Build sustainable and low carbon health systems

- Telemedicine and digital healthcare
- Solarisation
- Green Infrastructure and Bio Waste Management

Decarbonize the healthcare supply chain

- Energy efficient manufacturing solutions
- Strengthening National Regulators

Mobilize finance for resilient, low-carbon, sustainable health and climate systems

G20 भारत 2023 INDIA

- Health Financing
- Catalyze novel and blended financing
- Incubate innovations

Facilitate collaboration on human, animal, and climate-health challenges

- Strengthening Animal Health Preparedness
- One Health Surveillances
- Upgrading Centers for Disease Control

Workforce capacity building on climate and health interplay

Climate Mainstreaming under Health Projects in Indonesia

Indonesia: Primary Healthcare and Public Health Laboratories Upgrading and Strengthening Project (RBL)

Upgrading Primary Healthcare and PH Labs

- Increased access to Primary Health Care Facilities to reduce carbon footprint
- Increased diagnostic tests, disease surveillance including climate-sensitive diseases,
- Sustainable procurement of medical equipment with Energy Star Efficiency standards
- Capacity building of healthcare workers

Indonesia: Supporting Essential Health Actions and Transformation Program

Essential Health Actions and Transformation

- HNAP recognizes climate change and its impact
- Community education on climate change (healthy climate village)
- Mainstream digital coordination and reporting to minimizing carbon footprint
- Training healthcare facility staff to identify and quantify sources of greenhouse gas emissions
- Emergency disaster preparedness and response, waste management and toxic materials disposal in Health Facility Accreditation System

Climate Mainstreaming under Health Projects in Thailand and Kirabati

Thailand: Medical Excellence Centers Project

Medical Excellence Centers Project

- Green construction and climate smart and resilient infrastructure for medical excellence centers at five public hospitals.
- Climate assessments, and studies for adopting climate mitigation measures
- Training on climate change adaptation and mitigation for healthcare workers

Kirabati: Climate Resilient Health Infrastructure and Systems Project

Resilient Health Infrastructure and Systems

- Relocating the hospital to an elevated location to minimize impact of coastal inundation from storm surges and high tides
- Climate and disaster-resilient design features
- Utilizing construction material that can withstand climate conditions and changing weather patterns
- Installing utilities above flood level and storing medical equipment above flood level

Climate Mainstreaming under Health Projects in Bangladesh and India

Bangladesh: Supporting 5th Sector health plan (in-process)

Prioritizing Climate and environment agenda

- Solarization of health facilities and cold chain
- Electrification of ambulance fleet
- Regulatory standards for green technologies and green bio-waste management
- Digital Health
- Capacity development for human resource on climate resilience and green skilling

India: Early Childhood Development (ECD) Project in Meghalaya

ECD Meghalaya

- Switching from a wood-fired kitchen to using a smokeless stove and gas
- Improving food storage areas using wooden slabs
- Rainwater harvesting and improving drainage systems
- Training the healthcare workforce on climate resilience and disaster preparedness.

Bangladesh Case Study: Green Vaccine Manufacturing

Bangladesh: Vaccines, Therapeutics, and Diagnostics Manufacturing and Regulatory Strengthening Project

- Adopting green building design features
- Green biowaste management
- Circular economy with recycle and re-use
- Developing green supply chain

Innovative measures to develop a green supply chain

Using expanded polystyrene instead of widely used packaging material (borosilicate glass),

Reducing **carbon emissions under the project by 65%**

Using styrene syringes made of cyclic olefin polymer plastic, which are free from metal oxide residues and, after incineration, produce the least amount of ash

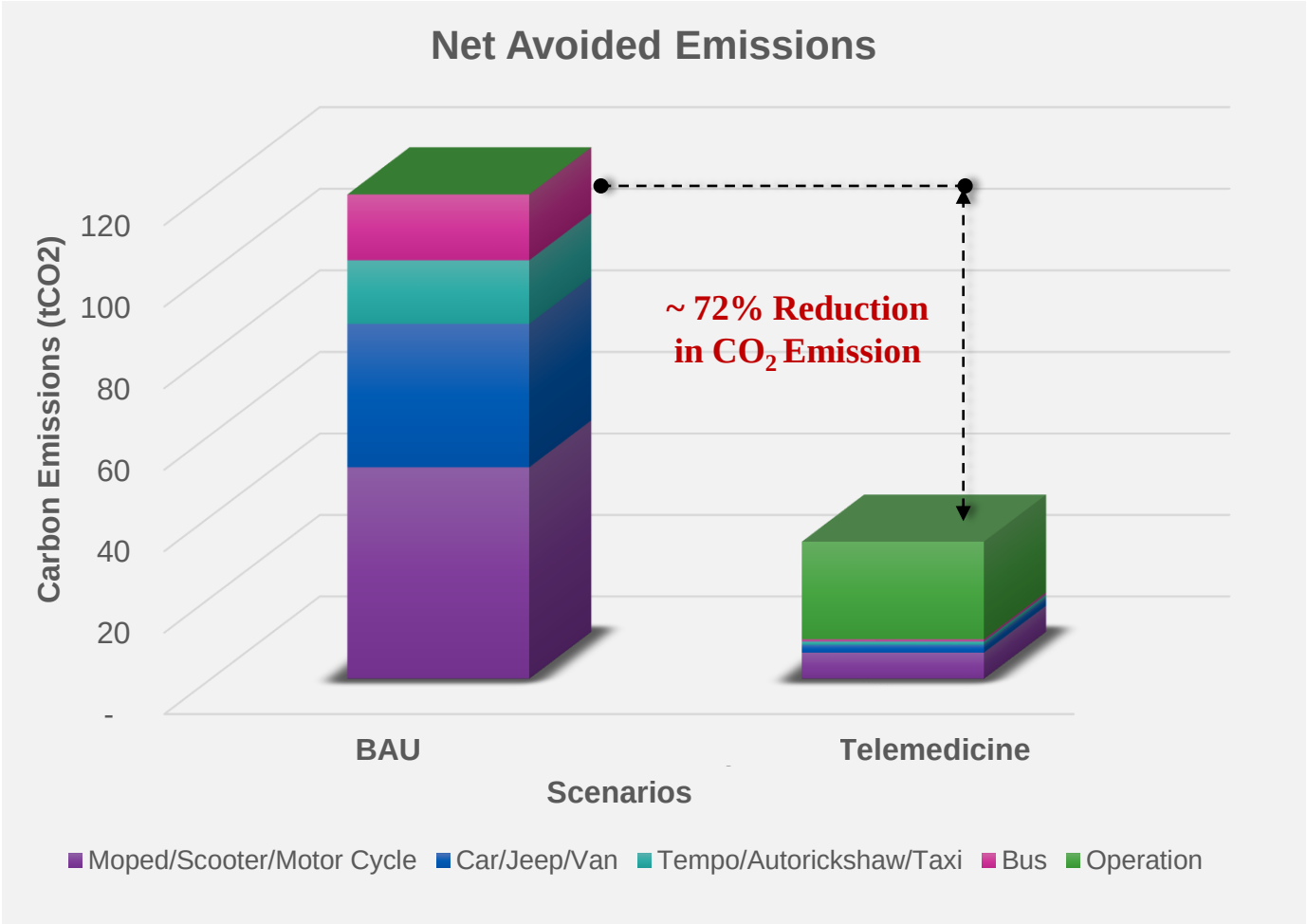
50% reduction in carbon dioxide emissions related to transport and storage.

Multidose vials will be preferred to decrease biomedical waste and carbon footprint.

Optimizing distribution process using **foldable packaging for higher volume with fewer transportation rounds**

India Case Study: Impact of Telemedicine for Emission Reduction

Net Avoided Emissions from Apr 2022 to March 2023 for 619,598 telemedicine consultations in Jharkhand state



72% reduction in CO2 emission through telemedicine as compared to business as usual (BAU) scenario

85 tonnes CO2 emissions avoided due to telemedicine services over a BAU scenario

Telemedicine Study Findings

85 tonnes

of CO2 emission

=

43,190

kilograms of coal

Each  represents 10,000 kilogram of coal

197

barrels of oil consumed

Each  represents 50 barrels of oil consumed

2,698

Tress required to absorb CO_2

Each  represents 1,000 trees

THANK YOU