Health Co-Benefits of Collaborative Climate Action

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EarthMedic
EarthNurse

MINISTRY OF HEALTH & WELLNESS

CLIMATE CHANGE AND HEALTH BAHAMAS

COLUMBIA
MAILMAN SCHOOL OF PUBLIC HEALTH
GLOBAL CONSORTIUM ON CLIMATE AND HEALTH EDUCATION

Learning Objectives

- Describe how **healthcare facilities and homes** can become more resilient, greener, and cost efficient in the face of a changing climate
- Identify cases of effective community action in **mitigating** and **adapting** to climate change.
- Describe effective actions which *individuals and communities* can take together to improve their health **and** the environment (co-benefits)

What are "*Co-Benefits*" in climate action?

The **bonus** social, economic, environmental and technological benefits we get when we take climate action.

Some examples:

- planting trees
- composting
- walk or cycle to work/school
- eat a more plant-rich diet /less meat
- switch to an electric car or install a solar power system at home/clinic,
- investing in a stronger house/clinic

https://thecobenefits.org

ADAPTATION

MITIGATION

SUFFERING

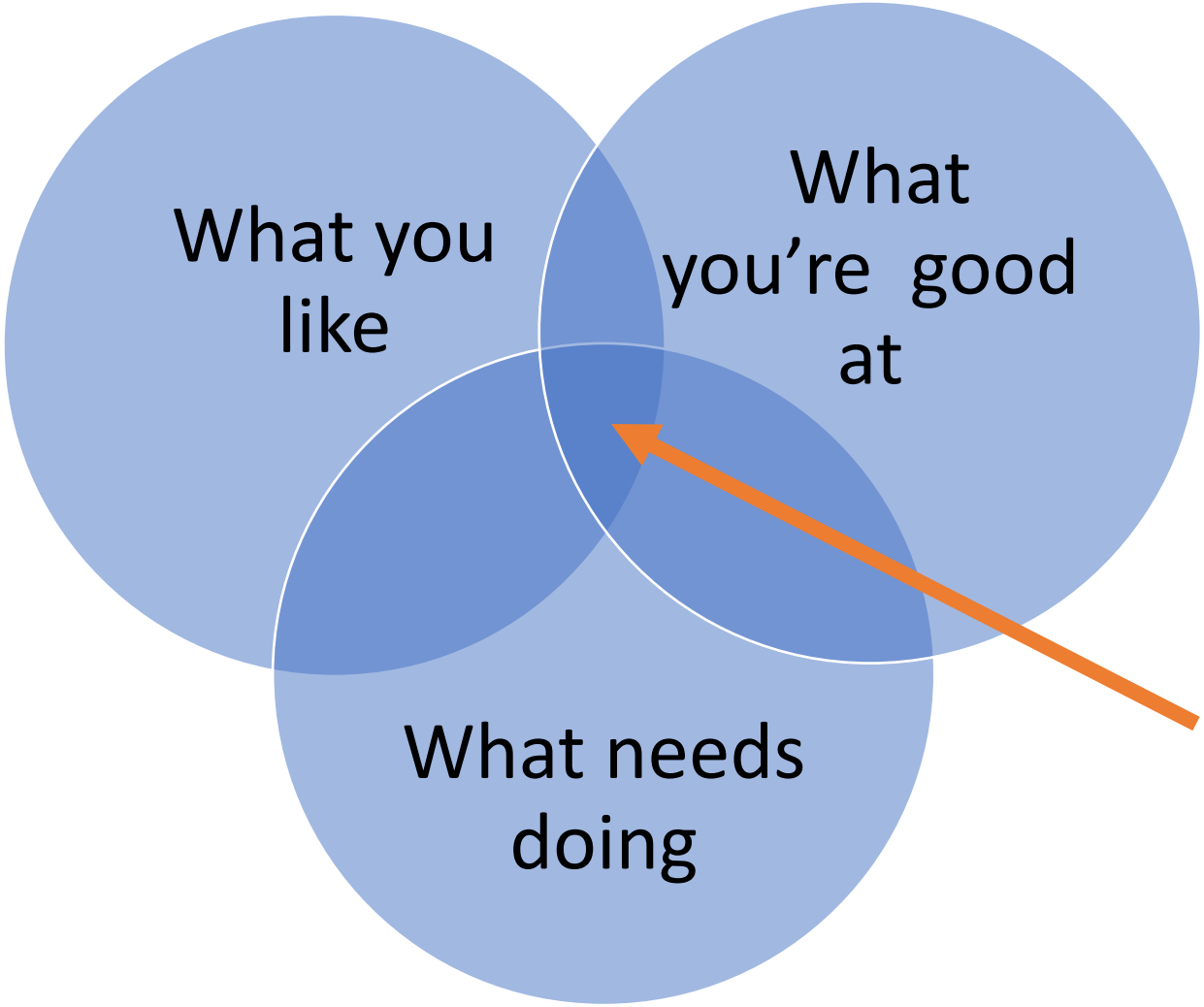
Adaptation and Mitigation action

- The goal of **mitigation** is to reduce greenhouse gas levels in a timeframe sufficient to allow ecosystems to adapt naturally to climate change, ensure food production is not threatened

- The goal of **adaptation** is to reduce our risks from the harmful effects of climate change (like heat, extreme weather, or sea-level rise, or food insecurity).

- Some actions like solar power in homes/clinics are both mitigation and adaptation actions, plus reduced costs

Finding your role in Climate & Health



Your climate action 'sweet spot'

Community Initiatives Against Climate Change

1. How do local initiatives against climate change compare to international efforts?
    1. *Global efforts have not succeeded to date in reducing the adverse impacts of climate change*
    2. *Many communities are solving their own climate problems, and we can learn from them*
2. What are some examples of successful communities?
    1. *USA, Barbados, Denmark, UK, New Zealand … We need more examples from Caribbean*
3. Do communities ever take action solely on the basis of predicted climate change?
    1. *Successful groups take action without completely understanding everything that might be needed to reach their long-term goal. They proceed by trial and error to make progress step by step.*
4. Are there principles or best practices?
    1. Community groups must find a consensus on community policy and then funding, implementing and evaluating that policy
    2. Practices that have been success in one community tend to be adapted by similar communities. But because each community is unique, there are no best practices for everyone, only better practices, depending on the local context
5. What's the next step toward creating more successes?
    1. The highest research priority is harvesting experience, e.g., case studies from successful communities.

From 50 to 500: Scaling up climate-prepared health facilities in the Caribbean

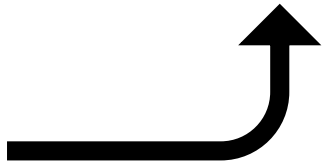
PAHO/WHO SMART Hospital Chateaubelair

SAFE + GREEN + WELL-MAINTAINED + HEALTHY STAFF

The Challenge

- Climate change is the biggest challenge to global public health and business of 21st Century
- Health system contributes 4.4% of global carbon emissions
- Caribbean highly vulnerable (UN and G-20)
- 2/3 hospitals are in climate vulnerable areas
- Health professionals often not healthy themselves (mental stress, body weight, diabetes, etc)
- Only 50 of 500+ Caribbean hospitals have been through the PAHO ‘’SMART” hospital program 2010-2020

How to rapidly scale up to 500 by 2030?



Health care carbon pollution

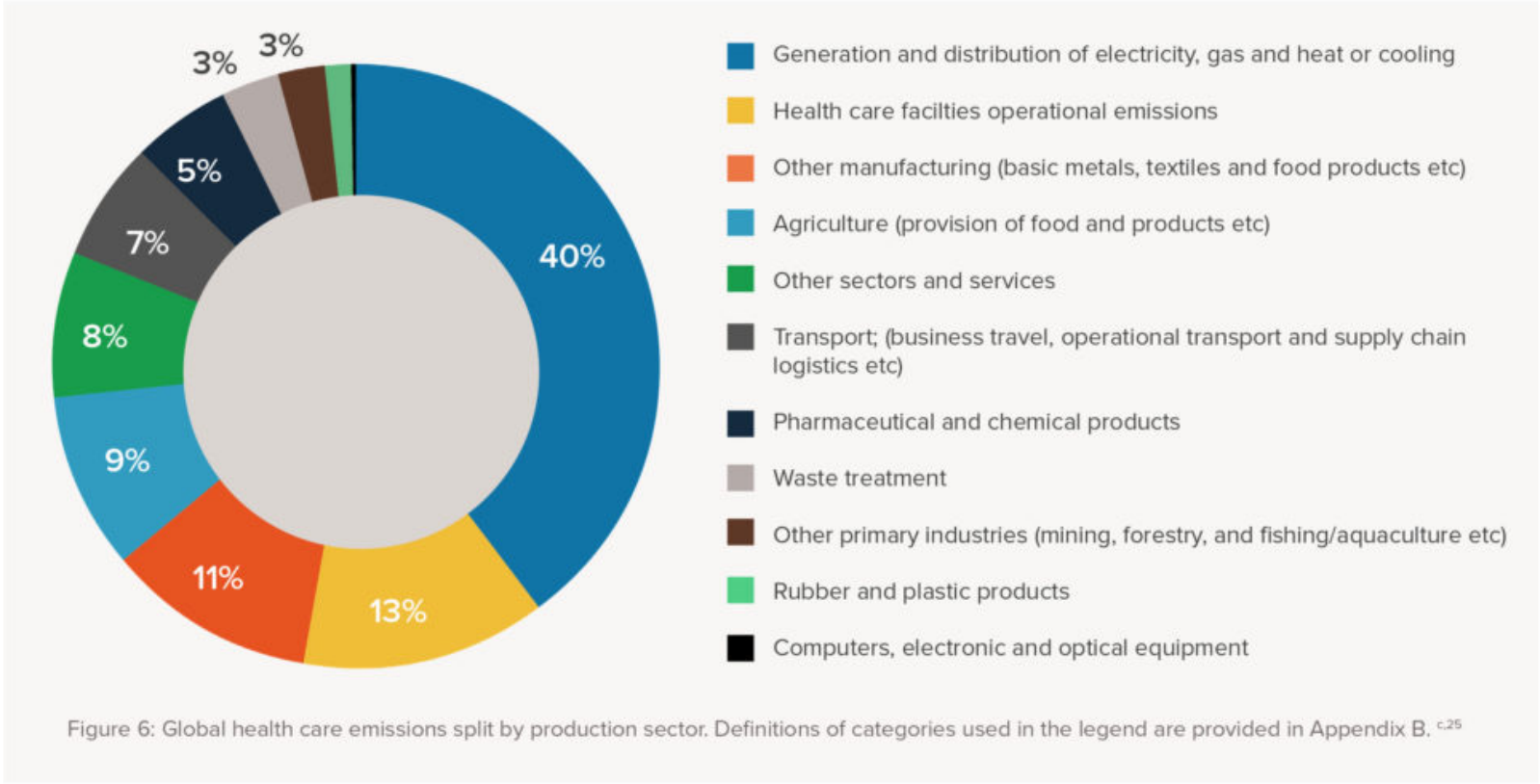


Figure 6: Global health care emissions split by production sector. Definitions of categories used in the legend are provided in Appendix B. [c,25]

Health Care Climate Footprint Is 4.4% Of Global Emissions; Larger Than Japan Or Brazil

https://healthpolicy-watch.news/health-care-climate-footprint-is-4-4-of-global-emissions-larger-than-japan-or-brazil/

c. This breakdown differs to sector splits reported in previous work in this area (such as by the NHS in the United Kingdom). These studies attributed supply chain emissions to sectors providing goods and services directly to the health care sector, whereas in this study, emissions are traced through the supply chain to the original emitter.

The Proposal

- Can we establish a multi stakeholder initiative to scale up climate-ready hospitals in the Caribbean from 50 to 500 by 2030?
- **Climate Ready/SMART = SAFE + GREEN + WELL-MAINTAINED + HEALTHY STAFF**
- How? Clusters of 2 SMART/mentor hospitals + 8 aspiring facilities, matched by size/functions/language
- Supported by an online integration platform for each cluster of hospitals/health facilities; within and across countries/territories

The Proposal – Part Two

- **Approx one year** to go through the program for a medium-sized district or regional hospital or polyclinic
- **Estimated cost is approx. US$1M/facility --** varies with the facility and degree of hands-on vs hands-off support.
- Assessment of needs at each facility - Hospital Safety Index, Green Checklist identifies - areas that can conserve resources, cut costs, increase efficiency in operations and reduce a hospital's carbon emissions
- Smart Hospitals Toolkit (paho.org)
- SMART includes capacity building training for construction sector (both designers and contractors), staff training
- Design works, tendering and contracting, Retrofitting, building supervision and certification; recalculate SMART score

The Proposal – Part 3

SMART facilities should include measures to promote the health and well-being of staff and patients such as:

- plants and trees
- healthier diets
- encouraging walking and biking.

Making Healthcare Facilities in the Caribbean SMART

A Platform for integrating Disaster Reduction, Climate Change Adaptation, Environmental Management & Conservation Efforts

RESILIENCY
SAFE

1. Sound Roof and Foundation
2. Improved Security and Signage
3. Secured Equipment and Fuel Storage
4. Protected and Efficient Doors and Windows
5. Good Drainage
6. Back up Power
7. Water reserve
8. Disaster Management Plans
9. Comprehensive Maintenance Planning
10. Disability Access

A SMART HOSPITAL

ENVIRONMENTALLY SOUND
GREEN 70%

1. Water Efficiency
2. Waste Minimization and Management
3. Pollution Reduction
4. Rainwater Harvesting
5. Alternative Power using Renewable Energy
6. Efficient Lighting and Cooling
7. Improved Indoor Air Quality

SUSTAINABILITY
SMART

1. Reduced Downtime
2. Resilient Structure
3. Reduced Operating Costs
4. Improved Safety
5. Satisfied Patients and Staff
6. Environmentally Sound Operations
7. Improved Community Care & Services

Pan American Health Organization

World Health Organization

UKaid

Smart Healthcare Facilities in the Caribbean

SMART Hospitals: Practice-informed evidence

- In the British Virgin Islands, the Peebles Hospital, built to SMART standards, was the **only government facility that remained functioning in 2017 after a triple Hurricane: Irma, Jose, and Maria**. This hospital became the seat of government for several weeks after the hurricane.
- In St. Vincent and the Grenadines, Georgetown Hospital (a SMART hospital) was the **only one that remained functional after a severe storm-affected 39 clinics and the reference hospital**

St. Ann's Bay SMART Health Centre
Jamaica

Pan American Health Organization

World Health Organization
REGIONAL OFFICE FOR THE Americas

UKaid
from the British people

SMART Health Care Facilities

Implemented by **PAHO** and funded by **UK-FCDO**, the St. Ann's Bay Health Centre in **Jamaica** is the first health facility on the island to have been fully retrofitted to meet **SMART** standards.

SMART means that the facility has been strengthened to meet present and future risks caused by disasters and climate change.

SAFE + GREEN + MAINTAINED = SMART

Potential Partners / Stakeholders

- Public, private, civil society, academia
- Possible funders – Caribbean countries and relevant regional institutions, France, Holland, UK, and USA have Caribbean territories
- High net worth individuals, Foundations
- International development partners: PAHO/WHO, World Bank, IADB

Resources for safer and greener health facilities

- Smart Hospitals Toolkit (paho.org)
- Aga Khan Development Network: "*How our health operations are slashing carbon emissions while saving thousands*" healthcarbonfootprint@akdn.org
- UK National Health Service Net Zero plan Greener NHS » Delivering a net zero NHS (england.nhs.uk).
- *Healthcare Without Harm* (www.noharm.org) aims to reduce the environmental footprint of health care and create community anchors for sustainability
- For primary care and GP offices, *Greener Practice UK* (Greener Practice – Greener Practice – UK's primary care sustainability network) and *My Green Doctor* USA https://mygreendoctor.org

Climate change and NCDs: two sides of the same coin

- Climate change and NCDs both typified by over-consumption: of food, fossil fuel, tobacco and alcohol (Social and Commercial Determinants)

- **Excessively large number of deaths among people with NCDs in the months after extreme weather events, given the disruption to services and reduced availability of medicines.**

- Need or more research to document the vulnerability

What can practitioners and patients do?

- Be aware of vulnerability of people w NCDs
- Issue longer prescriptions to tide folks over
- Pre – identify people with NCDs via health centres before extreme events?
- Cloud based medical records to support continuity of patient care when people are displaced or have to migrate

Climate change and NCDs: Agri-Food systems

- Erosion of agriculture as more storms, drought and damage to coral reefs undermine food and nutrition security in SIDS -> more consumption of cheap, low-quality imported food, leading to obesity and NCDs.

- Agriculture, especially for meat, uses huge amounts of gas and oil for fertilisers and mechanised agriculture - **a more rich diet would benefit health from reduced NCDs, and benefit the planet**

- Is this feasible in the Bahamas?

Climate change and NCDs: AirQ and Transport

- Heat and drought lead to more fires and smoke, and pollution from vehicle emissions can trigger asthma

- People living in SIDS are increasingly inactive, driving up NCD incidence. Transport largely by vehicles using fossil fuels.

- Increasing alternative transport such as biking and walking, which utilise existing built environment, have **potential co-benefits to health, energy security, tourism and the planet.**

- What scope for alternative transport projects in Bahamas?

EarthMedic&EarthNurse HQ in Trinidad: 6 KW Solar system

Battery Back-up Bank:
2 days of power

What can individuals and communities do?

Six things you can do to combat climate change

1. **Waste less food:** Methane from agriculture is a major GHG. Reducing food waste is significant thing consumers can do to lessen their climate impact.
2. **Eat less factory-farmed red meat and a more plant-rich diet:** Farms feed cattle grains, which cause them to release methane into the air through their gases. adopting a plant-rich diet can help reduce climate change, don't have to be vegan
3. **Consume less energy and water E.g.,** switch to LED light bulbs, set the AC thermostat higher, install Solar panels, purchase low-flow shower heads and taps, take shorter showers, hang clothes on the line
4. Call and meet your representative and advocate for adaption and mitigation
5. Talk about climate change at home, in school, at work, in the community
6. Volunteer in a not for profit or in community activities, e.g., plant trees

10 ways you can help fight the climate crisis (unep.org)

1. **Spread the word** Encourage friends, family and co-workers to reduce their carbon pollution.
2. **Political pressure** Lobby politicians and businesses to support efforts to cut emissions
3. **Transform your transport** leave your car at home and walk or cycle if possible; get an E-car
4. **Rein in your power use** Install solar panels on your roof: turn your AC up a degree or two; Switch off appliances and lights
5. **Tweak your diet** Eat more plant-based meals – your body and the planet will thank you.
6. **Shop local and buy sustainable** buy local and seasonal foods. Help small businesses and farms locally and reduce emissions from transport and cold storage.
7. **Don't waste food** One-third of all food produced is either lost or wasted.
8. **Dress (climate) smart** . Buy fewer new clothes and wear them longer
9. **Plant trees!**
10. **Focus on planet-friendly investments C**hoose financial institutions that don't invest in fossil fuels

Main categories of what you can do:

- Talk about climate change – "*Use your voice, use your vote, use your choice"*
- Adaptation
  - Structural elements of house, e.g., strengthen foundations, walls, roof
  - Non structural elements, e.g., windows, doors
  - Flood precautions/preparation
- Mitigation
  - Energy and water use – energy conservation, solar panels, harvest rainwater
  - Food/diet – more plant-rich diets, kitchen garden, grow #trees4food
  - Alternative transport - like walking, biking and rapid mass transport
  - Plant trees in yard, community, roadsides, health facility grounds

Household Checklists

A household checklist is a useful place to start!

Conclusion

- Climate action can help homes and health **facilities** to be “Climate-SMART” – more resilient, greener, and cost efficient given a changing climate
- Many types of community action can help **mitigating** and **adapting** to climate change
- Climate action is good for people’s health and well-being (co-benefits)
- Together, we can do this!