



Creating a Climate-Resilient and Sustainable Health System Across Asia

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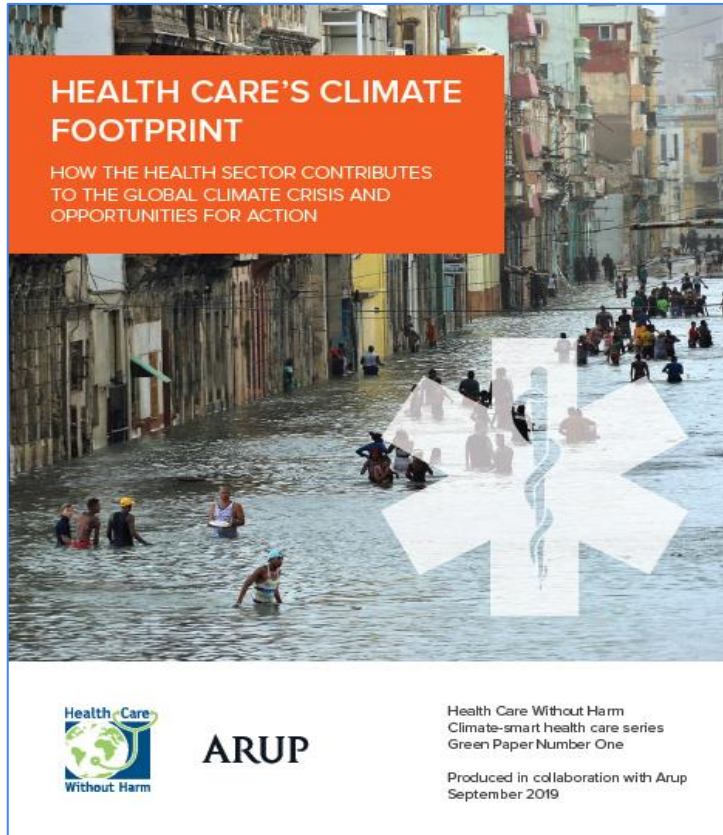
The CARAGA Regional Hospital in Surigao City sustained damages in its upper floors but remains operational, with over 200 admitted patients, including suspected and confirmed COVID-19 cases. © WHO Philippines

Typhoon Rai's Impact

- 8 million people affected, 340,000 displaced, 1.5 million homes destroyed, 13 billion pesos agriculture damaged, 17 billion infrastructure wrecked

HEALTH CARE'S CARBON FOOTPRINT

Climate change is the biggest health threat and opportunity of the 21st Century
-The Lancet



Equivalent to 4.4% of global net emissions

- Equal to emissions from 514 coal fired power plants
- If health care were a country it would be the 5th largest climate polluter on the planet



Strong trend toward resilient and environmentally sustainable HCF

Case studies Typhoon “Yolanda”(NOV. 8, 2013)

Impact:

Affected: 7 regions, 22 provinces, 33 cities, 73 municipalities, 26,675 families, 125,604 individuals

Damaged: **819 health facilities**

Victims: 6,134 deaths, 28,981 injured

Actions taken:

A total of Php 221,338,277.73 worth of logistic augmented to all CHDs affected.

A total of 278 teams/ 2,876 personnel (technical teams, local teams, foreign teams) were deployed

Augmentation of manpower at the OPCEN, hospitals and local health offices

Deployed START and intensified SPEED in all provinces of Leyte and Samar

Surveillance of and prevention of possible outbreak of diseases

Provision of vaccines and prophylaxis medicines

Provided mental health and psychosocial support

Provided WASH services

Provided nutrition services

Adaptation refers to the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Definition DOH AO 2012-0005

Mitigation in the context of disaster management refers to the lessening or limitation of the adverse impacts of hazards and related disasters.

Definition DOH Hospital safety index, guide for evaluators

Mitigation in the context of climate change refers to human intervention to address anthropogenic emissions by sources and removals of all GHG, including Ozone-Depleting Substances and their substitutes

Definition DOH AO 2012-0005

Disaster Risk Reduction and Management in Health (DRRM-H) – an integrated systems-based, multi-sectoral process that utilizes policies, plans, programs, strategies to reduce health risks due to disasters and emergencies, improve preparedness for adverse effects and lessen the adverse impacts of hazards to address needs affected population with emphasis on the vulnerable people.

Definition DOH AO 2012-0046



- ***Health resilience*** is defined as capacity of a health system to absorb, adapt and transform when exposed to shock such as pandemics, natural and human-induced disasters such as armed conflict, and still retain the same control on its structure and functions.
- ***Health system*** is the sum of all the organizations, institutions and resources whose primary purpose is to improve health. Strengthening health systems means addressing key constraints related to health worker staffing, infrastructure, health commodities (such as equipment and medicines), logistics, tracking progress and effective financing.

What is Resilience

- Resilience is the ability of a system to plan, absorb, recover and adapt rapidly to disruptions from different events that have a potential to do harm
- Strengthening health systems means addressing key constraints related to health worker staffing, infrastructure, health commodities (such as equipment and medicines), logistics, tracking progress and effective financing.
- Climate-resilient healthcare facilities are those that are able to anticipate, respond to, cope with, recover from and adapt to climate-related shocks and stress, so as to bring ongoing and sustained health care to their target populations, despite an unstable climate. (WHO)

Literature Review Results

- there is a clear consensus that healthcare operations, especially high use from hospitals, contribute significantly to greenhouse emissions
- climate-change may perpetuate health inequities, especially socially and economically,
- however current resilience frameworks do not necessarily address this or necessarily reduce this burden.
- Focus of framework and assessment tools is on disaster preparedness and emission
- knowledge among the health care workforce both in disaster preparedness and the health impacts of climate change is lacking

Literature Review Results

- While there is growing evidence and research on the effect of climate change on human health, there is a lack of research that tests the effectiveness of healthcare interventions
- Lacking are indices and metrics which qualify cost reduction and carbon reduction in investing in sustainable healthcare infrastructure
- There is a need to evaluate whether these frameworks are having a significant impact on resilience as a whole, which makes it unclear which adaptation and mitigation strategies are the most effective
- The majority of literature are dated prior to the pandemic, and the minority that were published after address the future phenome for healthcare, dual disasters or multi-hazard burdens

Southeast Asia Perspective on Resilience

- Big concepts are disaster preparedness, sustainability (energy, HC waste, emission), people focused
- need for more staff training/ preparedness, leadership from doctors/ senior management and adequate staffing overall
- most unique perspective is the concept of health equity and climate-change, the region is highly aware of inequity stemming from environmental, economic, social, and intergenerational disadvantages that can be amplified by climate-change and extreme weather

Quotes on Resilience from Global Partners

“Resilience is a more proactive approach that mixes adaptation and mitigation.” With resilience you can have more innovation.” - Brazil“

“First step is always a V&A assessment.” – CCDC India

“Adaptation is the process, Resilience is the end game.” - LatAm

Part of the resilience work is advocating for a massive budget from the government to be allocated to the health sector because it's so interconnected.” - CAHA

“Healthcare is the backbone of the community, they should be leading the work.” - US Colleague

I. Sustainability in Healthcare: What is Health Care Without Harm

- Health Care Without Harm (HCWH) is an international nongovernmental organization (NGO) that works to transform health care worldwide so that it reduces its environmental footprint, becomes a community anchor for sustainability, and a leader in the global movement for environmental health and justice.
- Three regional offices (based Brussels, Manila, and Washington, DC) that develop regional work and initiatives in Latin America, Europe, South East Asia, and the United States, respectively.
- Strategic partners in Australia, Brazil, China, India, Nepal, and South Africa. Practice Greenhealth, a nonprofit health care sustainability membership organization, and Greenhealth Exchange, a green purchasing cooperative in the United States.





GGHH - A worldwide community of hospitals, healthcare systems and organizations dedicated to reducing the ecological footprint of healthcare operations, while promoting environmental and public health in their communities.



GGHH has over 1,600 members in 78 countries

USA and Canada

Practice Greenhealth, HCWH's implementation arm in the US, is an organizational member, along with 18 hospitals and health systems in Canada, representing in total 3,776 hospitals and health centers.

Europe

64 members representing the interests of 7,474 hospitals and health centers.

Global

5 members representing the interests of 4,900 hospitals and health centers.

Asia

182 members, representing the interests of 13,968 hospitals and health centers.

Latin America

767 members representing the interests of 2,500 hospitals and health centers.

Africa

92 members representing the interests of 1,722 hospitals and health centers.

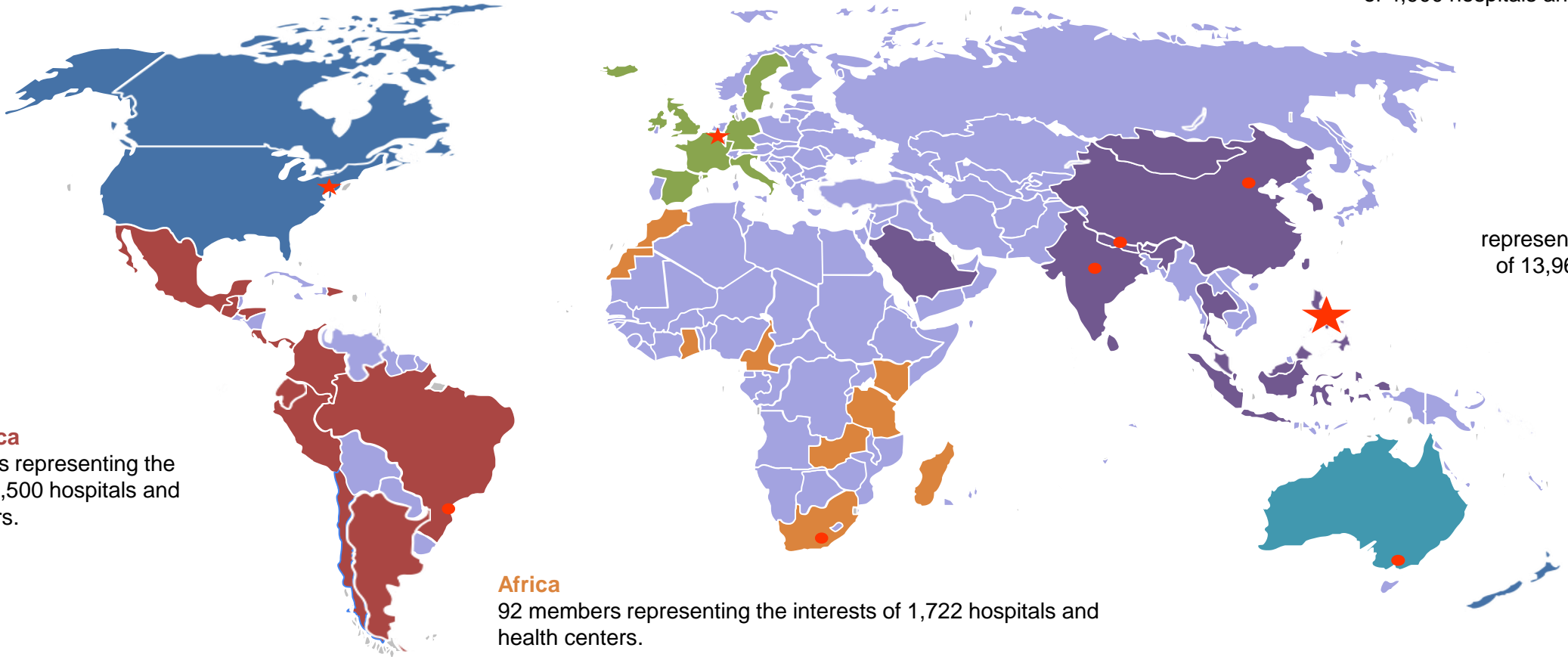
Pacific

61 members, representing the interests of 922 hospitals and health centers.

★ HCWH Regional Offices
● Strategic Partners

HEALTH CARE WITHOUT HARM

GGHH members represent the interests of over 60,000 hospitals and health centers



Tools for Greening Hospitals: Guidance Document

This is a sample document. The full version will be released via GGHH Connect (www.GGHHConnect.net)

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Buildings Guidance Document

Support green and healthy hospital design and construction

Water Guidance Document for Members

Reduce hospital water consumption and supply potable water



Energy Guidance Document for Members

Implement energy efficiency and clean, renewable energy generation



Waste Guidance Document for Members

Reduce, treat and safely dispose of healthcare waste



GGHH AGENDA: 10 SUSTAINABILITY GOALS



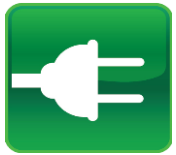
Leadership



Chemicals



Waste



Energy



Transportation



Water



Food



Pharmaceuticals



Buildings



Purchasing



**AWARENESS
RAISING &
KNOWLEDGE
SHARING**



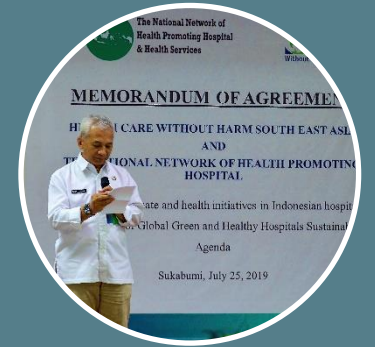
**RESOURCES &
TOOLS
DEVELOPMENT**



**CAPACITY
BUILDING**

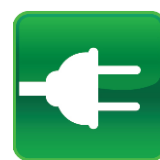


**POLICY
DEVELOPMENT
/ ADOPTION**



**NETWORK
BUILDING AND
ESTABLISHING
KEY
PARTNERSHIPS**

GGHH SUSTAINABILITY GOALS





WASTE: Properly managing healthcare waste – reduction, treatment, safe disposal

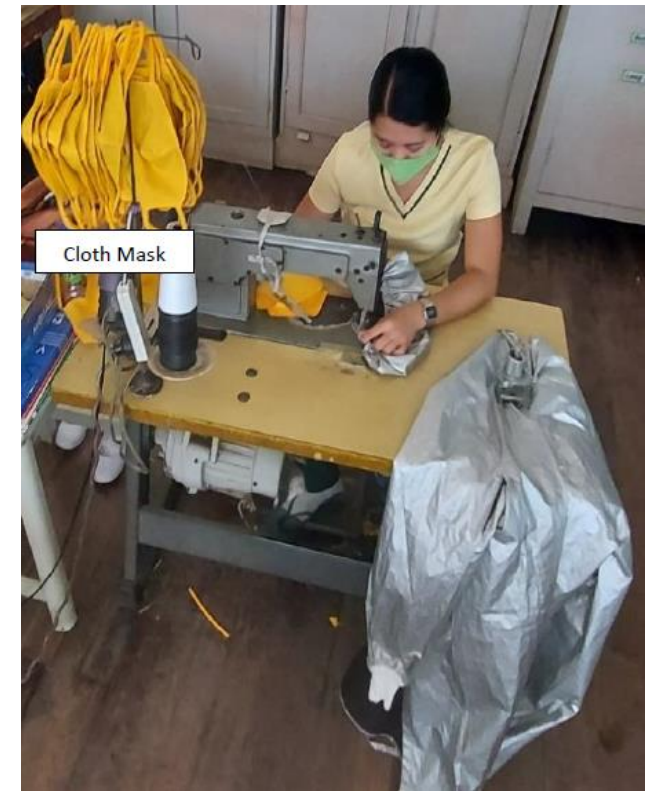


CahayaQalbu Clinic *Indonesia*

- 90% reduction in medical waste and 90% savings from total budget from using washable PPEs instead of disposable sets

St. Paul Hospital Iloilo *Philippines*

- Saved ~65.M PHP (3.2B USD) from using washable PPEs instead of disposable sets (Apr-Dec 2020)
- Saved 33.7% from waste expenses through recycling (Jan-Nov 2020)



Case Study 1:



The audits clearly demonstrate the significance of plastics in the healthcare waste stream, representing between 46 and 72 percent.

Objectives for COVID Waste Audit

- To quantify and classify the healthcare waste generated in the time of COVID-19
- To analyze the plastic composition of the healthcare waste, including volume, amount and their categories particularly looking at the personal protective equipment
- To develop recommendations for actions that may be established at the hospital and DOH level towards the adoption of sustainable healthcare waste management systems in the healthcare setting

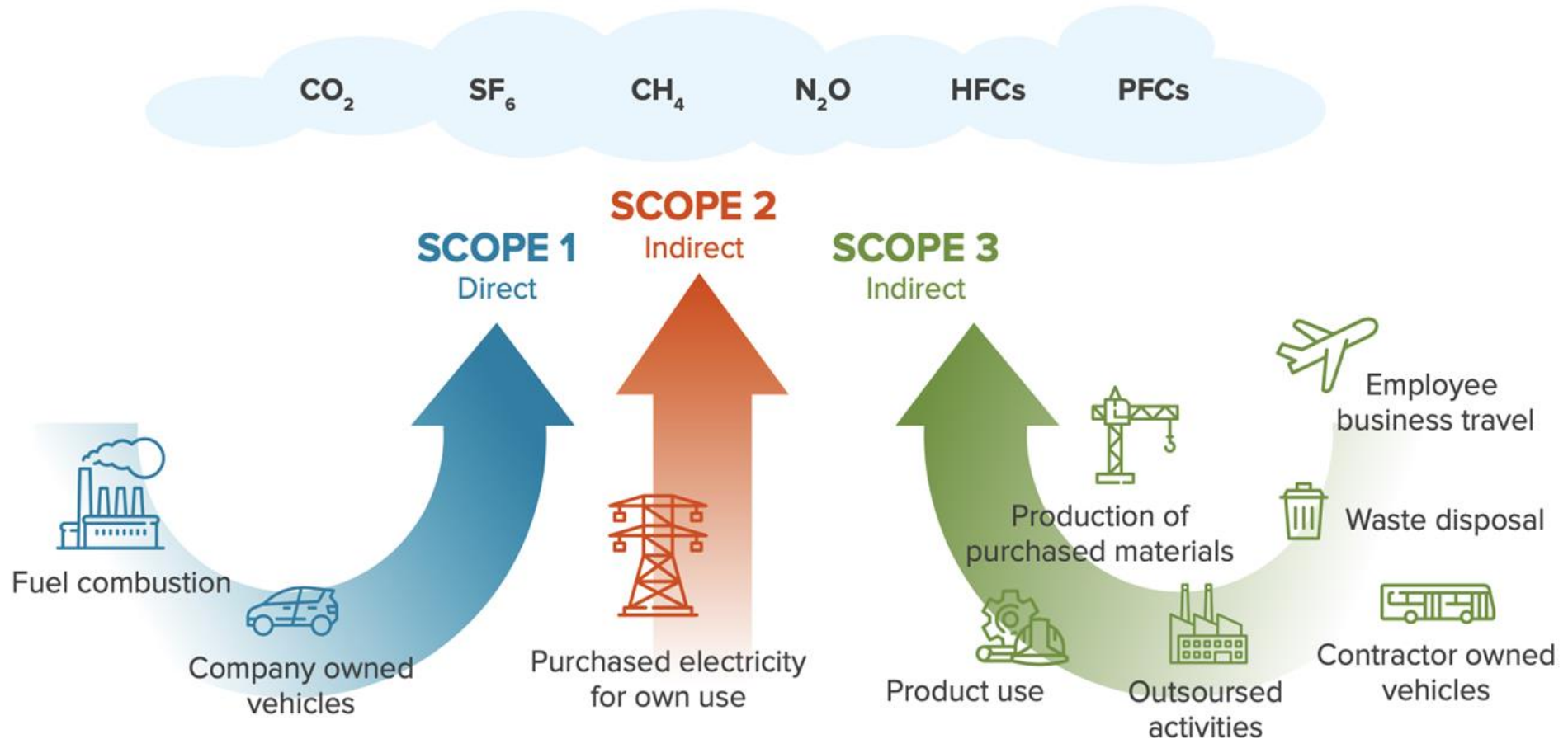


III. The Climate Impact Checkup Tool, HCWH'S Carbon Footprint Calculation Tool

How did we do it?

2016	2019	2020	2021
<p>First version</p> <ul style="list-style-type: none">• Excel version. Had 2 updates• GGHH members download the tool in Connect and shared results with a Google form- more than 200	<p><i>Huellatones</i></p> <p><i>Chile, Colombia, Costa Rica y México (2020)</i></p> 	<p>Global development</p> <ul style="list-style-type: none">• Compared 4 tools• Global consultation process with feedback from experts and GGHH members• Global pilot• Coding started	<p>Global launch</p> <ul style="list-style-type: none">• Guideline• Online course• Online calculation and reporting tool (May) with offline version• Benchmarking

CARBON FOOTPRINT ORGANIZATION BY SCOPES



Source: Graphic adaptation of the Greenhouse Gas Protocol (GHGP)⁵.

WHAT THE TOOL INCLUDES

Table 6 – Health care facilities carbon footprint. Health Care Without Harm tool V1

Scope 1	Scope 2	Scope 3
<ul style="list-style-type: none">● Stationary combustion● Mobile combustion● Fugitive emissions (cooling and medicinal/anesthetic gases)● Waste on site treatment	<ul style="list-style-type: none">● Purchased electricity	<ul style="list-style-type: none">● Business travel● Electricity transmission and distribution losses● Inhalers● Waste off site treatment● Employee commuting● Patient commuting

Please visit our new website: <https://greenhospitals.org/>

