



GLOBAL GREEN and
HEALTHY HOSPITALS



CLIMATE AND
HEALTH
ALLIANCE

a project of the campaign for
environmentally responsible health care
WWW.NOHARM.ORG



Global Green and Healthy Hospitals

Acting together for environmental health



Fiona Armstrong, Convenor, Climate And Health Alliance (CAHA)

www.caha.org.au

[@healthy_climate](https://twitter.com/healthy_climate)

www.facebook.com/pages/Climate-and-Health-Alliance/

Global Green and Healthy Hospitals

Introduction

Climate, environment and health

Why the health sector?

- First do no harm
- Reduce health hazards from health care services

Global Green and Healthy Hospitals – the solution

GGHH Connect - bringing the world together

Join us!

Case studies

Questions & Discussion

CAHA Members

Australian College of Nursing, Australian Physiotherapy Association, Australian Psychological Society, Australian Women's Health Network, Australian Medical Students Association, Australian Research Alliance for Children and Youth, Australian Nursing and Midwifery Federation, Australian Association of Social Workers, Australian Healthcare and Hospitals Association, Australian Rural Health Education Network, Australian Council of Social Service, Australian Health Promotion Association, Australian Institute of Health Innovation, CRAN*Aplus*, Doctors Reform Society, Health Issues Centre, Kooverup Regional Health Service, Psychology for a Safe Climate, Public Health Association of Australia, School of Public Health and Community Medicine University of NSW, Services for Australian Rural and Remote Allied Health, CoHealth, Women's Health East, Women's Health in the North, and World Vision Australia

Our work

Advocacy

- Submissions, lobbying, policy forums, policy development, publications

Research

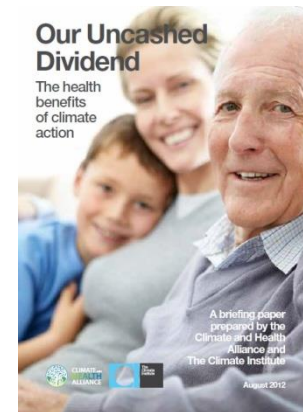
- *Our Uncashed Dividend: The Health Benefits of Climate Action; Health and Energy Choices; Coal and Health in the Hunter Valley: A Lesson from One Valley for the World.*

Communications

- Media, film, social media eg Twitter and Facebook, newsletters

Outreach and engagement

- Events, webinars, meetings



Health and Energy Choices: Position Paper

The Climate Institute releases the report prepared for the inquiry into the health benefits of climate action. The report is available for free download at www.climateinstitute.org.au. The report is available in both English and French. For more information on the report, please contact the Climate Institute at info@climateinstitute.org.au or call 1800 054 000.



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Why health and environment?

Human health is directly impacted by the environment

- Climate change
- Air pollution
- Contaminated water
- Toxic chemicals
- Management of waste

The health sector has a moral imperative to:

“first do no harm”

And to lead by example demonstrating sustainability while protecting human health



The Environmental Crisis is Global



Climate change is the biggest global health threat of 21st century

The impacts will be felt all around the world – and not just in some distant future but in our lifetimes and those of our children.

-- *The Lancet*



2° OF WARMING IS NOT A SAFE TARGET

IT IS THE BOUNDARY BETWEEN DANGEROUS AND VERY DANGEROUS CLIMATE CHANGE



Chart by Jos Hagelaars, adapted by David Spratt. See full presentation www.breakthrough2014.org

Climate change and human survival

Editorial, British Medical Journal, 2014

“..the IPCC’s new should leave the world in no doubt about the scale and immediacy of the threat to human survival, health and well-being.”

“This is an emergency. Immediate and transformative action is needed at every level: individual, local, national; personal, political, and financial”.

“... action not only limits the threat of climate change but offers a health dividend, including potentially large savings for health systems.”



Health benefits of climate action

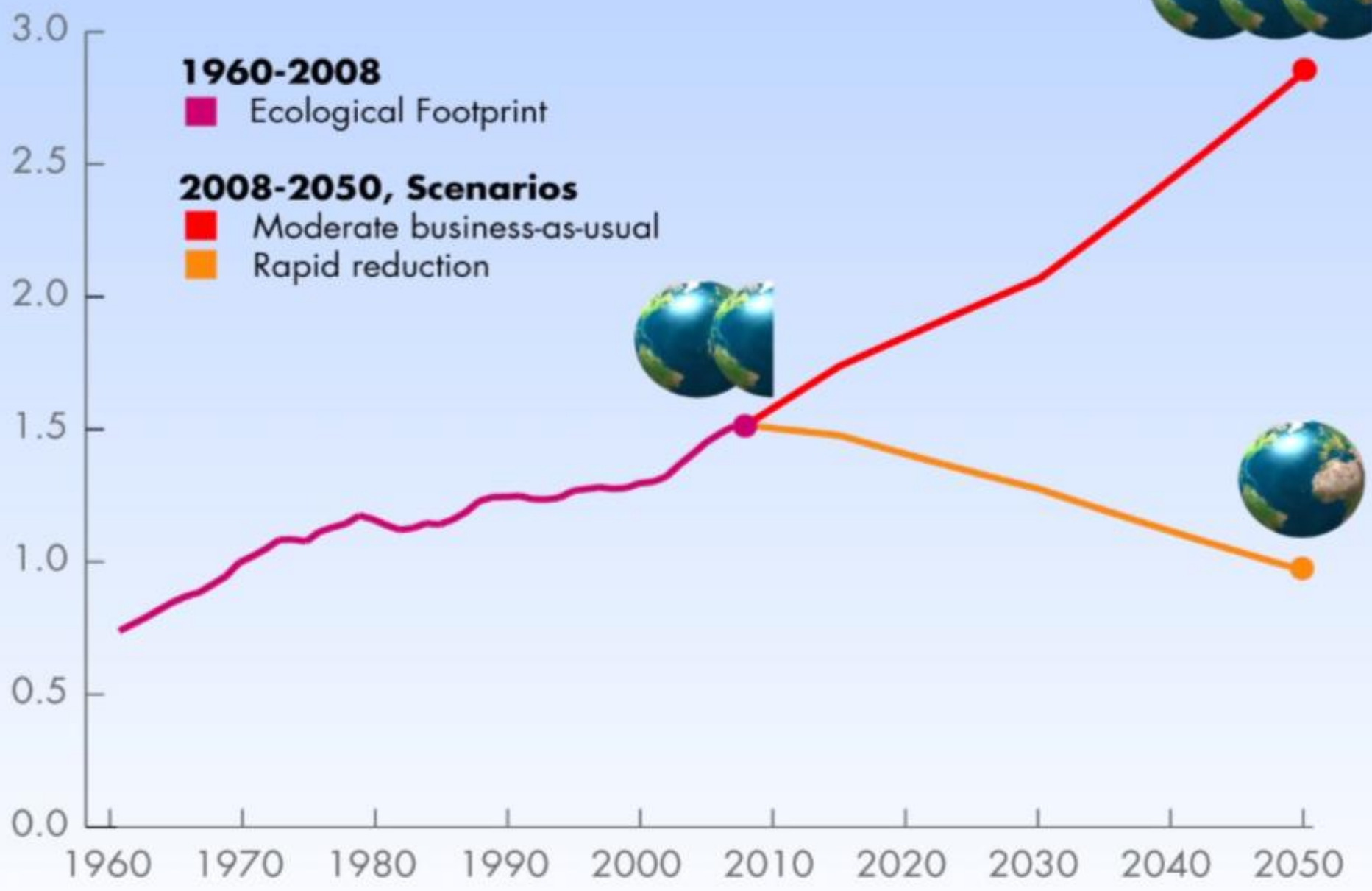
“climate change already has, and will continue to have, a major adverse impact on the health of human populations.

“.. reducing greenhouse-gas emissions has unrivalled opportunities for improving public health.

“Indeed, moving to a low carbon economy could be the next great public health advance.”

*British Medical Journal, The Lancet, and the
Finnish Medical Journal*





y-axis: number of planet earths x-axis: years

Environmental Factors
= $\frac{1}{4}$ of global burden of disease - WHO



The health sector environmental footprint

Greenhouse gas emissions

- NHS-England represents 25% of the public sector carbon footprint
- U.S. health care industry represents 8% of their carbon footprint nationally

The incineration of medical waste

- Source of dangerous air pollutants: dioxin and mercury

The use of hazardous chemicals indoors

- Contributes to the high rates of asthma among health care workers

The huge scale of the health care sector results in unhealthy practices

- Poor waste management
- Use of toxic chemicals
- Unhealthy food choices
- Reliance on polluting technologies

The good news

The health care sector can play a leading role in solving these problems.

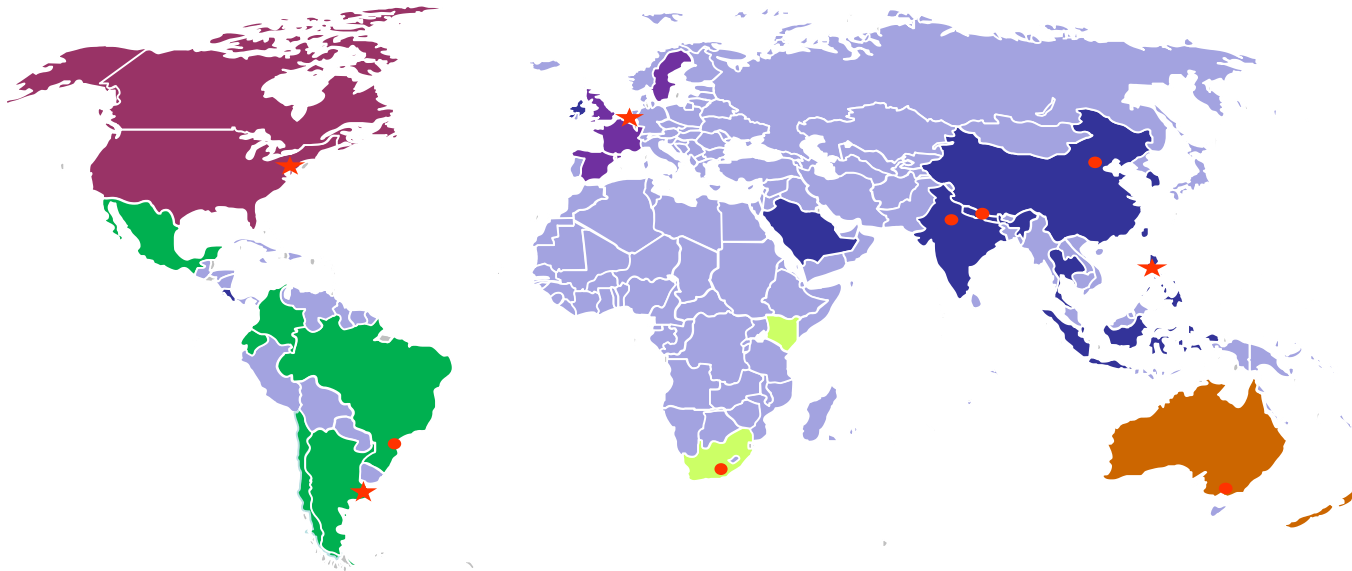
Through its massive buying power and mission-driven interest in preventing disease, the health care sector can help shift the entire economy toward sustainable, safer products and practices.



Global Green and Healthy Hospitals (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 Objectives

Serve as a vibrant virtual community

- Hospitals & health systems

Chart progress

- Achieving measurable outputs
- Sharing best practices
- Finding solutions to common challenges
- Raising standards

Mobilise health care to work together

- Improve environmental health
- Locally and globally



GGHH Goals



Leadership



Chemicals



Waste



Energy



Water



Transportation



Food



Pharmaceuticals



Buildings



Purchasing

North America

2 Organizations representing the interest of 1050 Hospitals and 13 major Health Systems

Europe

12 Hospitals, 14 Health Systems and 6 Organizations representing the interest of 458 Hospitals and 43 Health Centers)

Asia

26 Hospitals, 3 Health Systems and 4 Organizations representing the interest of 2207 Hospitals and 3099 Health Centers)

Latin America

311 Hospitals, 16 Health Systems and 12 Organizations representing the interest of 705 Hospitals and 699 Health Centers)

Africa

3 Hospitals

Global

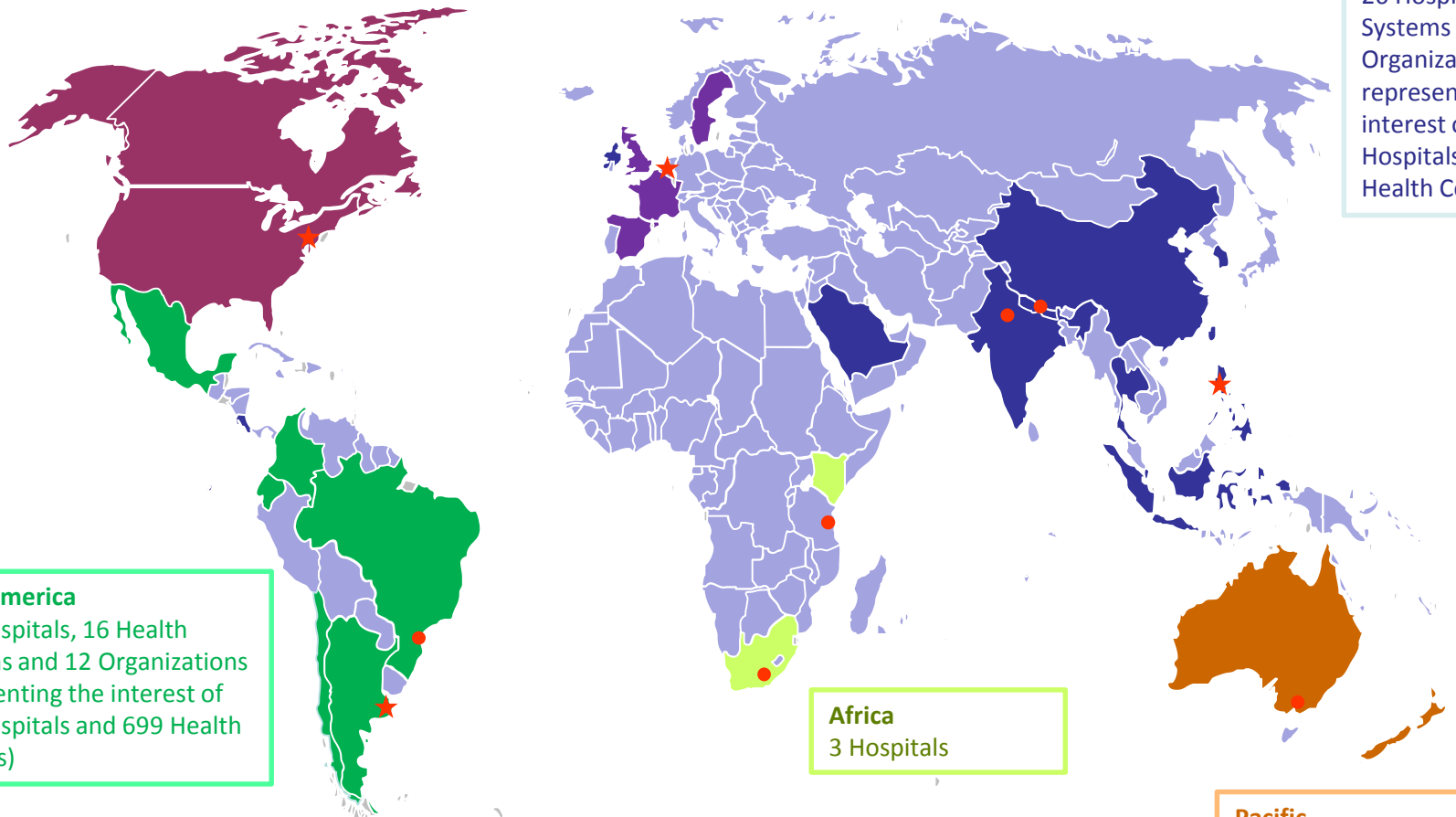
2 Organizations representing the interest of 900 Hospitals

Pacific

8 Health Systems , 40+ Hospitals, 20+ Health Centers employing 40,000 + staff, and Organizations representing the interests of 60,000 health professionals

Totals: By June 2014, GGHH has 419 members from 30 countries representing the interest of 5204 Hospitals and 4143 Health Centers

★ HCWH Regional Offices
● Strategic Partners



North America

2 Organizations representing the interest of 1050 Hospitals and 13 major Health Systems

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Pacific

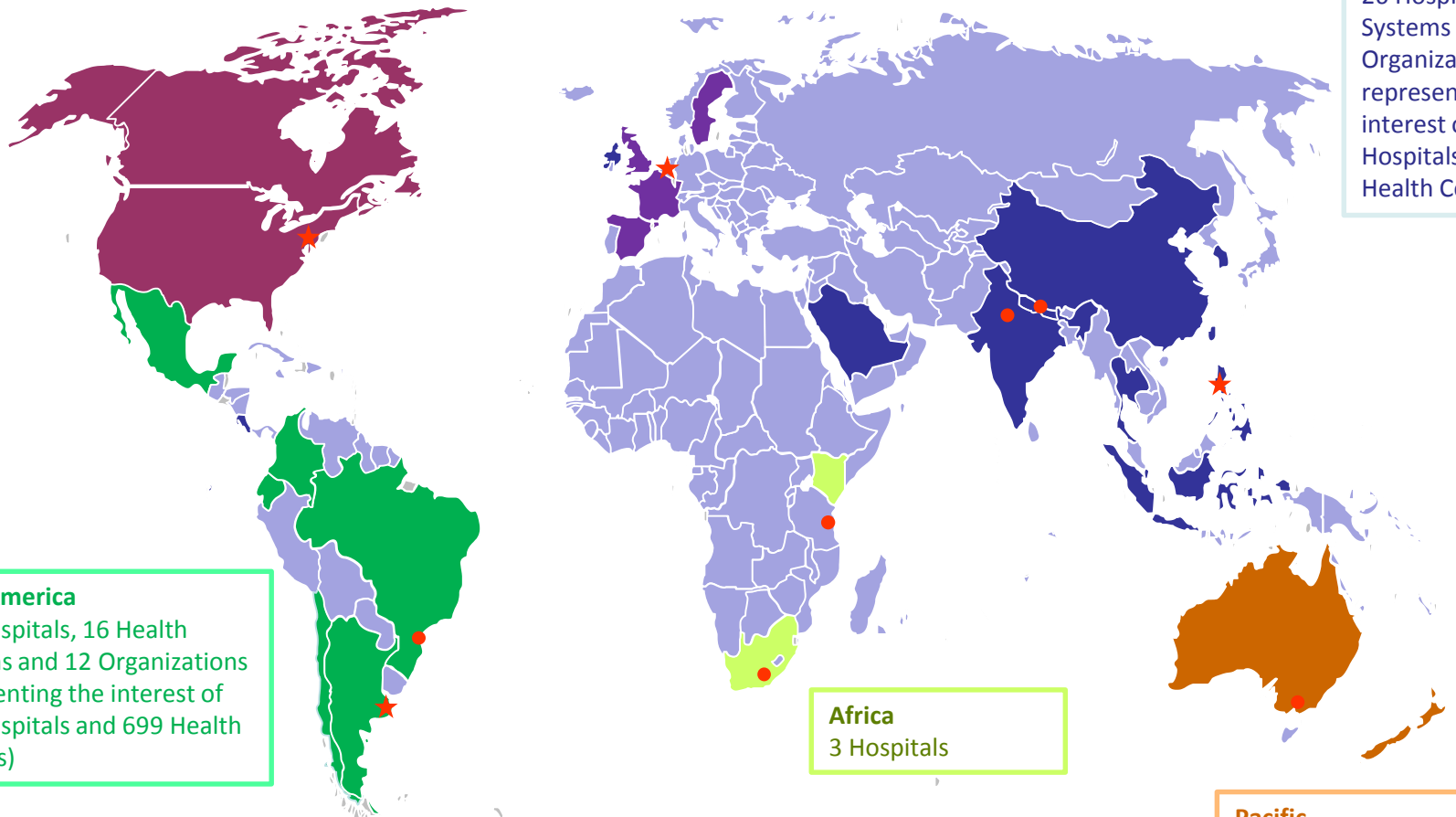
40+ Hospitals, 20+ Health Centers employing 40,000 + staff, and Organizations representing the interests of 60,000 health professionals

Global

2 Organizations representing the interest of 900 Hospitals

Totals: By September 2014, GGHH has more than 9450 Hospitals and Health Centers as members from around the world

★ HCWH Regional Offices
● Strategic Partners



GGHH Member Resources and Benefits

- Global learning community
- Guidance Documents
- **Case Studies**
- Self Assessments
- Member Promotional tools
- Opportunities to promote work globally
- Educational Webinars
- Membership Certificate



Yonsei University Health System

Annual energy savings: 1,901,686,000 won

- Replaced old heating/air conditioning equipment with highly effective/efficient facilities
- Changed all lights at fire exits to LED
- Switched to high efficiency transformer at the Cardiovascular Hospital
- Increased thermal efficiency of boiler and refrigerators
- Installed solar powered streetlights
- Controlled the supply of air conditioning and heating during summer/winter seasons
- Distributed energy reduction guide and regulations
- Air conditioning system renovations



Koowerup Regional Health Service in Victoria

- Recycling - reduced waste by 40 tonnes in first year
- Purchase green energy
- Solar power
- Recycled water
- Paddock to plate mentality
- Men's shed, community kitchen, playgroups, environmental groups
- Retrofit of building serves as example for community
- Health promotion focus



Partners HealthCare (U.S.)

25% reduction in energy consumption over 5 years on a \$100m U.S. annual energy bill

- 230 energy conservation measures
 - Energy reduction of 25%
 - Implementation cost: \$61M
 - Average payback 3.7 years
 - 27% annual ROI
- Annual pollutant reduction resulting from the energy conservation measures:
 - 21.6 tons of sulphur dioxide, 5 tons of nitrous oxide, 6,332 tons of carbon dioxide and 0.15 tons of mercury.



Gundersen Lutheran

Will achieve energy independence in 2014

Four hospitals and 75 clinics

- Using wind, solar and biofuels
 - Saved \$5.4 million from energy efficiency
 - Saved \$2.1 million from renewable sources
 - Keeping healthcare costs down
 - Goal to be carbon neutral
- Stopping investing from fossil fuels
 - Will not invest any more funds in companies that extract fossil fuels, such as coal, gas and oil



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Austin Health, Victoria

Committed to all ten goals, with an action for each year of the strategy in each of the ten areas.

Equates to 37 actions over four years.



Hospital Fernandez, Buenos Aires, Argentina

- 400 bed public hospital
- Mercury-free
- Substituting dental amalgam in most cases
- Eliminated hazardous chemicals
 - DEHP-PVC, BPA, glutaraldehyde
- Green cleaning

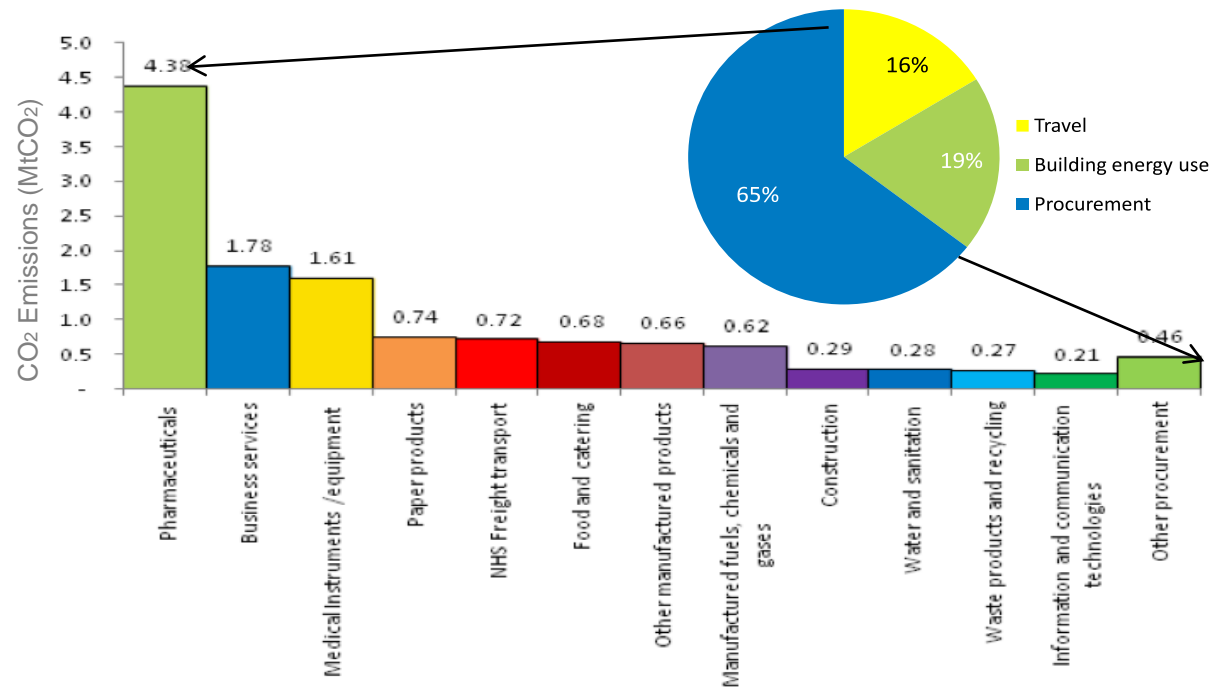


UK National Health Service (NHS)

Footprint: 18 million tons of CO₂ per year,
26% of public sector emissions

CO₂ Reduction Targets

- 10% by 2015
- 26% by 2020
- 80% by 2050



Kaiser Permanente (U.S. Health System)

Kaiser Permanente commits to reduce its greenhouse gas emissions by 30% by 2020

- Green-e energy certified wind energy.
- 15 Mw on-site solar power generation
- 2 Mw of power onsite using cogeneration technology
- Investing \$2.4 million in new lights and window-film installations
 - saves \$1 million per year in energy costs



"These measures will improve the overall health of our communities and reduce our operating costs at the same time."

*Rame Hemstreet,
Chief Energy Officer at Kaiser Permanente*

GGHH CONNECT- Mission and Purpose

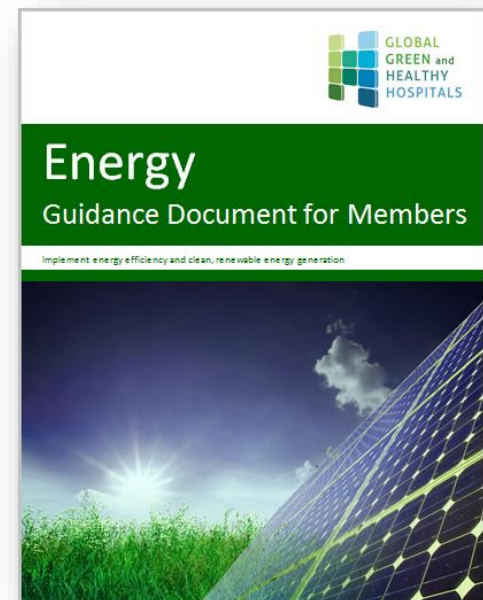
*To provide a borderless environment for GGHH members to **meet, teach and learn from each other** to assist and help accelerate the achievement of their **sustainability goals***



GGHH Member Resources and Benefits



- Communities dedicated to each of the 10 GGHH Agenda goals with:
 - Discussion Forums
 - Global Teams of Experts
 - Agenda Goal Guidance Documents
 - Self-Assessment Checklists
 - Tools and Resources
 - Case Studies




- My Homepage
- Contacts Center
- Messages
- My Documents
- Training and FAQs
- Collaboration Settings

Global Green and Healthy Hospitals

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

[Visit the GGHH Website](#)



The GGHH Connect Help Desk is full of tutorials, guides, and people to show you how to use and take full advantage of GGHH Connect.

Visit the Help Desk today!

Activities

- All
- Connections
- Following
- My Communities
- Me



GGHH Admin in Energy About an hour ago.







Updated a *blog entry*.



Costa Rican Hospital Seeks to Become First Carbon Neutral Medical Center

View details [View details](#) [View details](#) [View details](#) [View details](#) [View details](#) [View details](#) [View details](#) [View details](#) [View details](#) [View details](#)

GGHH Goal Communities

-  Leadership
-  Chemicals
-  Waste
-  Energy
-  Water
-  Transportation

GGHH Connect Communities

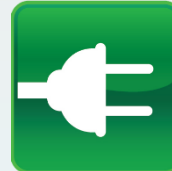
Leadership

GGHH Connect Team

HCWH Global Team

The Experts

Goals



Regions

Africa

Asia

Australia

Europe

Latin America







United States



Waste > Home



Waste Community

-  **Discussions Forum** | Bring questions, project updates, and topics to discuss with your colleagues.
-  **News** | Read the latest Waste news
-  **Case Studies** | Read success stories of your colleagues in implementing Waste projects
-  **Tools & Resources** | Access a digital library to deepen your knowledge and assist you in working on this issue
-  **Experts** | View a list of Waste Experts available to provide advice and answer your questions
-  **Community Members** | A directory for the Waste community




Case Study | Brazil- Recycling Surgical Wrappers

Albert Einstein Hospital in São Paulo, Brazil set out to increase recycling throughout their facility and implement programs in new units. Focusing in on sterile materials from surgery theatres, the hospital implemented a program that in its first year resulted in the recycling of 40 tons of material.

[Download the Case Study](#)



Recent Community Activity

All	Forums	Blogs
Posted by	Title	
 Clare Topping	RE: Reprocessing of single use devices Discussion Forum Waste (in English)	
 GGHH Admin	Vídeo Hospital Bir transforma sua gestão de resíduos hospitalares	
 GGHH Admin	Video El hospital Bir transforma su gestión de residuos sanitarios	

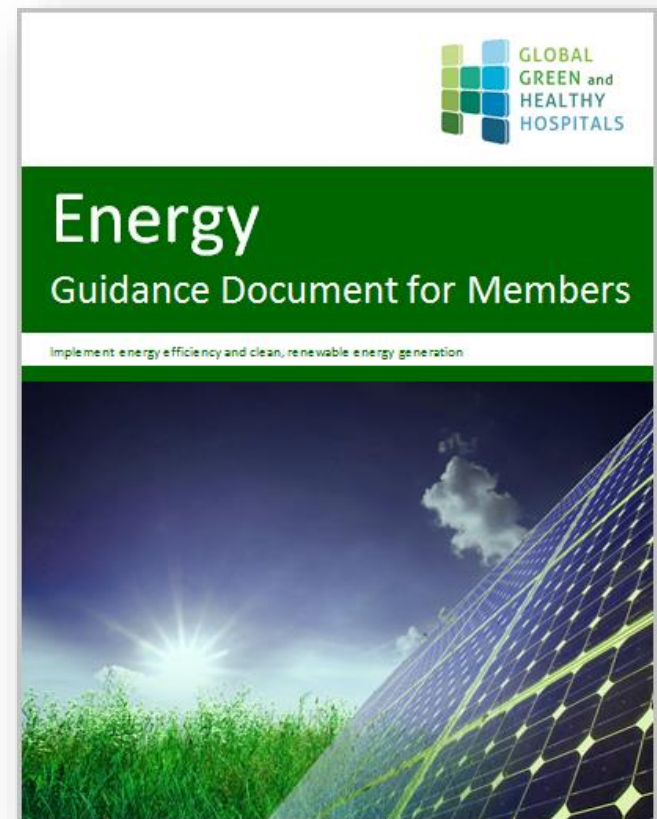
GGHH Connect - Tools and Resources

Guidance Documents

- Overview of each goal
- Suggested action items and projects
- Strategies and tips for implementation
- Additional resources for learning/research

Self-Assessment Checklists

- Baseline picture for new members
- Suggested project focus areas
- Track progress year after year



New! Guidance Documents for Members



GGHH Connect - Self-Assessment Checklists

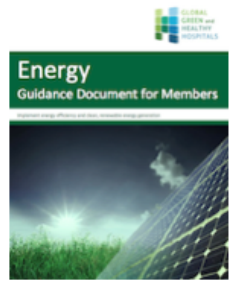


- Home
- Forums
- News Blog
- Case Studies
- Tools & Resources
- Experts
- Report Progress
- Members

GGHH Goal Community > Report Progress

Energy | Self Assessment

Energy | Guidance Document



- [Energy Guidance Document](#)
- [Energy Guidance: Policy Action Items](#)
- [Energy Guidance: Context Action Items](#)
- [Energy Guidance: Energy Conservation Action Items](#)
- [Energy Guidance: Clean Energy Sources Action Items](#)
- [Energy Guidance: Operations Action Items](#)

Energy Self-Assessment Context Action Items

Assess energy usage patterns and needs for the facility/community; measure and benchmark energy performance.

**Please indicate your percent level of completion on the following activities:
(N/A means Not Applicable)**

- Gather aggregate facility energy consumption data (typically from utility bills). Record the data monthly for at least 12 months. ▾
- Graph the above data to look for trends, seasonal variations, and unexpected changes. ▾
- Gather discrete subsets (e.g. space heating, cooling, lighting) of whole building energy use where possible. Record the data monthly for at least 12 months. ▾
- Where possible, record hourly, daily, and weekly consumption for a given sample of time, to better understand the cycles of consumption at a discreet level, and use the information to detect energy consumption drivers and trends as well as reduction opportunities. ▾

GGHH CONNECT- Social Stewards



**Fiona
Armstrong**
Pacific Climate and
Health Alliance



Nick Thorp
Health Care
Without Harm



Luqman Yesufu
Groundwork



Carolina Gil Posse
Salud sin Daño

GGHH CONNECT - Key Support Team Experts



Marcelo Porto
Energy
fhi360
Brazil



Victoria Rice
Waste
University of
Washington
Health Center
United States



Tracey Easthope
Chemicals
Health Project
Ecology Center
United States



Trevor Thornton
Waste
Deakin University

GGHH CONNECT- Expert Conversations



Teresa Lewis

Posts: 4

Join Date: 8/20/14

[Recent Posts](#)

RE: Interesting Waste Tool

9/18/14 7:06 AM as a reply to Jerome Ribesse.

[Reply](#) [Reply with Quote](#) [Quick Reply](#)

Hi Jerome,

That is fantastic news especially when you are going to be working with 18 healthcare organisations. I will keep researching for you to see what is out there. When the new revised best practice for waste management is up and running I would like to know how the project is going and the problems (if any) you are encountering along the way. Best wishes to all for this jerome, and as I've said, I will keep my eyes and ears open to see what other waste management tools are out there.

Teresa

0 (0 Votes) [Up](#) [Down](#) [Flag](#)

[↑ Top](#)



Jerome Ribesse

Posts: 7

Join Date: 6/14/14

[Recent Posts](#)

RE: Interesting Waste Tool

9/19/14 12:43 AM as a reply to Teresa Lewis.

[Reply](#) [Reply with Quote](#) [Quick Reply](#)

Thanks a lot Teresa.

I'll check with Nick Thorp how we can translate the guide in English once it'll be ready.

Jerome

0 (0 Votes) [Up](#) [Down](#) [Flag](#)

[↑ Top](#)



Susan Wilburn

Posts: 3

Join Date: 6/14/14

[Recent Posts](#)

RE: Interesting Waste Tool

9/19/14 5:46 AM as a reply to Jerome Ribesse.

[Reply](#) [Reply with Quote](#) [Quick Reply](#)

Hi Jerome and Teresa,

This is a really helpful discussion. Let me add info about the tools that will accompany the GGHH Waste Guidance documents , currently in the review process, to track waste volumes, weights and proportions. We are creating metrics from the guidance document for GGHH members to track waste: kilograms of hazardous and non-hazardous waste per bed including proportion and types of waste recyclable and recycled. These will be available later in the Fall this year.

Jerome, the good practices from your system - in French and in English, Spanish and Portuguese will be very useful to share. THANK YOU. Merci beaucoup.

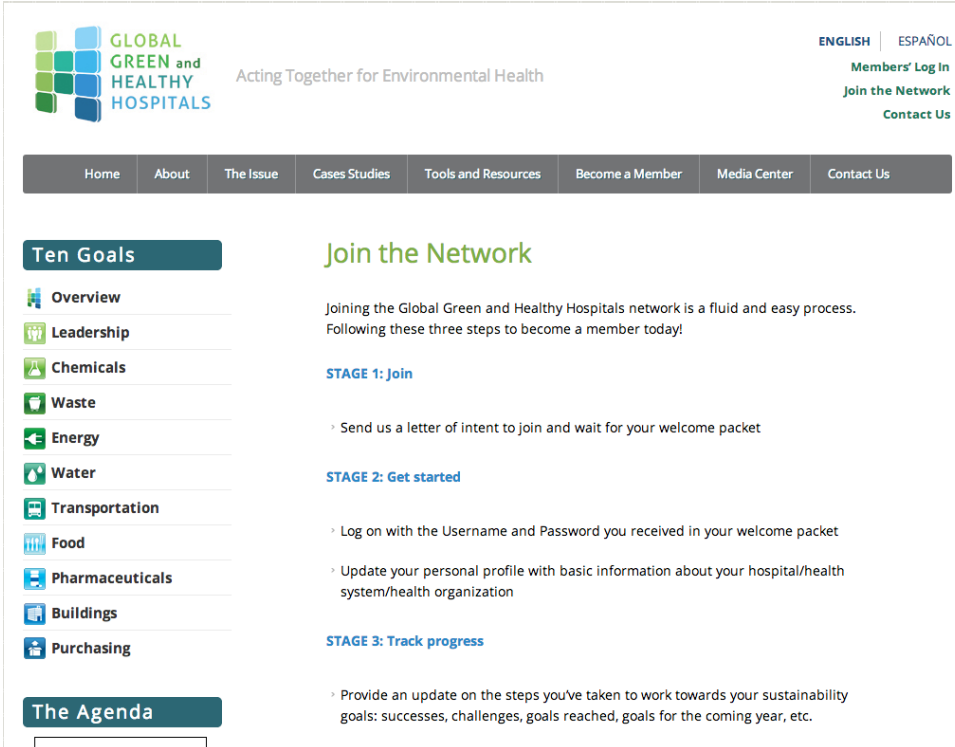
Joining GGHH

Only Health Care members

- Hospitals
- Health Systems
- Health Care Organizations

Member request on website:

www.greenhospitals.net



GLOBAL GREEN and HEALTHY HOSPITALS Acting Together for Environmental Health

ENGLISH | ESPAÑOL
Members' Log In
Join the Network
Contact Us

Home About The Issue Cases Studies Tools and Resources Become a Member Media Center Contact Us

Ten Goals

- Overview
- Leadership
- Chemicals
- Waste
- Energy
- Water
- Transportation
- Food
- Pharmaceuticals
- Buildings
- Purchasing

The Agenda

Join the Network

Joining the Global Green and Healthy Hospitals network is a fluid and easy process. Following these three steps to become a member today!

STAGE 1: Join

- › Send us a letter of intent to join and wait for your welcome packet

STAGE 2: Get started

- › Log on with the Username and Password you received in your welcome packet
- › Update your personal profile with basic information about your hospital/health system/health organization

STAGE 3: Track progress

- › Provide an update on the steps you've taken to work towards your sustainability goals: successes, challenges, goals reached, goals for the coming year, etc.

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- while promoting environmental and public health in their communities

