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# Buildings

## Guidance Document for Members

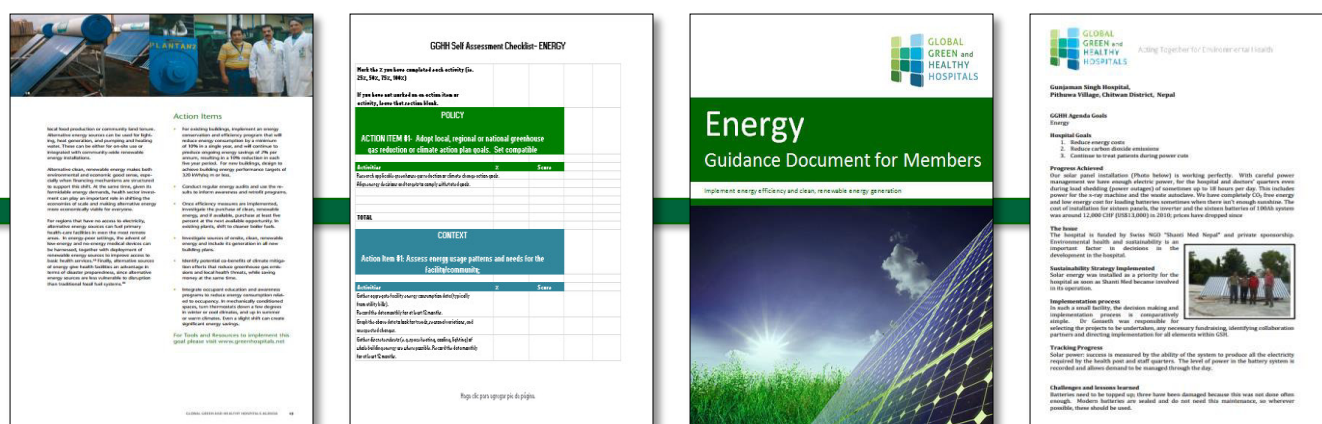
Support green and healthy hospital design and construction



# The GGHH Guidance Document Series

Global Green and Healthy Hospitals is producing a series of Guidance Documents—one for each of the ten GGHH goal areas. These documents are intended to assist GGHH member hospitals and health systems around the world reduce their environmental footprint and promote environmental health.

They are also designed as integral parts in a system that logically progresses from the Action Items in the GGHH Agenda; to Self-Assessment Checklists that members can use as a benchmarking tools; to the Guidance Documents themselves and associated case studies and resources; to a series of measurement tools (still in development) to help members measure their progress over time.



These documents, which are available to members as an integrated online system via GGHH Connect, are also downloadable in PDF format. They are designed as participatory, living documents. That is to say, GGHH wants membership feedback and suggestions for actions, examples, case studies, links and the like so that these Guidances can evolve based on the real experience and input of our members. We aim to update them regularly.

## About this Buildings Guidance Document

Buildings have a significant environmental health footprint. A host of contemporary environmental health problems – climate change, toxic pollution, biodiversity loss and more – can be linked to the production and maintenance of the built environment. As development accelerates in many regions, the production of buildings becomes more resource intensive, stressing local and bioregional building material supplies and methodologies beyond their sustainable capacities.

Buildings that support the delivery of healthcare services are as diverse as the delivery systems that shape them. Facilities vary widely between and within countries. They range from small community outpatient clinics to large acute-care hospitals sponsored by an equally broad range of owners -- including government agencies, philanthropic nonprofits and

corporate entities. They include community facilities that operate 24 hours a day, every day, and are intended to operate as “safe havens” in natural disasters. The significant environmental and health impacts associated with hospital buildings have led to the creation and adoption of a wide variety of “green building” tools and resources related to healthcare.

This Buildings Guidance Document helps health care leaders make the changes needed to reduce their resource consumption, use environmentally sustainable and healthy building products and minimize the environmental impacts by identifying specific actions that health care facilities can take. These actions are supported with links to case studies, and lists of specific Action Items that can be used to guide the development of solutions and measure progress towards reducing the environmental impact of new and existing health care buildings.

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# OVERVIEW

The built environment influences health. A host of contemporary environmental health problems – climate change, toxic pollution, biodiversity loss and more – can be linked to the production and maintenance of the built environment. As development accelerates in many regions, the production of buildings becomes more resource intensive, stressing local and bioregional building material supplies and methodologies beyond their sustainable capacities. Buildings have a huge environmental health footprint. The UN Environment Program estimates that global building-related Action Items may be responsible for up to 40 percent of carbon dioxide releases.

The non-profit Architecture 2030 estimates that global building-related Action Items, when transportation of materials is factored in, exceed 48 percent. While industrial CO2 emissions are leveling off, they continue to rise in the building sector. It has been widely accepted that a 'business as usual' approach with respect of greenhouse gas emissions would lead to global economic and environmental catastrophe in the long term. With major developed and developing nations accepting the IPCC predictions on climate change, "the impetus to the adoption of sustainability within the built environment gathered pace. It is now the case that a majority of professionals and scientists accept that action is needed to mitigate climate change through the reduction of greenhouse gas emissions in particular and the adoption of sustainability practices generally" (Reed and Wilkinson, 2008).

The construction and use of buildings consumes billions of tons of raw materials, generates significant waste, consumes a tremendous amount

of energy and contributes toxic emissions to the air. Given this impact, there are significant opportunities to improve environmental quality and human health through sustainable practices in planning, design, construction and operation of health care facilities.

Buildings that support the delivery of healthcare services are as diverse as the delivery systems that shape them. Facilities vary widely between and within countries. They range from small community outpatient clinics to large acute-care hospitals sponsored by an equally broad range of owners -- including government agencies, philanthropic nonprofits and corporate entities. They include community facilities that operate 24 hours a day, every day, and are intended to operate as "safe havens" in natural disasters. The significant environmental and health impacts associated with hospital buildings have led to the creation and adoption of a wide variety of "green building" tools and resources related to healthcare.

From siting hospitals near public transportation routes, to using local and regional building materials, to planting trees on the site, to incorporating design components like day lighting, natural ventilation, alternative energy and green roofs, existing health facilities can moderate their environmental footprint and their impact on local communities, while new buildings can be designed to use far fewer resources. This applies to all healthcare buildings -- from large, centralized hospital facilities to small community clinics.

Research also suggests there is a direct relationship between the built environment and therapeutic outcome; the design of a health facility can positively influence patient health, as well as caregiver performance and satisfaction.

# About Health Care Without Harm

Health Care Without Harm is an international coalition of more than 500 members in 53 countries that works to transform the health care sector so that it is no longer a source of harm to human health and the environment.

We collaborate with doctors, nurses, hospitals, healthcare systems, professional associations, NGOs, governments and international organizations to promote the development and implementation of safe and environmentally healthy practices, processes and products in the health care sector.

HCWH has regional offices in the United States, Latin America, Europe and South East Asia as well as strategic partners in South Asia and Africa.



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