



Global Green and Healthy Hospitals

Annual Report 2018



ABOUT GGHH

Global Green and Healthy Hospitals (GGHH), a project of Health Care Without Harm (HCWH), is an international network of hospitals, health care facilities, health systems, and health organizations dedicated to reducing their environmental footprint and promoting public and environmental health.

Launched in 2011, the GGHH network has more than 1,160 members in 55 countries on 6 continents who represent the interests of over 36,000 hospitals and health centers. From small rural health clinics, to modern urban hospitals, to sub-national and national ministries of health, the GGHH network is as diverse as it is expansive.

This diversity and reach is the strength and backbone of GGHH that supports network members to take action. By sharing experiences, successes and challenges, GGHH members are working together locally, nationally, regionally and internationally to transform the health sector and foster a healthy, sustainable future.

THE 10 GGHH SUSTAINABILITY GOALS



Leadership

Prioritize Environmental Health



Transportation

Improve Transportation Strategies for Patients and Staff



Chemicals

Substitute Harmful Chemicals with Safer Alternatives



Food

Purchase and Serve Sustainably Grown, Healthy Food



Waste

Reduce, Treat and Safely Dispose of Healthcare Waste



Pharmaceuticals

Safely Manage and Dispose of Pharmaceuticals



Energy

Implement Energy Efficiency and Clean, Renewable Energy Generation



Buildings

Support Green and Healthy Hospital Design and Construction



Water

Reduce Hospital Water Consumption and Supply Potable Water



Purchasing

Buy Safer and More Sustainable Products and Materials

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Practice Greenhealth is the organizational member of GGHH in the US and has over 20 staff members.

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REFLECTIONS



Dedicated staff of HCWH and partner organizations coordinate and deliver the GGHH program around the world.

The beginning of 2018 saw GGHH celebrating its biggest milestone in the history of the network: 1,000 institutional members. An important and inspiring moment for GGHH, it served as a broader indicator that sustainable health care is moving into the mainstream in all corners of the world. This accomplishment launched a year highlighted by expansion, evolution and exciting ambitions that are redefining what truly sustainable, climate-smart health care can be.

Over the course of the year, GGHH welcomed over 160 new members, representing the interests of over 4,000 hospitals and health centers from 6 continents. Membership in India and the Pacific region each close to doubled in just 12 months time. In every region of the world, health care institutions from small rural clinics to large health systems joined the GGHH network and pledged their commitment to protect public and environmental health.

Coupled with this growth, GGHH experienced engagement at new and unprecedented levels. We welcomed our first national health ministry member with the Republic of Maldives. The Ministry of Health of Costa Rica embedded the GGHH Agenda as their environmental policy. Important provincial level members such as the Victorian Department of Health and Human Services in Australia joined the network. National and sub-national governments are making sustainable health care a priority and using GGHH as a vehicle to achieve it.

Of equal importance to this growth, are the ambitious commitments and targets that GGHH members are challenging themselves to achieve. In 2018, they raised the bar to new heights. Targets to be carbon net positive, source 100% renewable electricity and produce zero waste are growing in number with members around the world.

The year 2018 also marked the launch of one of our largest scale projects to date: Sustainable Health in Public Procurement (SHiPP). Working in collaboration with United Nations Development Programme (UNDP) and with GGHH members across 10 countries, the project aims to promote and embed sustainable, low-carbon procurement in the health sector.

A convergence of progression, growth and heightened ambition took place in 2018. Long term aspirations to decarbonize the health sector and transform the global supply chain are now coming into focus. It is the GGHH community of members that is leading the way. And it is the collaboration amongst this community that will play an integral role in achieving these objectives and beyond.

NICK THORP
GGHH Network Director
Health Care Without Harm

NETWORK BREADTH

2018 was another year of steady growth for the GGHH network around the world. From Colombia to Canada, Nepal to New Zealand and all points in between, GGHH welcomed over 160 new members in 2018, representing a 16% increase in network membership.

These members brought with them their own networks of hospitals and health centers that they manage or work closely with. Over the span of 2018, the number of hospitals and health centers represented by GGHH members grew by over 12%.

2018 MEMBERSHIP HIGHLIGHTS



In India, membership doubled to over 50 institutions representing the interests of more than 7,000 hospitals and health centers.



In Latin America, over 50 members joined from countries across the region.



The GGHH network expanded into 5 new countries that include: Dominican Republic, Lithuania, the Netherlands, Pakistan and the Republic of Maldives.

USA and Canada

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

Europe

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

Global

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

Latin America

756 members representing the interests of 2,250 hospitals and health centers.

Asia

181 members representing the interests of 15,268 hospitals and health centers.

Pacific

55 members representing the interests of 1,079 hospitals and health centers.

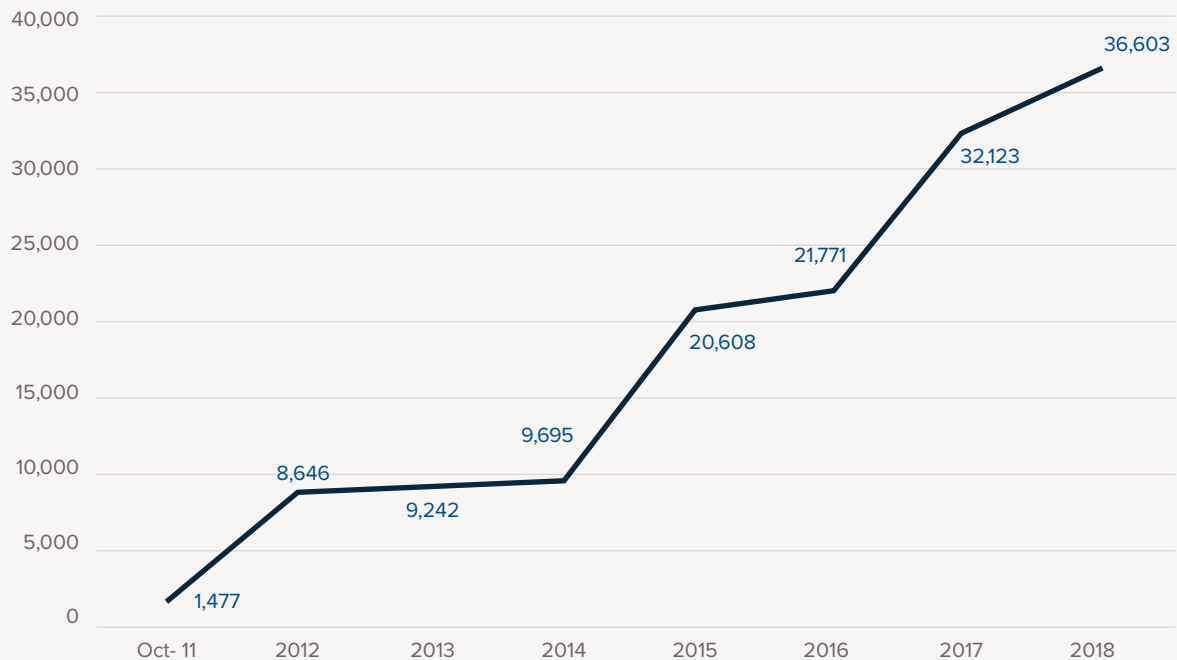
Africa

90 members representing the interests of 1,856 hospitals and health centers.

★ HCWH Regional Offices ● Strategic Partners

GGHH has 1,163 members in 55 countries who represent the interests of over 36,000 hospitals and health centers.

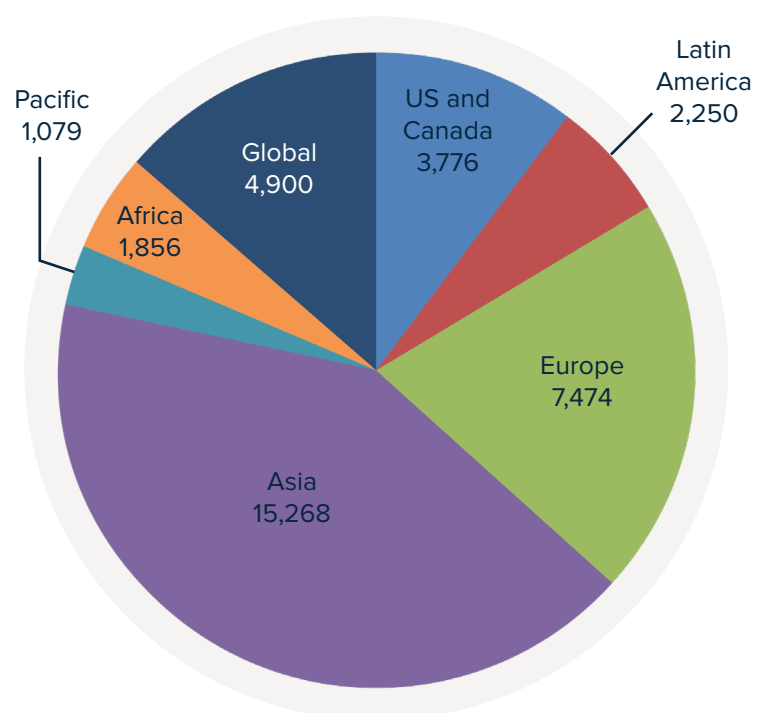
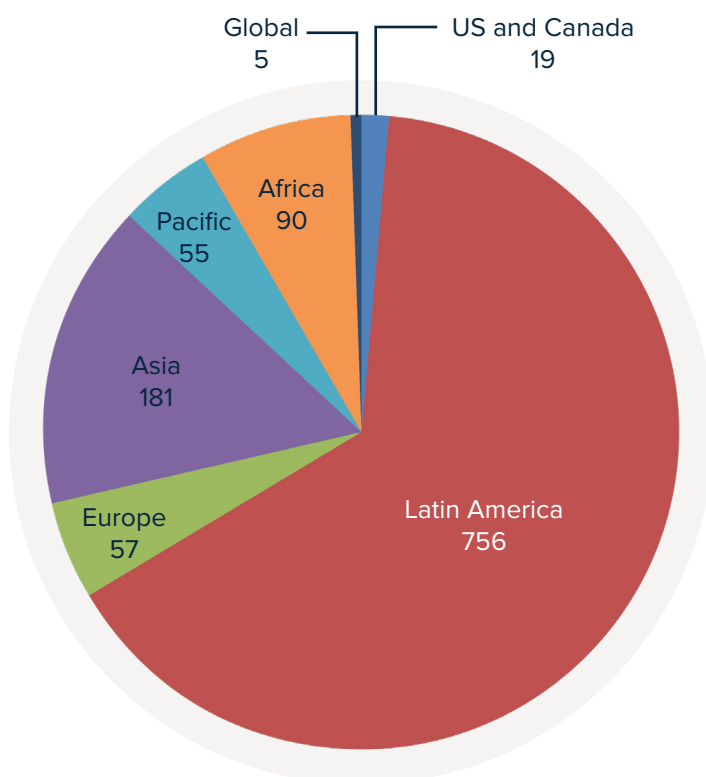
NETWORK BREADTH



— Hospitals and health centers represented by GGHH members around the world, per year

MEMBER DISTRIBUTION BY REGION

HOSPITALS AND HEALTH CENTERS REPRESENTED BY REGION



CLIMATE

The GGHH network around the world is stepping up to tackle climate change, which the Lancet identifies as both the biggest public health threat and opportunity of the 21st century. From hospitals and health systems mitigating their carbon footprints, to health care facilities in rural areas installing on-site renewable energy to ensure access to quality care, to health care organizations advocating for policies to address climate change, GGHH members are implementing climate-smart health care solutions and using their trusted voice to educate and engage the public and policy makers.

Health Care Climate Challenge

In 2018, HCWH relaunched the Health Care Climate Challenge with a new name, a new look and a renewed dedication from the health care sector to address climate change through its three pillars of mitigation, resilience and leadership. In its fourth year the Climate Challenge grew to include 181 institutions, representing the interests of over 17,500 hospitals and health centers in 26 countries.

In the United States, HCWH formally launched the Climate Challenge in 2018, which was met with endorsements from leading hospitals and health systems from across the country. Over half of the 25 new participating institutions who joined the Health Care Climate Challenge in 2018 are from the U.S. All 19 organizations in the Health Care Climate Council, a leadership body of U.S. health systems, committed to protecting their patients and employees from the health impacts of climate change and becoming anchors for resilient communities, joined the initiative.



Solar panels at King George Hospital in India.



HEALTH CARE Climate Challenge

CLIMATE



100% Renewable Electricity

With the re-launch of the updated Health Care Climate Challenge, HCWH developed an ambitious call for health care institutions to commit to using 100% renewable electricity (RE). This call was met with endorsements from 21 health care institutions, representing the interests of more than 2,600 hospitals and health centers in 12 countries.

Ten of these commitments are from GGHH members:

- Centre Hospitalier Universitaire – Mohammed VI, Marrakech (Morocco)
- Counties Manukau Health (New Zealand)
- Hospital Clínica Bíblica (Costa Rica)
- Hospital Nacional de Niños, Dr. Carlos Sáenz Herrera (Costa Rica)
- Kirtipur Hospital (Nepal)
- Radboud University Medical Center (Netherlands)
- SCR Piemonte (Italy)
- Stockholm County Council (Sweden)
- Sussex Community NHS Foundation Trust (UK)
- Tilganga Institute of Ophthalmology (Nepal)

Eight of these commitments are from members of Practice Greenhealth, GGHH organizational member in the U.S.:

- Advocate Aurora
- Boston Medical Center
- Gundersen Health System
- Kaiser Permanente
- Rochester Regional Health System
- Partners HealthCare
- University of California Health
- University of Vermont Medical Center

When they fully implement their RE commitments, these institutions will collectively be serving over 23 million patients per year at facilities powered by 3.3 billion kilowatt hours of renewable electricity. In doing so, they will have reduced their aggregate annual greenhouse gas emissions by over 1 million metric tons of carbon dioxide (CO₂e).

LARGE SCALE CHANGE

CLIMATE

Global Climate Action Summit

HCWH, in collaboration with its global partners showcased the commitments of GGHH members and the health care sector around the world to address climate change, through initiatives like the Health Care Climate Challenge and 100% renewable electricity health care commitments, at the Global Climate Action Summit (GCAS), which took place in San Francisco (U.S.) in September of 2018.

In conjunction with GCAS, HCWH organized a series of events for health care sector representatives to come together to discuss their opportunity and role to leverage leadership for climate action in all regions of the world.

- At the Global Climate Roundtable, health care leaders from around the world met with representatives from government, international agencies, and the nonprofit sector to foster greater collaboration to achieve shared climate goals.

- Leading health system members in the state of California in the U.S. formed the California Health Care Climate Alliance, in collaboration with HCWH. This leadership body is committed to protect the public from the health impacts of climate change, become anchors for resilient communities, and contribute to meeting the state's climate goals.

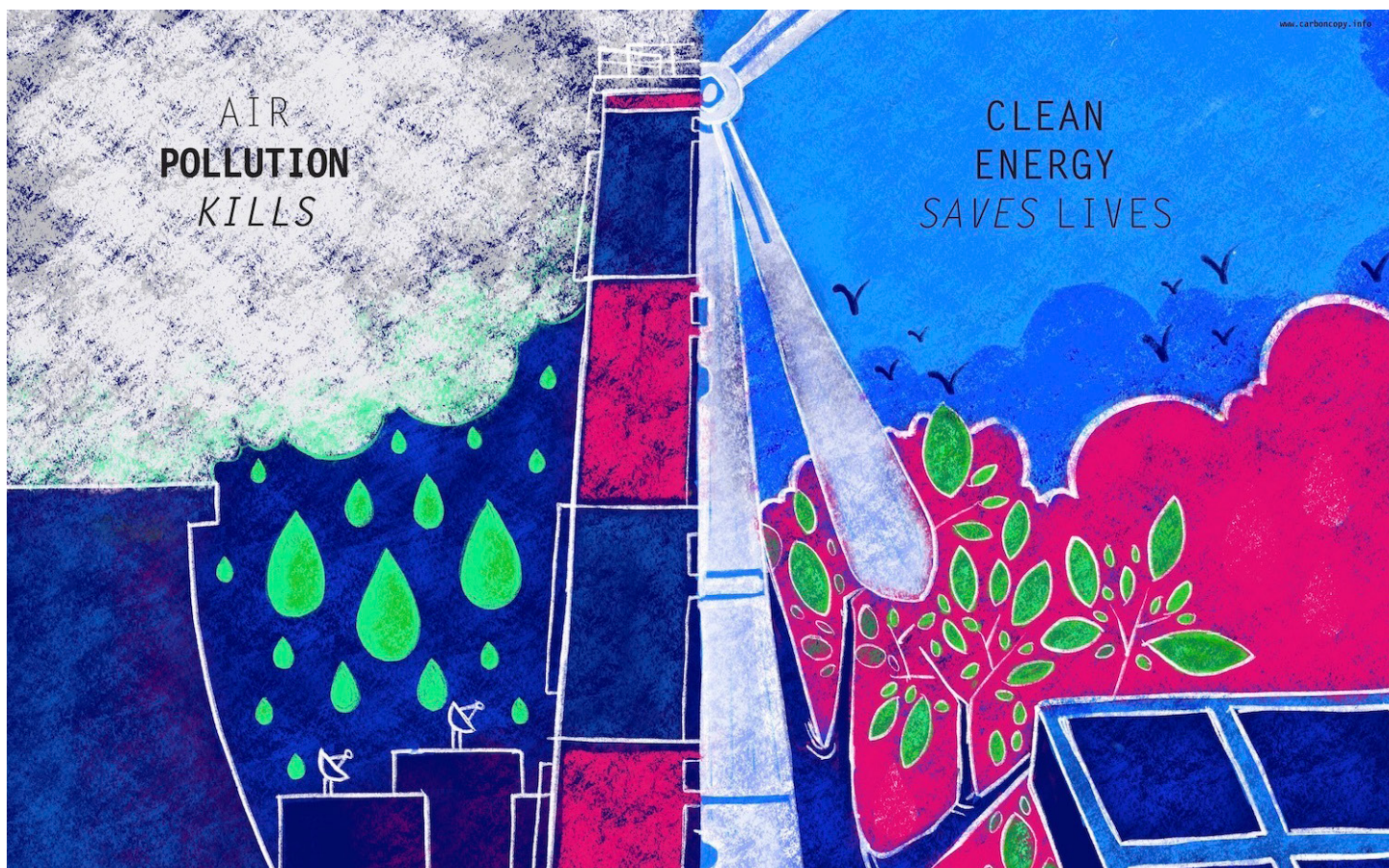
- HCWH, the University of California San Francisco Global Health Group, the US Climate and Health Alliance and the Global Climate and Health Alliance, co-hosted the Global Climate and Health Forum to build the capacity of the global health response to climate change.

- At the event, organizers announced the Call to Action on Climate and Health, aimed at accelerating stronger advocacy and action in addressing climate change through 10 priority steps.



Nancy Pelosi, then Minority Leader and today Speaker of the U.S. House of Representatives, addresses the Global Climate and Health Forum, which was co-organized by HCWH.

CLIMATE



GGHH member hospitals in India are monitoring air pollution and educating their communities on the health impacts. The Healthy Energy Initiative India developed advocacy and educational posters.

Air Pollution Monitoring- India

Air pollution in India ranks as some of the worst in the world, causing dramatic negative health impacts on the population. The Health and Environment Leadership Platform (HELP), the GGHH arm in India, the Centre for Chronic Disease Control and HCWH's Healthy Energy Initiative India have set out to address this issue by mobilizing the health care sector. In 2018, eight GGHH member hospitals across the country installed air pollution monitors. Hospital doctors and staff are stepping up as both educators for patients on

the health impacts of air pollution and advocates for the transition to clean, renewable energy. GGHH is currently exploring how this initiative, which is growing in India, can also serve as a model for GGHH members in other countries to replicate.

In collaboration with our partner Lung Cancer Foundation of India, HCWH also launched Doctors for Clean Air, a national physicians network to address air pollution.

LARGE SCALE CHANGE

PROCUREMENT

Sustainable procurement presents an enormous opportunity to reduce the environmental footprint of the health care supply chain. This can improve human health and reduce greenhouse gases, resource depletion, and chemical pollution around the world.

In 2018, HCWH rolled out a joint project with the United Nations Development Programme (UNDP). Sustainable Health in Public Procurement (SHiPP) is funded by the Swedish International Development Agency and will work across the UN system and in ten countries over four years. In 2018 the project launched successfully in the geographies where HCWH and its partners are managing implementation: China, India and via a regional project component, Latin America.

In each of the regions and countries HCWH is responsible for, project teams have:

- Conducted a baseline assessment of policies and practices currently in place at the governmental level and at GGHH member institutions.

- Identified GGHH members to participate in the project as pilot hospitals.

- Held national/regional workshops bringing together GGHH members, government representatives, manufacturers and local and international experts to discuss strategies and opportunities to progress sustainable procurement in the health care sector.

- Documented case studies detailing successful implementation of sustainable procurement practices from GGHH members.

UNDP is leading project implementation in Moldova, Ukraine, Tanzania, Vietnam and Zambia.

In 2019, HCWH's part of the project will expand to Brazil and South Africa and develop a second regional component in South East Asia.



In 2018 HCWH and UNDP launched the Sustainable Health in Procurement Project (SHiPP) in 10 countries. GGHH members at the Latin America SHiPP workshop, Cali, Colombia.

LARGE SCALE CHANGE

NATIONAL/SYSTEM ADOPTION

Over 120 members in the GGHH network are health systems that manage and oversee the operations of multiple hospitals and health centers ranging in size from 2-3 facilities to hundreds. By becoming members and committing their institutions to sustainable health care, both public and private health systems have a unique opportunity to engage a multitude of facilities, health care providers, patients and communities.

In 2018, 16 new health systems joined GGHH, including:

- 7 health systems that joined HELP, the Indian arm of GGHH
- The Victorian Department of Health and Human Services (Australia)

GGHH also witnessed growing national government engagement in the network. In addition to Chile, whose Ministry of Health mandated several years ago that all of the country's public hospitals join GGHH and work to implement the network's goals, in 2018 both the Republic of Maldives and Costa Rica made major commitments.

Ministry of Health of the Republic of Maldives

GGHH was honored to welcome the Ministry of Health of the Republic of Maldives. They are the first national health system to become a member in the history of the network.

In 2018, HCWH worked with WHO, Maldives and the Maldives Ministry of Health to assess existing hospitals and prepare a report that will guide policies and strategies for green climate-smart health care facilities. The recommendations in the report will support the Maldives efforts to reduce the environmental footprint of their health care facilities and increase their resilience to the impacts of climate change.

The Maldives is particularly vulnerable to flooding and rising sea levels driven by climate change. Even a one meter rise in sea-level could threaten the ability to inhabit most of the country's islands.



In 2018 the Ministries of Health in the Maldives and Costa Rica embraced GGHH. HCWH staff visited the Maldives to assess and provide guidance to develop green, climate-smart health care.

Ministry of Health of Costa Rica

In 2018, the Ministry of Health of Costa Rica adopted and embedded the GGHH Agenda and framework of 10 sustainability goals as their environmental policy. Engagement of the Agenda at this level is unprecedented in the history of the network. It is an incredible accomplishment for GGHH and a signal of the growing movement of sustainable health care into the mainstream.

Often seen a global environmental leader, Costa Rica has a target to be carbon neutral by 2021. By adopting the GGHH Agenda, they demonstrate the important role their health care sector has to play in reaching this goal.

In every corner of the world, GGHH members are innovating solutions and implementing programs to foster sustainable, climate-smart health care. GGHH staff in three HCWH regional offices and partner organizations in six additional countries provide guidance and support directly to members, while also focusing on strategic organizing and advocacy to foster a climate that promotes this transformation in the health sector. Working collaboratively, GGHH members and staff have achieved great progress to make that transformation a reality.

AFRICA

HCWH Partner groundWork manages GGHH in Africa.

From South Africa to Cameroon, Morocco to Madagascar, the GGHH network continued to expand around the region in 2018. While the main priority area for the vast majority of GGHH members in Africa is improving their waste management practices to ensure they reduce their impacts to the health of their surrounding community and environment, members around the region are also implementing innovative solutions to improve their energy efficiency, procurement of safer chemicals and building climate-smart facilities.

The South African Medical Association (SAMA) and the Health Professional Council of South Africa (HPCSA) accredited GGHH in 2018 to train and equip medical and environmental health practitioners with the skills and knowledge to incorporate sustainability models in their day to day activities. groundWork held two such trainings in two provinces: Gauteng and Western Cape.

With the expansive size of the continent members are building strong networks to engage with one another at the national level to collaborate on projects and share their experiences.

- In South Africa, members come together annually for provincial forums in the Western Cape, Gauteng, KwaZulu-Natal and the Free State. These forums provide opportunities for members to share their sustainability objectives, learn from one another and discuss strategies to achieve collective progress.
- GGHH member, the Association for Sustainable Development in Health Care (A2DS) formed in 2018 to organize and educate hospitals in Morocco and Northwest Africa on sustainable health care practices.



Member Spotlights

Mohammed VI University Hospital - Morocco

Through a series of energy efficiency programs, retrofitting of their facilities and the installation of renewable energy systems, Mohammed VI University Hospital in Marrakesh is well on its way to reach its commitment to power its buildings on 100% renewable electricity by 2030. In 2018, on-site solar panels and geothermal wells were powering 90% of their outdoor lighting, heating water used at their facilities and reducing their carbon footprint.

Netcare Limited - South Africa

groundWork, together with Netcare Limited, hosted the 2018 GGHH Exchange with a total of 22 delegates in attendance from four provinces. The purpose of this exchange was to learn and share experiences on health care waste management. Netcare recently installed an onsite waste treatment facility and hosted members to educate them on their new system and provide a venue for group discussions on sustainable health care waste management strategies and experiences.

GGHH IN ACTION

Health Care Waste Management in Africa

In 2018, HCWH began its second year of a collaborative project with the United Nations Development Program (UNDP), the World Health Organization (WHO) and our strategic partner in South Africa, groundWork, to support hospitals around the continent in the implementation of sustainable health care waste management programs and mercury device elimination.

Direct, on the ground implementation was the focus of 2018. African-built autoclaves for the sustainable treatment of health care waste were installed and operational in the 14 GGHH member hospitals in Ghana, Madagascar, Tanzania and Zambia. These hospitals also received over 2,300 mercury-free thermometers and blood pressure meters. All 24 pilot hospitals in the project are now mercury-free.

Pilot hospitals co-financed the autoclave installations through the construction of the facilities to house them and by covering staff and operational costs. The autoclave manufacturer and local agent in each country provided training for the installation, operation and maintenance of the new non-incineration technology to avoid the production of persistent organic pollutants (POPs) such as dioxins and furans.

In 2019, the project in Tanzania and Zambia will be linked with the launch of the SHiPP project in those countries to build capacity for sustainable procurement. They will take on the procurement of non-mercury thermometers and blood pressure devices and expand the procurement, installation and maintenance of solar photovoltaic electricity.



groundWork is educating health professionals in South Africa on climate-smart health care. They hosted a training on the subject in 2018 for the city of Cape Town.



The new health care waste management facility at Cape Coast Teaching Hospital, a GGHH member in Ghana.



HCWH and groundWork are working with GGHH members in 4 countries in Africa to implement sustainable health care waste management. Luqman Yesufu (on left), GGHH Africa Coordinator, with colleagues from Tanzania and Madagascar developing a mobile application for tracking waste.

ASIA: CHINA

HCWH Partner Rock Environment and Energy Institute (REEI) manages GGHH in China.

The GGHH China network is composed of a variety of hospitals, hospital associations and health institutes. Since 2013, REEI has worked closely with members at all levels, from government agencies, to professional associations to individual hospitals, to support and promote the development of green and sustainable health care in China.

Climate

In February 2018, working with GGHH member the China Academy of Building Research, REEI released the Chinese translation of the World Bank's Climate-Smart Health Care report, to introduce this new concept to the Chinese health sector. Throughout the year, climate-smart health care was a main focus of REEI's communications and engagement with members and institutions around the country working on climate and health.

Procurement

REEI began work on procurement through the SHiPP project in 2018 with a focus on research and baseline assessments.

In September, REEI interviewed hospitals in Zhejiang Province and Guangdong Province to learn about

their procurement policies and practices. Then in November, REEI convened a workshop on "Sustainable Procurement in the Health Sector, Leveraging the Health Sector's Low Carbon Development." Over 40 representatives from hospitals, international organizations, environmental groups and pharmaceutical companies attended to discuss strategies and opportunities to move the health sector in China on this issue.

Member Spotlights

Green Hospital Committee

The Green Hospital Committee (GHC), a GGHH member with more than 50 hospital members, supported REEI to engage Chinese hospitals in the Health Care Climate Challenge. Four hospitals, the first in China, signed agreements in 2018 to join the initiative.

The Second Hospital of Jilin University

In 2018, the hospital integrated sustainable procurement into several of its departments and projects. While upgrading appliances and their hot water supply, they installed new equipment and a heat exchange system that resulted in a decrease in water consumption by over 7% despite a 9% increase in health care services. In their pathology department, they installed a waste solvents recovery machine, which extracts xylene and ethanol from the waste solvents. This prevents environmental pollution, while reducing the cost of waste treatment.



Climate-smart health care is a key focus for HCWH partner REEI in China. They launched the Chinese translation of the World Bank's report in an event at the China Academy of Building Research in 2018.



HELP, the Indian arm of GGHH, doubled its membership in 2018. The HELP Steering Committee, comprised of health care representatives from across India, met in Kochi to plan for the future.

ASIA: INDIA

HCWH Partners the Centre for Chronic Disease Control (CCDC) and Public Health Foundation of India (PHFI) manage the Health and Environment Leadership Platform (HELP), the Indian arm of GGHH.

In only the second year of the program, the HELP (GGHH in India) member network doubled in size to include 56 institutions representing the interests of over 7,300 hospitals and health centers and more than 30,000 physicians.

HELP focuses on:

- Advocating for the importance of inter-sectoral, collaborative policymaking to address the health impacts of environmental pollution.
- Showcasing leadership in health systems by reducing their environmental and energy burden.
- Building the capacity of physicians to address the health impacts of environmental pollution.

In 2018, the HELP Secretariat made significant progress to advance sustainable, climate-smart health care into the mainstream in India in a variety of areas that include:

- Members worked together in sub-committees on energy and waste to develop strategies and collaborated with each other to address these key areas for the network and health sector in India.
- The Association of Healthcare Providers – HELP Green Hospital Awards were in place and will launch in 2019 to recognize the achievements of health care facilities at reducing their environmental footprint.
- The development of a National Green Hospital Standard moved forward in collaboration with Quality Accreditation Institute and National Accreditation Board for Hospitals & Healthcare Providers.

Member Spotlights

Holy Family Hospital

To reduce their carbon footprint, Holy Family Hospital in Dehli installed 4000m² of solar panels on the rooftops of their buildings. These arrays deliver clean, renewable energy directly to their facilities while reducing their emissions by 25 tons of CO₂ per month and saving them over USD 50,000 per year.



Nepal has a strong and engaged network of members working to protect the health of their communities. HECAF hosts regular member meetings to foster collaboration.

ASIA: NEPAL

HCWH Partner Health Care Foundation – Nepal (HECAF) manages GGHH in Nepal.

The 25 GGHH members in Nepal range from leading hospitals in the capital of Kathmandu to small clinics in rural parts of the country. In collaboration with HCWH, HECAF worked with these members to build sustainable health care waste management systems in hospitals across one of the world's most impoverished countries.

Implementing waste segregation and recycling systems, installing autoclaves to sterilize waste and building bio-digesters to generate energy from food waste, are a few of the ways these health care facilities worked to reduce their environmental footprint and protect the health of their community, while delivering quality care.

Renewable energy is emerging as an effective, climate-smart solution for hospitals in Nepal to continue operations during the frequent power outages that happen across the country.

Member Spotlights

Kirtipur Hospital

Established in 2006, Kirtipur Hospital provides around the clock emergency services and houses the Nepal Cleft and Burn Center. To address the 12-16 hour power blackouts they often experience, the hospital installed a solar system that provides a total of 35% of the hospital's energy needs. They are targeting to operate on 100% renewable electricity in the future as they expand their capacity from 100 to 300 beds.

Tribhuvan University and Teaching Hospital (TUTH)

Over the past 2 years, TUTH focused on its health care waste management system. By employing non-burn technology with autoclaves, zero waste recycling programs and bio-digesters to process biodegradable and pathological waste, the hospital is seeing impressive results. They are reducing their overall waste, generating USD 160 per month through recycling and recovering methane gas captured from their bio-digester for cooking at the facility.

SOUTH EAST ASIA

HCWH South East Asia manages GGHH in the region.

The South East Asia network of members is a diverse group of hospitals, health systems and health organizations from around the region. From public hospitals in the Philippines and Taiwan to large professional organizations, such as the Indonesia Hospital Association, to the Thai Department of Health's Green and Clean Hospitals program and private hospitals in Singapore, the network in the region is seeing engagement at all levels.

In 2018, HCWH South East Asia introduced a series of trainings and audits to support and engage GGHH members in tackling two key issues for the region: energy and plastics waste.

Energy: In partnership with the United Nations Industrial Development Organization (UNIDO) and the Center for Renewable Energy and Sustainable Technologies (CREST), HCWH hosted an Energy Management System training. GGHH member hospitals from the Philippines along with experts and staff from host organizations attended.

Plastics Waste: HCWH began two projects focused on plastics use reduction in 2018. Through these projects HCWH held several trainings for GGHH members in the Philippines and Indonesia on medical waste auditing with a focus on plastics

- Each of the participating GGHH member hospitals went through a three day plastics waste audit at their facility, resulting in a series of recommendations to improve their policies and procedures.
- HCWH Asia published a report, *Plastics in Health Care*, for GGHH members around the region and world to learn about the plastics issue, how to conduct an audit and opportunities to reduce and remove plastics from the waste stream.



In 2018, HCWH South East Asia trained GGHH members on medical waste auditing. Staff at Mary Johnston Hospital in the Philippines sort waste during their audit.

Member Spotlights

Universitas Gadjah Mada Academic Hospital - Indonesia

With the aim of reducing electricity usage and cost, as well as the carbon footprint of their facility, Universitas Gadjah Mada Academic Hospital launched a large-scale lighting retrofit. In total, the hospital invested in replacing over 2,900 fluorescent bulbs with LEDs. This will result in a cost savings of over 20%, while dramatically reducing the number of mercury containing lamps.

St. Paul Hospital, Tuguegarao - Philippines

The dialysis center at St. Paul Hospital in Tuguegarao consumes an average of 32,000 liters of water each month. To recycle some of this water the hospital purchased and installed a reverse osmosis system along with setting up piping to their laundry system. They are now repurposing over 62%, equal to 20,000 liters, of water from the dialysis center.



EUROPE

HCWH Europe manages GGHH in the region.

The GGHH network in Europe comprises 57 members from 11 countries ranging from Iceland to Germany to Lithuania. While members vary from individual public and private hospitals to subnational health services and national health organizations, the European GGHH network is very much a network of networks. Member organizations such as C2DS (France), TEM Foundation (Sweden), and Santhea (Belgium) work at national and regional levels to engage and support their hospital and health facility members to implement sustainable health care.

At the European Union and national levels there are laws, directives and regulations in place related to procurement, climate, pharmaceuticals, chemicals and other GGHH sustainability goals that guide health care facilities across the region. GGHH and HCWH Europe play an integral role to educate and support members in developing programs and procedures that are in compliance.

Increasingly, members in the region are not only meeting these laws but going one step further. Through procurement innovation, members in Sweden are working with manufacturers to build sustainable products. And with targets to be fossil fuel-free, carbon neutral and using 100% renewable electricity, members are demonstrating their leadership, regionally and globally, to reduce their carbon footprint.

European Health Care Climate Council

The European Health Care Climate Council (EHCC) is a new coalition of hospitals and health systems from across Europe that are committed to strengthening the health sector's response to climate change. In 2018, the EHCC grew to 9 members from 6 countries, of which 7 are GGHH members.

The EHCC issued a public statement in 2018 following the release of the IPCC 1.5 report, calling for the EU to set more ambitious energy efficiency and renewable energy targets.

Member Spotlights

National Health Service (NHS) - UK

Between 2007 and 2017 the carbon footprint of health and social care in England was reduced by over 18% - a reduction of over 6 million metric tons of CO₂e. This achievement is the result of NHS Trusts across England taking action to reduce their carbon emissions and working to achieve the targets set out in the Climate Change Act. In addition to the NHS Sustainable Development Unit (SDU), over 20 NHS Trusts and hospitals are GGHH members.

Landspítali - Iceland

Landspítali, the National Hospital of Iceland, aims to be a role model on environmental issues. Over the last several years, they have focused on sustainable procurement across their facility. They have discontinued use of plastic coverings on trolleys, reducing their use of plastic by 10 tons per year and saving USD 50,000 annually. Furthermore, Styrofoam boxes are no longer used for take-away food, which has led to a reduction of 123,000 boxes annually. Staff now use a high-quality, reusable box, which is also BPA-free.



Staff at Landspítali, the National University Hospital of Iceland, receive their food in reusable, BPA-free containers.



HCWH Europe hosts the CleanMed Europe conference to bring together the health sector from around the region. The 2018 event took place in Nijmegen, the Netherlands.

LATIN AMERICA

HCWH's Latin America team manages GGHH in Spanish speaking Latin America.

HCWH Partner Projeto Hospitais Saudáveis (PHS) manages GGHH in Brazil.

Since the launch of GGHH in 2011, the growth and development of the network in Latin America has occurred at an exceptional pace. In 2018 alone, over 50 new members joined GGHH from around the region, bringing the total to over 750 institutional members, which makes up 65% of the entire global network. Membership in Chile, Colombia and Brazil alone numbers in the hundreds in each country. Adding to the unique profile of the Latin American network is that over 75% of these institutional members are individual hospitals. This demonstrates the high level of engagement on the ground at hospitals around the region to implement sustainable health care.



Menos huella, más salud (Less footprint, more health)

In its third year, the Menos huella, más salud (less footprint, more health) program continued to grow, demonstrating the impressive impact GGHH members in Latin America are having in their efforts to protect public and environmental health. The program offers a package of tools and trainings to support hospitals and health centers in Latin America to measure and reduce impacts. In addition, it recognizes members who report data and show progress with a variety of awards.

In 2018, the HCWH Latin America team was honored to present 60 awards and recognitions to participating GGHH members in Latin America for their accomplishments.

Hospitals that Heal the Planet

To showcase the innovative and successful projects of GGHH members around the region that are participating in the Menos huella, más salud program,



The HCWH Latin America team is working with members from around the region to support the adoption of sustainable procurement. Attendees of the SHIPP conference/workshop in Cali, Colombia.

HCWH released the second edition of its report, *Hospitals that Heal the Planet*.

SHiPP- Conference and Workshop on Sustainable Procurement

In October of 2018, HCWH hosted a conference and workshop on sustainable procurement in Cali, Colombia. Over 80 attendees from health care facilities in Argentina, Chile, Colombia and Costa Rica came together to learn about and discuss opportunities to reduce their environmental footprint through the goods and services they purchase. From round table discussions to case study presentation to training sessions, the 3 days of events engaged and educated participants on successful strategies and approaches that they brought back to their institutions.

Member Spotlights

Ushuaia Regional Hospital - Argentina

The Ushuaia Regional Hospital, located in the southern most province in Argentina, launched a program to improve their facility procurement program. During this process, the hospital adopted environmentally preferable purchasing criteria to reduce their environmental impact. This has resulted in the hospital implementing policies to procure non-mercury medical devices and light bulbs, replace hazardous chemicals with safer alternatives and purchase PVC-free medical supplies.

Área de Salud Catedral Noreste - Costa Rica

Located in the capital city of San José, Área de Salud Catedral Noreste is a medium-complexity clinic that serves over 60,000 patients per year. With an investment of USD 2,600, the facility set out to improve their energy efficiency and reduce energy use. By focusing on LED lighting upgrades, improved lighting control and staff engagement, they have seen close to a 20,000 kW reduction in annual electricity usage. This has lowered their annual carbon emissions by over 6,000 tons of CO₂.



The Brazilian network of GGHH members is a robust and active network made up of over 200 hospitals, health systems and health care facilities from around the country. In 2018, PHS continued its efforts to expand the network, strengthen relations with members and provide them with the resources and tools to improve their environmental management and track their progress and success, specifically in the areas of climate and waste.

Climate

PHS is a global leader in engaging its network to commit to climate action through the Health Care Climate Challenge. Its focus on education has been key to this success. In 2018 PHS published an updated version of their Guide to Greenhouse Gas Emissions Inventory in Health Organizations and participated in a series of events to promote climate-smart health care and support members in calculating their footprint and setting targets for reduction.

Since 2015, 90 health care institutions in Brazil have participated in the Health Care Climate Challenge, with over 50 reporting on all three pillars of mitigation, resilience and leadership.

Waste

PHS continued its promotion and engagement of the Health Care Waste Challenge in 2018 with over 60 health care institutions participating and submitting data on their waste management practices. Through participation in the Waste Challenge and submission of data, GGHH members are working with PHS staff to understand opportunities and strategies for improvements.



PACIFIC

HCWH Partner the Climate and Health Alliance (CAHA) manages GGHH in the Pacific region.

There has been dynamic growth of the GGHH network in the Pacific region under the stewardship of a small team at CAHA. In 2018 the membership grew from 37 to 55 institutions, representing over 1,000 hospitals and health services.

New members include the Department of Health and Human Services (DHHS) in the state of Victoria. The Department's Environmental Sustainability Strategy 2018-2023 includes the following pledge: "We will join the Global Green Healthy Hospitals network and encourage public health services to join and actively participate in the network." This is a welcome acknowledgement of the value of the network by a state government that is a national leader on climate and energy issues. CAHA supports the implementation of the DHHS Strategy through participation in the Implementation Working Group. Other state governments in Australia are also acknowledging GGHH as the leading network for sustainability in health care.

Key Events

The Healthy Hospitals Healthy Planet Forum, featuring keynote speaker Dr. David Pencheon (Founding Director of the UK NHS Sustainable Development Unit), took place in 2018. GGHH Pacific Member Western Health, CAHA, and the Institute for Hospital Engineering Australia (IHEA) jointly hosted the event.



GGHH members are leaders in the sustainable health care field. Western Health Environmental Sustainability Officer Catherine O'Shea accepts their sustainability award.

Sessions included presentations on the carbon footprint of Australian health care, green pharmacy, behavior change for sustainability, low carbon models of care and inspiring case study examples of waste reduction and energy savings.

Also in 2018, CAHA hosted a Climate and Health Symposium in Melbourne, where approximately 60 attendees gathered to discuss issues of climate and health in Australia. The Symposium created opportunities for collaboration and the sharing of challenges, successes and opportunities surrounding climate change and health to generate momentum to help accelerate coordinated and effective action.

Member spotlights

Counties Manukau District Health Board - New Zealand

Counties Manukau District Health Board (DHB) have continued their climate leadership, reducing greenhouse gas emissions by 21% since 2012. Using a combination of initiatives including switching anesthetic gases, commuter share-ride programs, recycling and reducing waste, the DHB has realized cost savings of USD 340,000. The Counties Manukau DHB achievements have been recognized by New Zealand's Assistant Health Minister who said the DHB is "setting an example to the rest of the health system on how it is done."

Western Health - Australia

Western Health has been recognized for its leadership in sustainable health care, winning the health category of the Victorian Premier's Sustainability Awards. Their program to recycle single-use metal instruments enables them to recover high-quality metals and avoid unnecessary waste and disposal costs. To date they have recovered approximately 500 kilograms of recycled steel, around 80% of the single use metal instruments purchased by the service.



HCWH US convenes the Health Care Climate Council, made up of leading health systems from around the country. Members of the Health Care Climate Council at the Global Climate Action Summit.

NORTH AMERICA: UNITED STATES

HCWH U.S. implementation arm Practice Greenhealth is the organizational member of GGHH in the U.S.

The United States is home to some of the world's leading hospitals and health care providers. This type of cutting edge, high tech health care can result in a large environmental footprint. In response, hospitals and health systems around the country are implementing ambitious projects and goals to reduce their impact.

In 2018, members raised the bar on their sustainability commitments and are employing innovative strategies to achieve them. Participation in the Health Care Climate Challenge increased to over 20 health care institutions in the U.S. Eight hospitals and health systems in the U.S. took their commitments to the next level by pledging to power their facilities with 100% renewable electricity. And 22 health systems also joined We Are Still In, a cross-sectoral movement committed to meet the goals of the Paris Agreement.

To assist members in taking climate action at their institutions, Practice Greenhealth released a Greenhouse Gas Reduction Toolkit in 2018. This comprehensive resource supports members in understanding why this issue is critical to the mission of health care, how to develop a greenhouse gas inventory, how to set a reduction goal, and how to make progress towards that goal. The toolkit includes an Excel-based tracking tool specifically designed for hospitals and a PowerPoint template to make the pitch to leadership on setting a greenhouse gas reduction goal.

Health Care Climate Council

The U.S. Health Care Climate Council (HCCC), established in 2014, is a leadership body of health systems that are committed to protect their patients and employees from the health impacts of climate change and become anchors for resilient communities. HCCC members implement innovative climate solutions, inspire and support others to act, and use their trusted voice and purchasing power to move policy and markets to drive the transformation to climate-smart health care. The 19 health systems of the HCCC represent nearly 500 hospitals in 32 states, employ one million people, and generate over USD 180 billion in annual operating revenue.

Member Spotlights

Rochester Regional Health

In 2017, Rochester Regional Health became the first U.S. health system to publicly announce a 100% renewable electricity goal by 2025, and in 2018 they joined the Health Care Climate Council and the Health Care Climate Challenge. They have made significant progress on their goal with a 500-kilowatt solar array at system headquarters, a 5.5 megawatt solar farm, additional on-site solar, and an off-site 10 megawatt wind farm.

GGHH TOOLS AND RESOURCES

Global Green and Healthy Hospitals offers a diverse array of resources and tools for members. From cutting edge online platforms that connect members with colleagues and experts from around the globe, to educational tools and events that keep the community on the pulse of the sustainable health care field, to initiatives that bring together the global health sector to address environmental and public health issues, GGHH has something to assist every member achieve their sustainability goals.

In 2018, GGHH launched new and exciting calculation tools for members, while continuing to expand and develop existing resources.



New Features in the Hippocrates Data Center

The Hippocrates Data Center is a cutting edge resource that puts the power of data management, goal benchmarking, and progress tracking into the hands of each GGHH member.

Anesthetic Gas Carbon Footprint Calculator

In 2018, GGHH added an anesthetic gas carbon footprint calculator to its suite of tools and data forms available for members on the Hippocrates Data Center.

Waste anesthetic gases make a significant contribution to a hospital's overall greenhouse gas emissions. Nitrous Oxide (N₂O), the most commonly used gas in many health care settings, has a 114-year lifetime in the atmosphere and a global warming potential of almost 300 times that of carbon dioxide. Anesthetics, such as isoflurane, desflurane and sevoflurane, are short-lived climate pollutants with a 1-14 year atmospheric lifespan, and have been estimated to have a global warming potential 500 to 3,700 times that of equivalent amounts of CO₂.

Built by HCWH Europe, the anesthetic gas carbon footprint calculator provides members with the ability to calculate the greenhouse gas emissions related to the use of four types of anesthetic gases: sevoflurane, isoflurane, desflurane and nitrous oxide. With this data and knowledge, health care practitioners can make informed decisions to reduce their footprint.

Energy Use Greenhouse Gas Emissions Calculator

The energy data form in Hippocrates allows members to input and track the energy consumption of their facilities by source. In 2018, GGHH built a carbon emissions calculator to assist members in understanding their carbon footprint from their reported energy use. Using the location of the health care facility along with the amount and type of energy used, members can receive a calculation of their related greenhouse gas emissions. This information is integral to setting a baseline and tracking the progress and success of strategies aimed at reducing a health care facility's carbon footprint.



GGHH launched a new anesthetic gas calculation tool to assist members in understanding their impact. Staff at Vivantes Klinikum Neukölln in Germany explain their practices.

GGHH Case Studies Library

Creating a network of practice and collaboration has been a key objective of the GGHH network since its inception. By sharing experiences, knowledge and examples of successful sustainability projects and programs, GGHH anchors a learning community that can accelerate change at health care facilities around the world.

The GGHH Case Studies Library provides a wealth of knowledge and on the ground examples of health care sustainability directly from the members who implemented the project. Members can learn about each other's projects, strategies and approaches and connect with one another to deepen their understanding and collaborate.

In 2018, GGHH members submitted over 40 new case studies, bringing the library total to 212.



GGHH Connect

An innovative, online platform, GGHH Connect serves as the connective tissue of the network. It houses all member resources and tools, providing access to the knowledge and experience of leading hospitals, health systems, and experts from around the world.

First launched in 2014, GGHH Connect has become an integral part of the network and a major asset to the member community. With the continued evolution of technology over the past 5 years, GGHH will go to work to build GGHH Connect 2.0 in 2019. It will take the best of the current platform and explore new features and functions to ensure GGHH members have the best tool possible to assist them on their sustainability journey.

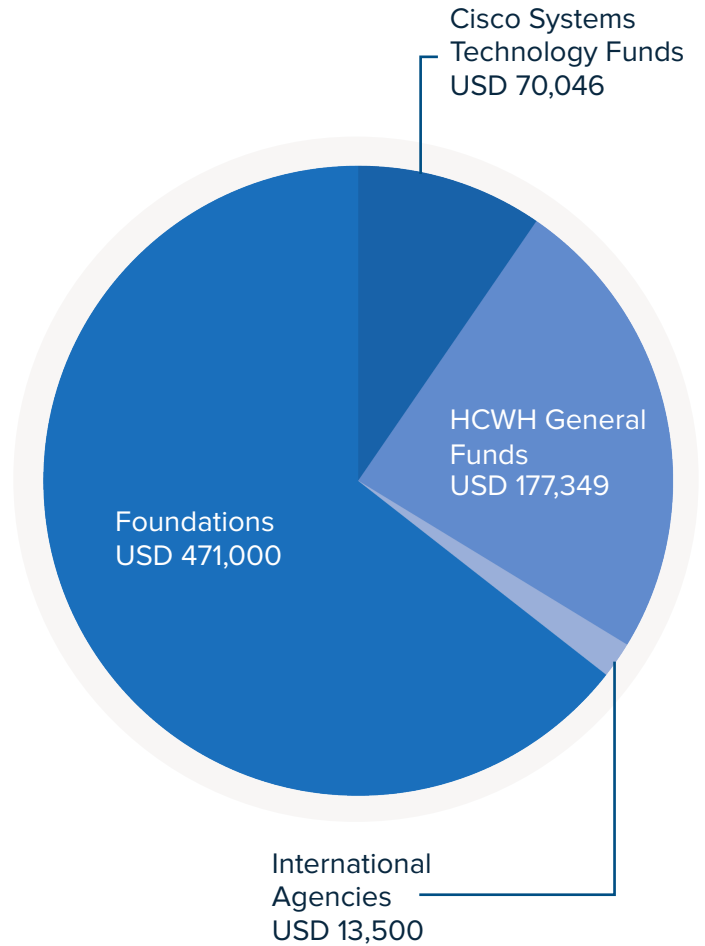


Counties Manukau District Health Board staff in New Zealand celebrate their carbon footprint reduction.

2018 INCOME

In 2018, total revenue for GGHH was USD 731,895. Revenue sources include:

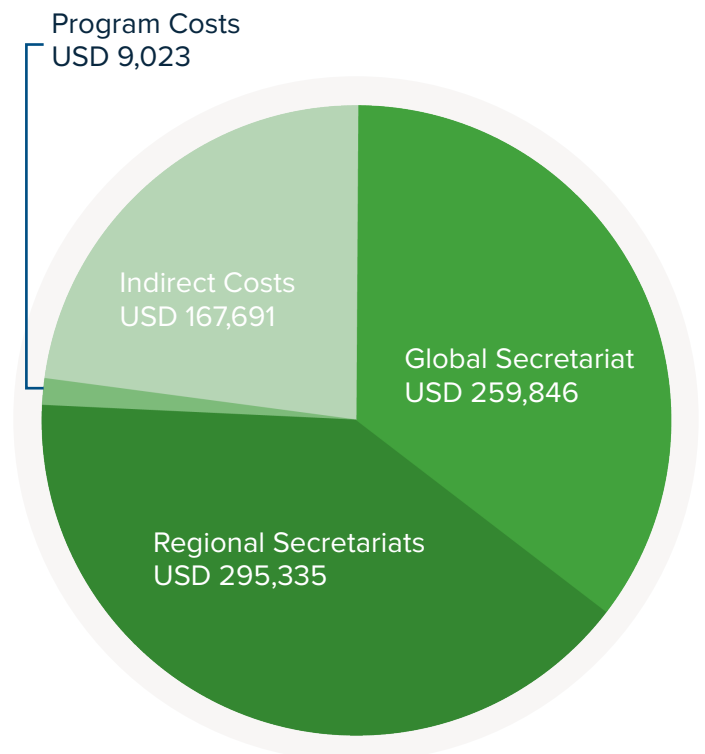
- A number of philanthropic foundations that provide general funding to HCWH.
- Cisco Systems, which has provided resources over several years to support the development of GGHH Connect and web-based tools for the network.
- International agencies that funded the assessment with the Republic of Maldives



2018 EXPENSES

GGHH uses the majority of its annual revenue to deliver, develop and administer the program around the world.

Income funds staff at HCWH regional offices and partner organizations who manage and coordinate the network at the national, regional and international level.



ABOUT HCWH

Global Green and Healthy Hospitals is a project of Health Care Without Harm.

HCWH works to transform health care worldwide so that it reduces its environmental footprint and becomes a community anchor for sustainability and a leader in the global movement for environmental health and justice.

HCWH's vision is that health care mobilizes its ethical, economic and political influence to create an ecologically sustainable, equitable and healthy world.

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