

# Options and the climate health nexus



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**Options views climate change as the greatest global challenge of our time.** We lead emerging work on the sustainable use of renewable energy in health, shock resilient and climate sensitive infrastructure, and reducing the health system's own direct carbon footprint to build a greener future.

“Many nations are poorly prepared to face threats to health from climate change, and with our interconnected global economy, this will have an impact on the whole world, we need to take urgent action before the effects become absolutely devastating.” Sir Andy Haines

Climate change, increased carbon dioxide in our atmosphere, global warming, air and ocean pollution pose catastrophic impacts to the health and wellbeing of people and are damaging the planet. These changes exacerbate gender inequality, resulting in more pronounced negative health impacts for women and children. Conservative estimates suggest that an additional 250,000 people per year will die between 2030 and 2050 because of the climate crisis.

Global health systems also contribute to climate change, with estimates suggesting that they contribute 5% of the world's greenhouse emissions<sup>1</sup> – the same as a mid-sized country. Relying on carbon fuelled supply chains to deliver health care, combined with pollution from waste disposals, undermines the very purpose of the health care system to improve people's wellbeing.

Without climate change mitigation strategies, already burdened health systems will face increased challenges making the goal of universal health care unobtainable.

**Options** works with governments, communities and partners to build systems that support people, especially women and children, and the planet to thrive.

## Innovative health infrastructure for efficient and sustainable health care



In Nepal, **Options' Nepal Health Sector Support Programme** has been at the forefront of designing hospitals and health facilities that integrate climate resilience into structures that can withstand earthquakes of high magnitude. Our visionary designs and innovative engineering create spaces that deliver good quality health services, are safe and welcoming and augment the natural environment. We consider multiple ways to reduce energy loads in the buildings: maternity wards are built south facing to take advantage of the natural heat of the sun for warmth for newborns, lighting is reduced in favour of daylight where possible, and air conditioning uses natural ventilation rather than relying on damaging hydrofluorocarbons, allowing clean air and cooling breezes throughout the hospital wards.

## Infrastructure assessments, policies and standards to promote resilience



Following a vulnerability assessment of Nepal's health infrastructure, **Options** developed a framework for maintenance and development. Our team evaluated health facilities' electricity supply, including whether they were connected to the national supply, mini-grid, renewable energy or no source. The facilities' water supply, land orientation and gradient, site location and risks to natural disasters were also recorded. Geographic information system mapping for different types of disaster identified the exposure and risk level of health facilities and provided an overall indication of public health infrastructure risk.

An increase in climate change-induced hazards is a reality. Consequently, national construction guidelines need to be revisited to ensure that design and structural parameters, construction techniques and materials are within safe margins and performance for projected changes in climatic conditions. We provide advice and support to national and subnational governments that encourages them to adopt and implement standard policies and guidelines to design and construct health infrastructure that mitigates environmental risk, and mainstreams gender considerations.

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<sup>1</sup> Lenzen, M et al. The environmental footprint of health care: a global assessment. The Lancet Planetary Health, 2020 Vol 4 e271-79

## Clean energy solutions for sustainable health services



**Options** supports governments to embed sustainable energy solutions in their health systems and within policy. In Kenya, our **Maternal and Newborn Improvement – Quality of Care** project installed **solar powered energy in 33 health facilities** across Bungoma County. Each site was equipped with rainwater harvesting and storage systems as well as photovoltaic solar power and solar water heating installations that were tailored to the energy needs of each health facility. Through harnessing renewable energy, these facilities reduced their carbon emissions and energy related costs on their already over-stretched budgets and improved the quality of care provided to women and their newborns.

## Enhancing health system preparedness and responsiveness



The COVID-19 pandemic has highlighted the health implications of rapid urbanisation, environmental degradation, land encroachment, population growth and globalisation. Diseases can more easily pass from animals to humans and have the potential to rapidly spread across nations and globally.

**Options** works in partnership with governments and communities in countries most vulnerable to the effects of climate change to strengthen public health security. During the Ebola crisis in Sierra Leone, our focus rapidly shifted from strengthening the day to day resilience of the country's health system to helping it respond to the acute crisis. By working with national laboratories across the country, **we improved the management of vital laboratory data** to ensure prompt turnaround of lifesaving Ebola test results.

**Options** is a critical partner to federal and subnational governments in managing the response to the COVID-19 emergency. In several countries, we have used a **COVID-19 readiness tool** to assess facilities' ability to prepare and respond to the outbreak. Our Nepal Health Sector Support Programme designed COVID-19 treatment wards at major hospitals and at the international airport.

## Enabling communities in urban centres to thrive



The urban population has been growing at a significant rate, particularly in countries in the global south. It is estimated that by 2050, 70% of the world's population will live in cities.<sup>2</sup>

Building healthy cities requires an integrated approach across multiple sectors to enable urban communities to achieve health and wellbeing in their day to day lives.

In Bangladesh, which is highly vulnerable to climate change and has a growing urban poor population, we delivered the **Health Systems Strengthening for Urban Health** programme. Working with the Ministry of Health and partners we mapped all public, private and NGO facilities on an online **Urban Health Atlas**, we prepared city health profiles which included information on population, disease prevalence, and health facilities, and enabled identification of service gaps as well as developed city health dashboards. These tools were used to inform city planning and decision-makers, and improved coordination between government departments at national level to better align priorities and budgets.

## Improving access to water, sanitation, hygiene and nutrition



Climate change is having a detrimental impact on communities' access to clean water, quality sanitation and nutritious food. **Options** conducted health facility assessments in Sierra Leone to ensure funding and resources were targeted to address gaps in water, sanitation and hygiene (WASH) services. In India, we provided technical and management capacity building to improve access to health, nutrition and WASH services, ensuring reforms were sustained far beyond the life of the Government Health and Nutrition Plan.

<sup>2</sup> UN. News. 2018. <https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html> (accessed July 6 2021)



## About us

Options is an international development consultancy delivering innovative solutions to some of the world's most complex health challenges. We drive transformational improvements in the health and well-being of the most vulnerable. Our work supports the vision of a world where women and children can access high-quality health services they need, without financial burden.

With over 28 years' experience, Options has a proven track record in building partnerships throughout Africa and Asia and tailoring approaches to the local context.

Options is continuously looking forward, innovating, and co-creating new solutions with our partners and clients to address the climate change and health nexus. Further investments and partnerships will enable us to transform the problems of today into the solutions of tomorrow.

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