

# Climate Resilient, Gender Responsive Eye Care

An Intersectional Guide



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# How to use this guidance

This document is a practical **guidance and advocacy tool** for advancing **integrated action on climate and eye health, ground in an intersectional gender equity approach**.

It supports decision-makers, planners and eye health actors to embed eye health and equity in climate and health planning, and to strengthen services in ways that improve access and build climate resilience. It can be used to:

- inform national and sub-national health, climate adaptation and disaster risk management policies and plans
- support advocacy and dialogue with decision-makers on inclusive, climate-resilient eye health
- guide the design and adaptation of eye health programs and services
- complement existing global and eye health sector-specific frameworks on climate action, eye health, gender and other intersecting dimensions of equity



# Executive Summary

The climate crisis is already affecting eye health and deepening existing inequities in who can access care, whose needs are prioritised, and how well health systems can respond. Women and girls, older people, people with disabilities and others facing poverty, discrimination or exclusion are often more exposed to climate-related risks and more likely to face barriers to timely, affordable and appropriate eye care.

This guidance document presents a practical framework for governments, health planners and eye health actors to adopt an integrated approach that connects climate resilience, eye health and intersectional gender equity, ensuring eye health is an essential part of efforts to build more resilient, inclusive health systems.

This requires a shift from isolated interventions to more coordinated action that embeds eye health into climate-sensitive public health planning, disaster preparedness, community health systems and inclusive policy processes. Climate-related eye health risks should be incorporated into national health strategies, adaptation plans, risk assessments and preparedness efforts, with clear responsibilities, financing and accountability. It also highlights the importance of understanding how gender, age, disability, poverty and other structural factors intersect to shape both climate vulnerability and access to care.

To support integrated action, the guidance sets out eight priority recommendations across advocacy, planning and design, service delivery, coordination and partnerships, alongside key approaches to put each recommendation into practice:

- 1. Elevate eye health as a public health priority in climate sensitive health planning**
- 2. Apply an intersectional equity lens to both climate and health decision-making**
- 3. Strengthen climate-resilient primary and community eye prevention, promotion and care**
- 4. Use outreach and telehealth strategically to reduce inequities and emissions**
- 5. Embed eye health into disaster preparedness and response**
- 6. Partner with women's organisations, organisations of people with disabilities (OPDs) and other local organisations**
- 7. Design facilities and systems for climate resilience, accessibility and dignity**
- 8. Invest in women's leadership, workforce inclusion and inclusive data driven decision making**

The report also includes 4 detailed case studies from Eritrea, Bangladesh and India, Sierra Leone and Nepal, which offer real world practice examples of how an integrated approach to climate, eye care and inclusion can be achieved.

# 1 Introduction

## Why an integrated approach to climate action, eye care and intersectional gender equity matters

***The World Health Organization recognises human-made climate change as the single greatest global health threat of the 21st century. <sup>1</sup> Its impacts on eye health are already being felt.***

Rising temperatures, changing rainfall patterns, worsening air pollution, increasing food insecurity, and more unpredictable and severe extreme weather events are increasing risks to vision and eye health. These include higher rates of trachoma,<sup>2</sup> Vitamin A deficiencies,<sup>3</sup> acute eye injuries,<sup>4</sup> glaucoma and severe allergic eye diseases.<sup>5</sup>

Beyond direct health impacts, the climate crisis places a growing strain on health systems, increasing the risk that avoidable vision loss goes untreated. Damage to facilities, power and water disruptions, and supply, transport and outreach delays can lead to delayed treatment or chronic disease management, lost or broken spectacles, and reduced follow-up care. Good vision and accessible eye care are also critical enablers of climate resilience, supporting mobility, livelihoods, learning, and safe participation in emergency response and recovery.

### **The eye health impacts of the climate crisis are not felt equally.**

Climate-related risks to eye health are shaped by multiple social, economic and political factors that influence people's exposure to hazards, their vulnerability to harm, and their ability to access timely and appropriate care. Women, girls and people of diverse genders and sexual orientations, often face heightened climate-related health risks compared to men and boys,<sup>6</sup> driven by harmful gender norms, unequal access to resources and decision-making, structural discrimination and stigma, particularly in low- and middle-income countries.

Poverty, age, disability and other structural drivers of health inequity often intersect with gender inequity to further increase climate- and displacement-related eye health risks, including:

#### **Increased exposure risks, due to gendered social and economic roles**

Women and girls often face a higher risk of infectious eye conditions such as trachoma due to gendered roles like caregiving and water collection.<sup>7,8</sup> Worsening water scarcity, pollution and hotter and drier conditions intensify these risks, making hygiene practices like face washing harder to maintain while increasing exposure to dust, flies, and contaminated water sources.<sup>9,10</sup>

Women are also over-represented in informal work<sup>11</sup>, particularly outdoor work, where worsening heat, dust, air pollution and a lack of safety protocols increase risks of eye injuries<sup>12</sup> and UV exposure.

## Poverty

Women, especially those aged 25–34, are more likely than men to live in extreme poverty (around 1 in 10 globally).<sup>13</sup> Poverty increases vulnerability to climate shocks, worsening health risks, food insecurity and reducing financial access to care. In many countries women are less likely than men to have health insurance,<sup>14</sup> with 49% of women reporting that the cost of seeing a doctor prevents them from seeking care.<sup>15</sup>

## Age

Climate hazards such as increased UV radiation, extreme heat and smoke can worsen age related eye conditions like cataracts, dry eye disease, and age-related macular degeneration (AMD).<sup>16</sup> Women are more likely than men to experience certain age-related eye conditions due to longer life expectancy, menopause-related hormonal changes, higher rates of some autoimmune disorders and structural barriers that limit older women's access to care.<sup>17</sup>

## Disability

People with disabilities are up to four times more likely to be injured or die in climate-related disasters<sup>18</sup> and often face barriers to information, evacuation and eye health services, including the ability to repair or replace spectacles and other assistive products.<sup>19</sup> These barriers are structural, driven by gaps in inclusive planning and public education, inaccessible infrastructure and exclusion from decision-making. Gender inequity can compound these impacts, with women with disabilities facing greater constraints on resources and mobility, heavier caregiving burdens, and higher risks of violence and neglect during emergencies.<sup>20</sup>



## **Unequal access to climate information and decision-making roles**

Particularly in lower-income and less democratic contexts, women often have less access to formal information on climate change and its health impacts, and less confidence to engage with it.<sup>21 22</sup> Educational disparities and limited democratic freedoms widen this gap.<sup>23</sup> Alongside the underrepresentation of women in eye health leadership, these barriers reduce women's influence over climate and eye health policy, planning and decision-making. This can lead to gendered risks being overlooked and lower investment in culturally appropriate services, including eye care.

## **Economic Abuse**

Gender norms and financial inequalities often limit women's ability to seek timely eye care, with household resources prioritised toward men and mobility restrictions increasing delays and costs of treatment.<sup>24</sup> The climate crisis intensifies these barriers by placing additional financial strain on households and disrupting health services,<sup>25</sup> further reducing access to already limited eye health care and amplifying existing gender-based discrimination in healthcare decision making.

**Women, girls, gender-diverse people and those facing multiple forms of discrimination are more likely to face preventable eye conditions, delayed treatment and poorer outcomes as the climate crisis accelerates.**

**How governments, health planners and eye health actors respond will shape whether climate action helps to reduce inequities and strengthen health systems - or reinforces existing gaps.**

**An integrated approach that centres equity, inclusion and climate resilience can both protect the right to vision and promote more just, responsive and sustainable health systems for all.**

# **2 Recommendations for inclusive, equitable, climate-resilient eye care for all**

## **1. Elevate eye health as a public health priority in climate sensitive health planning**

Climate-related risks to vision should be integrated in planning assumptions, targets, budgets, coordination arrangements and preparedness actions across national health strategies, health sensitive national adaptation plans (H-NAPs) and disaster risk management frameworks.

### **Key approaches**

- Coordinate stakeholders across eye health, climate, gender, disability, emergency preparedness and public health systems so eye health is integrated into climate adaptation planning, emergency preparedness and routine health system strengthening. Advocate for clear focal points and joint work planning in areas such as risk assessment, preparedness, training, procurement and monitoring.
- Use practical entry points in existing processes (such as H-NAPs, national health strategies and interventions, emergency preparedness and response policies and plans) to advocate for and support inclusion of eye health in priority hazard profiles, with clear budgeted actions and timelines.
- Integrate climate-related eye health risks and indicators into routine public health education, surveillance and risk assessments, including hazard-specific planning for air pollution and smoke events, extreme heat, floods and disease outbreaks affecting eye health.

## **2. Apply an intersectional equity lens to both climate and health decision-making**

Policy and planning processes should explicitly assess who is most at risk, who faces the greatest barriers to care, and how climate shocks may amplify existing inequities in eye health, so that resources, service models and preparedness efforts are targeted where they are needed most.

### **Key approaches**

- Undertake intersectional risk, barrier and enabler analyses as part of routine health and climate adaptation planning and policy making, with specific attention to women, girls and gender-diverse people. This should include mapping exposure to hazards, eye health needs, and access barriers such as cost, mobility, safety and access to information.

- Analyse how power operates within systems - including who makes decisions, who controls resources, and whose voices are excluded - and use this analysis to inform policy and resource allocation.
- Move towards shared decision-making by embedding meaningful participation across climate-sensitive eye health planning, design and implementation. Use accessible formats, venues, languages and timings, partner with trusted intermediaries, and include feedback and accountability mechanisms (for example, community scorecards and complaint-response systems) so women, older people, people with disabilities, gender-diverse people and displaced communities can shape design and monitor delivery.
- Integrate climate vulnerability assessments into eye health project screening and design, including analysis of differential risks and access barriers for priority populations.
- Use disaggregated data to guide health and climate adaptation planning, target setting and accountability, including by gender, age, disability, and displacement status. Track service disruptions and recovery after extreme events, and routinely review results to adapt outreach, referral pathways, pricing/subsidy approaches and continuity plans.

## Case study

### Climate-resilient, gender-responsive trachoma elimination in Eritrea

Eritrea's nationally led trachoma elimination program illustrates how **cross-sectoral action** can address the climate-sensitive drivers of infectious eye disease, while advancing more equitable access to prevention and care. In trachoma-endemic settings, drought, water scarcity, flooding, and extreme heat can disrupt hygiene practices, reduce access to safe water, and undermine progress towards elimination. These risks often affect women and girls disproportionately because of multiple socio-economic barriers to accessing services.

In response, the Ministry of Health, with support from The Fred Hollows Foundation, UNICEF and other partners, strengthened implementation of the Facial Cleanliness and Environmental Improvement components of the SAFE strategy, through coordinated action across eye health, environmental health, Water, Sanitation and Hygiene (WASH), education, and local administration.

A central feature of this approach was the use of WASH as both a public health and resilience entry point. Community-based hygiene promotion, Community-Led Total Sanitation programs, and school-linked WASH activities were used to support face washing, safe sanitation, and healthier household environments in priority areas. By linking eye health objectives with local WASH systems and community platforms, the program helped reduce environmental risk factors for trachoma while reinforcing behaviours that are essential for sustaining elimination gains, including during periods of water stress or service disruption.

The program also reflected an equity-focused approach. It recognized that gender inequities can intersect with poverty, age, disability, remoteness, and climate vulnerability, increasing exposure to infection and limiting access to services. Community mobilization therefore engaged women, caregivers, community health agents and local leaders in behaviour change, follow-up and referral. This helped address practical barriers such as time constraints, mobility limitations and decision-making dynamics that can prevent women and girls from accessing water, hygiene facilities, and eye care.

As Eritrea moved closer to elimination thresholds, these efforts were increasingly linked to longer-term system strengthening. Surveillance, reporting, and case management were embedded within routine structures to help maintain readiness for potential recrudescence, including risks associated with climate variability, population movement, or service interruptions.

Eritrea's experience shows that trachoma elimination can do more than reduce disease. When WASH, equity and climate risk are built into program design, elimination efforts can also strengthen community resilience, protect access for those most at risk, and support more sustainable eye health outcomes.



### 3. Strengthen climate-resilient primary and community eye prevention, promotion and care

Equity-responsive primary and community care approaches delivered closer to where people live are key strategies to improve prevention, early detection, continuity of care and equitable access for underserved and marginalised populations, including women and girls.<sup>26</sup>

Primary and community-based care models can also reduce healthcare's climate footprint compared to energy intensive specialist and hospital-based care,<sup>27</sup> and can lower travel related Scope 3 greenhouse gas emissions<sup>28</sup> by reducing the need for patients to travel long distances for routine screening and management.<sup>29</sup>

#### Key approaches

- Integrate eye health information (including on climate related health risks), awareness raising and screening into primary and community health programs which already reach women, including maternal and child health services, sexual and reproductive health, WASH and community public health programs.
- Train and build the capacity of community and primary health workers to recognise and respond to early signs of climate-sensitive eye and infectious conditions, such as conjunctivitis and trachoma risk during floods, heat and water scarcity, and to escalate alerts through routine supervision systems.
- Align with disaster preparedness and continuity of care - include simple preparedness messaging in routine home visits (such as where to seek care when services are disrupted, safeguarding spectacles and eye medications, and tailored planning for people at higher risk)

### Primary and community care integration opportunities

Numerous health programs that already reach women and girls offer entry points for strengthening climate and gender-sensitive primary and community eye care, including:

- A 2024 pilot in Uganda, “Achieving equity through integrating health services for women” supported by The Fred Hollows Foundation, integrated eye care with maternal and broader health services. The pilot reported increased uptake of eye care among women, with women’s screenings increasing by 20% during the pilot period, and women rising to 50% of total people screened.<sup>30</sup>
- Prenatal and postnatal counselling can also include practical messaging on nutrition and eye health, such as the implications of climate-driven food insecurity and vitamin A deficiency for maternal and infant eye health, alongside referral pathways and links to locally available nutrition or supplementation services.

In Pakistan, the Lady Health Worker (LHW) program reaches an estimated 115 million people in underserved rural communities and urban slums.<sup>31</sup> LHWs have already received training in primary eye care to identify common eye conditions and refer patients into the health system.<sup>32</sup> There are clear entry points for further integration of climate-risk education and preparedness (for example, expanding eye health prevention and referral messaging to incorporate information on climate and eye health risks, preparedness and early warning information).<sup>33</sup>



## Case study

### Women-Led Green Vision Centres (Orbis International)

Vision centres provide primary eye care services to semi-rural and rural communities, offering screening and basic management, and connecting patients to a base hospital or higher-level facility for referral and treatment when needed.

Orbis International's Green Vision Centres (GVCs) in Bangladesh and India are decentralised primary eye care hubs, designed to be both climate-resilient and gender-responsive. Many of these are operated and led by locally trained women (Women-Led GVCs), helping to reduce social barriers to care by creating an accessible and trusted environment for women and girls, while supporting dignified employment and leadership pathways for female eye health professionals.

In India, 56% of attendees at women led GVCs are women & girls, compared with 42% in non-women led GVCs. Over a period of one year, the GVCs experienced a nearly 150% growth in attendance by women and girls. Program evaluations have found that women feel more comfortable to be treated by women optometrists.



The centres use solar power and energy-efficient equipment to reduce emissions and operating costs and can continue delivering essential services during climate-related disruptions such as extreme weather events and power outages. The model also aims to be financially self-sustaining, supporting ongoing maintenance of solar systems and continuity of care over time.

To date, 61 community-based centres have been established in Bangladesh (34 of which are Women-Led) and 53 centres in India, (28 of which are women-led). 25 centres in India have achieved formal accreditation for quality standards.

Tele-ophthalmology has made an ophthalmologist virtually available at the GVCs. About 20% of patients visiting the GVC needing referral to secondary/tertiary facilities were provided care through tele-ophthalmology, reducing unnecessary travel. The adoption of e-bikes for outreach further supports responsible consumption and sustainable mobility in their communities.

Across both countries, the GVCs serve over 1 million people and have trained nearly 10,000 health personnel, highlighting how integrating gender-responsive design with climate resilience can create a scalable model that strengthens sustained eye care access, community trust and the overall health system.

## 4. Use outreach and telehealth strategically to reduce inequities and emissions

Outreach services, tele-ophthalmology and tele-optometry can play critical roles in maintaining equitable access to eye care in climate-vulnerable settings.

When designed inclusively and with attention to structural barriers to technology, these approaches can reduce dependence on travel (and associated greenhouse gas emissions) and support continuity of care during climate-related disruptions. In some settings, these services can reduce out-of-pocket costs and time constraints linked to caregiving responsibilities.<sup>34 35</sup>



### Key approaches

- Implement targeted eye care outreach strategies to serve communities at risk of being overlooked, such as women experiencing multiple challenges due to poverty, limited mobility, age or disability, and to minimise unnecessary travel to static healthcare sites.
- Design telehealth services to be digitally accessible and inclusive, including compatibility with assistive technologies, accessible formats, and practical support for people with low digital literacy and connectivity.<sup>36</sup>
- Use telehealth and outreach to maintain follow-up for people with ongoing or chronic eye conditions, when routine services or transport are disrupted.
- Use telehealth and digital records to reduce environmental footprint, including by reducing patient transport needs and avoiding high volumes of paper-based record keeping where appropriate.<sup>37 38</sup>
- Address gender gaps in digital access and literacy by pairing telehealth expansion with broader measures that improve women's and girls' access to devices, connectivity and digital skills.
- Combine telehealth expansion with options for in-person navigation and assisted digital access so low-connectivity or low-literacy users are not excluded.
- Embed strong privacy, confidentiality and cybersecurity safeguards, recognising that confidentiality concerns can be a barrier to women's use of telehealth and that technology-facilitated abuse and coercive control can heighten privacy risks for some women and girls.

## 5. Embed eye health into disaster preparedness and response

Ensure eye health is integrated in disaster preparedness, anticipatory action planning, and emergency and humanitarian response health teams. This will help prepare for specific eye health risks, improve capacities to address disaster and conflict -related eye injuries, loss of spectacles and assistive products, and strengthen continuity of care for patients with ongoing eye conditions after crises and displacement occur.

### Key approaches

- Embed simple eye injury triage and referral protocols within emergency medical team procedures
- Integrate eye care within anticipatory action - use climate and vulnerability data to proactively pre-position basic eye care supplies (including pathways for rapid replacement of spectacles and low-vision aids). Adapt service delivery and trigger early interventions for women and marginalized groups most at risk of climate shocks, before inequities in eye health deepen.
- Ensure continuity of care for people with chronic eye conditions (for example, access to eye drops and safe follow-up when routine services are disrupted or people are displaced).
- Include eye health needs in emergency drills, stockpiles, referral maps, rapid health assessments and recovery planning.

Planning should explicitly consider strategies to address intersecting barriers for women and girls, older people, and people with disabilities, including accessible communication and clear service mapping, to support equitable and accessible referral pathways and the inclusive distribution of assistive products.



## 6. Partner with women's organisations, organisations of people with disabilities (OPDs) and other local organisations

Partnering with women's organisations, organisations of persons with disabilities (OPDs), and other local organisations such as LGBTQIA+ community organisations can accelerate inclusive, climate-resilient eye health. Working with these organisations can help embed eye health into trusted community platforms, locally led climate action and broader campaigns to address discriminatory norms and practices. Meaningful engagement with these groups can help ensure programs are effective, accessible and context-responsive, while strengthening safeguarding, accountability and outcomes for all communities, including groups facing structural barriers to eye care.

### Key approaches

- Use partnerships to identify people facing intersecting barriers to eye health, and to co-design accessible services, information and healthcare worker training on gender, LGBTQIA+ inclusion (where safe and appropriate) and disability inclusion.
- Integrate climate and eye health messaging into broader community awareness and behaviour change strategies to address gender-based discrimination and harmful practices, such as the impacts of unequal child-caring responsibilities or unequal economic decision-making on access to healthcare.
- Integrate climate and eye health messaging into women-led platforms such as savings groups, cooperatives, farmers' groups and disaster preparedness committees.
- Support community-based case-finding, referral and follow-up using women leaders and disability champions.
- Co-design accessible outreach approaches for people with disabilities, women in informal work, and older women, including transport coordination and accessible communication.
- Ensure partnerships are adequately resourced and based on equitable power-sharing, recognising women's organisations and OPDs as leaders and experts, not just implementers or outreach channels.

### Case Study

#### Climate-resilient eye care advancing equity for women and girls with disabilities in Sierra Leone (Sightsavers)

In Sierra Leone, climate change is not a distant threat - it is a daily reality that shapes access to essential health services. Flooding, extreme heat and unreliable energy supplies regularly disrupt eye care delivery, with the greatest consequences felt by women and girls with disabilities in rural and climate-vulnerable communities. Social norms that limit women's mobility, caring responsibilities and poverty intersect with disability and climate shocks, making access to eye care even more challenging. To address these layered barriers, Sightsavers supported the establishment of Green Vision Centres (GVCs), which build climate-resilient systems to reach women most at risk.

The GVCs were designed using local climate risk assessments to ensure services remain accessible during floods, heatwaves and power disruptions. By aligning infrastructure, clinical practices and outreach strategies with local climate realities, the model helps ensure continuity of care even during emergencies. Community and surgical outreaches, as well as vision screening for eye health services, are strategically planned around seasonal climate risks, ensuring women and girls can access services when environmental conditions would otherwise restrict movement. This is particularly critical in rural areas where flooding and extreme temperatures disproportionately affect women's ability to travel safely to health facilities.

**Centring women, girls and people with disabilities:** the GVCs work through trained women's groups and Organisations of Persons with Disabilities (OPDs) who lead sensitisation, screening and referrals, helping to overcome stigma, build confidence and increase awareness of available services. By bringing services closer to communities and tailoring engagement approaches, the program addresses the social and structural barriers that often prevent women with disabilities from accessing eye care.

**Sustainable infrastructure for continuous care:** The GVCs integrate multiple climate-resilient and low-carbon design features, including natural lighting, reflective roofing, passive cooling, renewable energy systems and energy efficient equipment. These measures enable facilities to function reliably during power outages and extreme weather events, while significantly reducing energy consumption and greenhouse gas emissions.

**Climate-smart, people-centred service delivery:** GVCs adopt efficient, integrated, people-centred service delivery models, such as completing eye examinations and dispensing spectacles in a single visit. This "one-stop shop" approach reduces repeat travel, lowers transport costs and cuts carbon emissions - benefits that are especially important for women with disabilities who face mobility and financial constraints. Reusable and recyclable instruments minimise healthcare waste and promote a circular, climate-smart approach to eye care delivery.

**Impact and scale:** Today, the GVCs provide comprehensive vision and eye care, including integrated spectacle dispensing, to over two million people across Sierra Leone. The model demonstrates that it is both feasible and effective to embed climate resilience, sustainability, gender-responsive and disability inclusion approaches within national eye health systems - ensuring that no one is left behind as climate risks intensify.



## 7. Design facilities and systems for climate resilience, accessibility and dignity

Apply an integrated climate resilience, equity and accessibility lens to facility design, refurbishment and systems planning. This can reduce service disruptions, protect patients and health workers from heat and extreme weather, and improve access to eye care for people with diverse needs.

### Key approaches

- Apply universal design principles to ensure facilities are accessible and uphold privacy, safety and dignity, including private changing spaces, sex-separated toilets, and hygiene supplies (including menstrual products).
- Incorporate environmentally sustainable building design principles, including passive cooling, solar orientation and heat-mitigation features suited to local conditions.
- Design facilities to improve thermal comfort, ventilation and safe working conditions for patients and staff during extreme weather events.
- Link investment in facility design, refurbishment and maintenance to continuity of care planning, including reliable power, resilient infrastructure, and safe patient flows during climate shocks.

### Case Study

#### **Nijadgh Community Eye Health Centre, Nepal (Tilganga Institute of Ophthalmology)**

The Nijadgh Tilganga Community Eye Hospital is a community eye facility in Nepal, established in 2024 by the Tilganga Institute of Ophthalmology with support from The Fred Hollows Foundation.

From inception, the design of the hospital aimed to respond to local environmental and climate risks and improve inclusion for groups who faced barriers to access, including women, people living with disabilities and older persons.

Climate risks and equity concerns were considered early during feasibility and design, involving consultations with sustainability experts and local communities. The design team assessed likely climate hazards for the area (including localised flooding and extreme heat) and considered how building and service design could strengthen safe, dignified and equitable access.

Based on these findings, the facility design focused on universal access and patient flow, low-carbon and resource-efficient infrastructure, and measures that support continuity of care during extreme heat, flooding, and interruptions to power and water supply.



For accessibility, safety and dignity, clinical rooms were arranged to reduce walking distances and waiting times. To reduce crowding within the main building and improve comfort and safety, high-traffic functions such as reception, pharmacy, optical services and patient toilets were planned outside the main building.

To manage heat and reduce reliance on mechanical cooling, the building design incorporates passive cooling measures. These include a cavity wall system with internal thermal insulation and increased ground floor height to improve air circulation. Natural light and ventilation, supported by efficiency measures such as sensor lighting, reduce day-to-day energy demand.

The hospital also employs an on-site solar power system (up to 80 kW) with real-time monitoring to manage electricity use and support continuity during grid disruptions.

Low-flow water fixtures and an on-site deep-boring water treatment plant reduce pressures on municipal water supplies, while ensuring water quality. Waste management includes on-site segregation and autoclaving for sterilising reusable sharps and surgical tools, with exploration of effluent treatment to reduce wastewater pollution. As the area is prone to localised flooding, the ground floor elevation was increased to help reduce flood impacts. An existing banyan tree was conserved and incorporated as a shaded outdoor waiting area.

Early integration of sustainability considerations with the strong support of Tilganga's management and The Fred Hollows Foundation, combined with meaningful engagement with local stakeholders, helped ensure inclusive, climate resilient design choices.

## 8. Invest in women's leadership, workforce inclusion and inclusive data driven decision making



Inclusive, climate-resilient eye health systems depend on diverse leadership, inclusive workforce development and meaningful participation. Policies should support women's leadership and participation in eye health, climate and disaster planning, including by addressing barriers faced by older women and women with disabilities. Empowering women as decision-makers, health workers and community leaders, and embedding climate action commitments within eye health accountability structures, can strengthen the relevance, effectiveness and sustainability of health responses.

### Key approaches

- Create enabling environments for women's leadership in eye health (including target setting, oversight and accountability, equitable recruitment and promotion practices, leadership training, and clear career progression pathways).
- Expand networks, mentorship and peer support to strengthen retention, well-being, and progression of women leaders across levels.
- Address intersectional under-representation in eye health leadership by removing accessibility barriers and providing reasonable accommodations that enable meaningful participation and progression for older women and women with disabilities.<sup>41</sup>
- Address structural barriers within institutions, including discriminatory norms, inaccessible workplaces, and the unequal distribution of unpaid care responsibilities, that limit women's leadership and progression.
- Integrating climate-sensitive and equity-focused content into health and eye health workforce education and training.

# 3 Conclusion

Climate change is already reshaping who can access eye care, who is left behind, and how well health systems can respond. The evidence is clear: without deliberate action, the climate crisis will deepen existing inequities in eye health and make it harder for women, girls, older people, people with disabilities and other marginalised groups to access timely, affordable and appropriate care.

This guidance sets out a practical, equity-focused framework to support governments, health planners and eye health actors to take coordinated action. How organisations adapt the recommendations should be guided by the specific climate and equity risks in each context - starting from realistic and feasible entry points. With the impacts of the climate crisis on health and vulnerable communities only expected to increase, making a start on integrated action now will be critical to ensure equity, accessibility and climate resilience are at the centre of eye health policy, planning and service delivery in the future.

By working across sectors, listening to communities most affected, and investing in inclusive systems and leadership, we can protect vision, reduce avoidable inequities, and build eye care services that are stronger, more responsive and better prepared for a changing climate.

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11. Nijgadh Tilganga Community Eye Hospital, Nepal. Credit: Michael Amendolia
12. Papua New Guinean ophthalmologist Dr Jambi Garap at the Women Deliver Conference, April 2026. Credit: Michael Amendolia / The Fred Hollows Foundation
13. Back cover - A girl with albinism (Haja Alimatu Konneh) posing for a photo during a climate awareness raising event in collaboration with Sierra Leone Association of people with Albinism. Credit: Michael Duff / Sightsavers

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