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Global Disability Innovation Hub

Advancing disability inclusive climate action

A resource guide for global practitioners working on urban climate action, nature-based solutions, and energy transition.

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Cover image: Fatema Khatun is the leader of a self-help group of persons with disabilities in Bangladesh. The group works to ensure persons with disabilities are included in community-based DRR activities.

Foreword – Collaborating to advance inclusion in practice

Climate change is the defining challenge of our time. Its impacts are widespread, but they are not experienced equally. Persons with disabilities – who represent over one billion people globally – are disproportionately affected by climate-related risks, yet remain underrepresented in climate policy, planning, and action.

This Resource Guide is a practical response to that gap. And it brings something new to the field of climate action: a clear, practical focus on how disability inclusion can be embedded across specific climate action sectors. From energy and urban development to nature-based solutions and disaster risk reduction, it showcases real-world examples that demonstrate what is possible when inclusion is intentional. These examples are still too rare and too often undocumented. By highlighting them, this guide aims to inspire and equip climate practitioners to act, then document and share those actions to drive learning across sectors.

The guide is grounded in dialogue, with organisations of persons with disabilities, climate actors, and development partners, and reflects a growing recognition that inclusive climate action is not only a matter of rights, but of resilience and resourcefulness. This is reflected in the growing momentum for official recognition of a disability constituency with the UNFCCC; a vital step to ensure that persons with disabilities can shape the policies which impact their lives.

As organisations committed to disability inclusion and innovation, we see this guide as both a comprehensive resource and a starting point to build more evidence. There is an urgent need for deeper collaboration between disability and climate actors to generate and share knowledge, build mutual understanding, and strengthen inclusive practice.

Through partnerships, dialogue, and joint learning, we can ensure that persons with disabilities are not only supported to be resilient to the impacts of climate change, but are active participants in shaping a more just and sustainable future.

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Acronyms

AT	Assistive technology
CRPD	United Nations Convention on the Rights of Persons with Disabilities
DFAT	Department of Foreign Affairs and Trade (Australia)Disabilities
ESG	Environmental, social and governance
GESI / GEDSI	Gender equality, disability, and social inclusion
ILO	International Labour Organization
INGO	International non-governmental organisation
ISO	International Organization for Standardization
NbS	Nature-based solutions
ODA	Official Development Assistance
OECD-DAC	Organisation for Economic Co-operation and Development – Development Assistance Committee
OPD	Organisation of persons with disabilities
TEA	Transforming Energy Access
UNFCCC	United Nations Framework Convention on Climate Change
WCAG	Web Content Accessibility Guidelines

Introduction

Why this Resource Guide?

Climate change – and the ways we mitigate, adapt, and respond to it – is reshaping our world. Yet, persons with disabilities remain largely overlooked in planning, policy, and implementation of climate action. Practical resources and evidence on disability-inclusive climate adaptation and mitigation are also currently dispersed.

This guide seeks to address these gaps, supporting practitioners working across urban climate action, nature-based solutions, and energy transition to embed disability inclusion meaningfully and systematically in their work.

By centring persons with disabilities in the design and delivery of climate action we harness their lived experience whilst tackling barriers to participation. In this way we can reduce the disproportionate impacts of the climate crisis on marginalised people, and transform the inequalities that persist globally, shaping a future grounded in equity and resilience for all.

Who should use the guide?

This guide is for individuals who are involved in designing, funding, implementing, or evaluating climate action, including those working on climate-related disaster risk reduction.

We recommend this guide for a wide range of stakeholders across the climate action ecosystem:

- Government officials and policymakers
- Funders and investors
- Urban planners and infrastructure developers
- Technical experts and operational teams
- Civil society and community-based organisations
- UN entities and other international organisations
- Multilateral and bilateral development banks

What does the guide offer?

This guide brings together tools, case studies, frameworks, and practical guidance to help practitioners:

- Understand the intersection of disability and climate change
- Apply inclusive approaches across various programme activities such as planning, budgeting, procurement, and monitoring
- Explore sector-specific strategies for including persons with disabilities and achieving equitable outcomes
- Learn from practical examples and case studies

Grounded in the principles of the UN Convention on the Rights of Persons with Disabilities (CRPD) and the Sustainable Development Goals (SDGs), the guide promotes an intersectional, coordinated approach to disability inclusion.

How to use the guide

This guide is designed to be a flexible reference tool. Users can jump directly to the most relevant sections for their specific role, current needs, or project phase.

Navigating the guide

Go to Section 1: Understanding the intersection: Disability, development, and climate action

If you are new to disability inclusion, this section offers essential context on its link to global development and climate action by:

- Outlining the systemic barriers faced by persons with disabilities
- Highlighting why inclusive approaches are critical to achieving equitable and effective climate solutions
- Introducing key concepts and terminology used throughout the guide
- Presenting a framework for taking systematic action

Go to Section 2: Programme delivery

If you are responsible for core programme functions, this section suggests tools, case studies, and resources to help embed disability inclusion in the following areas:

- Strategy
- Risks and context analysis
- Planning
- Procurement
- Budgeting
- Design
- Stakeholder engagement
- Monitoring, evaluation and learning
- Communication and advocacy

Go to Section 3: Sectors and sub-sectors

If you work in a specific sector or sub-sector this section provides tailored insights, examples, and tools relevant to the following sectors:

- Urban climate action
- Energy transition
- Nature-based solutions

Generating new knowledge and dialogue

This guide reflects the available information at the time of research. We encourage practitioners to:

- Partner with organisations of persons with disabilities (OPDs) and other disability specialists to undertake pilot projects
- Document positive and challenging practices from disability-inclusive climate work and disseminate lessons with sector stakeholders

How was the guide developed?

We interviewed 15 experts in urban climate action, energy transition, and nature-based solutions. Their insights shaped our desk review of grey and academic literature to find the latest evidence, tools and examples. We also held two multi-stakeholder consultations in Washington D.C. and London to pinpoint gaps and promising practices.

OPDs played a key role in shaping this Resource Guide. The World Blind Union and the European Disability Forum joined the consultations in Washington, D.C. and London respectively. A further consultation in Jakarta captured perspectives of the disability movement in Indonesia. This guide was also informed by CBM Global's ongoing collaboration with OPDs in climate research, disaster risk management programmes, advocacy, and capacity strengthening.

Evidence for disability-inclusive climate action remains limited, particularly in low- and middle-income contexts and emerging areas such as nature-based solutions. Much of the existing research is not sector-specific and lacks validated case studies or examples of best practices. As such, this guide is intended as a starting point for continued dialogue, learning, and innovation.

A significant portion of the available data is self-reported, and there is currently no unified, impartial framework for evaluating good practices in disability-inclusive climate action. Moreover, this field is still in its early stages, meaning that long-term impact assessments and evaluations of actions in practice are often unavailable or not yet feasible. Therefore, our assessment in this guide focuses primarily on identifying promising practices rather than measuring outcomes.

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Section 1: Understanding the intersection: Disability, development, and climate action

This section explains how systemic exclusion affects persons with disabilities across development contexts, and why inclusive approaches are essential to achieving equitable and effective climate solutions. It also presents key terminology and a practical framework to support climate actors in taking systematic, rights-based action.

Systemic barriers faced by persons with disabilities

Persons with disabilities represent a sizeable, and growing, population in every context. There are an estimated 1.3 billion persons with disabilities globally, around 16% (World Health Organization, n.d.). This is predicted to increase as populations age (United Nations Department of Economic and Social Affairs, n.d.).

Persons with disabilities continue to face systemic exclusion across multiple dimensions of development. These include higher rates of poverty, limited access to education, healthcare, and employment, and persistent underrepresentation in political and public life. These disparities are not due to individual capabilities, but to structural barriers such as discrimination, inaccessible environments, lack of assistive technology, and inadequate support systems. (United Nations Department of Economic and Social Affairs, 2024)

Persons with disabilities are diverse and are affected by these barriers differently according to their gender, age, impairment, location, and a range of other factors. Inclusion strategies must combine broad-based measures to promote participation with contextualised, targeted initiatives to address specific inequalities and support under-represented and at-risk constituencies.

Disability inclusion is critical to achieving equitable and effective climate solutions

Climate change disproportionately affects persons with disabilities, amplifying pre-existing inequalities and vulnerabilities (Stein, 2024) (Humanity & Inclusion, 2023). Persons with disabilities are at heightened risk from climate-related hazards such as storms, floods, droughts, and extreme temperatures due to structural barriers, including inaccessible infrastructure, exclusive governance, and inadequate disaster preparedness planning (Bond Disability and Development Group; and International Disability and Development Consortium, 2025). The risks are compounded for women with disabilities and other under-represented groups such as indigenous persons with disabilities, Deafblind persons, persons with psychosocial disabilities, and persons with cognitive disabilities (Brossard, 2024).

Climate action refers to the broad set of efforts aimed at addressing both the causes and impacts of climate change. This includes mitigation measures, such as reducing carbon emissions to limit global warming, and adaptation strategies, like diversifying crops to cope with rising temperatures (WWF, n.d.). Climate resilience is the capacity of communities and systems to anticipate, absorb, and recover from climate-related shocks and stresses (UNFCCC, 2021).

International frameworks emphasise the need for inclusive climate action and the application of the CRPD such as (United Nations General Assembly, 2006):

- **Articles 11:** Calling for protection and safety of persons with disabilities in situations of risk, including humanitarian emergencies and natural disasters.
- **Articles 3 & 4:** Promoting non-discrimination, accessibility, and full participation.As of July 2025, 192 countries have ratified the CRPD.

The Paris Agreement refers to general 'obligations on human rights' (in the Preamble) and 'consideration of vulnerable groups' (Article 7.5). This has led to limited provision for disability in climate governance and policymaking. Research by McGill University found that only 41 out of 195 State Parties reference disability in their Nationally Determined Contributions (NDCs) and "these references are rarely accompanied by concrete measures to include persons with disabilities, their rights, or their knowledge in climate decision-making". (Jodoin, et al., 2025)

In its 2024 study, the European Disability Forum (EDF) analysed climate-related legislation and plans from 13 European countries. The study found only one country which reported dedicated budget lines for disability-inclusive climate action – Lithuania for inclusive disaster risk management (DRM), including training for humanitarian workers and improving information accessibility information. Furthermore, consultation with persons with disabilities and their representative organisations was noted only in Lithuania and Sweden, and even then, only to a limited extent. (Riche, 2024).

Although many climate actors have made high-level commitments to disability inclusion, there is a significant gap in operationalisation. Disability is often subsumed under a broad mandate for social inclusion or social safeguarding, without consideration of the specific measures which are required to include persons with disabilities.

Most disability inclusion interventions relate to adaptation (e.g., accessible early warning systems). There are very few examples of disability-inclusive mitigation efforts (e.g., accessible, low-carbon transport systems). There is also a lack of dedicated funding, sector-specific guidance, and monitoring and evaluation frameworks. Cooperation between social inclusion and climate action specialists is rare, and they seldom engage with organisations of persons with disabilities (OPDs). Disability is often seen as an 'add-on', rather than being integral to climate resilience (Bond Disability and Development Group; and International Disability and Development Consortium, 2025) (Lemon, 2025).

To explore sector-specific opportunities for advancing disability inclusion jump to the chapters on Urban Climate action, Nature-based solutions, and Energy transition

Key concepts and terminologies

Adopting a rights-based approach to disability

To deliver effective and equitable climate action, it is essential to move beyond the view of disability as simply a health or safeguarding issue. Moreover, when disability is perceived as a problem with an individual, responses are motivated by fear, pity, or a drive to fix the individual through medical treatment. Medical and charity models of disability are rejected as they lead to stigmatisation, discrimination, segregation, and abuse (Division for Inclusive Social Development, 2022).

A rights-based approach recognises that persons are disabled not by their impairments, but by the barriers in their environment - physical, institutional, attitudinal, and digital - that limit their participation. This is enshrined in the United Nations Convention on the Rights of Persons with Disabilities (CRPD), which requires that persons with disabilities are included in all aspects of public life on an equal basis with others. This approach recognises the inherent dignity of persons with disabilities and promotes independence, inclusion, and accountability.

For climate practitioners, this can mean the following:

- Shifting the focus from charity or compliance to equity, dignity, and participation.
- Designing programmes and infrastructure that anticipate and remove barriers from the outset.
- Enabling pathways to equitable and inclusive employment opportunities.
- Recognising diversity within the disability community and targeting the needs of those who experience intersectional discrimination, such as women with disabilities.

A rights-based approach also means engaging persons with disabilities as partners, not just beneficiaries. This includes:

- Consulting and co-designing with persons with disabilities and their representative organisations.
- Investing in equitable partnerships with organisations of persons with disabilities (OPD).
- Embedding accessibility and reasonable accommodation into all stages of the programme cycle.
- Ensuring accountability through inclusive monitoring and evaluation.

Delivering disability inclusion through a GEDSI approach

A Gender Equality, Disability, and Social Inclusion (GEDSI) approach is gaining traction to streamline and coordinate efforts to include a range of social groups facing a higher risk of marginalisation. While there are advantages to this approach, there is a risk of over-generalising and focusing on the most common or most visible people among these social groups. This could lead to overlooking the specific and unique requirements of persons with disabilities, particularly those from underrepresented groups, or those experiencing disadvantage due to intersecting discrimination based on age, gender, or ethnicity, for example.

For this reason, we highlight four essential elements of disability inclusion which require explicit and sustained attention:

Accessibility

Reasonable accommodation

Assistive Technology

Meaningful participation

These elements should be embedded intentionally in the design of policies, programme strategies, budgets, and implementation plans. Without this focused approach, climate actors risk diluting disability inclusion within broader inclusion efforts, resulting in continued exclusion and inequitable outcomes.

Accessibility

Accessibility is a precondition of inclusion. It allows persons with disabilities and other groups to have access to and enjoy physical environments, transportation, facilities, services, information and communications, including new technologies and systems.

Accessibility is often delivered through compliance with standards such as the Web Content Accessibility Guidelines 2.0 (WCAG) and can be improved through inclusive design methodologies.

Universal Design is a proactive approach to accessibility which ensures that products and environments are useable by all people, to the greatest extent possible, without the need for adaptation of specialised design.

Inclusive design is a methodological approach used to co-design solutions with diverse end users, including people with disabilities. It is not limited to the physical design of products, services, and infrastructure. It can also facilitate inclusive decision-making, strategic planning, and research methods. (Global Disability Innovation Hub, 2022).

Examples of accessible and inclusive design in climate action include:

- Applying inclusive design methodologies in infrastructure and service delivery.
- Ensuring that climate risk maps and early warning systems are available in accessible formats (e.g., braille, audio, sign language).
- Designing public infrastructure (e.g., flood shelters, green spaces, transport hubs).

Reasonable accommodation

Reasonable accommodation refers to necessary and appropriate modifications and adjustments to a service, facility, process or job which do not impose a disproportionate or undue burden. These are solutions provided to persons with disabilities on an individual basis to enable their participation on an equal basis as others. Not providing reasonable accommodation is discrimination under the CRPD.

Reasonable accommodation differs from accessibility as it relates to solutions provided on an individual basis and delivered when they are required by the individual. Accessibility applies to actions taken in advance to improve access to all users.

Reasonable accommodations could include providing transportation, personal assistance, or interpretation for a person to, for example, perform the essential functions of a job as a consultant or employee. These should not be confused with disability support services, which refer to the ongoing assistance and support that persons with disabilities require to fully participate in everyday life (e.g., carers and personal assistance, social protection).

Examples in climate action:

- Covering the costs of a delegate's sign language interpreter or personal assistant, and providing time and space for sensory breaks, to enable participation of a person with disabilities in a climate action planning workshop.
- Adjusting work schedules or roles in green jobs programmes to accommodate the capacities and requirements of a person with disabilities who meets all the criteria for employment.

Assistive technology

Assistive technology (AT) refers to products, and related services, which advance the functioning and independence of persons with disabilities. They include, for example, physical devices (e.g., hearing aids) and digital products (e.g., screen reading software).

Examples in climate action:

- Distributing solar-powered hearing aids or communication devices in off-grid areas.
- Developing mobile apps that provide accessible climate information or navigation tools during extreme weather events.
- Ensuring access to essential AT is maintained during climate disasters and that disaster response plans consider diverse AT users.

Meaningful participation

Ensuring the meaningful participation of persons with disabilities is a core principle of the CRPD. Participation must go beyond consultation, it must be active, sustained, and influential across all stages of climate policy and programming.

This includes, but is not limited to, engagement with OPD which play a critical role in articulating rights, shaping policy, and holding institutions accountable.

Meaningful participation also requires:

- Engaging a diversity of voices: Disability is not a homogenous experience. Climate actors must take deliberate steps to include underrepresented groups such as persons with cognitive, psychosocial, and multiple disabilities, persons with deafblindness, and persons with disabilities from Indigenous, rural, or low-income communities.
- Creating enabling environments: Participation must be accessible and inclusive. This includes providing reasonable accommodations (e.g. sign language interpretation, accessible venues, plain language materials), covering participation costs, and ensuring safe and respectful spaces for dialogue.
- Embedding participation in governance: Persons with disabilities and their representative organisations should be included in climate governance structures, such as national adaptation committees, city planning boards, and climate finance mechanisms.
- Investing in capacity and leadership: Participation is most effective when persons with disabilities are empowered to lead. This includes investing in leadership development, technical training, and long-term partnerships with OPDs.

Examples in climate action:

- Co-developing national climate adaptation plans with OPDs and persons with disabilities.
- Including persons with disabilities in community-based climate risk assessments and resilience planning.
- Contracting OPDs to conduct accessibility audits of climate infrastructure and services; or to engage in research to generate evidence on the user experiences of persons with disabilities.
- Establishing advisory groups of persons with disabilities to inform inclusive design and implementation of urban climate action or energy programmes.

Framework for taking systematic action

To deliver on commitments to disability inclusion, climate actors must be specific, intentional, and systematic in their approach. This guide proposes a three-tiered framework that aligns with established approaches to social safeguarding and gender equality. It is designed to support practitioners in identifying entry points for action, setting progressive goals, and ensuring accountability.

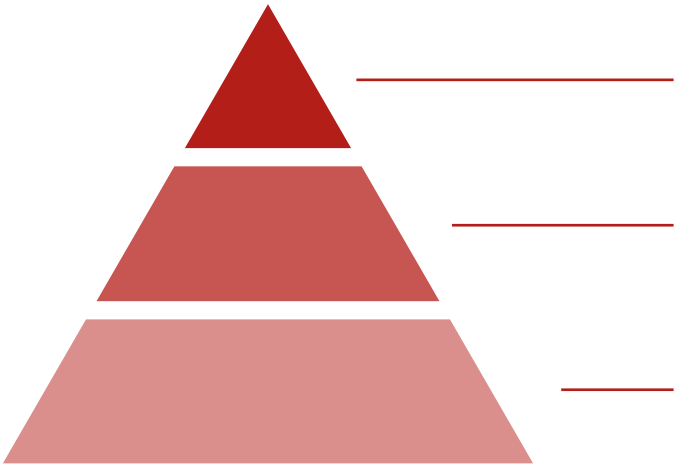

Figure 1: Three-tiered framework for taking systemic action

Tier 1

At a minimum, all climate action investments must uphold basic disability inclusion safeguards. These include:

- Identifying and mitigating the risks of harm to persons with disabilities and exacerbating social inequalities.
- Preventing discrimination against persons with disabilities, for example, by addressing negative attitudes amongst staff and partners.

Tier 2

Progressively, all climate action investments should adopt inclusive approaches and aim for equitable outcomes for persons with disabilities by mainstreaming the four elements of disability inclusion described in the previous section. This includes:

- Applying inclusive design principles in infrastructure and service delivery to improve accessibility and resilience.
- Providing reasonable accommodation to enable full and meaningful participation in activities.
- Enabling access to appropriate assistive technology.
- Engaging persons with disabilities and their representative OPDs in decision-making processes.

Tier 3

A subset of targeted actions should have the explicit aim to tackle the factors that put persons with disabilities at greater risk of the climate crisis, including the structures underpinning the exclusion of persons with disabilities from climate action. These specific, high-impact interventions may include:

- Investing in research and innovation initiatives, specifically tailored to pilot creative solutions with persons with disabilities and maximise co-benefits.
- Creation of systematic mechanisms to enable participation, such as Access Panels for infrastructure initiatives.
- Supporting leadership development programmes for persons with disabilities in climate governance and advocacy, particularly persons from underrepresented groups.
- Reforming climate action institutions to embed disability inclusion across governance, financing, and accountability mechanisms.

Sugeng is a man with a cognitive disability from Yogyakarta, Indonesia. He owns and operates a hair salon. © CBM Global.

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Section 2:
Programme delivery

To embed disability inclusion effectively, climate programmes must integrate inclusive practices across all stages of the programme cycle. This section presents entry points for disability inclusion; from context analysis and strategy development to budgeting, procurement, and monitoring. Although some examples come from outside climate action, they illustrate transferable approaches.

Strategy

Strategies set the direction for policy, planning, and investment. When disability is not explicitly addressed, exclusion is more likely to perpetuate throughout the programme cycle (Patrick, Wardrop, & Marimuthu, 2025). Inclusive strategies must go beyond general commitments to social equity and articulate specific objectives, indicators, and mechanisms for addressing the rights and needs of persons with disabilities. They must also embed monitoring, evaluation and learning to assess and propagate positive outcomes.

Key actions

- ☑ Define how the inclusion of persons with disabilities is integral to achieving the strategic impact of your project, programme, or company. Structure bespoke key performance indicators and outline how operations will deliver these outcomes.
- ☑ Embed essential disability inclusion enablers, including accessibility, reasonable accommodation, assistive technology, and meaningful participation in GEDSI strategies.
- ☑ Use evidence generated by civil society and consult persons with lived experience to inform inclusive climate policy and programming, supporting the participation and leadership of persons with disabilities.

Example

The International Fund for Agricultural Development has a **Disability Inclusion Strategy 2022-2027** aligned with the CRPD. The strategy applies principles such as non-discrimination, full and effective participation, accessibility, and respect for difference. Commitments span an array of functions such as leadership, planning and management, procurement, budgeting, programming, staff training, communication, reporting and monitoring.

Resources

The **United Kingdom's Foreign, Commonwealth & Development Office, Department for Environment, Food & Rural Affairs and Department for Energy Security and Net Zero** have published Guidance for its International Climate Finance delivery partners on how to integrate gender equality, disability and social inclusion into programme design and delivery. It offers practical tools and expectations for mainstreaming gender equality, disability, and social inclusion in climate finance, complementing the approaches outlined in this guide.

The World Bank's **International Finance Corporation** recently published, with **GDI Hub**, a report titled, Investing for Inclusion: Exploring a Disability Lens. The guide outlines a step-by-step approach to integrating disability-inclusive considerations within investment strategies throughout the investment process and life cycle.

Environmental, Social and Governance (ESG) frameworks have come to shape investment decisions and accountability globally. While many ESG strategies incorporate broad social criteria, they often fail to identify or respond to the specific barriers faced by persons with disabilities. The **International Labour Organization Global Business and Disability** has published 'Inclusion of Persons with Disabilities as Strategic Advantage of Sustainability Practices for Corporates and Investors' which presents a framework and key performance indicators for disability inclusive sustainability efforts. This draws on several established frameworks, including the European Sustainability Reporting Standards, Sustainability Accounting Standards Board standards, Global Reporting Initiative standards (developed with **Fundación Once**), and a White Paper on ESG and Disability Data from the **Valuable 500**, **Allianz**, & **London Stock Exchange Group**, in partnership with **Tortoise Media**.

Transforming Energy Access (TEA) platform and **GDI Hub** collaborated on a publication Integrating Disability in Energy Transition GESI Strategies. This resource provides context, rationale, and strategic recommendations for embedding disability inclusion in energy transition and gender equality and social inclusion (GESI) programming.

There is growing evidence at the intersection between disability and climate change to inform approaches at a strategic level. For example Unequal climate justice for people with disabilities from **Bond** and the **International Disability Development Consortium** draws on insights from communities and civil society organisations to inform recommendations for governments, donors, and international non-governmental organisations (INGOs) on strengthening disability-inclusive climate action.

Context analysis and risk assessment

A disability-inclusive approach to context analysis and risk assessment ensures that the specific experiences, barriers, and capacities of persons with disabilities are considered from the outset. This is a key step in strategy development and programme planning which improves the relevance and effectiveness of climate interventions and helps to avoid unintended harm and exclusion.

Figure 2: Transforming Energy Access, GDI Hub 2025 - Leverage opportunities, mitigate risks (Wardrop, 2025)

Key actions

- ☑ Involve organisations of persons with disabilities (OPD) and persons with disabilities in identifying environmental, social, and institutional barriers and risks.
- ☑ Collect and use data on the situations of persons with disabilities in communities most affected by the climate crisis.
- ☑ Apply insight on how climate hazards disproportionately affect persons with disabilities due to pre-existing inequalities.

Examples

A **Sightsavers Ireland** report, funded by **Irish Aid**, The inclusion of young people with disabilities in climate action: a summary study from Sierra Leone, presents findings and recommendations drawn from a participative study with young people with disabilities in Freetown and mapping climate action policy, and institutions and organisations working on climate change in the country. The evidence and recommendations will inform Sightsavers' citizenship and political participation and partnerships (CPP) work moving forward.

The **Development Pathways'** report, Social protection – a situational analysis of persons with disabilities in Cambodia, commissioned by the **Australia-Cambodia Cooperation for Equitable Sustainable Services (ACCESS)** programme and funded by the Government of Australia, through the **Department of Foreign Affairs and Trade** (DFAT), presents the challenges faced by persons with disabilities across Cambodia. Findings were drawn from quantitative analysis of national datasets, a review of existing literature, and insights gathered through consultations with representatives from the Royal Government of Cambodia, OPDs and development partners.

Research presented in Disability and Climate Change in the Pacific, funded by **DFAT** and delivered by the **Pacific Disability Forum** involved focus group discussions and validation workshops with OPD members, OPD climate change resource teams, climate stakeholders, and actors who represented governments and civil society organisations of Solomon Islands, Kiribati and Tuvalu. Findings showed how climate change both intensifies the negative effects of existing exclusion for persons with disabilities and introduces new risks and adverse impacts.

Resources

CBM Australia, **Plan International Australia**, and **Nossal Institute's** guide on Using Data on Disability to Inform Inclusive Development outlines practical approaches for collecting and applying disability data to inform programme design, risk assessment, and monitoring. (For more resources on disability data see the section below on Monitoring and Evaluation.)

The Situational Analysis of The Rights of Persons with Disabilities from the **Global Disability Fund** provides a country-level overview of the situation of persons with disabilities in a range of sectors, including disaster risk and response planning.

UN-Habitat's Guide for Community Assessments outlines participatory tools for assessing climate vulnerability at the community level, with persons with disabilities included as a stakeholder group. **CBM Global IAG** has published tips for disability inclusion in a Tip Sheet on community mapping and vulnerability and capacity assessments.

A Manual for Gender-Responsive Climate Vulnerability Assessment from **Kota Kita**, in partnership with **United Nations** and **City of Kupang Government**, includes a methodology for rapid assessments and a case study from Kupang, Indonesia.

The **Transforming Energy Access** (TEA) platform has developed a GEDSI Toolkit, with **Value for Women** and **GDI Hub**, which includes a risk management matrix to help identify, assess, and mitigate gender equality, disability, and social inclusion (GEDSI) risks in climate and energy projects.

Reference guide, Disability in GEDSI analysis, from CBM Global IAG provides tips, guiding questions, and data sources for GEDSI advisors seeking to ensure that disability equity and rights are adequately addressed.

Kota Kita and **UNESCO** have developed an approach to profiling a city for accessibility and inclusion that included engaging citizens. Studies were undertaken in the cities of Surakarta (Solo) and Banjarmasin, and a Guideline to Participatory Approach for Disability-Inclusive City for others to reproduce the methodologies.

The **Inclusive Futures Helpdesk**, funded by **UK International Development**, published a rapid review of Disability inclusion in climate justice frameworks and environmental and climate risk assessment processes.

Planning

Effective planning ensures that disability inclusion is embedded from the outset, shaping priorities, guiding resource allocation, and informing implementation. Failing to deliver accessibility across all domains (infrastructure, digital environments, communications, products, and services) could expose companies to legal challenge. For example, in 2022 Uber was successfully taken to court in the United States as its policy of starting wait-time fees just two minutes after a car's arrival violated the Americans with Disabilities Act by failing to give passengers with disabilities enough time to safely reach the vehicle (U.S. Department of Justice Office of Public Affairs, 2022).

Inclusive planning also improves cost-effectiveness as integrating or adopting inclusive design from the start of a project typically only adds about 1% to the total cost, whilst making these changes later may increase costs by up to 20%. (Disability Inclusive and Accessible Urban Development Network and CBM, 2016)

Key actions

- ☑ Embed disability inclusion across every project phase by setting clear inclusion goals, action plans, and monitoring, with designated owners responsible for delivery.
- ☑ Plan for participatory accessibility audits and co-design with persons with disabilities to identify barriers and implement improvements in environments, policies, and services.

Examples

In 2022, the **International Federation of Red Cross and Red Crescent Societies** (IFRC) collaborated with **CBM** and **Humanity & Inclusion**, among others, to update All Under One Roof, a set of guidelines for disability inclusive shelter. This includes a checklist of actions for mainstreaming disability inclusion in assessment and planning, such as 'Shelter and settlement teams have received training on disability inclusion, and/or include staff members with relevant experience'.

Bespoke tools can enable more inclusive participation. This tactile map of Surakarta (Solo) was laser cut to enable participants with visual impairments to engage in participatory mapping activities to plan more inclusive cities. © GDI Hub and Kota Kita / AT2030 Inclusive Infrastructure Programme.

Resources

The **Economic and Social Commission for Asia and the Pacific's** (UNESCAP) Guidance Note on Disability-Inclusive Project Management Cycle provides a practical framework for integrating disability inclusion in planning and all stages of project management. It outlines core principles, actionable steps, and tools to help development practitioners ensure that persons with disabilities are meaningfully included in project design and delivery.

A paper, Towards Smart, Sustainable, Accessible and Inclusive City for Persons with Disability by Taking into Account Checklists Tools by **Salha et al**. offers practical guidance on how to use a design checklist to improve disability inclusion in urban climate action programmes. It covers key domains such as public spaces, the built environment, economic participation, legal frameworks, safety, independent living, and healthcare.

A Handbook for Gender-Inclusive Urban Planning and Design from the **World Bank** and **Kounkuey Design Initiative** (KDI) provides practical strategies for urban planners, policymakers, and designers to create more inclusive cities by actively incorporating the voices of marginalised groups.

Transforming Energy Access (TEA), in collaboration with Value for Women and GDI Hub platform has developed an open-source GEDSI Toolkit to support inclusive planning in the energy transition sector. It includes templates for creating GEDSI action plans; tools for assessing baseline performance; and guidance for embedding inclusion throughout project activities. Tool 5 is particularly useful for action planning.

Climate Investment Fund's (CIF) paper Disability Inclusion in Climate Finance presents an operational framework for disability inclusion in climate investments which includes common challenges, gaps and associated risks in different entry points of operational delivery; across urban climate action, energy transition and nature based solutions.

Procurement processes

Procurement is a powerful lever for embedding disability inclusion into climate action. By integrating inclusive criteria into procurement policies, terms of reference, and the supplier selection process, practitioners can ensure that goods, services, and infrastructure are accessible and responsive to the needs of persons with disabilities.

Key actions

- ☑ Include accessibility requirements and inclusion criteria in policies, contracts, and supplier selection.
- ☑ Score and advance bidders based on proven accessibility performance.
- ☑ Co-design requirements and monitor delivery in partnership with OPDs.

Example

Asian Development Bank's Disability Roadmap 2021-2025 commits to incorporating disability inclusion in sustainable procurement guidelines.

Resources

Section E of the **UNICEF** Toolkit on Accessibility outlines how to embed accessibility and inclusion into procurement processes, including terms of reference, evaluating bids, and developing contract clauses. Such clauses might require a supplier to demonstrate a commitment to disability inclusion and accessibility, including the following:

- Ensuring that all physical infrastructure complies with relevant accessibility standards (e.g., International Standards Organization (ISO) 21542 or national equivalents).
- Providing information and communication materials in accessible formats (e.g., large print, braille, audio, sign language).
- Making reasonable accommodations to support the participation of persons with disabilities in consultation, training, or service delivery activities.
- Engaging with OPDs where relevant to inform design and implementation.

UNOPS Supplier Resource Centre, with an aim to build long-term partnerships with reputable and ethical suppliers and to deliver impactful projects, hosts resources for supplies to be disability-inclusive, such as Tips to demonstrate disability inclusion in your bid.

For the private sector, in 2023 **Sky** launched their Inclusive Procurement Maturity Model to support organisations to improve procurement practices at a sustainable pace of change. This approach could work in tandem with applying the **International Labour Organization's** (ILO) Disability-Inclusive Supply Chains: A Guide for Business.

The **Business Disability Forum's** resource Principles of disability smart procurement outlines scenarios and 'top tips' for procurement such as asking potential suppliers and developers for examples of accessible and inclusive products or services they have developed for other organisations.

The **United Nations** Disability Inclusion Strategy includes measures to improve procurement. Guidelines from **High-Level Committee on Management Procurement Network** provides UN system organisations with standardised guidance for embedding disability-inclusion criteria into procurement processes, ensuring that all goods and services purchased are accessible and inclusive.

The **Transforming Energy Access** (TEA) platform's GEDSI Toolkit includes a Procurement Guidance Checklist (Tool 6). The **UNOPS** Supplier Resource Centre provides key definitions and requirements for disability-inclusive bids.

Budgeting

While inclusive interventions can be low-cost when integrated from the outset, it requires intentional allocation of financial, human, and technical resources. Without dedicated budgets for accessibility, reasonable accommodation, and stakeholder engagement, inclusion can be difficult to achieve. Embedding inclusion in budgets from the start improves cost-effectiveness and enables meaningful participation and equitable outcomes for all groups, not just persons with disabilities. When resources are limited or diminishing, it is essential that the most practical and effective solutions are delivered. This can apply from funding through the material resources for construction. Dedicated financing for inclusion ensures it is safeguarded through resource scarcity, and ensures interventions delivered are fit-for-purpose well into the future.

Key actions

- ☑ Allocate financial, human, and technical resources for accessibility, reasonable accommodation, and OPD engagement.
- ☑ Include persons with disabilities in policy, planning, and budgeting.

Examples

International Fund for Agricultural Development's Disability Inclusion Strategy 2022-2027 emphasises budgeting for disability inclusion, for example, to cover costs related to reducing or removing the barriers to inclusion for person with disabilities.

Resources

UNICEF's Budgeting and mobilizing resources for disability inclusion in humanitarian actions contains relevant guidance. **UN Women** have also published a resource, Gender- and disability-inclusive budgeting: Issues and policy options, for integrating gender and disability inclusion into public financial management systems, including tools for budget analysis, planning, and monitoring.

For funders of climate action, the report Investing in Disability Inclusive Climate Justice: A Guide for Funders – published by **Disability Rights Fund, Impatient Earth and Impatience Wellbeing** – highlights the severe lack of funding directed toward disability-inclusive climate initiatives, and proposes solutions for funders to better include persons with disabilities in their strategies and impact.

Design

Accessibility is fundamental to disability-inclusive climate action and requires adherence to established technical standards for physical and digital access, as well as the provision of reasonable accommodations to remove barriers to participation. Inclusive design goes beyond technical standards; it is a participatory process that centres the lived experiences of diverse users to achieve equity.

Key actions

- ☑ Apply accessibility standards and inclusive design principles across physical, digital, and communication infrastructure.
- ☑ Engage persons with disabilities in design processes to identify barriers, shape solutions, and embed accessibility throughout the project lifecycle, from planning to implementation.

Examples

GDI Hub's Inclusive Cities programme, delivered under the **UK International Development** funded **AT2030**, explored how to embed disability inclusion in urban development across six global cities. The project combined desk-based research with participatory engagement, including tactile mapping, photo diaries, and co-design workshops to centre the voices of persons with disabilities, working closely with local OPDs, researchers, and community-based designers.

Outputs of this project include the following:

- Global Comparison Report: This consolidates the learning across all six city case studies, allowing us to extract the common themes, barriers, and opportunities.
- Global Action Report: To equip cities with practical actions to accelerate accessibility and inclusion in their physical infrastructure, buildings, services, and operations.

Resources

Tools and frameworks for improving accessibility include the following:

- The ISO 21542:2021 is an international standard for accessibility in the built environment.
- The Web Content Accessibility Guidelines (WCAG) is a global standard for digital accessibility.

- **UNICEF's** Accessibility Toolkit offers practical guidance, checklists, and sample terms of reference for inclusive infrastructure and communications.
- **SightSavers'** Accessibility Standards and Audit Pack includes templates, costings, and tools for conducting access audits.
- **World Blind Union & CBM Global's** Accessibility GO: Guide to action offers a step-by-step guide for integrating accessibility into organisational practice.
- The **World Bank's** Technical Note on Accessibility provides sector-specific guidance and case studies, such as the 'Scaling Up Urban Upgrading Project (P159397)' in Vietnam which incorporated technical accessibility standards into urban infrastructure.
- **AbilityNet** focuses on digital accessibility and offers Accessibility and Inclusive Design training covering a wide range of topics, from 'creating accessible content on Office 365' to 'accessible mobile development'.

Tools and frameworks for delivering inclusive design include the following:

- **GDI Hub's** Inclusive Design Strategy applies lessons from the redevelopment in East London following the London 2012 Olympics and Paralympics plus three years of research on inclusive design in cities. The strategy sets out a process for delivering inclusive design in urban development and infrastructure.
- **Asian Development Bank** hosts an open-source 12-module training programme on Inclusive Design, developed with the **GDI Hub** and their partner **Clarity Labs**, with funding from the **Urban Climate Change and Resilience Trust Fund.**
- The **Royal Institute of British Architects'** Inclusive Design Overlay to the RIBA Plan of Work provides guidance and structure to embedding inclusive design across a project cycle.

Queen Elizabeth Olympic Park integrates urban nature-based solutions with inclusive design. Careful attention to material selection ensured smooth and level access throughout the park. © Queen Elizabeth Olympic Park, London Legacy Development Corporation and GDI Hub.

Stakeholder engagement

Meaningful engagement with persons with disabilities ensures that interventions are informed by lived experience, responsive to diverse needs, and accountable to those most affected. The CRPD emphasises meaningful participation and diverse representation of persons with disabilities, including through collaboration with OPDs. Diverse stakeholders are required to deliver inclusive climate action, including local civil society actors. Effective collaboration across stakeholder groups and technical domains requires specific efforts and tools.

Key actions

- ☑ Identify and map persons with disabilities and OPDs as key stakeholders.
- ☑ Create accessible and safe spaces for participation throughout the project cycle.
- ☑ Ensure OPDs and persons with disabilities are not only consulted but actively involved in decision-making, implementation, and monitoring.
- ☑ Build long-term partnerships with OPDs to strengthen capacity and trust.

Examples

The Community-led Urban Development report by **International Institute for Environment and Development** (IIED) presents examples from Cambodia, Indonesia, Nepal, the Philippines and Thailand where community organisations have sought to include marginalised community groups in upgrading activities and offers recommendations to scale up action.

At city level, systems thinking is an approach that can support working across interconnected themes such as inclusion, low-carbon infrastructure, and sustainable development. The **USAID**-funded Building Healthy Cities project by **JSI India** developed dynamic systems maps for cities in India, Indonesia, Nepal, and Vietnam.

Resources

Kota Kita and Firm Foundation's Social Design Field Guide introduces participatory design methods such as journey mapping, community workshops, and visual storytelling. It is particularly useful for engaging diverse community members in inclusive planning.

CBM Global's Guidelines for Rights-Based Consultations with Organisations of Persons with Disabilities provide practical steps for planning and conducting OPD consultations that are accessible, respectful, and empowering. The guidelines had input from **Pacific Disability Forum, Laos Disabled People's Association, and Women with Disabilities Taking Actions on our Reproductive Health and Human Rights, Philippines.**

CBM Global, Fiji Disabled Peoples Federation and Disabled Child Foundation's Tips on Engaging OPDs in Disaster Risk Reduction outline how to meaningfully engage OPDs in disaster risk reduction (DRR) activities.

Global Infrastructure Hub (with supported from the World Bank) developed a Stakeholder Identification, Engagement and Empowerment Tool that supports infrastructure practitioners to identify, engage, and empower stakeholders, including marginalised groups. It outlines steps for inclusive engagement and provides tools for mapping and analysis.

UN Habitat's Compendium of People-Centred Practices shares a collection of global case studies and tools that demonstrate inclusive, participatory approaches to urban development. It highlights how to embed equity and accessibility in city planning and governance. **UN Habitat's** HerCity Toolbox is designed to engage girls and young women in urban development. While gender-focused, it offers adaptable methods for disability-inclusive engagement, including co-design and digital tools.

UNESCO and **Kota Kita's** Toolbox of Program and Practice Ideas, developed for the city of Banjarmasin, presents practical ideas for disability-inclusive urban development, including stakeholder engagement strategies, accessibility audits, and inclusive governance models.

C40 Cities' Inclusive Community Engagement Playbook is a detailed practitioners' guide for cities on how to deliver inclusive community engagement; including a selection of tools of varying complexity to cater to stakeholders with different needs and capacity, plus case studies from around the world.

UN Habitat and Block by Block Foundation's The Block by Block Playbook: Using Minecraft as a participatory design tool in urban design and governance guides practitioners in facilitating community engagement and encourages setting a shared vision across topics such as amenities, climate conditions, gender, governance of the space, and accessibility barriers.

A self-help group of persons with disabilities in the Khulna district of Bangladesh meets to discuss their work to ensure that other people with disabilities in their community are included in disaster risk management. © CBM Global / Kaizer.

Monitoring, evaluation and learning

Embedding disability inclusion in monitoring, evaluation and learning (MEL) ensures accountability for meaningful participation and enables course correction to address barriers and achieve equitable outcomes.

Key actions

- ☑ Collect and analyse disability data using standardised tools such as the questions sets from the Washington Group on Disability Statistics.
- ☑ Involve OPDs and persons with disabilities in defining indicators, collecting data, and interpreting results.
- ☑ Ensure that MEL, surveys, and reporting formats are accessible to persons with disabilities.
- ☑ Use findings to adapt design and improve inclusion over time.

Examples

In 2018, the **Organisation for Economic Cooperation and Development's Development Assistance Committee** (OECD-DAC) introduced the "disability policy marker"; a tool to track how much Official Development Assistance (ODA) contributes to disability inclusion. The **European Commission** has adopted the marker, using it to screen 100% of its applicable ODA projects.

In 2022 the **IFRC** collaborated with **CBM** and **Humanity & Inclusion**, among others, to update All Under One Roof, a set of guidelines for disability inclusive shelter. This included a checklist of actions for mainstreaming disability inclusion in implementation and monitoring such as 'Indicators for accessibility, participation and inclusion have been included in sectoral action plans (at cluster and organisational level)'.

Resources

The Washington Group Short Set of Questions is a globally recognised tool for identifying persons with disabilities in surveys and censuses. It focuses on six core functional domains and enables disaggregated data collection for inclusive programming. Guidance on using the Washington Group questions has been developed by **CBM Global with the University of Melbourne**.

World Bank's Disability Data Hub is an open-data platform offering disaggregated development statistics, analytics tools, and resources to advance disability knowledge.

Nataša Rebernik et al.'s DIETool: Measuring disability inclusion performance in cities represents one of the first comprehensive attempts to develop performance indicators for disability inclusion at a city scale. This was developed using data from a Global North context and does not include regions which are considered as most climate vulnerable.

World Health Organization's Menu of Disability Inclusive Health Indicators provides a framework for developing indicators for a results chain in any sector.

Transforming Energy Access (TEA) platform's GEDSI Toolkit includes a tracker to assess if your programme is meeting GEDSI standards and best practices (see Tool 1: Operational Framework).

UNICEF's Guidelines on disability-inclusive evaluations provides customised insights, recommended good practices, and targeted action points for conducting disability-inclusive evaluations, in compliance with the **UN Disability Inclusion Strategy**.

For researchers and innovators, Inclusive Research Video Guidance for Early Career Researchers and Innovators by the **TIDAL Network+** - a collaboration between UCL, Strathclyde, Salford and Loughborough Universities - offers practical guidance on engaging diverse participants and achieving more impactful outcomes.

Communication and advocacy

Inclusive communication ensures that persons with disabilities can access, understand, and act on information related to climate risks, programmes, and opportunities. Inclusive communication should be embedded across all stages of project management, from community engagement and recruitment to reporting and advocacy.

Key actions

- ☑ Reduce jargon to effectively collaborate with experts from diverse domains across government, private sector, and civil society.
- ☑ Use multiple formats (e.g. braille, Easy Read, sign language, captioned video, plain language) to ensure information is accessible to persons with disabilities.
- ☑ Ensure persons with disabilities are visible and represented in climate narratives, campaigns, and decision-making spaces.
- ☑ Co-develop communication strategies with OPDs and persons with disabilities to ensure relevance, clarity, and cultural appropriateness.
- ☑ Support inclusive messaging in global climate governance and negotiations to raise awareness and influence policy.

Examples

A pilot training programme, funded by **Global Disability Fund**, and delivered by **CBM Global** aimed to equip OPDs with the knowledge and tools needed to advocate for inclusive climate action.

Action for Poverty published a call for action during COP29 to reform the 81% of national climate pledges under the Paris Agreement currently not considering disability in national determined contributions. Drawing on the author's field observations and interviews in flood-hit Sylhet, Bangladesh the piece calls for an intersectional, rights-based approach.

Ahead of COP-26, **International Disability Alliance**, in collaboration with the **Disability-Inclusive Climate Action Research Programme**, released an advocacy paper calling for a disability-inclusive approach to climate action in informal settlements. The paper highlights the vital role of persons with disabilities and their representative organizations, and provides key recommendations for stakeholders to ensure meaningful participation at all levels.

Resources

Communications:

- The Annex to the **Climate Investment Funds'** Disability Inclusion in Climate Finance Background Note provides practical guidance on inclusive communication, including accessible formats and engagement strategies.
- The UN Disability-Inclusive Communications Guidelines offers comprehensive guidance on accessible language, formats, and inclusive imagery for **United Nations** communications.
- **The Royal Society** and the **Scottish Sensory Centre's** British Sign Language (BSL) Environmental Glossary includes over 200 climate and environmental terms in BSL, supporting accessible climate education.

Advocacy:

- **European Disability Forum's** Disability Inclusive Climate Action Toolkit provides an overview of key resources on disability inclusive climate action advocacy and messaging. One example is the **Global Action on Disability Network's** Promoting Disability-Inclusive Climate Change Action.
- **Impatience Earth, Disability Rights Fund and Impatience Wellbeing** published, Investing in Disability-Inclusive Climate Justice: A guide for funders, including an Easy-Read version.

Networks

- Coalitions such as the International Disability Alliance (**IDA**), the International Disability & Development Consortium (**IDDC**), and the Global Action on Disability (GLAD) Network represent a large number of stakeholders seeking to advance disability inclusion in climate action policy and practice.

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Section 3:
Sectors and sub-sectors

This section provides sector-specific guidance for embedding disability inclusion in climate action. Each sub-section outlines key actions, practical examples, and curated resources to support implementation. Practitioners can use this section to identify relevant entry points and tailor strategies to their technical area.

Urban climate action

Why disability inclusion matters

More than half of the world's population live in cities and cities are responsible for 70% of global greenhouse gas emissions. (Carter & Boukerche, 2020) Investing in sustainable city infrastructure is essential to reduce emissions and strengthen resilience against climate change, particularly as cities continue to grow.

As cities expand and adapt to the impacts of climate change, there is a critical opportunity to embed disability inclusion into urban planning, infrastructure, innovation, and service delivery. However, persons with disabilities are often excluded from urban development processes, resulting in environments that are inaccessible, unsafe, and unresponsive to diverse needs. For example, 43% of persons with disabilities in developing countries report that transportation systems are not accessible to them. (UN DESA, 2024)

Inclusive urban development not only benefits persons with disabilities but also enhances resilience and liveability for all residents. As cities invest in climate adaptation and mitigation, disability inclusion must be recognised as a core component of sustainable urban transformation.

Planning and design

Planning and design are critical entry points for embedding disability inclusion in urban climate action. As cities adapt to climate change, inclusive urban development must ensure that infrastructure, services, and public spaces are accessible, safe, and responsive to diverse needs. This requires moving beyond technical compliance to adopt strategic frameworks, participatory processes, and inclusive investment approaches that centre the rights and experiences of persons with disabilities.

Jitesh (16), is from Bara, Southern Nepal. He has bilateral clubfoot and has received treatment at the Hospital and Rehabilitation Centre for Disabled Children in Banepa. © CBM Global.

Key actions

- ☑ Apply accessibility criteria across urban planning, transit, energy retrofits, digital services, and infrastructure projects.
- ☑ Require participatory co-design and inclusive governance by involving persons with disabilities in policy development, project design, and decision-making.
- ☑ Embed equitable measures, such as inclusive zoning, fair energy tariffs, and social-equity benchmarks, into climate, energy, and smart-city programmes, backed by cross-sector collaboration.

Resources

Under the leadership of **UN-Habitat**, the New Urban Agenda provides a foundational framework that integrates climate action with principles of inclusion, universal design, and participation. It outlines actions such as inclusive zoning, transit equity, and accessible infrastructure.

C40 Cities' policy paper, developed by **UrbanEmerge** and **World Enabled**, Mainstreaming disability inclusion through energy transition in cities is designed to guide city governments in integrating disability inclusion into urban energy transition strategies. It also emphasises participatory approaches, universal accessibility, and cross-sector collaboration, and includes global case studies from cities like Barcelona, Seoul, and Vancouver to illustrate practical applications.

UN-Habitat's International Guidelines on People-Centred Smart Cities outline a framework for inclusive, sustainable, and human rights-based digital urban development. The guidelines advocate for inclusive governance models that actively involve persons with disabilities in decision-making processes.

GDI Hub's Delivering Inclusive Design in Cities: A Global Action Report provides a comprehensive list of actions that cities can use to plan their own journey towards inclusion.

Guidance on Inclusive Infrastructure and Social Equity developed by t**he Global Infrastructure Hub**, with **Atkins Acuity**, supports infrastructure organisations in embedding social equity, including disability inclusion, into large-scale projects, with case studies and practical tips.

Labour markets

As cities invest in green infrastructure and services, there is a critical opportunity to ensure that employment practices are accessible, equitable, and inclusive of persons with disabilities. This includes proactive recruitment, reasonable accommodation, inclusive workplace culture, and valuing lived experience in design and delivery.

Key actions

- ☑ Provide vocational training opportunities for persons with disabilities to transition to digital, smart city and greener sectors such as public transport, electric vehicles, and green building sectors.
- ☑ Harness technology and digital innovation to develop new job opportunities accessible to persons with disabilities.
- ☑ Provide incentives for organisations to employ persons with disabilities in the sector.

Resources

The International Labour Organization (ILO) has developed a self-assessment tool for organisations to understand how disability-inclusive employment practices can be developed and improved in any local business in any country. ILO also provides practical guidance on implementing workplace adjustments across the employment cycle, including a Model Policy in the following:

- Promoting Diversity and Inclusion Through Workplace Adjustments: A Practical Guide
- Managing Disability in the Workplace

PurpleSpace is a global professional development hub for disabled employees and allies, offering resources to support inclusive workplace networks and leadership.

The Disability-confident employers toolkit from Inclusive Futures helps employers build inclusive recruitment, retention, and progression practices.

Transport

Accessible and inclusive transport systems are essential for enabling persons with disabilities to participate fully in urban life. Yet, many public and private transport systems remain inaccessible, unsafe, or unaffordable. Climate-smart transport interventions, such as low-carbon mobility, electric vehicles, and active travel, must be designed with inclusion in mind to ensure equitable access and avoid reinforcing existing barriers.

The concept of an “accessibility chain” emphasises the need for seamless, accessible connections across all stages of a journey - from home to destination. Breaks in this chain (e.g., inaccessible pathways or stations) can prevent travel altogether.

A lack of awareness and acceptance among transport operators is often a major barrier to accessibility. (Odame, 2022)

Key actions

- ☑ Conduct accessibility audits of transport infrastructure and services in partnership with OPDs to identify barriers and inform upgrades.
- ☑ Provide disability awareness training for transport service providers.
- ☑ Invest in participatory planning and inclusive policymaking to ensure that mobility systems are accessible, safe, and equitable.

Access barriers are multidimensional, for example, for accessing transport infrastracture it is necessary to consider physical, information and communication barriers. This example from Surakarta (Solo), demonstrates physical accessibility interventions but it is not clear whether information is accessible for all users. © GDI Hub and Kota Kita / AT2030 Inclusive Infrastructure Programme.

Examples

A study, Alternative travel mode for commuters with disability in Accra: The lived experiences of Uber and taxi users, by Prince Kwame Odame et al. in Accra, shows that alternative modes of transport such as taxis and ride-share companies such as Uber may offer more flexible transport options for persons with disabilities. Taxi subsidy schemes can improve attitudes of taxi drivers towards customers with disabilities.

In Indonesia, through the **UK PACT** programme, several initiatives have integrated aspects of disability inclusion in low carbon transport interventions. For example, **Arup** and **Kota Kita** undertook a collaborative research project in Semarang, Indonesia to develop a sustainable transportation network in the city. The project took an inclusive urban planning approach, consulting marginalised groups in the city and prioritising accessibility requirements.

Active travel is a key intervention for reducing carbon footprint in cities, promoting cycling and walking as primary modes of transport. The **C40 Cities** Knowledge Hub offers strategies for equity and accessibility in cycling. The article links to other knowledge products on equity and cycling, including the 'Wheels for Wellbeing' which developed inclusive design principles for cycling infrastructure.

Electric vehicles present opportunities for cleaner, quieter, and more accessible transport. However, inclusive design is essential. Research is underway to improve EV accessibility and ensure charging infrastructure is usable by all, such as that of **Nadia Palmieri et al**. on consumer preferences in Italy and **Shira Lappin et al**. on accessible public charging in the UK.

Resources

A C40 Cities policy paper, developed in collaboration with **UrbanEmerge** and **World Enabled**, Mainstreaming Disability Inclusion Through Mobility Action in Cities guides city governments in integrating disability-inclusive strategies into sustainable urban mobility and transport planning. It highlights the barriers persons with disabilities face in accessing public transport; mobility infrastructure; and digital mobility services and offers practical strategies to overcome these challenges.

Healthy cities

Green and healthy cities aim to reduce carbon emissions while improving the quality of life for all residents. For persons with disabilities, inclusive access to green infrastructure, public spaces, and health-supporting environments is essential. However, many urban climate action initiatives overlook the specific requirements of persons with disabilities, particularly in areas like active travel, urban greening, and climate-related health risks. Embedding disability inclusion in these interventions ensures that the benefits of green and healthy cities are shared equitably.

Key actions

- ☑ Collect and analyse disaggregated data on how climate-related health risks (e.g., heatwaves, air pollution) affect persons with disabilities. Use this data to inform targeted interventions and resource allocation.
- ☑ Ensure that parks, riversides, and other nature-based, health-promoting environments are designed with accessible pathways, seating, signage, and transport links.
- ☑ Include persons with disabilities in the design of heatwave preparedness strategies and ensure that air quality alerts are disseminated in accessible formats.

Resources

A journal article, Pedestrians with Disabilities and Town and City Streets: From Shared to Inclusive Space? from **Lawson et al**. explores the hazards of shared spaces for persons with disabilities and the transition to inclusive space.

The **World Health Organization's** Age-Friendly Cities Framework promotes inclusive urban environments for older persons, a group which constitutes a significant proportion of persons with disabilities.

Suprihatin is a woman with a cognitive disability from Yogyakarta, Indonesia. Within her community, she leads a self-help group for people with cognitive disabilities. © CBM Global.

Green buildings and infrastructure

Green buildings and infrastructure are central to urban climate action, aiming to reduce emissions, improve energy efficiency, and enhance resilience. However, sustainability goals can sometimes conflict with accessibility – such as the use of revolving doors or elevated green roofs (McKinnon, Patrick, & Muldowney, 2022). To ensure equitable outcomes, inclusive design should be embedded from the outset, balancing environmental performance with the diverse needs of persons with disabilities.

Key actions

- ☑ Embed disability-inclusive design principles in early planning and procurement stages to ensure accessibility features are not deprioritised in favour of environmental performance targets.
- ☑ Embed disability-inclusive design principles in early planning and procurement stages to ensure accessibility features are not deprioritised in favour of environmental performance targets.
- ☑ Engage persons with disabilities and OPDs throughout the design and construction process to surface potential accessibility barriers and co-create viable solutions.
- ☑ Conduct post-occupancy evaluations to assess accessibility and user experience, ensuring future infrastructure improvements are informed by lived experience.

Resources

A report from **UNOPS**, The Importance of Inclusive Infrastructure for Climate Action provides guidance, toolkits, and case studies.

MASS Design Group's award-winning impact-based design methodology integrates participatory design and local fabrication, creating inclusive and sustainable buildings. The methodology has generated 17,000 jobs with women representing 38% of the workers on construction sites. **MASS** also hosts the Deaf Space and Disability Justice Design Lab.

Access to nature and green space

Access to nature and green spaces is vital for physical and mental health, social inclusion, and climate resilience. (Berg, et al., 2019) (Kabisch, Basu, Bosch, Bratman, & Masztalerz, 2023) (Selanon & Chuangchai, 2023) Yet, persons with disabilities often face barriers to enjoying these benefits due to inaccessible infrastructure, limited transport options, and affordability challenges. Inclusive design and planning of green spaces can deliver co-benefits – cooler urban environments, improved wellbeing, and greater participation in community life – while advancing climate and equity goals. Accessible eco-tourism presents a key opportunity for persons with disabilities and an emerging market for enterprise.

Key actions

- ☑ Use spatial data and tools such as GIS to assess accessibility and inform inclusive planning of natural and urban green spaces.
- ☑ Use participatory mapping with OPDs to identify barriers and co-design inclusive green spaces that reflect community needs.
- ☑ Ensure transport links to parks and nature reserves are accessible, affordable, and safe for persons with disabilities.
- ☑ Include accessibility criteria in eco-tourism policies and infrastructure to promote inclusive recreation and economic opportunities.

Examples

A Slovenia based study by **Lepoglavec et al.**, Accessibility of Urban Forests and Parks for People with Disabilities in Wheelchairs, Considering the Surface and Longitudinal Slope of the Trails, used GIS tools to assess the accessibility of urban forests and parks for wheelchair users, considering trail surfaces and slopes. It demonstrates how spatial data can inform inclusive planning of natural areas.

'Senderismo Sin Limites' is a Zero Project award-winning initiative from **Fundación Eres** in Chile. It developed inclusive hiking and park access through training for tourism professionals, self-assessment tools, and adaptive equipment such as single-wheeled transport vehicles.

A study by **Triguero-Mas et al.**, on Quality of Life Benefits of Urban Rooftop Gardening, found that rooftop gardening programmes in Barcelona improved wellbeing, social inclusion, and quality of life for persons with cognitive disabilities.

Also in Barcelona, urban greening initiatives have been found to reproduce or worsen existing inequities unless inclusion is prioritised. Research by **Calderón-Argelich et al.** into Barcelona's "Superblock" model identified risks relating to maintenance, lack of comprehensive guidelines, and tensions between greening and accessibility. This highlights the importance of embedding accessibility and inclusion in urban greening strategies. Guidelines were developed to support inclusive implementation, exemplified by the 'Superblock' plan which prioritises community, inclusion, and public space with the aim of improving air quality and access to urban green space. The Barcelona superblock project illustrates how a nature-based solution to climate mitigation can deliver outcomes relating to inclusive public spaces and access to green space.

Urban ecosystems and resilience

Urban ecosystems – including green infrastructure, water systems, and public spaces – play a vital role in enhancing climate resilience, especially in informal settlements. When designed inclusively, these systems can reduce environmental risks, improve access to essential services, and support the participation of persons with disabilities in urban life. However, inclusive approaches remain underutilised in ecosystem-based adaptation and resilience planning.

Key actions

- ☑ Use rights-based, participatory frameworks to align environmental sustainability with social equity, embedding inclusion in both infrastructure and institutional resilience efforts.
- ☑ Use inclusive community engagement to co-design urban resilience strategies that reflect diverse needs and lived experiences.
- ☑ Apply universal design principles to green and blue infrastructure, such as drainage systems, parks, and water access points.

Examples

In Nairobi's Kibera settlement, the **Kounkuey Design Initiative (KDI)** led a series of community-driven interventions that combined access to water and sanitation, education spaces, and green infrastructure. The Kibera Public Space project demonstrated how hybrid infrastructure – integrating ecological, social, and physical systems – can be co-designed with communities to address diverse needs, including those of persons with disabilities.

STIL Solutions is a Canadian social enterprise founded by a woman with vision impairment, focused on inclusive and sustainable design. Its flagship product, WasteFinder, is a tactile and visual waste disposal system that enables persons with disabilities to independently and accurately sort waste in public spaces. The product is used in universities, medical centres, and public venues across Canada, and has expanded to the U.S. and India. The company also engages in research on inclusive waste systems and was awarded the C40 Women4Climate Tech Challenge for its innovative approach.

In Ulaanbaatar, Mongolia, the Flood Resilience in Ger Areas project – funded by the **Adaptation Fund**, implemented by **UN-Habitat** and executed by **World Vision International** – aimed to reduce climate-related flood risks in informal settlements through small-scale, community-driven infrastructure interventions.

Resources

KDI's Integrated and Inclusive Infrastructure Framework outlines principles and tactics for inclusive infrastructure development. Supported by **Architectural Association of Kenya, Arup East Africa UCL Engineering for International Development Centre**, it emphasises rights-based, resilient, and balanced approaches that integrate social inclusion and environmental sustainability.

Disaster Risk Reduction and Management (DRRM)

Persons with disabilities are disproportionately affected by disasters due to systemic barriers in preparedness, response, and recovery. Inclusive DRRM ensures that early warning systems, emergency shelters, and recovery efforts are accessible and responsive to diverse needs. Embedding disability inclusion in DRRM not only upholds rights but also strengthens community resilience and effectiveness of climate adaptation strategies.

Key actions

- ☑ Engage OPDs in co-developing inclusive early warning systems, evacuation plans, and recovery strategies.
- ☑ Ensure emergency shelters and services meet accessibility standards and provide reasonable accommodations.
- ☑ Train DRRM personnel on disability inclusion, including communication, mobility support, and psychosocial needs.
- ☑ Include disability-specific indicators in disaster preparedness and response monitoring frameworks.
- ☑ Use inclusive simulation exercises to test and improve accessibility of disaster response protocols.

Participants in a training on community-based disability inclusive disaster risk reduction practice first aid.

Example

There is limited evidence on how to transition from inclusive emergency shelters to long-term accessible housing and services. Localised approaches offer an opportunity for more tailored interventions, but disability inclusion must be better integrated. For example, Nepal has initiated **Local Adaptation Plans of Action (LAPA)**, however a report by **Humanity & inclusion** found limited coverage in disability inclusion.

Resources

CBM Global collaborated with the **Pacific Disability Forum** and their OPD members to publish a series of tipsheets for DRR practitioners covering inclusive early warning systems, shelter, and community engagement. CBM Global has also developed an e-learning course to address critical disability inclusion gaps in disaster risk reduction practices. Developed in collaboration with the **UN Office for Disaster Risk Reduction** and the African Disability Forum, the scenario-based course is aimed at practitioners working on community-based disaster risk reduction programmes.

The **Global Facility for Disaster Reduction and Recovery (GFDRR)**, administered by the **World Bank**, Knowledge Hub is a repository of global case studies and tools, including examples of inclusive DRM.

All Under One Roof from **IFRC**, **CBM** and **Humanity & Inclusion** is a comprehensive guide to disability-inclusive shelter and settlements in emergencies.

A C40 Cities policy paper, Mainstreaming Disability Inclusion in Disaster Risk Management, developed in collaboration with **UrbanEmerge** and **World Enabled**, provides guidance for city governments on integrating disability-inclusive strategies into urban disaster preparedness and response. The paper outlines inclusive approaches to early warning systems, evacuation planning, post-disaster recovery, and infrastructure design, emphasising participatory planning and universal accessibility.

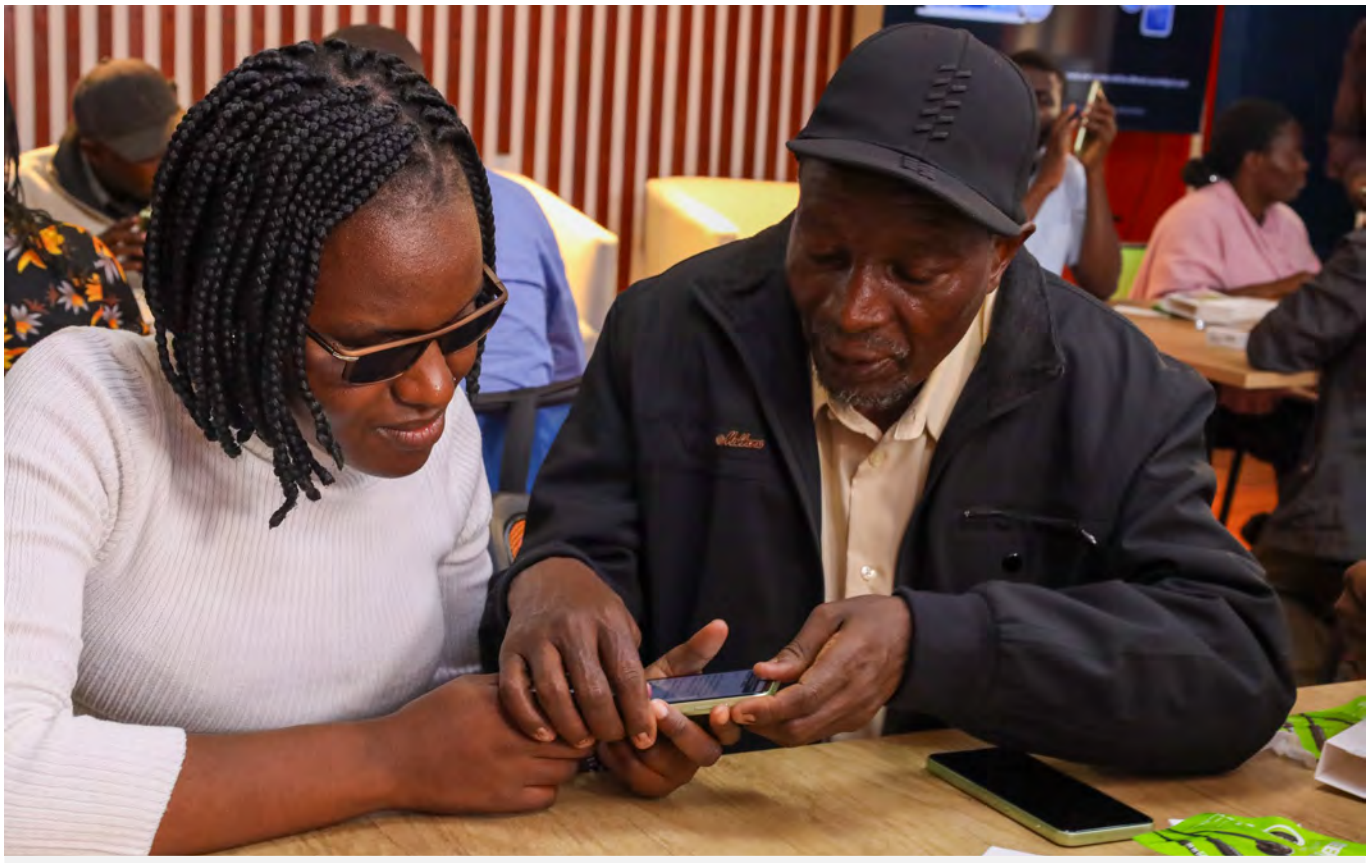
The **Global Facility for Disaster Reduction and Recovery (GFDRR)** – administered by the **World Bank** – and researchers from **University College London** published Designing Inclusive, Accessible Early Warning Systems: Good Practices and Entry Points. This resource is intended to support development practitioners, particularly World Bank staff, in designing early warning systems that include diverse social groups and respond to local needs and contexts.

Harnessing technology for inclusion

Technology plays a transformative role in enabling disability inclusion in urban climate action. From accessible communication tools to inclusive urban data systems and assistive technologies, digital innovation can bridge gaps in participation, mobility, and resilience. However, without intentional design and inclusive governance, technology can also reinforce exclusion. Ensuring that digital tools and smart city systems are accessible, affordable, and co-designed with persons with disabilities is essential for equitable climate action.

Key actions

- ☑ Ensure digital platforms used in climate action (e.g. early warning systems, mapping tools, mobile apps) meet international accessibility standards.
- ☑ Co-design smart city technologies with persons with disabilities to ensure usability, safety, and relevance.
- ☑ Use inclusive data systems to collect, analyse, and visualise disability-disaggregated climate risk and resilience data.
- ☑ Support digital literacy and training programmes for persons with disabilities to engage with climate technologies and services.



Participants of the 'Mobile as AT' project in Kenya workshop engage in hands-on learning, sharing knowledge and building digital skills through collaborative smartphone use. © Angus Stewart / GDI Hub.

Example

Safaricom, a leading telecommunications company in Kenya, has become a regional pioneer in embedding disability inclusion across its products, services, and operations. Recognising that persons with disabilities are often excluded from digital and financial services, Safaricom undertook a comprehensive accessibility audit in 2017 to assess how its offerings served this population.

The audit found that users with vision impairments faced significant barriers using its mobile money platform, M-PESA. In response, the company introduced an interactive voice response (IVR) system, enabling vision impaired users to navigate services independently and securely. This reduced the risk of fraud and improved financial autonomy.

Safaricom implemented a system to identify customers with accessibility needs during service calls. Staff are trained to respond appropriately, including using Kenyan Sign Language for deaf customers. The Safaricom website was redesigned to meet international accessibility standards.

Safaricom has also made efforts to hire and support employees with disabilities. This includes accessible workstations, assistive equipment, and career development support. Through a campaign called “Open Your Eyes Kenya”, Safaricom aimed to raise public awareness about the barriers faced by persons with vision impairments.

Resources

The Smart Cities for all Toolkit from **G3ICT** helps cities embed digital inclusion in smart city planning and implementation. **G3ict** and **World Enabled**, with support of the **Microsoft** corporation, make their Smart Cities for All Digital Inclusion Toolkit available in 8 languages to city leaders around the world.

AT2030 and ATscale have funded research and case studies on how mobile phones can function as low-cost assistive technologies, delivered by **GDI Hub** and **Google**.

ATscale has also developed tools to support governments and partners in planning and budgeting for assistive technology provision, with partners such as **Clinton Health Access Initiative** and **GDI Hub**.

Nature-based solutions

Why disability inclusion matters

Nature-based solutions (NbS) – such as reforestation, wetland restoration, and green infrastructure – are increasingly recognised as vital strategies for addressing climate change, enhancing biodiversity, and supporting sustainable livelihoods. However, the rights and contributions of persons with disabilities are often overlooked in their design and implementation.

The 2024 UN Disability and Development Report highlights that environmental programmes – including those focused on conservation and ecosystem restoration – frequently fail to consider accessibility, participation, and benefit-sharing for persons with disabilities. (United Nations Department of Economic and Social Affairs, 2024) (M'Vouama, Hossain, Sutter, & Ghimire, 2023) This exclusion undermines equity and limits the effectiveness and long-term sustainability of NbS initiatives.

Inclusive NbS can generate multiple co-benefits – such as improved health, food security, and disaster resilience – for persons with disabilities and their communities. Embedding disability inclusion from the outset enables NbS to contribute to more just, resilient, and ecologically sound climate action. An **Inclusive Futures** report **Disability inclusion in nature-based solutions programming** shares how there is limited evidence available on disability inclusion and nature-based solutions programming and reports on emerging best practices in the sector.

Agriculture, agroforestry, and food security

Climate-smart agriculture and food systems are essential for building resilience and ensuring food security in the face of climate change. However, persons with disabilities face barriers including inaccessible local landscapes, buildings, communications, and practices; limited awareness among communities and planners; as well as stigma, disinterest, and discriminatory attitudes (CBM Global; APH Disaster READY; and Pacific Disability Forum, 2022). Inclusive approaches must address physical, informational, and social barriers to participation, while recognising the rights and contributions of persons with disabilities in rural development and food systems.

Key actions

- ☑ Ensure training venues are accessible, materials are provided in multiple formats, and outreach strategies are inclusive of persons with disabilities.
- ☑ Improve food security and economic independence by embedding disability inclusion into climate-resilient farming practices – such as drought-resistant crops, raised planting beds, and accessible irrigation systems.
- ☑ Promote inclusive land and resource governance by ensuring persons with disabilities are represented in community-based natural resource management and land-use planning processes.

Examples

The **World Bank** APPEALS Project in Nigeria integrated disability inclusion into agro-processing and livelihoods support, allocating 20% of places to farmers with disabilities, and providing accessible communications, training, and assistive technologies.

The We Are Able! programme is implemented in six African countries by a consortium led by **ZOA** and including the **African Disability Forum**. It promotes inclusive food and livelihood security by strengthening the participation of persons with disabilities in local governance and land-use planning. Through community engagement and advocacy, the programme supports persons with disabilities to claim their rights to land, income, and basic services. In Uganda, for example, persons with disabilities have been supported to engage in dialogues with local authorities, influencing decisions on land access and agricultural support schemes.

A **Plan International** and **Banke UNESCO Club** project in Nepal supported young women with disabilities to engage in environmentally sustainable entrepreneurship. The initiative combined training in agricultural resource management, income generation, and environmental conservation. Participants were introduced to nature-based solutions such as vermicomposting, which uses locally available materials to enhance soil health and support sustainable farming practices.

Ripple Effect partnered with the National Union of Women with Disabilities Uganda to implement an inclusive rural livelihoods project. A key feature of the programme was its peer-to-peer training model. Women farmers with disabilities were not only beneficiaries but also served as peer educators, training both disabled and non-disabled farmers in improved agricultural techniques to boost productivity and food security.

Climate Just Communities (CJC) is a programme funded by the **Scottish Government** to promote climate resilience in Malawi, Rwanda, and Zambia. Community-led initiatives include terracing, tree plantation and tree nurseries to maximise agricultural production, protect the environment from flooding and provide a source of income. **CBM UK** have partnered with the National Union of Disability Organisations in Rwanda to advise CJC delivery partners and district government staff on embedding disability inclusion from the start. This includes raising awareness at the community level to challenge negative attitudes towards persons with disabilities; improving the accessibility of tree nursery structures to enable wheelchair users to move between seedling rows; providing access to assistive technology through referrals to specialist services; and encouraging community groups to create specific roles for persons with disabilities. For example, persons with disabilities who cannot undertake certain physical tasks are assigned as supervisors, enabling them to participate in this waged labour opportunity.

Community members tend an experimentation plot as part of an inclusive climate-resilient livelihoods project implemented by CBM Global and Action Intercooperation Madagascar. © CBM Global.

Resources

Assistive Technology (AT) for use in agriculture has been pioneered by **AgrAbility**, with **Purdue University**, which has developed a The Toolbox: Agricultural Tools, Equipment, Machinery & Buildings for Farmers and Ranchers with Physical Disabilities. This includes accessible farm layouts and tools for gardening, livestock handling, small fruit and flower production, woodlots, and forestry.

SPARK, a consortium of **Light for the World**, the **International Labour Organisation** and **Procasur**, supports the **International Fund for Agricultural Development (IFAD)** on achieving disability inclusive rural transformation. It published a blog titled Eight ways to include people with disabilities in climate action.

A 2022 **Sovacool et al.** study, Equity, technological innovation and sustainable behaviour in a low-carbon future, highlights how food sharing practices, while sustainable, may exclude persons with disabilities due to dietary restrictions and accessibility.

Ecosystem restoration and management

Ecosystem restoration is a vital strategy for climate resilience, biodiversity protection, and sustainable livelihoods. Yet, many initiatives overlook the participation and requirements of persons with disabilities. Inclusive approaches can ensure that restoration efforts are equitable, locally grounded, and capable of delivering co-benefits for marginalised groups. This includes accessible project design, inclusive governance, and livelihood opportunities linked to restored ecosystems. (Light for the world, 2024) (United Nations Department of Economic and Social Affairs, 2024)

Key actions

- ☑ Combine ecosystem restoration with inclusive, sustainable livelihoods that engage marginalised groups, including persons with disabilities.
- ☑ Design restoration infrastructure and planning to support both ecological goals and social inclusion, ensuring accessible and equitable outcomes.
- ☑ Ensure persons with disabilities and OPDs are actively involved in the governance of restoration programmes, including planning, implementation, and monitoring.

Examples

'Corals, chickens, and community' is a project led by the **Kyeema Foundation**, delivered in partnership with **Corals for Conservation** and **Just World Partnerships**, which supports young Indigenous scientists and community leaders in Fiji and Papua New Guinea (PNG) to restore degraded coral reefs. It combines ecosystem restoration with inclusive livelihood development, such as village chicken farming and seaweed production, with a focus on engaging marginalised groups including persons with disabilities, in both restoration and livelihoods activities.

Sustainable Community Climate Resilience through Nature-based Solutions in Papua New Guinea and Solomon Islands is implemented by **Save the Children** and partners – **Save the Children PNG, Save the Children Solomon Islands, Natural Carbon, The Nature Conservancy,** and **Mai-Maasina Green Belt** . The project focused on working with coastal communities to protect mangroves and coastal forests. It integrates inclusive governance, youth upskilling, and alternative livelihoods such as honey production and carbon market participation. Persons with disabilities were actively included in decision-making and benefit-sharing mechanisms.

A biodiversity assessment by **Advanced Environmental Systems** conducted for the installation of a riverboat access ramp in New South Wales, Australia, considered both ecological and accessibility impacts. This approach demonstrates how infrastructure for ecosystem access can be designed to meet both environmental and inclusion goals, and could be replicated in similar contexts.

Aquaculture and fishery

Aquaculture and fisheries play a vital role for food security, livelihoods, and climate resilience – particularly in coastal and riverine communities. Persons with disabilities often face barriers to participating in these sectors, such as inaccessible infrastructure, limited access to adaptive equipment, and exclusion from training and extension services. Inclusive approaches can create new opportunities for sustainable livelihoods and enhance community resilience. (United Nations Department of Economic and Social Affairs, 2024)

Key actions

- ☑ Ensure aquaculture training and extension services are accessible and inclusive of persons with disabilities.
- ☑ Promote adaptive tools and technologies that enable persons with disabilities to participate in fish farming and processing.
- ☑ Engage OPDs in the design of coastal and inland fishery programmes to ensure relevance and accessibility.
- ☑ Support inclusive value chains by linking disabled fishers and aquaculture workers to markets and cooperatives.

Examples

A 2023 **European Parliament** resolution on the small-scale fisheries situation in the EU and future perspectives called for accessible working environments in the sector to promote income generation opportunities for persons with disabilities.

In South Africa, the **USAID-funded** Expanding Participation of the Disabled in Climate-Adaptive Agriculture project implemented aquaponics systems designed to reduce physical labour and adapted for wheelchair users. The project was delivered in partnership with **INMED Partnerships for Children** and **Disabled People of South Africa (DPSA)**. Participants received business training and engaged in community market events, which helped to reduce stigma and increase visibility of farmers with disabilities.

A **UNDP**-supported project, Inclusive Aquaponics for a Resilient Saint Lucia, introduced aquaponics systems tailored for accessibility, enabling persons with disabilities to participate in sustainable food production. The initiative demonstrated how inclusive design can support both environmental resilience and social inclusion in small island developing states.

In the United States, aquaponics has also been used in educational programmes such as Growing Together, which engages students with disabilities in hands-on learning about sustainable agriculture, fostering both skills development and environmental awareness.

Water and sanitation

Water, sanitation, and hygiene (WASH) systems are essential for health, dignity, and climate resilience. However, persons with disabilities often face barriers to accessing safe water and sanitation due to physical inaccessibility, lack of inclusive planning, and limited participation in decision-making. (Water for Women, 2024) Inclusive WASH interventions must address these barriers while also responding to the growing risks posed by climate change – such as flooding and water scarcity – that disproportionately affect persons with disabilities . These risks are intensifying in informal urban settlements where infrastructure is often inadequate. (UN-Habitat, 2018)

Key actions

- ☑ Design WASH systems through inclusive, community-led processes that address the specific needs of persons with disabilities and older persons.
- ☑ Build institutional capacity for disability inclusion through training, technical support, and integration of inclusive practices into project design.
- ☑ Integrate disability-inclusive indicators into WASH monitoring and evaluation frameworks to track access, participation, and outcomes.

Examples

A collaboration between **Monash University** and the **Asian Development Bank**, the RISE project integrated flood resilience, biodiversity, and inclusive WASH in informal settlements and used community-based, participatory process for project implementation.

In partnership with **CBM Australia**, the Community-Based Drinking Water and Sanitation Program (**PAMSIMAS**) introduced disability-inclusive WASH practices in 59 pilot villages in Indonesia. This included training for government officials and facilitators, accessible facility design, and direct participation of persons with disabilities in planning and implementation.

Water for Women was Australia's flagship WASH programme from 2018-24, implementing projects in 16 countries in the Asia-Pacific region. **CBM Australia** provided specialist disability inclusion technical support to the managing contractor and delivery partners. This included conducting annual disability inclusion analyses, inputting to project design; developing tools and guidance; and facilitating training and other learning activities. This support enabled the **Water for Women** programme to generate lessons for the wider sector.

Energy Transition

Why disability inclusion matters

The global shift toward renewable energy and low-carbon technologies presents a transformative opportunity to build more inclusive and equitable energy systems. Persons with disabilities are disproportionately affected by energy poverty – particularly in rural and informal settlements - and often face multiple barriers, including to affordability challenges, inaccessible infrastructure, and higher or specialised energy needs (Energy Savings Trust, 2021). They are also significantly underrepresented in the energy sector workforce (United Nations Department of Economic and Social Affairs, 2024) (Buettgen, 2022). These barriers can severely limit access to education, healthcare, livelihoods, and participation in community life (United Nations Department of Economic and Social Affairs, 2024) (Marimuthu, 2025).

A just energy transition is an opportunity to mitigate the unequal impacts of climate change, whilst addressing pre-existing inequities. By addressing the specific requirements of persons with disabilities, energy programmes can expand their reach, improve outcomes, and contribute to broader development goals.

Energy access

Reliable energy access is essential for health, education, livelihoods, and climate resilience. Yet, persons with disabilities are disproportionately affected by energy poverty and often excluded from energy access programmes and infrastructure planning. Barriers include higher energy needs, inaccessible technologies, and limited representation in energy policy. A just energy transition must address these inequities by embedding disability inclusion in energy access strategies, technologies, and financing mechanisms. (Wolbring & Leopatra, 2012) (Ngum, Mushayavanhu, & Coe, 2021)

As highlighted in **GDI Hub's** white paper - Opportunities for Disability-inclusive Energy Access delivered under the **Transforming Energy Access (TEA) platform**:

- Persons with disabilities often face higher energy costs due to increased time spent at home, reliance on assistive technologies, and the need for heating, cooling, or uninterrupted power. But their overall consumption may be less than average due to limited financial resources. (Ivanova & Middlemiss, 2012)
- Energy insecurity is more prevalent among persons with disabilities, particularly in rural and informal settlements.
- A significant proportion of assistive technologies require electricity – 26% of products on the WHO Priority Assistive Products List require power, and 18% use batteries. (United Nations Department of Economic and Social Affairs, 2024)
- Households with persons with disabilities are more likely to use polluting fuels such as wood or coal, increasing health risks. (United Nations Department of Economic and Social Affairs, 2024)

- Solar energy adoption tends to favour urban and high-resource areas, potentially widening access gaps in low-income or informal settings. (Sovacool, Newell, Carley, & Fanzo, 2022)
- Improving access to electricity in schools can enable access to education for children with disabilities who require electricity for AT. (United Nations Department of Economic and Social Affairs, 2024)

Key actions

- ☑ Integrate disability-inclusive design and data into energy programmes to assess energy needs and audit infrastructure.
- ☑ Design off-grid energy solutions that power assistive technologies and meet the specific requirements of persons with disabilities.
- ☑ Support inclusive entrepreneurship in the renewable energy sector, including training and financing for persons with disabilities.
- ☑ Promote universal design in energy infrastructure, such as accessible solar kiosks, charging stations, and public lighting.

Example

The Gaza Solar Access Project from **UNOPS** and the **Government of Japan** used vulnerability assessments to prioritise energy access for households headed by women, older persons, and persons with disabilities. Hybrid solar systems were installed, benefiting over 1,100 people, with more than 20% of households having persons with disabilities.

Resources

Guidance on How Can Energy Access Programmes Address the Needs of People with Disabilities – produced under the **Low Energy Inclusive Appliances** programme – provides recommendations for researchers, appliance manufacturers, and other energy access stakeholders. The programme was delivered by **Energy Saving Trust** and **CLASP**, and funded by **UK International Development** through the **Transforming Energy Access platform**, with additional support from the **IKEA Foundation**. It also developed two disability inclusion checklists for energy access programmes and appliance companies.

Energy-efficient products

As the energy transition accelerates, emerging technologies and products are reshaping how energy is produced, stored, and consumed. However, without inclusive design, these innovations risk reinforcing existing inequalities. Persons with disabilities often face barriers to accessing energy-efficient appliances, smart home systems, and renewable energy solutions. Inclusive innovation – grounded in universal design, accessibility, and affordability – can ensure that new energy products support independence, reduce costs, and expand opportunities for persons with disabilities.

As highlighted in **GDI Hub's** white paper - Opportunities for Disability-inclusive Energy Access delivered under the **Transforming Energy Access (TEA) Platform**:

- Energy-efficient products can reduce costs for low-income households but may be unaffordable or inaccessible without targeted support.
- Smart home systems offer independence but may increase energy bills, highlighting the need for integration with renewable energy sources (Hasan, et al., 2022).
- Many assistive technologies can be adapted to run on solar or low-energy systems, but market shaping is needed to ensure availability and affordability.
- Inclusive product design must consider usability, repairability, and local production to ensure long-term sustainability and access.

Key actions

- ☑ Promote inclusive product and infrastructure design by supporting innovation that integrates accessibility, sustainability, and local context in off-grid and low-resource settings.
- ☑ Apply market-shaping strategies to scale access to clean energy powered assistive technologies and inclusive appliances, prioritising affordability, durability, and user-centred design.
- ☑ Support inclusive entrepreneurship and employment by investing in disability-led enterprises and applying workforce inclusion standards in clean energy sector industries.

Examples

In Timor-Leste, a **Mercy Corps** project supported a business run by persons with disabilities to develop cookstoves that are both clean-burning and accessible, addressing indoor air pollution while promoting inclusive entrepreneurship.

In Lesotho, **African Clean Energy's** work developed smartphone-enabled cookstoves with built-in sensors and adopted a pay-as-you-go model to improve affordability. The company also set a target to employ at least 10% of its workforce from the disability community.

A study – Optimization of e-Mobility Service for Disabled People Using a Multistep Integrated Methodology – by **Lamedica et al.** proposed a five-step methodology to optimise energy-efficient routes and charging schedules for electric vehicles (EV) used by persons with mobility impairments. This type of research can support urban planners implementing EV charging infrastructure and integrating it with accessibility considerations.

SolarEar is a pioneering social enterprise that has developed the world's first solar-powered, rechargeable hearing aid. Traditional hearing aids are often prohibitively expensive and require frequent battery replacements, which are costly and difficult to access in off-grid areas. SolarEar's solution includes:

- A solar-powered charger for hearing aids, cochlear implants, and other small devices.
- Universal rechargeable batteries that last 2–3 years, compared to the 7–10 days for conventional batteries.
- Moisture-resistant design suitable for humid environments.
- Affordability pricing compared conventional models.

SolarEar exemplifies inclusive business: many of its employees and leaders are persons with disabilities, ensuring that lived experience informs product design and business strategy. Profits are reinvested to expand access to hearing care. The solar-powered system reduces reliance on disposable batteries, lowering environmental impact.

Resources

ATscale has conducted research on how to apply market-shaping approaches to increase access to assistive technology in low- and middle-income countries.

Entrepreneurship and employment in the green economy

The shift to a low-carbon economy is generating new opportunities across sectors such as renewable energy, circular economy, and sustainable infrastructure – often referred to as "sunrise industries."

These sectors include water supply, sewerage, waste management and remediation activities; transportation and storage; electricity generation, steam and air conditioning supply; construction and buildings. (C40 Cities, n.d.)

While green jobs can reduce poverty and promote equity, persons with disabilities remain underrepresented due to systemic barriers. Inclusive entrepreneurship and employment – supported by targeted investment, skills development, and enabling policies – are essential to ensure persons with disabilities can participate and lead in the green economy. (Hughes & Rescalvo, 2021) (European Disability Forum, 2023) (Giardi, Lueder, & EPR, 2023)

Key actions

- ☑ Invest in accessible vocational training and inclusive employment models that enable persons with disabilities to enter and thrive in green sectors.
- ☑ Support disability-led innovation and entrepreneurship through accelerators, funding, and recognition platforms.
- ☑ Apply inclusive investment strategies and market-shaping tools to scale access to assistive technologies and inclusive business models.

Examples

Zero Project Awards is an international platform recognising inclusive innovations, including those in climate and environmental sectors. It highlights scalable solutions led by or benefiting persons with disabilities.

Innovate Now is Africa's first assistive technology accelerator, launched as part of the **UK International Development funded AT2030** program, led by **GDI Hub**, supporting disability-led start-ups in green and inclusive innovation. Participants have developed solutions in mobility, WASH, and locally manufactured assistive devices.

Recycling4All is a joint venture between the **Repsol Foundation** and **ILUNION**, established to promote inclusive employment within the growing circular economy sector. (Buettgen, 2022) Based in Spain, the company specialises in the recycling of waste electrical and electronic equipment – a rapidly expanding area of environmental concern. At the time of reporting, two-thirds of employees were persons with disabilities, demonstrating a strong commitment to workforce inclusion. The company operates across the entire recycling value chain, from collection and classification to treatment and recovery.

In Malawi, the "Skills for Resilience" project exemplifies how disability-inclusive green job training can be embedded in climate adaptation strategies. Led by the **Norwegian Association of the Disabled** in partnership with **Malawi's Technical, Entrepreneurial and Vocational Education and Training Authority,** the four-year initiative targets young smallholder farmers – particularly women and persons with disabilities - whose livelihoods are threatened by climate-related hazards. (Buettgen, 2022)

Resources

Making the green transition inclusive for persons with disabilities is a report by **Fundación ONCE** and the **ILO Global Business and Disability Network**, co-funded by **European Social Fund** which explores how the global shift toward a green economy – driven by climate change mitigation and sustainability goals – can be inclusive of persons with disabilities. The report highlights the risks of exclusion this population faces in the evolving labour market and outlines opportunities across key sectors such as energy, transport, construction, agriculture, and tourism. It provides a roadmap with actionable recommendations for governments, businesses, trade unions, training institutions, and civil society to ensure that persons with disabilities are not left behind.

A report by the **European Platform for Rehabilitation (EPR)**, with support from the **European Union**, called Skills and jobs for an inclusive green economy: Policies, practices and recommendations for employment support going green outlines the concept of the green economy and green jobs, detailing the essential skills required to access employment in this sector. It also highlights the services provided by EPR member organisations that support persons with disabilities in gaining training and assistance for green job opportunities.

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About us

CBM Global's Inclusion Advisory Group

The Inclusion Advisory Group (IAG) is a global network of inclusion specialists working to advance the rights of persons with disabilities through advisory services which generate systemic change.

We work in close partnership with the Disability Movement to provide rights-based, tailored, quality-assured advice to development and humanitarian organisations that are looking to make inclusion a reality for persons with disabilities.

CBM Global works alongside persons with disabilities living in the world's poorest places to fight poverty and exclusion, to transform lives and build inclusive communities. We create concrete and sustainable change through our three vehicles of change: community programmes, advisory and advocacy.

Contact IAG

Global Disability Innovation Hub

Global Disability Innovation (GDI) Hub accelerates ideas into impact for a more just world —for disabled people, and all people. We are a world leading delivery and practice centre, an Academic Research Centre at University College London (UCL) and the first World Health Organization (WHO) Global Collaborating Centre on Assistive Technology. As an Academic Research Centre and Community Interest Company, our diverse portfolio and unique structure enables rapid translation of research into practice.

GDI Hub is also home to the UK International Development funded AT2030 programme which tests 'what works' to improve access to lifechanging Assistive Technology (AT) for all. Launched in 2016 as a legacy of the London 2012 Paralympic Games, GDI Hub works in 60 countries, with a reach of more than 34 million people since 2016, developing homegrown technologies alongside new knowledge and research.

Contact GDI Hub

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References

Berg, M. M., Poppel, M. v., Kamp, I. v., Ruijsbroek, A., Triguero-Mas, M., & Gidlow, C. (2019). Do Physical Activity, Social Cohesion, and Loneliness Mediate the Association Between Time Spent Visiting Green Space and Mental Health?'. Environment and Behavior, 144–66.

Bond Disability and Development Group; and International Disability and Development Consortium. (2025). Unequal Climate Justice for People with Disabilities: Insights and Evidence from Communities and Civil Society Organisations. Bond Disability and Development Climate Working Group.

Brossard, L. (2024). Women with Disabilities and Climate Change. ONG Inclusiva.

Buettgen, A. (2022). "Nothing about us without us" - Realizing disability rights through a just transition towards environmentally sustainable economies and societies. Geneva: International Labour Organization.

C40 Cities. (sd). Good Green Jobs. Opgehaald van C40 Cities

Carter, L., & Boukerche, S. (2020). Private Sector Investment in Climate Smart Cities. World Bank Group; United Nations Development Programme; and Global Infrastructure Facility.

CBM Global; APH Disaster READY; and Pacific Disability Forum. (2022). Climate-smart agriculture: Tip sheet for disability inclusion. The Australian Humanitarian Partnership.

Disability Inclusive and Accessible Urban Development Network (DIAUD); World Enabled; Christian Blind Mission (CBM). (2016). The Inclusion Imperative: Towards Disability-inclusive and Accessible Urban Development. Disability Inclusive and Accessible Urban Development Network (DIAUD) and CBM.

Disability Inclusive and Accessible Urban Development Network and CBM. (2016). The Inclusion Imperative: Towards Disability-Inclusive and Accessible Urban Development. Disability Inclusive and Accessible Urban Development Network (DIAUD) and CBM.

Division for Inclusive Social Development. (2022). Introducing the United Nations Convention on the Rights of Persons with Disabilities. United Nations Department of Economic and Social Affairs.

Energy Savings Trust. (2021). How energy access programmes can address the needs of people with disabilities. Opgehaald van Energy Savings Trust.

European Disability Forum. (2023). Technical Brief: Disability Inclusion and Climate Priorities. European Disability Forum (EDF).

Giardi, G., Lueder, E., & EPR. (2023). Skills and jobs for an inclusive green economy: Policies, practices and recommendations for employment support going green. European Platform for Rehabilitation (EPR).

Global Disability Innovation Hub. (2022). Inclusive design strategy.

Hasan, M., Talukder, T. I., Saima, F. T., Joy, M. N., Das, A., & Sheham, M. N. (2022). Smart Home Automation System Powered by Renewable Energy. IEEE International Conference on Distributed Computing and Electrical Circuits and Electronics, 1-7.

Hughes, K., & Rescalvo, M. (2021). Just transition beyond the energy sector. Manila: Asian Development Bank.

Humanity & Inclusion. (2023, 12 5). How climate change affects people with disabilities. Retrieved from Humanity & Inclusion

Ivanova, D., & Middlemiss, L. (2012). Characterizing the Energy Use of Disabled People in the European Union towards Inclusion in the Energy Transition. Nature Energy, 1188–97.

Jodoin, S., Bowie-Edwards, A., Lofts, K., Mangat, S., Adjei, B., & Lesnikowski, A. (2025). A systematic analysis of disability inclusion in domestic climate policies. npj Climate Action.

Kabisch, N., Basu, S., Bosch, M. v., Bratman, G. N., & Masztalerz, O. (2023). Nature-based solutions and mental health. In T. McPhearson, N. Kabisch, & a. N. Frantzeskaki, Nature-Based Solutions for Cities (pp. 192–212). Edward Elgar Publishing.

Lemon, F. (2025). Investing in Disability-Inclusive Climate Justice: A Guide for Funders. Disability Rights Fund.

Light for the world. (2024, June 3rd). Restoring ecosystems: six approaches for disability inclusive climate action. Retrieved from Light for the world

Marimuthu, B. W. (2025). Opportunities for Disability-inclusive Energy Access. Transforming Energy Access Platform.

McKinnon, I., Patrick, M., & Muldowney, A. (2022). Why Inclusive Design Is Important for Climate and Crisis Resilience in Cities. AT2030; and Global Disability Innovation Hub.

M'Vouama, J., Hossain, M., Sutter, S., & Ghimire, M. (2023). Persons with disabilities and climate change in Nepal: Humanitarian impacts and pathways for inclusive climate action. Lyon: Humanity & Inclusion.

Ngum, S., Mushayavanhu, D., & Coe, S. (2021). Economic Empowerment of Excluded Groups in the COP26 Energy Campaign: Key Issues to Consider in Applications to the Rapid Response Facility', Work and Opportunities for Women (WOW). Helpdesk.

Odame, P. K. (2022). Travel Mode Choice and Its Responsiveness to the Needs of Commuters with Disability in the AccrA. Journal of Land Use, Mobility and Environment, 431–45.

Patrick, M., Wardrop, P., & Marimuthu, a. B. (2025). Integrating Disability in Energy Transition GESI Strategies. Transforming Energy Access Platform.

Riche, N. (2024). Mapping Disability Inclusive Climate Action in Europe. European Disability Forum.

Selanon, P., & Chuangchai, W. (2023). The Importance of Urban Green Spaces in Enhancing Holistic Health and Sustainable Well-Being for People with Disabilities: A Narrative Review. Buildings, 1-12.

Sovacool, B. K., Newell, P., Carley, S., & Fanzo, J. (2022). Equity, Technological Innovation and Sustainable Behaviour in a Low-Carbon Future. Nature Human Behaviour, 326–37.

Stein, P. J. (2024). Advancing disability-inclusive climate research and action, climate justice, and climate-resilient development. The Lancet Planetary Health, e242-e255.

U.S. Department of Justice Office of Public Affairs. (2022, July 18). Uber Commits to Changes and Pays Millions to Resolve Justice Department Lawsuit for Overcharging People with Disabilities.

UN DESA. (2024). Disability and Development Report: Accelerating the realization of the Sustainable Development Goals by, for and with persons with disabilities. United Nations.

UNFCCC. (2021). Climate Action Pathway: Climate Resilience – Vision and Summary. United Nations Framework Convention on Climate Change.

UN-Habitat. (2018). Pro-Poor Climate Action in Informal Settlements. UN-Habitat.

United Nations Department of Economic and Social Affairs. (2024). Disability and Development Report: Accelerating the realization of the Sustainable Development Goals by, for and with Persons with Disabilities. New York: United Nations.

United Nations Department of Economic and Social Affairs. (n.d.). Ageing and disability. Retrieved from United Nations Department of Economic and Social Affairs

United Nations General Assembly. (2006). Convention on the Rights of Persons with Disabilities. New York: United Nations.

Wardrop, P. M. (2025). Integrating Disability in Energy Transition GESI Strategies. Transforming Energy Access platform.

Water for Women. (2024). What does climate-resilient inclusive WASH look like? Insights from Water for Women. Water for Women.

Wolbring, G., & Leopatra, a. V. (2012). Climate Change, Water, Sanitation and Energy Insecurity: Invisibility Of People With Disabilities. Canadian Journal of Disability Studies 1, 66–90.

World Health Organization. (n.d.). Disability. Retrieved from World Health Organization

WWF. (n.d.). What's the difference between climate change mitigation and adaptation? Retrieved from World Wildlife Fund


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