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Greening communities guidance

Lifelong learning for climate and sustainability action



Greening Education Partnership

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Greening Education Partnership
Getting every learner climate-ready

The **Greening Education Partnership** is an independent and inclusive community of practice on the role of education in tackling climate change. It is led by national governments, intergovernmental organizations, youth, civil society organizations, and private sector, among others. For more information, please contact gep@unesco.org or visit https://unesco.org/en/sustainable-development/education/greening-future

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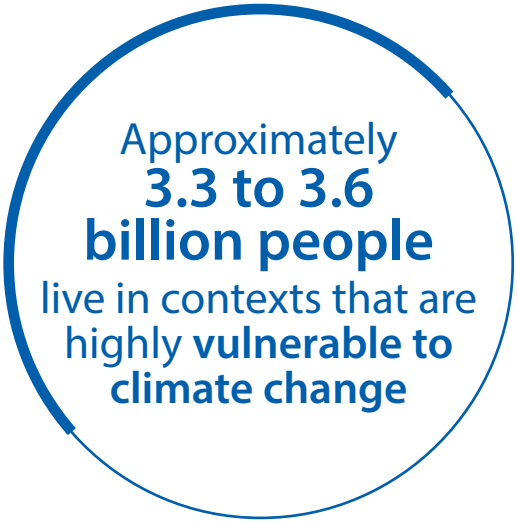
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S H O R T S U M M A R Y

Greening communities to enhance action at the local level

Climate change poses a serious threat to communities around the world, compelling us to protect vulnerable lives and shape resilient futures. By nurturing lifelong learning and empowering local initiatives, communities can drive transformative change – amplifying local efforts into global impact.

Green communities are municipalities of any size that embrace lifelong learning to empower individuals to take meaningful climate and sustainability action. This is achieved by extending climate education beyond the classroom and offering learning opportunities in non-formal and informal settings – rooted in and responsive to local culture and context. By engaging learners of all ages across a variety of learning environments, residents of green communities are equipped to take informed, proactive and responsible action for the climate and environment, contributing to more sustainable living.



The sections of this document provide an overview of the diverse learners, learning spaces and educational approaches that can contribute to greening communities. It outlines practical steps for developing a comprehensive green learning strategy and action plan that mobilizes learners of all generations in climate and sustainability efforts.

Municipal governments, along with a wide range of local stakeholders and change agents in both urban and rural areas, are invited to use this guidance to foster green communities through a lifelong learning lens.

Together, let's green our communities!

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"Since wars begin in the minds of men and women it is in the minds of men and women that the defences of peace must be constructed"

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Greening communities guidance

Lifelong learning for climate and sustainability action

Foreword

The Greening Education Partnership, launched at the UN Transforming Education Summit in 2022, has rapidly advanced its mission to make every learner climate-ready. The Partnership is uniting key actors across an expanding number of UNESCO Member States to advance coordinated action across four pillars: greening schools, curriculum, teacher training, and communities.

Together, we are strengthening research, developing cutting-edge global guidance and forging strategic partnerships to shape a future where climate education is not only accessible but transformative.

While formal education plays a vital role, climate education must extend beyond classroom walls. Non-formal and informal learning environments are essential for raising awareness and inspiring informed climate action. With the right tools, knowledge and resources, communities can become powerful engines of lifelong learning and climate action. They can serve as hubs for sustainability, resilience and innovation, helping us build a better future from the ground up.

As we look ahead, the urgency is clear. By 2050, nearly 70% of the world's population will live in urban areas, many of which are already grappling with extreme heat, flooding, and storms that threaten infrastructure, health, and livelihoods. At the same time, rural communities are on the frontlines of climate disruption, facing altered seasons and damaged ecosystems.

This new guidance provides clear principles, minimum requirements and practical advice for building green communities in diverse settings. It unpacks who can support greening communities through learning, where this learning can take place, and what should be learned.

To realize green communities worldwide, the active involvement of local government stakeholders - the primary audience of this publication - is essential. Equally important is collaboration with civil society organizations, educational institutions, youth groups and other community actors.

This publication is part of UNESCO's broader effort to place communities at the heart of climate action. By reimagining how we live, work and collaborate, we can transform our neighbourhoods into models of sustainability and climate resilience.

Developed in partnership with World Scouting, the publication complements two recent UNESCO publications, the green school quality standard and the greening curriculum guidance.

Through our global commitment to transforming education, we can ensure that all learning institutions effectively prepare learners to tackle the climate crisis and create solutions needed to build a sustainable future.

Let's work together to grow climate-ready communities across the globe!



Stefania Giannini
Assistant Director-General for Education, UNESCO

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List of abbreviations

AI	Artificial Intelligence
ALE	Adult Learning and Education
AR	Augmented Reality
CCE	Climate Change Education
CLC	Community Learning Centre
COP	Conference of the Parties
CSI	Corporate Social Investment
CSO	Civil Society Organization
CSR	Corporate Social Responsibility
ECCE	Early Childhood Care and Education
ESD	Education for Sustainable Development
ESG	Environmental, Social and Governance
FAO	Food and Agriculture Organization of the United Nations
FEE	Foundation for Environmental Education
GEP	Greening Education Partnership
GIAHS	Globally Important Agricultural Heritage Systems
ICT	Information and Communication Technology
IFLA	International Federation of Library Associations and Institutions
IPCC	Intergovernmental Panel on Climate Change
M&E	Monitoring and Evaluation
MECCE	Monitoring and Evaluating Climate Communication and Education
NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development
PPP	Public-Private Partnership
RCE	Regional Centre of Expertise
SDG	Sustainable Development Goal
SIDS	Small Island Developing States

STEM	Science, Technology, Engineering and Mathematics
TVET	Technical and Vocational Education and Training
UN DESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UN-Habitat	United Nations Human Settlements Programme
UNICEF	United Nations Children's Fund
UNITAR	United Nations Institute for Training and Research
UNU	United Nations University
WHO	World Health Organization
WOSM	WOSM - World Organization of the Scout Movement
WWF	World Wildlife Fund
WWQA	World Water Quality Alliance
YRE	Young Reporters for the Environment
YUNGA	Youth and the United Nations Global Alliance
YoU-CAN	Youth UNESCO Climate Action Network

Glossary of terms

Biodiversity: The variability among living organisms including terrestrial, marine and other aquatic species and the ecological environments of which they are a part. This includes variation in attributes, as well as changes in the abundance and distribution over time and place within and among species, biological communities and ecosystems.

Change agents: A type of stakeholder group characterized by demographic distinctions such as age (e.g. youth, older adults), gender (e.g. women and girls) or culture and religion (e.g. Indigenous people and their communities, faith-based organizations). As individuals or groups, change agents play key roles in leading advocacy efforts. They also help ensure under-represented groups are actively involved in decision-making and facilitate peer learning within and across their communities.

Circular economy: A circular economy is defined as a current sustainable economic model, in which products and materials are designed in such a way that they can be reused, remanufactured, recycled or recovered (the 4-Rs). This means materials can be maintained as long as possible, along with the resources of which they are made, and the generation of waste, especially hazardous, is avoided or minimized, and greenhouse gas emissions prevented or reduced.

Citizen science: This involves participation of a range of non-scientific stakeholders in the scientific process. At its most inclusive and most innovative, citizen science involves citizen volunteers as partners in the entire scientific process, including determining research themes, questions, methods, and means of sharing results and conclusions.

Climate adaptation: In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects.

Climate change: A change in the overall state of the Earth's climate (such as temperature and rainfall). It is caused by natural (such volcanic eruptions, changes in ocean currents and changes in the activity of the Sun) and human causes (such as burning of fossil fuels).

Climate justice: Climate justice links development and human rights to achieve a human-centred approach to addressing climate change, safeguarding the rights of the most vulnerable people and shares the burdens and benefits of climate change and its impacts equitably and fairly.

Climate mitigation: Human actions and initiatives that reduce the release of greenhouse gas emissions or remove greenhouse gases from the atmosphere.

Climate resilience: The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure while also maintaining the capacity for adaptation, learning and transformation.

Education for sustainable development (ESD): Education that empowers learners with knowledge, skills, values and attitudes to take informed decisions and take responsible action for environmental integrity, economic viability and a just society empowering people of all genders, for present and future generations, while respecting cultural diversity.

Formal learning: Learning that occurs from experiences in education or training institutions, which leads to certification. Formal learning is intentional and has structured learning objectives and dedicated time and support.

Governance: This entails the procedures, frameworks and policies that direct the leadership, management and operations of institutions, organizations or systems. Effective governance ensures the maintenance of integrity and the smooth running of organizations, governments and communities.

Green communities: These are communities that offer holistic lifelong learning opportunities to enhance climate and sustainability action across the whole community. These learning opportunities are ideally planned in collaboration with stakeholders and supported by policy to ensure they are maintained over the long-term. Green communities can monitor, evaluate and report on their progress to allow iterative improvements over time. Green communities have achieved 'Leader' status according to the Greening Communities Guidance Action Planning and Assessment Tool (Annex 1). The process of becoming a green community is called 'greening'.

Greening education: Rooted in long-standing efforts on ESD, a communication term to describe a holistic response to young people's demands for education about the climate and environmental crisis that empowers them with the knowledge, skills and attitudes needed to engage in transformative action on mitigation, adaptation and resilience to climate change and other environmental challenges, aimed at shaping green, low emission climate-resilient societies.

Green learning: Learning that takes place within formal, non-formal and informal settings, enabling people of all ages to acquire the knowledge, values and skills to support environmental protection, climate action and sustainable living.

Green jobs: Green jobs are decent jobs that contribute to preserve or restore the environment. By definition, green jobs meet all criteria of the social, economic, and environmental sustainability. Promoting green jobs can be a powerful tool to address many global issues such as rural poverty, unemployment, climate change, and food insecurity.

Green skills: The knowledge, abilities, values and attitudes needed to live in, develop and support a sustainable and resource-efficient society. The breadth of green skills includes occupational and technical skills used more intensively in green operations, and transferable skills such as decision-making and teamwork.

Indigenous knowledge: Indigenous knowledge refer to the philosophies (including understandings, values, skills and competencies) developed and experienced by societies with long histories of interaction with their natural surroundings.

Informal learning: Learning that results from daily life activities related to work, family or leisure. Informal learning is not structured in terms of objectives, time or support and typically does not lead to certification. Informal learning may be intentional but in most cases it is perceived as unintentional or incidental. It may take place in public learning places such as libraries or cultural centres or in hyper-local contexts like neighbourhoods, family settings, markets, natural spaces and farms or via social media applications, among other spaces.

Non-formal learning: Learning that is acquired as an alternative or in addition to formal learning and typically does not lead to certification. While less regulated than formal education, it is still structured in terms of objectives, time, and support. Non-formal learning is intentional from the learner's perspective and is often shorter in duration. It tends to focus on life skills, work skills and social or cultural development.

Post-carbon economy: An economy that is addressing the problems associated with the unlimited growth-centric model and is eliminating its reliance on fossil fuels by systematically adopting mechanisms and financial instruments to facilitate the transition to renewable energy as the primary source.

Stakeholders: A diverse range of groups across formal, non-formal and informal learning settings who can contribute to greening communities through learning. Stakeholders may also participate in green learning initiatives as learners. These may include local governments, educational institutions, youth organizations, civil society groups, private sector partners, and grassroots movements, among others.

Sustainability: Sustainability can be defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Technical and vocational education and training (TVET): TVET refers to educational processes that, in addition to general education, involve the study of technologies and related sciences, and the acquisition of practical skills, attitudes, knowledge and understanding related to occupations in various sectors of economic and social life.



SECTION 1

Introduction

In this section

1.1 Background
Provides an overview of the importance of greening communities through lifelong learning

1.2 What is a green community?
Describes the main characteristics of green communities

1.3 What is learning for a green community?
Outlines the five elements of greening communities through lifelong learning: the learners, learning places, learning modalities, a range of climate and sustainability-related issues, and a focus on holistic learning

1.4 What is the Greening Communities Guidance?
- Places the Greening Communities Guidance within the context of the guidance documents produced by the other three Greening Education Partnership Pillars
- Outlines the objectives, structure and methodology used to develop the guidance document, along with suggested uses.

Introduction

1.1 Background

Climate change is not a distant threat but a current reality affecting communities worldwide. It impacts everything from food security and water availability to public health and economic stability (IPCC, 2023). Moreover, broader environmental degradation issues such as air, water and soil pollution are increasingly impacting the health of rural and urban ecosystems worldwide (IPBES, 2019). Communities around the world are all impacted by climate change and other sustainability issues; however, the nature, impacts and severity of these issues often differ between urban and rural settings (Folberth et al., 2015). For example, in densely populated megacities[1], aging infrastructure often cannot cope with extreme weather caused by climate change, leading to service disruptions and increased vulnerability for marginalized populations (Folberth et al., 2015; Peri and Sasahara, 2019). Coastal communities, from megacities like Lagos (Nigeria) and Istanbul (Türkiye) to small coastal villages like Selimiye (Türkiye) and tiny rural communities of Indigenous people such as Apakin (Nigeria) are particularly at risk from rising sea levels, which threaten to flood low-lying areas and disrupt essential services (UN, 2006). In other communities, rising temperatures are driving rural populations toward urban centres while also trapping poorer populations in less productive agricultural environments (Peri and Sasahara, 2019).

The global nature of the climate and sustainability crises demands urgent, coordinated action at all levels of government, in both urban and rural settings, from local initiatives to international agreements. The transformation of municipalities[2] and rural populations into green communities is therefore a critical component of global climate and sustainability learning and action. The United Nations (UN) Sustainable Development Goals (SDGs) (UN, 2015) and the Paris Agreement (UNFCCC, 2015) emphasize the importance of local action in achieving global targets. As the UN Secretary-General António Guterres (2019) stated, 'Cities are where the climate battle will largely be won or lost'. The United Nations Development Programme (UNDP) also recognizes the vital importance of local governments in turning the SDGs from vision to reality (UNDP, n.d.).

This guidance document recognizes the importance of global coherence and local adaptability in greening communities through learning. It provides a shared vision and acts as a practical support for local municipalities, communities and actors. Grounded in globally agreed goals and supported by the latest research on good practices from around the world, this guidance document encourages the development of locally relevant objectives and implementation strategies that reflect the unique risks, strengths and opportunities for communities that are greening through learning.

An important part of this local action is involving all community members in learning towards greening communities. A whole-of-community approach is essential for greening communities through learning. This means green learning opportunities are provided by a broad spectrum of stakeholders, including local governments, non-governmental organizations (NGOs), libraries, museums, educational institutions, Indigenous groups, youth organizations and the private sector, among others. Lifelong learning opportunities can make green learning accessible to people from all walks of life. This means ensuring green learning opportunities are available to people across all ages, education levels and sectors of society, as well as those from diverse gender, ethnic, national and economic backgrounds, including under-represented groups. Ideally, this lifelong learning should be holistic, action-oriented, rights-based and provided through non-formal and informal learning, rather than just through formal learning (UNESCO, 2021a). When entire communities are mobilized to learn and take action on climate change and sustainability and provided with skills to be part of green transitions, they are creating a safe and healthy planet for today's citizens and those of future generations.

[1] Megacities are defined as urban areas with over 10 million residents (World Economic Forum, 2018).

[2] By 'municipalities' we are referring to geographically defined areas under local governments. This includes everything from megacities to local towns and rural villages.

1.2 What is a green community?

Green communities can be understood as those that offer holistic lifelong learning opportunities to enhance climate and sustainability action across the whole community. These opportunities can be planned in collaboration with stakeholders and supported by policy to ensure they are maintained over the long-term. Green communities also monitor, evaluate and report on their progress, which allows them to iteratively improve over time. Green communities achieve 'Leader' status according to the Action Planning Assessment Tool in Annex 1.

The Greening Education Partnership (GEP) is an international collaboration with an overarching goal 'to deliver strong, coordinated and comprehensive action that will prepare every learner to acquire the knowledge, skills, values and attitudes to tackle climate change, environmental issues and to promote sustainable development' (UNESCO, n.d). Its Greening Communities Pillar (Pillar 4) aims to support communities in every country to transform into green communities with the urgency required to respond to the environmental crisis caused by unsustainable production and consumption (UNESCO, n.d). In the framework of the GEP, this guide aims to support communities and their stakeholders with this process of transformation and sustainable transitions.

A green community is one where:

… people live in unity with the planetary ecosystem;

… nature is abundant in human places and people can feel grass, smell clean air and hear birds in their vicinity;

… daily activities are in harmony with nature through responsible consumption, circular economies and sustainable livelihoods;

... individuals of all ages and from all walks of life have opportunities to learn about climate change and how to take effective climate action throughout their lives;

… people have strong interpersonal and intergenerational relationships and have the sustainable livelihoods needed for their communities to thrive;

… young people are active leaders and equal partners in decision-making bodies that shape policies on climate, sustainability, and urban life;

… communities have become resilient and local governments enable and provide structures and places for participation in climate and sustainability learning and action;

… diverse mitigative, adaptive and regenerative actions across the globe have lessened climate change and restored balance;

… no one is disproportionately affected by climate change, and climate justice ensures that all communities – regardless of race, income, gender, or geography – benefit equally from adaptation and mitigation efforts;

… sustainable living is the status quo – and unsustainable lifestyles seem far away and outdated;

This can be promoted through providing people of all ages in a variety of learning places with green learning opportunities.

1.3 What is learning for a green community?

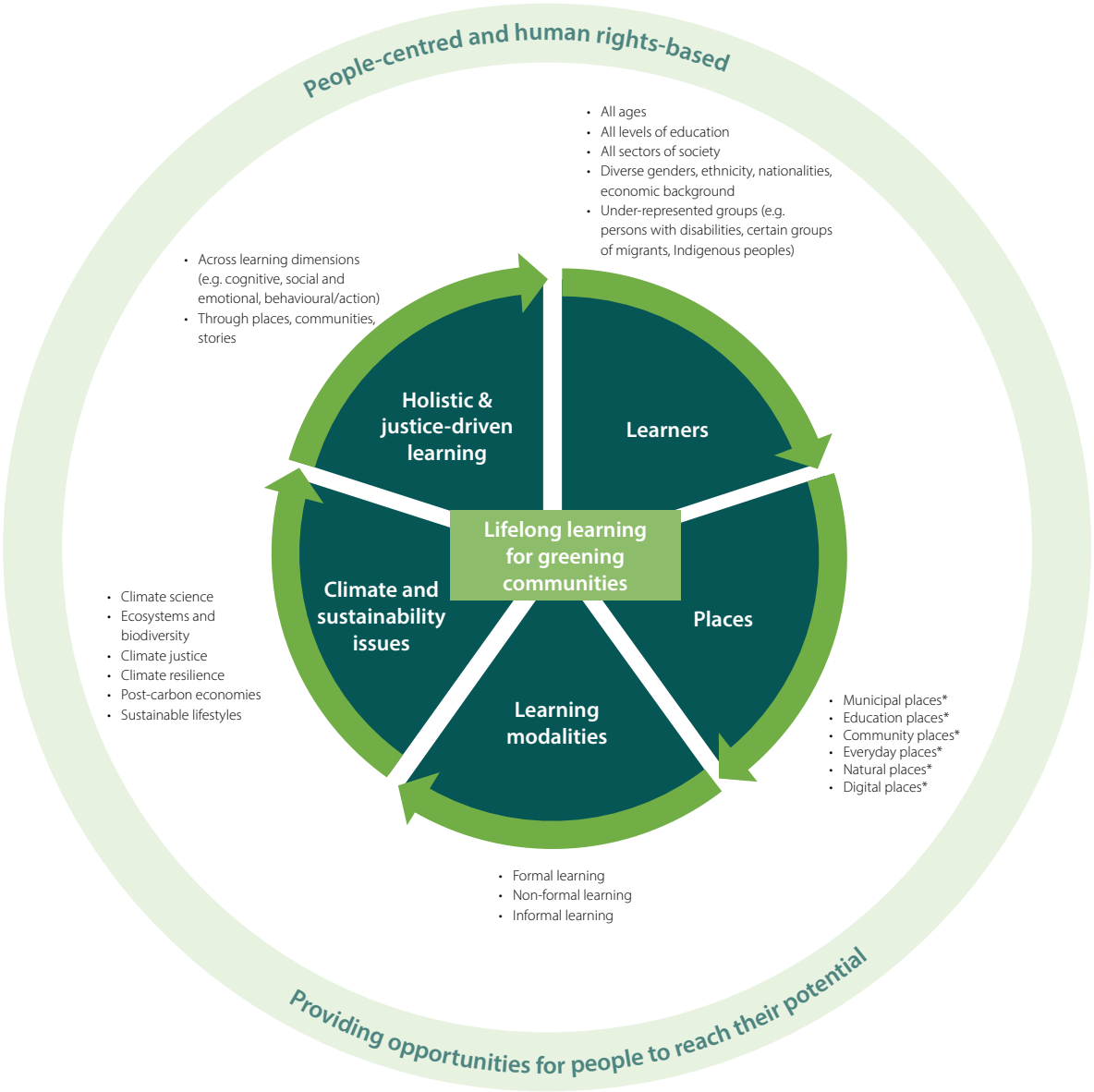
There are five elements of greening communities through lifelong learning, namely engaging:

1. learners of all ages and education levels (e.g. children, young people, adults, older people),
2. in all learning places and contexts (e.g. online, workplaces, families),
3. through a variety of learning modalities (i.e. formal, non-formal and informal),
4. across a range of climate and sustainability-related issues, and
5. with a focus on gaining the cognitive, social, emotional and action learning needed to contribute to a restorative future (c.f. UIL, 2022a, pp. 18f).

These aspects are elaborated in Figure 1, Box 1 and Box 2.

Local governments are ideally situated to coordinate efforts to green communities through learning due to their ability to formulate policies, allocate resources and integrate multi-stakeholder and systemic approaches to climate and sustainability action. To facilitate the transformation to green communities, municipalities can work with diverse stakeholders in planning, implementing and evaluating opportunities for lifelong learning. These stakeholders have access to diverse learning places, work with varied populations, and are vital for building locally relevant lifelong learning for climate and sustainability action.

Figure 1: A whole-of-community approach to greening communities through lifelong learning



* Municipal places
* Education places (e.g. early childhood education, primary education, secondary education, higher education, TVET, farmer schools)
* Community places (e.g. community learning centres, museums, libraries, hospitals, faith-based organizations, NGOs)
* Everyday places (e.g. families, workplaces, markets, peer learning networks)
* Natural places (e.g. parks , gardens, UNESCO sites)
* Digital places (e.g. social media, virtual and augmented reality, games, online repositories)

Box 1. Five broad elements of lifelong learning

Learners of all ages. Lifelong learning is a process that starts at birth and extends across all life stages.

All levels of education. Lifelong learning links all levels and types of education, including but not limited to, early childhood care and education (ECCE), primary and secondary school education, higher education, adult education and TVET.

All learners and learning places. Lifelong learning creates opportunities for diverse learning needs by bridging formal, non-formal and informal learning. Lifelong learning is designed for all learners, including those from diverse demographic groups characterized by gender, ethnicity, national, economic or social origins (e.g. persons with disabilities, Indigenous peoples and other traditionally under-represented groups) learn across a broad range of places including families, communities, workplaces, libraries, museums, online and distance learning platforms.

All learning modalities. Lifelong learning takes place in formal learning (i.e. institutionalized learning which leads to recognized qualifications), non-formal learning (i.e. learning which is institutionalized but acts as an alternative or complementary to formal education and does not usually lead to recognized qualifications) and informal learning (i.e. learning which is not institutionalized and takes place on an individual, family, community or societal basis). See Box 2 for more comprehensive definitions.

A variety of purposes. Lifelong learning is people-centred and human rights-based. Its purpose is to provide people with opportunities to develop their capabilities and reach their potential, regardless of their starting point in life.

(Source: UIL, 2022a, pp. 18f)

Box 2. Definitions learning modalities

Formal learning occurs as a result of experiences in an education or training institution, with structured objectives, time and support, leading to certification. Formal learning is intentional from the learner's perspective. Formal education is instrumental in embracing multidisciplinary, interdisciplinary or transdisciplinary approaches to climate and environmental education (Monroe et al., 2019). Examples include climate and environmental education offered in early childhood education centres, universities or TVET.

Non-formal learning is not provided by an education or training institution and typically does not lead to certification. While less regulated than formal education, it is, however, structured in terms of learning objectives, time or support. Non-formal learning is intentional from the learner's perspective. Funded by diverse mechanisms such as grants, programme funding or training leave, non-formal education is often shorter in duration and focuses on life skills, work skills and social or cultural development (UIL, 2022a). Examples could include short courses, workshops, and seminars devoted to environment, sustainability, and climate change.

Informal learning results from daily life activities related to work, family or leisure. It is not structured (in terms of learning objectives, learning time or learning support) and typically does not lead to certification. Informal learning may be intentional but in most cases it is perceived as unintentional (or 'incidental'/random). Informal learning may take place in public learning places such as libraries or cultural centres or in hyper-local contexts like neighbourhoods or family settings. Examples could include social media interaction with environmental champions or influencers, self-study or on-the-job mentoring.

Source: UIL (2015c)

1.4 What is the Greening Communities Guidance?

The ***Greening Communities Guidance*** was designed to complement guidance documents created in the other three Pillars of the Greening Education Partnership. The ***Greening Communities Guidance*** supports the transformation of communities through a focus on non-formal and informal learning across a range of learning places. The ***Green School Quality Standard*** focuses on greening schools through the 'whole institution approach' (UNESCO, 2024a); the ***Greening Curriculum Guidance*** focuses on greening across the primary and secondary education curriculum (UNESCO, 2024b); and the ***Educators at the Heart of Greening Education: A Climate Resilience Toolkit for Policymakers*** (working title, forthcoming) focuses on greening teacher education and education systems (UNESCO, forthcoming). The ***Greening Communities Guidance*** also aligns with the Greening Curriculum Guidance in identifying approaches to learning. In what follows, the objectives, structure, and uses of the Greening Communities Guidance are elaborated further.

Figure 2: The four Greening Education Partnership Guidance Documents



a) Objectives of the guidance

The objective of the Greening Communities Guidance is to provide a supportive resource for planning and implementing lifelong learning opportunities that enhance climate and sustainability action across communities of all sizes. The aim is to respond to the urgent need for widespread climate and sustainability learning and action across diverse urban and rural settings.

While the guidance is primarily targeted to local governments, other stakeholders, including change agents will find the guidance useful. For the purposes of this guidance, stakeholders and change agents are those who offer learning opportunities and places in greening communities. They may also be the participants of green learning opportunities. Change agents are a type of stakeholder characterized as individuals or groups that advocate for greening communities through learning.

The guidance highlights ways that local governments and others, including change agents, can:

Engage those who offer learning opportunities to green communities by:

- Collaborating and partnering with civil society, education and academic institutions, change agents, the private sector and others.
- Co-developing lifelong learning opportunities to green communities with all stakeholders and learners – including those who have not traditionally engaged in climate and sustainability action.

Support lifelong learning places to green communities through formal, non-formal and informal learning by:

- Offering a path to developing quality climate and sustainability learning to green communities across a wide range of learning places.

Develop and support holistic, quality lifelong learning opportunities to green communities that address a range of climate and sustainability topics by:

- Supporting the creation of holistic approaches to instructing about climate and sustainability topics, backed by the latest research.
- Providing information about the types of climate and sustainability topics that can be included in learning opportunities to green communities while also recognizing other ways of knowing.
- Emphasizing the importance of integrating local knowledge into climate and sustainability learning to green communities.

Create a green learning strategy for communities by:

- Following step-by-step guidance to develop and implement a locally focused strategy, and measure, evaluate and report on progress.
- Developing an action plan to identify, assess and prioritize actions and ways to measure the strategy's progress.
- Encouraging sharing with other communities that are greening through learning by becoming part of a broader network.

Identify actions to green communities through learning and develop ways to measure those actions by:

- Completing the Action Planning Tool, which provides suggested actions and measures to include in your action plan.
- Following the step-by-step instructions for assessing the extent to which your community meets the standard of being a 'green community' before and after implementing its green learning strategy.

b) Structure of the guidance

The Greening Communities Guidance comprises five sections, providing key considerations for lifelong learning towards green communities, strategic guidance and illustrative 'in practice' case studies to help concretize the material in the sections. See Figure 3.

Figure 3. The elements of learning for a green community



The five sections of the guidance are as follows:

Three **thematic sections** address an overarching consideration for greening communities through lifelong learning:

- **Who can offer learning opportunities for greening communities:** This section outlines a diversity of stakeholders who provide learning opportunities to green communities and overviews how local governments can support and collaborate with each stakeholder type.
- **Where does the learning take place in greening communities:** This section highlights the range of learning places that can advance the greening of communities and provides concrete suggestions for how local governments might support these places.
- **What and how to instruct in greening communities:** This section overviews approaches and topics of learning towards greening communities in alignment with the Greening Education Partnership's Greening Curriculum Guidance.

Two **sections support the development of strategies and plans** for greening communities:

- **How to develop a strategy for learning towards greening communities:** This section details steps local governments and others can take to collaboratively develop, implement, monitor, evaluate and report on the strategy.
- **How to create an action plan for learning towards greening communities:** This section provides a tool to both support action planning and determine the extent to which a community meets the standard of a 'green community'.

c) Uses of the guidance

All communities can use the guidance regardless of geography, climate and sustainability impacts and extent of progress already made towards greening. While the guidance is primarily addressed at local government, the document is also a relevant resource to inspire NGOs, libraries, museums, educational institutions, Indigenous groups, youth organizations, the private sector and others to build green communities through learning. The guidance was developed to cover a wide range of locations around the world, so it is important to keep in mind that the implementation of climate and sustainability action and transitions will look different from one community to the next.

The table below outlines suggestions on how local government and stakeholders, including change agents, may wish to use this guidance document. This includes those who are already offering community-based green learning initiatives and those interested in developing new initiatives.

Table 1. Steps for local governments and stakeholders to take when using the guidance

Those with an existing green learning strategy for their community	Those who want to develop a green learning strategy for their community
Review the *Greening Communities Guidance*.	
Identify relevant policies, plans, initiatives and stakeholders in the community municipality. Assess the community's needs and delivery capacity. Identify and mobilize resources, including funding, through multi-sector partnerships.	
Connect with local government representatives and stakeholders, including change agents, to identify partnership opportunities to green communities through lifelong learning.	
Engage a broad stakeholder base, including youth and under-represented groups, in planning, designing and implementing the strategy.	
Establish a planning committee to co-lead development of the strategy.	
Review and update the vision and goals for greening the community through lifelong learning in line with the concepts in the guidance, as appropriate.	**Develop a vision and goals for greening the community through lifelong learning in line with the concepts in the guidance, as appropriate.**
Update the existing, or develop a new, strategy in line with the steps in the guidance, as appropriate.	**Develop the strategy in line with the steps in the Guidance, as appropriate.**
Adopt, approve and finance the strategy.	
Update existing green learning initiatives in line with the guidance, as appropriate. Support stakeholder engagement with the strategy.	**Develop green learning initiatives in line with the guidance, as appropriate.**
Monitor, evaluate and report on the strategy to make iterative improvements in collaboration with other stakeholders.	
Share results, including with the UNESCO Greening Education Partnership Secretariat, to inform and inspire other communities across the globe.	

d) Methodology

The guidance was developed through a consultative process that ensured quality and ownership at both the national and international levels, with input from experts and practitioners from different regions around the world. The publication was developed within the Greening Education Partnership's Working Group 4 on Greening Communities, which was co-coordinated by the UNESCO Institute for Lifelong Learning (UIL), the Food and Agriculture Organization of the United Nations (FAO) and the World Organization of the Scout Movement (WOSM) between 2023 and 2025. UNESCO and the Working Group 4 Coordinators worked with numerous organizations and experts to develop and review the draft guidance.

The guidance draws on background from a broad set of resources, including academic papers, research reports published by international organizations, policy briefs, website content and practical examples from diverse organizations and communities. The initial draft was developed using a participatory co-creation approach with 35 volunteer experts from different fields and world regions. In order to gather input from multiple stakeholders, feedback on the draft publication was collected during COP 29 (November 2024) and the Sixth International Conference on Learning Cities (ICLC 6) (December 2024). A comprehensive editing process was then undertaken to sharpen the document and ensure its practical value. A second draft of the guidance was circulated among all members of the Greening Education Partnership in June 2025 for feedback, during a public consultation. The stakeholders consulted included municipal government officials, NGO programme implementers, researchers and young people, among others. A small group of experts then enhanced the structure of the chapters, filled gaps in the content, ensured alignment of content within and across chapters, selected practical cases, and refined possible steps to develop a green learning strategy and action plan for communities.



SECTION 2

Who can offer learning for greening communities?

This section focuses on **who** can offer learning in greening communities. Building a green community that offers lifelong learning opportunities involves a diverse range of stakeholders, including change agents, in planning and delivering meaningful and transformative learning on environmental issues and sustainability. These stakeholders may also participate in learning opportunities for greening communities.

In this section

2.1 Stakeholders of green learning and action

- Outlines the stakeholders and change agents who develop, deliver and/or offer opportunities to green communities through lifelong learning

2.2 The contributions of stakeholders to green learning

- Provides an overview of how local governments and stakeholders, including change agents, support the greening of communities by providing lifelong learning opportunities
- Provides concrete examples of how local governments can work with different stakeholder groups

2.3 Practice-based examples

- Provides inspirational examples from around the world of how diverse stakeholders and change agents are offering learning opportunities to green communities

2.1 Stakeholders of green learning and action

Stakeholders of green learning include groups and individuals who develop, deliver and/or offer green learning opportunities to learners of all ages. They may also provide learning places for greening communities and participate in green learning opportunities as learners. While all stakeholders contribute to greening communities through lifelong learning, change agents are a special type of stakeholder group that often play a key role in advocating for green learning in the community. For example, they often help ensure under-represented groups are actively involved in climate decision-making and facilitate peer learning within and across communities (See Box 3 for definitions).

Box 3. Types of groups that can be engaged when greening communities through learning

Stakeholders of greening communities through lifelong learning include a diverse range of groups across sectors – such as local governments, educational institutions, youth organizations, civil society groups, private sector partners, and grassroots movements. Stakeholders collectively design, facilitate and support formal, non-formal and informal learning to green communities. Stakeholders play a vital role in advancing environmental awareness, green skills and community empowerment through inclusive and context-relevant education initiatives. Since stakeholders play a role in creating and offering green learning opportunities, they must also participate as learners to ensure they have the necessary green skills and capabilities.

Change agents are a type of stakeholder group that includes individuals or organizations characterised by demographic distinctions such as age (e.g. youth, older adults), gender (e.g. women and girls) and culture and religion (e.g. Indigenous peoples, faith-based organizations, among others). Change agents hold dynamic roles in communities. They often act as advocates and connectors to help ensure under-represented groups are actively involved in climate and environmental decision-making. For example, youth may be powerful persuaders through involvement in school strikes or by generating viral social media campaigns. Indigenous peoples are critical knowledge holders in protecting natural sites and the earth's biodiversity. Change agents also often learn together by sharing knowledge through networks and peer learning, which helps them create opportunities for shifting structures and systems. Connecting change agents with each other and with other stakeholders is necessary to foster opportunities for lifelong learning.

Table 2 outlines the types of stakeholders across different sectors of the community who offer green learning opportunities. The stakeholders of green learning in communities may be part of existing networks that are already doing work to promote climate and sustainability action. However, there may be other stakeholders who might be potential new partners or collaborators for developing new green learning opportunities.

Everyone in greening communities can be both a learner and a facilitator. Stakeholders, including change agents, who green communities through lifelong learning will ideally be knowledgeable enough about good green learning to not replicate poor quality, status quo approaches. Stakeholders who are new to green learning can strengthen their internal capacity through professional development, including peer learning, mentorship and open-access training.

Importantly, given the field of green learning is rapidly developing, even those with prior experience working in green learning can participate in professional development to ensure policies, plans and programmes are based on the most up-to-date knowledge. Green learning should be integrated into the organizational culture of workplaces and integrated into staff roles, to ensure staff are compensated for required training or added responsibilities.

Table 2. Potential stakeholders for greening communities through learning

Government	Civil society	Education and academia	Change agents	Private sector	Other
Municipal leadership (e.g. mayors, city councils, district administrators) **Municipal departments, committees and companies** (e.g. urban planning, culture offices, utility entities) **Environmental and climate protection facilities** (e.g. parks, climate stations) **State, provincial, canton and national governments** **Extension services**	**Non-governmental, community-based and non-profit organizations** (e.g. education and environment organizations at local, national, regional and international levels) **Cultural institutions** (e.g. libraries, museums, art galleries, faith-based organizations) **Trade unions** **Interest groups** (e.g. fishing communities, farming)	**Non-formal and formal education providers** (i.e. early childhood education centres, primary and secondary schools, vocational institutions, CLCs, adult education centres, community colleges) **Research institutes and think tanks**	**Indigenous** leadership, communities and organizations **Young people** and youth organizations **Women and girls** and women's organizations **Persons with disabilities**, organizations that work with persons with disabilities **Older people** **Artists** **Health care providers** **Athletes** **Political champions and influencers**	**For-profit and commercial enterprises or businesses** **Social enterprises and entrepreneurs** **Philanthropic foundations** **Business coalitions and associations** **Manufacturers and service providers**	**Community clubs** **Social networks** **Farmer field schools**

2.2 Power dynamics and stakeholder collaboration

Establishing effective partnerships and collaborations among governments and other stakeholders is essential for creating lifelong learning opportunities for green communities. Harnessing the potential for change across a broad base of stakeholders helps ensure that learning approaches to green communities are high quality, locally appropriate and comprehensive. Working with a broad base of stakeholders can also help increase uptake of learning for greening communities in a range of sectors and places. Partnership-based approaches to stakeholder engagement can be very effective for promoting holistic green learning within local communities and can take many different forms. For instance, in the UNESCO Learning City of Hamburg (Germany), educational institutions, NGOs, companies and the public collaborate to integrate climate issues into formal education curricula and public awareness campaigns (UIL, 2024a; UIL, 2024b). Other examples of multi-stakeholder collaborations can be found in Section 2.4 below.

There are power gaps between government and the other stakeholders described in this chapter due to differences in their abilities to influence policy and decision-making. In addition, change agents like young people and Indigenous people and their communities are also often marginalized during engagement processes – including because their worldviews may not be integrated into mainstream learning policies, plans and programmes. It is important to recognize that not all change agents are working towards climate and environmental action within supportive contexts. Further, in a whole-of-community approach to greening through learning, not all stakeholders will be interested in addressing climate change and sustainability. Rather, it should be expected that some stakeholders will be disengaged from climate and sustainability learning and action (see Section 4 for more details).

There are a range of mechanisms that address power asymmetries to help ensure stakeholders can effectively collaborate on climate and sustainability learning initiatives. For example, community charters, co-governance models and participatory decision-making can help communities embed marginalized voices in leadership, design and implementation. To overcome access-related barriers, structural inequalities and a lack of trust, engaging marginalized groups in places of their choosing may facilitate their involvement. Strong facilitators can also help to ensure that the voices of marginalized groups or smaller parties are heard during meetings and planning events.

Local climate assemblies, typically organized by local governments or NGOs, represent an innovative, participatory approach to policy development (Smith, 2022). They, themselves, can also act as a powerful mechanism through which to promote lifelong learning for climate and environmental action. For example, 50 citizens participated in the Oxford Citizens' Assembly on Climate Change in 2019, in the United Kingdom of Great Britain and Northern Ireland (Ipsos MORI Social Research Institute, 2021). The deliberations focused on areas where the Oxford City Council felt they would have the most influence: waste reduction, buildings, transport, biodiversity and offsetting and renewable energy. Expert presentations, Q&A sessions and small group and plenary discussions helped the Assembly understand the issues and develop actionable recommendations. Following the Assembly, the Oxford City Council set a goal to become net zero by 2020 and has implemented the Zero Carbon Oxford Partnership, held a Zero Carbon Oxford summit, established a Climate Emergency Budget and created carbon budgets for the city.

2.3 The contributions of stakeholders to green learning

This section outlines how local governments and stakeholders, including change agents, can support the greening of communities through providing learning opportunities. It discusses how local governments can offer learning opportunities to municipal leadership and staff, and overviews how important stakeholder groups can act to provide green learning opportunities in the community. Throughout, the section highlights how local governments can support stakeholders in greening communities through learning. Accordingly, this section provides entry points for all stakeholders of greening communities to develop partnerships and collaborations. Some of these aspects are outlined in Table 3. This section can assist with the stakeholder mapping recommended as part of developing a green learning strategy (see Section 5.2).

Table 3. Example roles stakeholders play in partnerships and learning modalities

Stakeholder type	Partnership roles	Formal learning modalities	Non-formal learning modalities	Informal learning modalities
Government	- Create laws, policies, plans and programmes - Provide resources (e.g. in-kind, funding, technology) - Provide access to learning places (e.g. community centres, town squares, parks, beaches)	- Partner with early childhood centres, schools, higher education institutions, TVET institutions and farmer schools as part of the whole-institution approach	- Mainstream green learning across government leadership, municipal departments	- Implement public awareness campaigns - Provide peer learning through institutional and other peer learning networks (e.g. sister cities, UNESCO Learning Cities)
Civil society	- Provide topical expertise to inform policy and programme development - Provide resource (e.g. in-kind, funding, technology, research and data infrastructure) - Provide access to grassroots networks - Provide access to learning places (e.g. offices)	- Fill gaps in formal curriculum through provision of quality greening learning programme	- Provide resources, lesson plans and professional development for educators - Provide expertise in community-based dissemination and knowledge exchange	- Advocate for green learning with community partners, relationships and networks - Foster community connections to cultural and natural heritage - Transform human-environment relationship
Education and academia	- Collaborate with local governments and organizations to co-design place-based climate and environmental action initiatives. - Engage learners in real-world sustainability challenges through service learning and civic projects. - Use schools/educational institutions as hubs for community-wide green campaigns and events. - Work with local businesses to ensure green facilities and operations.	- Incorporate climate and sustainability in the curriculum.	- Host community workshops and non-formal learning programmes that invite public engagement with sustainability topics. - Support community members in co-designing non-formal learning experiences relevant to local sustainability needs.	- Foster a whole-institution approach to greening education. - Establish spaces for informal learning to occur, including eco-clubs, repair cafés, or seed exchanges.
Change agents	- Consult, collaborate or partner with local governments/civil society organizations/ educational institutions to drive forward lifelong learning for climate and environmental action.	- Co-develop curriculum content or guest-teach modules on local sustainability issues in schools and universities.	- Lead community-based workshops or training sessions in partnership with local organizations. - Build local capacities through trainings on climate resilience, that incorporate the unique knowledge and experiences of change agents.	- Use social media platforms or community gatherings to share stories, tips and advocacy messages on sustainability and climate and environmental action. - Implement public awareness campaigns.
Private sector	- Use local suppliers to reduce transport distances. - Partner with schools, colleges and universities to offer internships or curriculum-linked projects focused on sustainable business practices. - Engage in public-private partnerships to identify green skills, develop green technology training programmes and provide internships and job placements for community members.	- Work with local schools, universities and TVET institutions to support skills development for creating carbon-responsible products. - Donate technology such as heat pumps and solar panels to local schools/educational institutions.	- Implement trainings to support the greening of operations (e.g. reducing waste, using recycled materials, using solar and wind energy). - Sponsor or co-host community training programmes on green skills (e.g., energy efficiency, circular economy, sustainable entrepreneurship).	- Adopt a corporate social responsibility strategy including climate change and sustainability aspects in corporate missions. - Use product packaging, marketing campaigns and social media to share sustainability tips and promote climate-conscious consumer behaviour.

a) Government

Local governments are tasked with providing a wide range of services to the community (e.g. infrastructure, utilities, planning, public transit parks), many of which can be greened. Municipalities can mainstream climate and sustainability action **across the government**, rather than focusing greening efforts only on departments with sustainability-related portfolios. Mainstreaming is supported through the development of comprehensive, long-term policies and plans to green communities through learning. This often requires that **leaders** (e.g. mayors, city councils, administrators) and **department staff** (e.g. urban planning, culture offices, utility entities) are provided with opportunities to learn about greening. Green learning opportunities for government employees might focus on specific government departments to provide green learning in relation to their portfolios. For example, municipal leaders might participate in expert-facilitated sessions where they learn about local climate and sustainability issues and develop community-wide strategic priorities to green the community through learning. Staff in parks departments may benefit from webinars focused on creating learning opportunities in natural places. It may also be feasible to provide broader green learning opportunities across government departments. For instance, workshops on developing a green learning policy, or co-developing green learning opportunities with community-based stakeholders, may be relevant to multiple departments. Local governments might also consider strategic ways to learn through networks. This may involve peer learning through 'sister city' governments or national, regional and international city networks (such as the UNESCO Global Network of Learning Cities or C40 Cities, for instance) about successful strategies to green communities used elsewhere (Sister Cities International, 2025).

b) Civil society

Civil society refers to a wide array of organizations including, but not limited to, NGOs, cultural institutions (e.g. libraries, museums, art galleries, faith-based organizations) and heritage sites. Civil society actors bring climate and environmental knowledge expertise and field experience to inform policy development and advocacy efforts for climate action and sustainability through networks (OHCR, 2025; OECD, n.d). These types of stakeholders also advocate for climate and sustainability action through partnerships with ministries of education and across the cultural sector and beyond. By focusing on two-way advocacy – outwards to the community and upwards through relationships and networks – civil society actors support the creation of lifelong learning opportunities for greening communities.

In many communities, **NGOs**, community-based organizations and/or non-profit organizations play a critical role in providing access to learning about climate and sustainability issues. NGOs working in these areas are often created to fill gaps in provision of quality greening education in formal education systems (Centre for Sustainable Futures, MECCE Project and NAAEE, 2024). Therefore, these organizations often sit at the intersection of formal and non-formal education, providing learners with opportunities to participate in climate and sustainability learning that would otherwise not be available. This type of organization may also provide resources, lesson plans and professional development for instructors where few or no opportunities are otherwise available. In addition, NGOs may also provide non-formal and informal learning opportunities for adults who wish to learn how to take action on climate and sustainability issues. The programmes offered by these NGOs use a wide range of educational modalities such as camps, workshops, campaigns, competitions, and after school programmes (Nandhivarman, 2017). In addition, as partners in green learning initiatives, NGOs may also provide in-kind support such as expertise, technology, educational resources and research capacity (APSCC, 2020). NGOs may even provide grants to other organizations or individuals seeking to develop green initiatives (FundsforNGOs, 2025). Finally, through networks and partnerships, NGOs are particularly effective in mobilizing citizens through advocacy campaigns in support of humanitarian, ecological and social justice mandates (Harvard Law School, 2022). Many NGOs also leverage their networks to develop policies related to climate and sustainability education at local, sub-national, national and international levels (Trott, 2020; Wibeck, 2014).

Cultural institutions such as libraries, museums, art galleries and faith-based organizations play an instrumental role in shaping and localizing narratives of climate change and environmental issues. They are vital for ensuring the public has access to knowledge and resources on climate change and sustainability. For example, many libraries lead and support initiatives that localise, humanise and create communities around addressing the climate and environmental crises (IFLA, 2023a, 2024). Where resources for education, civic and social engagement are scarce, libraries often play a crucial role in fostering knowledge dissemination and exchange in the local community. Public libraries, which are often funded by municipal budgets, might curate collections to boost the availability of public resources related to climate change, biodiversity and conservation (Reiman, 2024). In addition, libraries may advocate for municipal governments to invest in sustainability learning resources such as birding or water testing kits, which can be used in citizen science initiatives (Reiman, 2024). Academic and research libraries also provide critical support for climate research and data infrastructure, especially when they champion Open Science principles (Appleton & Woolley, 2023).

Museums provide non-formal and informal learning opportunities to help visitors connect to cultural and natural heritage and transform perspectives on human-environment relationships. Museums help remove an emphasis on mastering scientific

topics and help impart a deeper understanding of one's place in a larger, interconnected system (Hamilton & Ronning, 2020). By developing exhibits on climate change and its impacts that resonate with visitors, museums can promote wider change.

Art galleries and artists provide another avenue for learning towards greening communities. Art helps change the way people think through media such as sculpture, paint, film and photography. For example, by creatively demonstrating climate impacts and possible solutions to wide audiences, art can play a key role in place-based learning and bringing communities together for climate action and sustainability (The Climate Reality Project, 2022; UNESCO, 2021b). Art can also push people to redefine their relationships with nature, for instance, by depicting the human impact of inaction and the transformative power of systems approaches (The Climate Reality Project, 2022). As out-of-the-box thinkers, artists can play a key role in bringing communities together for and environmental action through place-based learning, cultural festivals and transforming local public places (Creative Carbon Scotland, 2024).

Regardless of the specific faith or culture, **faith-based organizations** can be another powerful cultural institution stakeholder to help green communities through learning by bringing large, diverse audiences together for a common cause (Lakhani, 2023; UNEP, 2024). For example, some faith-based leaders play an active role in 'communicating the science of climate change through sermons, transitioning houses of worship to renewable infrastructure, divesting from fossil fuels, advocating for climate justice, deploying faith-owned infrastructure and nature-based solutions in disaster recovery, and much more' (UNEP, 2024).

Finally, **interest groups** such as farming and fishing communities are also civil society stakeholders. Fishing communities are particularly vulnerable to the threats of climate change and environmental issues such as water pollution. Global warming affects sea level rise and the frequency of coastal storms, which in turn threatens businesses and the livelihoods of coastal communities (UNESCO, 2024a). Similarly, farmers face severe threats to livelihoods when droughts or extreme heat affect the crops or the viability of farmland (UNESCO, 2024a). Such climate impacts may have ripple effects in the community such as spurring food insecurity or higher levels of migration to the cities, as members of agricultural families may go elsewhere to look for work (UNESCO, 2024a). Fishing and farming communities are acutely aware of and affected by climate change and environmental impacts, rendering them as critical stakeholders in developing, implementing and enhancing lifelong learning for climate and sustainability action.

How can local governments work with civil society to green communities through learning?

Local governments can support civil society organizations in many ways. Municipal culture and leisure departments may be particularly well placed to facilitate climate and environmental action partnerships with civil society. For example, partnerships with environmentally focused **NGOs** can be a great way to pool resources and co-develop communications campaigns and learning initiatives to green the broader community. Similarly, local governments can actively promote green programming offered by NGOs and cultural institutions such as libraries and museums as part of broader efforts in making lifelong learning opportunities available to all residents. Local governments can support the vibrancy of NGOs and **cultural institutions** by facilitating strong, long-term partnerships and access to funding and in-kind resources. Local governments can also offer special grants for cultural institutions to create public exhibits and collections that help redefine humanity's connection to the natural world. Aligning such grants with existing international awards and contests can increase the visibility of local projects and create more funding opportunities (UNESCO, 2021b). Access to resources, personnel, training, equipment, and funding is crucial for cultural institutions to develop and maintain climate and sustainability learning programmes and embed action within policies, plans and budgets. The culture departments of local governments may also partner with cultural institutions on training programmes focused on effectively communicating about the justice implications of climate and sustainability issues (Mayor of London, London Assembly, 2021). Other training might focus on fostering institutional support for experimentation in developing green learning opportunities. Municipalities support **artists** by commissioning public climate and sustainability art and championing the integration of arts-based projects into existing climate and environmental action efforts (Creative Carbon Scotland, 2024). Local governments are well-placed to help strengthen the capacity of **faith-based organizations** to provide greening learning opportunities by organizing interfaith councils, workshops, and forums that bring together leaders from diverse faiths to discuss climate and sustainability strategies and share effective practices (Mayor of London, London Assembly, 2021).

Local governments can work with **interest group** leaders to support advocacy efforts in protecting the economic and cultural vibrancy of fishing communities (UNESCO, 2024a). For example, in coastal communities, governments might work with small-scale fishers, members of indigenous communities, marinas and sustainable boating tourism operators to develop and collaborate on green learning strategies to protect coastlines and oceans (WWF, 2023; Saravia, 2025). Governments might also provide financial and non-financial incentives to support these groups in developing learning approaches to community initiatives such as clean-ups and habitat restoration projects. These initiatives can also serve as strategic opportunities to connect different stakeholder groups with each other.

c) Education and academia

Formal education settings, including primary, secondary and tertiary education, are also powerful contributors to greening communities through learning. The Green School Quality Standard (UNESCO, 2024b) recommends adopting a whole-institution approach to create cultures of sustainability in pre-primary, primary, secondary and tertiary education. In a whole-institution approach, sustainability and climate initiatives are integrated in all areas of institutional activity (UNESCO, 2024b, Tilbury, 2022). This means greening schools by incorporating climate and sustainability in community engagement, curriculum and learning, operations and infrastructure, and overall governance, as opposed to ad-hoc or 'one-off' green events (UNESCO, 2024b). A whole-institution approach is an acknowledgement that the entire school community – learners, instructors, administrators, support staff, parents and the wider community – are instrumental in promoting holistic and action-oriented climate and sustainability learning. Under the whole-institution approach, community engagement refers to community collaborations that help schools take action on climate and sustainability through locally focused sustainability projects. Community engagement represents an important means by which learners can participate in transformative learning opportunities that influence their school culture and activities (UNESCO, 2024b). Importantly, community engagement represents an entry point for local governments to support early childhood education centres, schools, universities and institutes as green learning places.

Climate change poses significant threats to young children's health, nutrition and safety, and can also interfere with **early childhood learning opportunities** and harm parents and caregivers (INEE, 2023). Growing research underscores that young children should not be shielded from the realities of climate change but instead learn from their encounters with environmental precarity (Nxumalo, 2018). Integrating green learning into ECCE helps children become climate-conscious adults who prioritize climate and sustainability action, and actively contribute to greening communities (INEE, 2023). In adopting a whole-institution approach to early childhood learning, community members can co-develop curriculum and programming, which means children are more likely to learn locally relevant solutions and actions (UNESCO, 2024a; UNICEF, 2021; INEE, 2023). Community partnerships can also provide play-based and/or outdoor learning opportunities for children to participate in hands-on activities to explore issues around climate change, sustainability, biodiversity and land (UNESCO, 2024a).

The whole-institution approach can help **primary and secondary schools** become living laboratories for sustainable transformations. Community engagement can support the integration of climate and sustainability action into school governance, infrastructure and curriculum. For example, local businesses can donate technology such as heat pumps and solar panels, which not only helps schools reduce their carbon footprint but also provides students with opportunities to learn about climate and sustainability issues and actions.

Universities and other higher education institutions typically enjoy a high level of autonomy in developing programmes, curricula and research related to climate change and sustainability. This means that local governments may have many different opportunities to harness the power of academic disciplines in education, communications, health, arts and many other areas across the natural sciences, social sciences and humanities to green communities through learning. A key area where higher education institutions can contribute to greening communities through learning is through innovations in research. For this reason, whole-institution approaches in higher education often add a fifth domain of 'research' to those of community engagement, curriculum and learning, operations and infrastructure, and overall governance (Tilbury, 2022).

TVET institutions are key learning places in fostering the development of skilled, qualified workers to meet the growing demand for green skills and green jobs. The whole-institution approach for TVET includes a 'greening the community and workplace' dimension to 'engag[e] industries, enterprises and the wider community in the institution's greening plan and programmes' (UNESCO-UNEVOC, 2017, p. 39). TVET institutions are especially critical in a global context where the labour market is undergoing significant transformation as new occupations emerge and a considerable number of jobs disappear due to automation and artificial intelligence (UIL, 2022a).

Agricultural schools and colleges are formal learning places focused on knowledge and technology transfer in the agricultural sector. Such schools are increasingly educating students willing to become agricultural producers, to adopt sustainable agricultural practices, climate change adaptation measures, and technological advancements such as digital tools and data analytics. The training provided by agricultural schools increases productivity, improves the living standards of farmers, and increases food security. For example, micro gardening training teaches people how to carry out small-scale agricultural activities to meet their own food needs while also supporting environmental sustainability. Such training can increase environmental awareness and provide individuals with knowledge and skills to implement climate- and environment-friendly agricultural methods and water saving techniques (Sanyé-Mengual et al., 2016; Green Campus Initiative, 2013; Soil Scientists Program, 2022). During macro farming training, farmers learn how to produce large amounts of food using modern agricultural techniques, sustainable agricultural practices, soil management, water management and integrated pest management (Altieri, 2002; Soil Doctors Program, 2020).

How can local governments work with the education and academic sectors to green communities through learning?

For **early childhood learning**, UNICEF (2024) has developed an 'Early Childhood Development Toolbox' to support and inspire local governments to improve their early childhood education systems. Local government officials, including mayors, council members and partners can use the toolbox to strategically plan and coordinate policies, services and programmes that benefit young children and families. The toolbox not only covers a broad range of issues related to ECCE; it also addresses ways to reduce environmental risks and strengthen urban resilience through early childhood education.

Local governments might be able to develop climate and sustainability learning opportunities and resources for formal and non-formal education providers across **pre-primary, primary and secondary education**. Local governments can partner with, or provide funding for, formal education programmes where students carry out action and inquiry projects focused on local climate and sustainability issues alongside ministries of education, local school divisions, non-formal education organizations, NGOs, cultural institutions and/or private sector entities. Such partnerships can also be used to create professional development courses and workshops to build formal and non-formal educator capacity to instruct climate and sustainability topics using appropriate content and approaches (see Section 4 for more information). The Student Action for a Sustainable Future programme in Saskatoon (Canada) provides action learning opportunities for students to explore climate and sustainability issues through a partnership between the local government, environmental organizations, school divisions, utilities providers, businesses and researchers (Student Action for a Sustainable Future, 2025). The programme also provides instructors with project-based learning resources that link formal education curriculum outcomes with climate and sustainability topics (Student Action for a Sustainable Future, 2025). Community partnerships can also be used to hold agricultural fairs and open days where experts can showcase work being done locally in the community and provide hands-on training to children and families on climate change mitigation and adaptation.

By partnering with **higher education** institutions, local governments can also harness the power of academic research across the natural sciences, social sciences and humanities when developing learning strategies, policies, plans and programmes to green communities. In this way, local governments can benefit from the latest multi-disciplinary research on transformative green learning, which can be an important resource for municipalities when developing learning initiatives and policies towards climate and sustainability action. Governments may also partner with local academics to map climate and sustainability action stakeholders in communities or evaluate the effectiveness of existing climate action and environmental policies or programmes, or by commissioning researchers or research institutions on research that directly supports community needs (Pizmony-Levy, McDermott & Copeland, 2021). Local governments might also provide financial or non-financial resources to coalitions of researchers seeking to raise awareness of climate and sustainability issues in the local community, such as offering platforms for community events or presentations. Additionally, leveraging social and traditional media channels to feature research insights and community action successes can help build the public's trust and value for climate and sustainability action (Turrentine, 2022).

Together, municipalities and **TVET institutions** can prepare current and future workers to green entire sectors and support workers in adapting to new labour markets. For example, workplace learning via TVET supports a 'better tuning of training to the skills needed in labour markets and practical learning experiences for students' (ILO, 2022, p. 59). Municipalities and other stakeholders can work with TVET institutions to develop green workplace learning opportunities (UIL, 2022a). A green skills analysis of the city's employment sectors can be used to identify potential areas for investment (UIL, 2022a). In addition, local governments can provide work placements for TVET students and new graduates to allow them to practice green skills.

Finally, collaborations between local governments, educational institutions and **farmer field schools** can provide green learning opportunities within local rural communities. Training programmes created through such partnerships can build the capacity of rural communities to use modern agricultural techniques and technology such as organic farming, water conservation, soil management and integrated pest management (Pretty, 2008; FAO, 2014). Climate-resilient, sustainable agriculture has additional benefits, including increasing agricultural productivity and providing economic and social stability for farmers (Tilman et al., 2002; Pretty, 2008; FAO, 2014).

d) Change agents

There are many local organizations and community groups built around diverse demographic characteristics such as age, gender, faith, culture and religion. These groups may already have active networks for greening through learning and can be powerful leaders and allies for greening communities (BNE-Kompetenzzentrum, 2023). Because they often hold a unique role in leading advocacy efforts and supporting peer-to-peer learning within communities, these types of stakeholders can be thought of as change agents. There are many kinds of change agents, including Indigenous peoples and communities, young people, women and girls, influencers, athletes and high-level political champions. Change agents can be influential due to their deep ties to their communities. They may also have wide reach due to having large social media followings.

It is important not to offload responsibility for climate and sustainability action onto individuals, particularly those most vulnerable to the impacts of climate and sustainability issues. Local governments interested in engaging with diverse stakeholders may wish to consult, collaborate or partner with community organizations or groups that work with these populations, rather than working with individual change agents directly. Therefore, below are outlined suggestions for ways local governments may collaborate with select groups of change agents to green communities through learning.

As change agents, **Indigenous people and their communities** are key champions of localized climate and sustainability solutions in many areas around the world (Ramos-Castillo et al., 2016; UN Department of Economic and Social Affairs Indigenous Peoples, n.d.; Harrisberg, 2019; UNESCO, 2020a). Members of Indigenous communities, such as traditional knowledge holders, elders and Indigenous educators are well-placed to embed local traditional knowledge in greening education. For example, Indigenous peoples around the world contribute to enhancing and managing biodiversity and landscapes, including by reducing forest loss and restoring and managing habitats (IPBES, 2019). In Belize, one Garifuna and four Mayan communities have formed the Sarstoon Temash Institute for Indigenous Management to co-manage the Sarstoon Temash National Park. The partnership is synthesizing modern science and traditional knowledge to ensure culturally sensitive data collection informs local and national climate change policy (UNESCO, 2019a). In Tonga, an Indigenous civil society organization called the Tonga Community Development Trust is building vulnerable communities' capacity in a number of different areas. For example, the Trust facilitates sustainable rainwater harvesting training programmes for women. The Trust has also conducted regional, national and community training under its Disaster Preparedness: Coping Communities initiative, which promotes the use of traditional Indigenous coping mechanisms while fostering action to increase community-based resilience (UNESCO, 2023).

Young people, defined as those aged between 15 to 24,[3] have long played a pivotal role in community-level environmental conservation and climate and sustainability action (Karsgaard and Davidson, 2023). Passion and willingness to address climate injustice make young people powerful advocates for sustainability. Having grown up with digital technology, young people often harness the power of social media and technology to amplify awareness, mobilize action and drive societal change (Field, 2017). With the largest youth generation in history (UN, 2024), today's young people are uniquely positioned to bridge intergenerational gaps, bring fresh perspectives and develop innovative solutions to longstanding sustainability issues. Young people are often pushed to the sidelines and subject to tokenistic treatment in formal decision-making processes (Gibbons, 2014; Narksompong and Limjirakan, 2015). As such, it is important that diverse young people receive adequate institutional backing to fulfil their potential as powerful stakeholders. Many young people are becoming prominent climate and environmental activist influencers and are using technology in innovative ways to mobilize their peers about climate issues (Loftus-Farren, 2017).

Women and girls are important change agent stakeholders in green learning and among the most vulnerable to climate change (Turquet et al., 2023). For example, women are the 'backbone of food security' in countries worldwide as major contributors to agriculture and food production. In Asia, women perform 50–90% of rice field work (FAO, 2011). Women are often well-placed to lead local intersectional climate change movements due to their lived experience and extensive local knowledge of food, farming, conservation and freshwater management (Chauhan and Kumar, 2016; Denton, 2002). Women are key sharers of traditional ecological knowledge, sustainers of kinship networks and leaders in post-disaster reconstruction and recovery (Singh et al., 2022; Turquet et al., 2023). Further, greater inclusion of women in environmental decision-making processes is related to increased climate adaptation and mitigation activities, more substantive policy outcomes and less conflict in decision-making processes (Grillos, 2018; Khatri-Chhetri et al., 2020; Maharjan et al., 2023; Singh et al., 2022). In other words, women and girls are key climate and environmental champions due to their ability to act as 'drivers of solutions' (UN, n.d.a.). Unfortunately, however, women farmers are more likely to be affected by climate impacts than men, especially in the developing countries (Khatri-Chhetri et al., 2020). Women are also under-represented in climate- and sustainability-related decision-making (Singh et al., 2022; Turquet et al., 2023). For example, only 8% to 22.5% of cabinet ministers globally are women, and men continue to be over-represented in policy areas

[3] This definition is used for statistical purposes. UNESCO considers 'youth' as a flexible category, as the experience of being young varies across the world (World Youth Report, 2020).

related to climate action such as foreign affairs, finance, home offices and defence (UN Women, 2025).

People with disabilities and organizations that work with them are critical to involve in lifelong learning for climate and sustainability action. People with disabilities are among the most adversely affected in large-scale emergencies, while also being among those with the least access to emergency supports (OHCR, 2025). At the same time, climate change may exacerbate the prevalence and incidence of impairments and may also create challenges for persons with disabilities to adapt or seek livelihood opportunities (CBM, n.d). Climate change may also acutely threaten the well-being of people with disabilities by decreasing access to food and sanitation, challenging access to infrastructure, and deepening vulnerabilities (e.g. due to limited ability to migrate) (CBM, n.d).

How can local governments work with change agents to green communities through learning?

Local governments can meaningfully work with **Indigenous peoples** to green communities by supporting or promoting Indigenous-led community events, actively involving Indigenous organizations and networks in efforts to develop local climate and sustainability learning strategies, and adopting culturally appropriate meeting formats (e.g. storytelling sessions, having an elder present during learning sessions) (ICLEI, 2018). Local governments interested in sustainability and conservation education may benefit from conservation of these knowledge systems, recognizing that climate change mitigation efforts led by Indigenous peoples provide significant economic and livelihood benefits for Indigenous and local communities (IPBES, 2019; Ramos-Castillo et al., 2016). Municipal governments can also develop collaborations with Indigenous leadership, such as elected band leaders, chiefs or other governance structures. Meaningful and ethical government partnerships should support Indigenous-led struggles related to climate vulnerability, recognizing the persistent and unlawful encroachment upon Indigenous territories, threatening their cultural and ecological integrity (Bruganch et al., 2017). Governments should recognize that fights for land protections are climate change mitigation efforts in and of themselves (Brugnach et al., 2014; IPBES, 2019; Walia, 2021). Local governments can implement collaborative governance frameworks that decentralize decision- making processes and centre Indigenous communities' concerns and right to self-determination (Bruganch et al., 2014). This mandate is supported by the UN Declaration on the Rights of Indigenous Peoples, which affirms the right of Indigenous communities to make decisions on education governance, cultural and educational institutions, and when and how culture and wisdom are transmitted (UN Human Rights Office of the High Commissioner, 2007).

By working with **youth organizations**, local governments can create mechanisms to actively include young people in decision-making. For example, some national governments have created youth councils, youth climate and environmental assemblies and offices for youth – these models include green learning components and may be able to be scaled to local communities (Office for Youth, 2025; Children's Parliament, 2024; Government of Canada, 2025; YUVA Association, 2023). Structures such as these can ensure young people are fully involved in designing, implementing and monitoring policies and programmes related to lifelong learning for greening communities. Finally, local governments can also provide support to existing youth groups and networks to further the development of green learning and green skills. For example, governments might provide financial support to youth-led climate and environmental projects or issue grants to young entrepreneurs focused on climate action and sustainability (RCE Bogota, 2021; City of Toronto, 2024).

By working with **women's organizations or networks**, local governments can support women's and girls' participation in global and local decision-making. First, it is critical to dismantle patriarchal attitudes and cultural norms that prevent women from taking on decision-making roles in their communities (Singh et al., 2022). This will often require a focused learning strategy for community leaders, business leaders, cultural leaders and others (Singh et al., 2022). Second, from a lifelong learning perspective, it is important to note that as extreme weather events cause increased economic hardship, girls are often the first to have their safety, education and work opportunities sacrificed (Plan International, n.d.). It is therefore critical to invest in girls' education at all levels and engage with women and girls who are out of school. In tandem with these efforts, governments can encourage local organizations to adopt gender-sensitive approaches to climate and sustainability learning and provide funding and in-kind support to women's organizations or networks working to promote green learning.

For governments to work towards disability-inclusive climate and sustainability learning and action, they should meaningfully collaborate with organizations of **people with disabilities** (Harvard University Center for the Environment, 2025). Collaborations may enable the collection of disability data in the region to support decision-making and the development of local strategies to boost green learning (Harvard University Center for the Environment, 2025). Local governments might also consider partnering with organizations that work with individuals with disabilities to develop disability-inclusive climate and environmental policies, plans and programmes. Such partnerships provide opportunities for people with disabilities to learn more about climate and

sustainability issues and municipal staff learn how to better uphold the dignity and human rights of people with disabilities, including in the context of climate change (Harvard University Center for the Environment, 2025). When considering which organizations to work with, municipalities should reach out to those that represent different types of disabilities such as intellectual, psychosocial and visual (Harvard University Center for the Environment, 2025).

e) Private sector

The **private sector** comprises organizations and entities which are not part of the government. This sector is a key stakeholder in supporting climate and environmental action because it comprises the largest part of the economy (and thus a significant creator of jobs), while also being responsible for high amounts of environmental degradation (Rashed and Shah, 2021). The ecological impacts of profit-maximizing business practices require learning initiatives that foster private sector engagement with climate and environmental responsibility (Dahlmann and Stubbs, 2023). This might include adopting corporate social responsibility strategies, including climate change and sustainability aspects into corporate missions, creating carbon-responsible products, connecting product lifecycles with circular economies, greening operations (e.g. reducing waste, using recycled materials, using solar and wind energy, using local suppliers to reduce transport distances) (International Training Centre of the ILO, 2022; Rashed and Shah, 2021). In addition to helping to mitigate climate change, these measures are also associated with lowered operational costs (International Training Centre of the ILO, 2022).

How can local governments work with the private sector to green communities through learning?

Local governments can support private sector entities in greening their business practices. For example, governments can create green learning workshops and competitions to develop green business ideas to instruct local businesses to strategically plan for circular economies (Green Business, 2019). These learning opportunities can be developed in partnership with business associations and chambers of commerce. Local governments can also encourage corporate funding mechanisms to support community-level environmental and climate adaptation and mitigation initiatives that foster lifelong learning for green communities. Corporations are increasingly seeking to finance 'Environmental, Social and Governance' (ESG) projects, which consider the company's impact on the environment and its role in the community (Parameshwaran, 2023). Joint initiatives between businesses and local governments can also finance collaborative projects that foster lifelong learning for climate and environmental action among learners from traditionally marginalized groups. Under funding models sometimes known as community-specific corporate social responsibility (CSR) or corporate social investment (CSI), municipalities may also match funds to maximize the potential for impact. Green learning initiatives created in partnerships between local governments and businesses occur in all types of industries and businesses and at many scales. Examples of successful CSR and CSI initiatives have been observed in Malaysia for instance, with corporate entities working closely with universities, communities, local councils and governmental agencies to provide access to electricity, clean drinking water and climate literacy awareness. Such initiatives have also been undertaken in Indigenous communities whose geographical and socio-economic conditions have limited them from gaining access to these basic human rights (Sivapalan and Subramaniam, 2021). Public-private partnerships (PPPs) are another common funding model for green learning initiatives. For example, PPPs can help identify green skills, develop green technology training programmes and provide internships and job placements for community members with green skills. Local governments entering into partnerships and funding agreements with businesses should ensure there is a genuine match between the motivations and goals of each partners. For example, there is increasing evidence that PPPs do not provide savings and may offload risks onto the public partner (Verweij and van Meerkerk, 2020).

One innovative way that local governments can support businesses in green learning is through 'hackathons', short events that bring software developers, engineers, designers, entrepreneurs and others together to create innovative solutions to specific challenges. In the UNESCO Learning City of São Filipe (Cabo Verde) an ocean-themed hackathon, Blue Hack, brought together 32 young people to solve challenges related to the local 'blue' (ocean) economy. During a three-day workshop, which was supported by UNDP's Accelerator Lab, teams developed business models for tourism, fishing, beekeeping, energy transitions and biotechnology. Each team also explored existing and potential mechanisms to fund their projects. The teams presented their model to a jury in a five-minute long pitch alongside a storyboard. The Blue Hack helped to create the conditions for institutions, organizations and individuals to develop 15 creative, locally relevant solutions for the blue economy. The project topics ranged from cosmetics with therapeutic potential to a virtual underwater diving simulator for educational, tourism and environmental purposes and a school for surfing and water sports.

2.4 Practice-based examples of learning opportunities offered by diverse stakeholders

Below are some inspirational examples from around the world illustrating how diverse stakeholders and change agents can offer learning opportunities for greening communities. These examples underscore how learning happens within organizations themselves, and how stakeholders can offer learning opportunities to the broader community.

Table 4. Examples of learning opportunities offered by diverse stakeholders

Who: Municipal government

Malaysia – World Wildlife Fund's One Planet City Challenge

The accomplishments of the Seberang Perai city council (Malaysia) in the World Wildlife Fund's (WWF) One Planet City Challenge (OPCC) demonstrate how green learning among local government officials can help transform local communities. The OPCC is a competition that recognizes municipal efforts to transition towards climate-resilient futures. In 2022, the city of Seberang Perai won first place in the 2022 OPCC competition. According to the city council's website, Seberang Perai aims 'to become a family-focused, green and smart state that inspires the nation' by 2030 (WWF, 2022). To further that goal, the city's council has:

- Established the first ever Upcycle Park, a recreational park built with used and waste materials
- Installed solar panels on city council buildings, which provide 40% of their energy needs
- Developed comprehensive economic and environmental plans such as a Climate Action Strategy, a Circular Economy Roadmap along with a Smart City, Low Carbon City strategy and an SDG Voluntary Local Review

Learn more: WWF Malaysia

Who: Change agents – Women and women's civil society organizations

Vanuatu – Women's Weather Watch (Women Wetem Weta – WWW)

The Women's Weather Watch (WWW) aims to build women's leadership capacity to manage disasters and support the development of inclusive weather and climate services. The programme engages Women I Tok Tok Tugeta (WITTT) Network members to study weather patterns, share information from official meteorological sources and disseminate messages in local languages to community networks. Recognizing that women already act as local knowledge brokers in the community, the programme teaches local women how to engage through existing relationships and local networks, rather than establishing new ones. The programme also makes space for participants to share feedback and experiences, including through locally led analysis, on the impacts of climate change. Finally, the platform enables women to engage with national humanitarian systems and facilitates community level Disaster Risk Reduction (DRR) plans and Climate Adaptation Strategies. WWW is a collaborative model established by ActionAid, the Shifting the Power Coalition Network, the Women I Tok Tok Tugeta (WITTT) Network and the National Disaster Management System. WWW underscores how supporting the capacity-building of women can be an effective means to build inclusive climate services.

Learn more: **Women's Weather Watch**

Who: Change agents – Youth and youth civil society organizations

International – Young Reporters for the Environment (YRE) Programme

The Young Reporters for the Environment (YRE) Programme is an international competition run by the Foundation for Environmental Education (FEE). YRE enables young people aged 11–25 to uncover and report on local environmental issues through investigative journalism and storytelling. The programme also engages wider audiences through media such as podcasts, photos, articles and videos. With over 350,000 participants in 44 countries, YRE has become a global platform for environmental youth leadership over the last 30 years. For instance, in Kenya, YRE participants investigated the impact of plastic pollution on local water sources. The resulting report was published in a regional newspaper, reaching an estimated 500,000 readers, and led to a community campaign to reduce plastic use. In Greece, a YRE investigation into illegal dumping prompted local authorities to implement stricter waste management regulations. In Bermuda, YRE contributes to a cultural movement of young people raising their voices in support of the environment. YRE students have risen to the challenge of reporting on biodiversity, ecosystem restoration and food security issues. They also participated in UN At Your Doorstep Discussions and continue to seek other environmental challenges to highlight with their reporting. Even in a small island community, young people are leading the way with their passion and vision for the future.

Beyond this, FEE also collaborates with the Ages of Globalization Project, where YRE participants conduct live streamed interviews with high-profile speakers from the United Nations and other global organizations. YRE's activities underscore how a youth-focused organization can provide rich learning opportunities for young people by not only leveraging digital tools, but also by connecting these change agents with local government stakeholders and by encouraging stakeholders to act upon youth-led findings.

Learn more: **Young Reporters for the Environment**

Who: Civil society

International – The Preserving Legacies Climate Custodian Cohort Program

Preserving Legacies is an international organization that operates across 35 countries. It is dedicated to safeguarding the diversity of cultural and natural places against the impacts of climate change. Climate threats such as fires, floods and seasonal shifts not only affect the integrity of cherished structures and landscapes, they also affect the communities who hold special connections to these places. To address this challenge, the Climate Custodian Cohort Program provides two site custodians in each global heritage site with training to build their capacity for climate adaptation. The sites include Angkor (Cambodia), the Candomblé Terreiros of Bahia (Brazil), the Champagne Hillsides, Houses and Cellars (France) and the Kerkennah Island (Tunisia). The site managers come from all walks of life, including community organizations, management authorities and nonprofits. The programme provides site custodians with tools, training and connections to allow them to adapt their sites and practices to a changing climate. Participants receive online and in-person training to improve their heritage literacy and conduct a climate risk assessment for their site. The site managers then use the assessment as a guide to design, implement and scale culturally appropriate solutions in their local community. Partners of this organization include the National Geographic Society, the International Council on Monuments and Sites, and the Climate Heritage Network. The Climate Custodian Cohort Program shows the value of local custodians in helping to improve community resilience through conserving heritage sites that are vulnerable to climate change.

Learn more: **Climate Custodian Cohort Program**

Who: Education and academia

Colombia – The Environmental School Project

The Environmental School Project in Bogotá (Colombia) is bringing climate and sustainability learning to youth in all 364 public schools in the city. Climate change has meant the city is struggling with a water crisis due to extreme droughts, which have been exacerbated by El Niño. The UNESCO Learning City is also grappling with extreme weather, floods, pollution and deforestation.

Schools that are part of the Environmental School Project participate in eight in-person sessions throughout the school year where they create and implement an Environmental School Project framework (Proyectos Ambientales Escolares). During tailored workshops on topics such as climate change, water systems, biodiversity, responsible consumption and waste management, students deepen their understanding of climate and sustainability issues and learn sustainable behaviours. Instructors and students have also participated in events hosted by the city of Bogotá which were focused on green themes such as water systems, animal protection, climate change, responsible consumption and school gardens. The events took place in outdoor places, such as wetlands, the Bogotá River basin, the Bogotá Botanical Garden and environmental classrooms in the city.

The Environmental School Project is delivered through a partnership between the District Secretary of Education and the Mayor's Office of Bogota. The project also benefits from several community partnerships. For example, instructional resources were created through a partnership with environmental organizations. Students explore issues related to greening local industries through partnerships with the city's manufacturing sector. In addition, a partnership with the Colombian Academy of Sciences resulted in the creation of a blended learning course on climate change for instructors, which had benefited 300 educators by 2023.

Between 2020 and 2022, 150 institutions developed Environmental School Projects. The city has also implemented an Environmental Social Service programme which has engaged over 1,300 students in climate change awareness sessions.

Learn more: **Environmental School Projects**

Who: Change agents – Young people and elders

Nepal and Uganda – Intergenerational climate dialogues

In Nepal and Uganda, rural, semi-urban and urban communities are harnessing intergenerational dialogue to develop locally led responses to the climate crisis. In Nepal, dialogues were held in the communities of Sakhuwa Parsauni (rural) and Birgunj (urban) within the Parsa district of Madhesh province. In Uganda, the dialogues took place in the communities of Kampala (urban), the country's capital city, as well as Namubiru (semi-urban) and the Moroto district (rural).

Young and older people in each community engaged in lively discussions and group activities in separate age groups and were then then brought together for an intergenerational dialogue. Each dialogue session lasted around three hours. The 48 women and 53 men who participated exchanged lived experiences related to climate change from the perspective of different generations, discussed coping strategies used by different generations and shared ideas for mitigating and adapting to climate change.

Importantly, local partners and facilitators were involved in the dialogues, which were held in local languages. The sessions were also underpinned by sensitivity to power dynamics, valuing lived experience and ensuring meaningful participation, informed by HelpAge's guide, Bringing Generations Together for Change and the World Health Organization (WHO) guide, Connecting Generations. Each participant was compensated for their travel to the dialogue sessions and time spent participating.

This project demonstrates the value of dialogues for reducing intergenerational tensions and bridging the gaps between the traditional and the modern. For instance, elders in Nepal shared that trees that store water were now being cut down, worsening local water shortages. Elders in Uganda shared that traditional practices such as afforestation and swamp preservation might help protect their community from flooding. The older people appreciated the younger participants' desire to work with them to find solutions to shared problems. They also recognized the value of learning from online sources.

The partner organizations in each community were each given a small grant to support local climate action based on the dialogue outcomes. In Nepal, the local partner has coordinated a series of public intergenerational dialogues focused on climate change. In Uganda, local partners have provided organic manure and fruit trees to those who participated in the dialogues, regardless of their age, in response to participant concerns around food security. HelpAge International, the main project partner, has been developing a multi-country programme to unite generations in their efforts to advance locally led climate action.

The pilot project, which was led by HelpAge International, Restless Development, Newcastle University and the Living Deltas Research Hub between August 2023 and March 2024, engaged local partners the Social Organization District Coordination Committee in Nepal, along with the Karamoja Youth Effort to Save Environment (KAYESE), Karamoja Agricultural Pastoral Development Program (KADP) and Reach One Touch One Ministries in Uganda.

Learn more: **Bringing generations together for climate action (HelpAge International)**

Who: Change agents – UN, civil society and young people

International – Youth and the United Nations Global Alliance

Youth and the United Nations Global Alliance (YUNGA) is an FAO-led alliance between UN agencies, civil society organizations, government institutions and youth groups. YUNGA aims to empower children and young people to have a greater role in society, raise awareness and become active agents of change in their communities. YUNGA aims to engage young people in activities of key environmental and social concern at both national and international levels.

YUNGA projects range from YUNGA's flagship educational series of Challenge Badges and Youth Guides, to capacity-building programmes, international competitions, and programmes inspiring active youth participation.

YUNGA has a simple but powerful way of developing its activities. It brings partners with common goals together and uses existing resources and infrastructure to develop joint initiatives and activities. Allowing everyone to contribute their skills, resources and knowledge is an effective way to get great results while sharing the work. Experts from the social and environmental sectors (including educators, policy-makers, field workers and youth organizations) also contribute to the development of YUNGA resources and materials. The result is a 'sea' of international agencies, civil society and local actors who implement activities in youth groups and other local settings.

YUNGA has a global coverage while directly engaging children and young people in local action to build a sustainable future for all.

Learn more:

Home | Yunga-UN | Food and Agriculture Organization of the United Nations

Challenge Badges | Yunga-UN | Food and Agriculture Organization of the United Nations

Youth Guides | Yunga-UN | Food and Agriculture Organization of the United Nations

Additional examples are available at: https://uil.unesco.org/en/greening-communities-guidance



SECTION 3

Where does learning take place in greening communities?

This section outlines physical and virtual learning places that can be sites of learning towards greening communities. Many of the places in this section are created or supported by the stakeholders discussed in the last section on the 'who' of learning (e.g. libraries, Indigenous communities).

In this section

3.1 Learning places and learning modalities

- Provides an overview of the types of places that can be used to green communities through lifelong learning
- Describes why the places are important for greening communities through learning
- Provides concrete suggestions and examples for what local governments can do to support green learning opportunities in each place

2.3 Practice-based examples

- Provides inspirational examples from around the world of how places can be used to support lifelong learning to green communities

3.1 Learning places and learning modalities

Many types of learning places support multiple types of learning modalities at the same time. For example, libraries can support instructors in updating curricula or lessons on environmental and sustainability issues (formal education) while also providing learning resources to visitors (informal learning). As another example, after school clubs and extra-curricular activities may provide learning opportunities that are not part of the national curriculum (non-formal education) inside of schools (formal education).

This section of the guidance outlines the kinds of learning places for formal, informal, and non-formal learning that may exist in a community (as in Table 5 below). For each type of place, the guidance highlights why the place is important for greening communities through learning. This is followed by suggestions for ways local governments can support green learning in those places. The suggestions are not meant to be exhaustive. Rather, they are provided to act as a starting point for your own brainstorming in creating a strategy to green your community through learning (as described in Section 5).

Communities will differ in their abilities to create, access and maintain the places listed below. For example, communities situated in less developed rural areas may experience limited access to formal educational institutions and inadequate internet connectivity. It is important to consider the community's unique strengths and how existing assets such as markets, farms and central public squares might be transformed and used to create inclusive, accessible green learning opportunities for all. For example, low-resource contexts might experiment with low-cost strategies such as pop-up spaces and mobile libraries to build capacity (FEE, 2025a). Low-cost, locally-available materials such as bamboo, clay and recycled plastics can be used to create dedicated or multi-purpose learning spaces for communities with lower resources. Building or adapting such spaces through participatory design processes with diverse stakeholders can also help create ownership and make these places thrive.

Partnerships and collaborations with government departments, civil society, educational institutions, change agents, the private sector and other stakeholders may also centre on places for green learning. Partnerships can help ensure learning places are physically and digitally accessible to people in marginalized groups, as well as those in remote and rural areas who are likely to have limited connectivity.

Table 5. Places of formal, non-formal and informal learning modalities

Places and learning modalities					
Places of formal learning	**Early childhood education centres**	**Primary and secondary schools**	**Higher education institutions**	**Technical and vocational education and training sites**	**Digital agricultural offices** **Local agricultural extension offices**
Places of non-formal and informal learning	**Municipal places** Green infrastructure, green learning hubs, public transport, public buildings, green offices	**Community places** CLCs, adult education, libraries, museums, art galleries, hospitals, NGOs, youth centres, faith-based spaces	**Everyday places** Workplaces, networks, family homes, markets, bus stops, train and subway stations, shopping centres, peer networks	**Natural places** Parks, gardens, forests, beaches, UNESCO sites	**Digital places** Social media, virtual reality, games, online repositories

a) Municipal places

Municipalities are optimal learning places for developing and implementing different green learning strategies. By implementing policies and practices to green across areas of municipal oversight, local governments can show what is possible for others in learning towards greening communities. A variety of **municipal operations** can be greened, including energy and water use, waste management, transportation, building design, zoning and procurement. Local governments can also implement robust waste separation, collection and processing systems, diverting organics and recyclables from landfills, reducing emissions, and extending the life of waste disposal sites. Municipalities can also play a significant leadership role in local **climate change adaptation** by developing climate-ready infrastructure, conducting risk assessments and ensuring disaster readiness. Local governments must stay up to date on the types of climate-related natural disasters most likely to occur in their area, whether they be floods, droughts or severe storms, to enable planning and implementation of locally relevant adaptation initiatives. Municipalities can provide residents with instructional materials about the community's climate adaptation and **disaster response** plans to empower residents to take appropriate action to prevent and recover from natural disasters. These changes can also be supported by new local laws and policies. For example, the Oulgaret Municipality in Puducherry (India) has strengthened its waste management and resource recovery systems by creating rules and by-laws that have significantly contributed to advancing sustainable urban development in the community (Oulgaret Municipality, 2024). Municipalities that are greening their operations can create accessible public learning opportunities to allow community members to learn how to actively utilize green infrastructure and participate in the municipality's green initiatives, including climate adaptation plans.

Other innovative approaches where municipalities can play a leadership role include shifting to **circular economy** approaches, including in partnership with public institutions or the private sector. Circular economies transform waste into valuable resources by implementing reuse, repair, renewal and recycling processes (Velenturf et al., 2021). For example, local governments in Spain are responding to the national Law 7/2022, which promotes a circular economy and reducing waste (European Environment Agency, 2024). The city of Gijón (Spain) has created the Action Plan of the Urban Agenda 2030, which includes implementing a municipal circular economy strategy, establishing circular purchasing regulations and developing waste and by-product exchange networks between companies (European Environment Agency, 2024).

Municipalities can also transform municipal property and public places into **green learning hubs**. This allows them to provide the public with opportunities to learn about climate and sustainability, which can help foster cultures for greening communities. For example, unused municipally owned public places in Chicago (USA) are repurposed into facilities for education, innovation and community engagement. The Plant in Chicago is a former meat packing facility that was turned into a vertical farm, which now provides workshops on urban agriculture and sustainability (Plant Chicago, n.d).

Because municipalities often create and enforce zoning policies, they can also develop focused initiatives to create high-density, **mixed-use development**. For example, creating hubs centred on public transportation, bike sharing and pedestrian-friendly urban designs helps reduce the need for private vehicles and promotes walkable, liveable communities in cities (Project for Public Places, 2014). When transitioning municipal fleets to electric vehicles, buses and rail, local governments should also invest in the charging infrastructure to encourage more widespread adoption among residents.

Municipalities can also provide learning resources that increase residents' confidence to **green their homes**. For example, local governments can create communications campaigns to empower residents to lower emissions by retrofitting their homes (e.g. heat pumps, solar panels, increased insulation), reduce their energy consumption at peak hours and 'rewild' their gardens (IUCN, 2022). Residents can be encouraged to take such actions by financial incentives or subsidies offered by the local government.

Municipalities may wish to create a **green office** to oversee the creation and implementation of green policies, plans and initiatives. Green offices can serve many functions, including creating green learning policies and initiatives, integrating learning into broader climate and sustainability policies, providing training and professional development for local government staff to mainstream green skills across departments, allocating funding and resources to support green learning in the community, and creating partnerships to build the community's capacity to green through learning. As a centralized service, Green offices can also improve collaboration among stakeholders and encourage efficient resource use. In smaller communities where establishing a green office may not be feasible, appointing a dedicated staff member to oversee climate and sustainability commitments can be a good alternative. Importantly, such a role must come with a long-term commitment, sufficient time and professional development to be effective (UNESCO, 2024b). Municipal environmental management departments can be well-placed to take on the role of a green office. For instance, in Cape Town (South Africa), the environmental management department coordinates and facilitates the implementation of the city's environmental strategy, undertaking environmental education, conservation planning and coordinating environmental partnerships (City of Cape Town, 2025).

b) Formal education places

As described in Section 2 and the Green School Quality Standard, a whole-institution approach is one model for greening formal educational institutions (Tilbury, 2022; UNESCO, 2024b). In this approach, formal education settings undertake climate and sustainability initiatives across institutional domains: overall governance and research, facilities and operations, teaching and learning, community outreach and engagement. The community engagement domain refers to climate and sustainability action collaborations with diverse stakeholders in the community.

Well-designed **early childhood education (ECE) centres** can help set the stage for young children's active engagement in climate and sustainability action later in life (UNESCO, 2024a). For example, outdoor learning places in pre-schools and kindergartens are often the first places children build their connection to and understanding of nature (Summers, Vivian and Summers, 2019).

Primary and secondary schools are also important learning places that can create conditions for fundamental, transformative green learning opportunities for young people, particularly when combined with community engagement. Blending formal curriculum with hands-on community projects such as planting native gardens, cleaning up beaches and hiking in nearby forests make the classroom a climate and environmental action point. Providing students with connections to nature in their communities has several added benefits. For instance, students who use naturalized school grounds, their emotional, physical and mental wellbeing improves (Sekulova and Ruiz-Mallén 2024). Schools that are greening through the whole-institution approach also often benefit their communities by leading initiatives such as local tree-planting campaigns or neighbourhood recycling programmes.

As part of the whole-institution approach, many **universities and TVET institutions** are adopting low-carbon operational practices, while also developing curricula and instructional methods aimed to instruct students about the importance of carbon neutrality and the need for climate change mitigation and adaptation and other environmental and sustainability issues (UNESCO-UNEVOC, 2017). One example of how universities can use their places for green learning is the Young Soil Scientists Program (2022). This peer-to-peer programme offers hands-on experience with sustainable soil management by learning how to convert leaflitter into nutrient-rich compost and apply it on institutional grounds. Students are provided with suggested sustainability actions to take, such as auditing food waste, creating new waste-sorting procedures, producing organic crops with the reclaimed soil and donating leftover produce to those in need (Young Soil Scientists Program, 2022).

How can local governments support educational spaces to green communities through learning?

Municipal policies, plans, infrastructure and funding for the greening of communities through learning should include child-centred approaches to nurture children's connections to local ecosystems and nature (INEE, 2023). Municipalities can provide accessible and affordable public transportation and climate- and environment-friendly early childhood services such as climate-proof playgrounds. Municipalities can also invest in and maintain infrastructure such as parks, conservation areas, pollinator gardens and community gardens, allotments and related public and school production schemes, which can provide school communities with ongoing access to important nature-based learning opportunities (UNESCO, 2024b). Providing age-appropriate interpretative tours and/or signage in natural municipal places are another way local governments can encourage green learning across ECE, primary, secondary and tertiary education. Ideally, such services are developed and delivered by people from the community, and the climate and environmental solutions and actions children learn about are localized (UNESCO, 2024a; UNICEF, 2022; INEE, 2023).

Municipalities can support school and educational institutions to green their facilities and operations with municipal programmes and policies. For example, local governments can increase sustainability and resilience to environmental shocks in ECE contexts by integrating greening into the regulatory requirements of ECE providers (INEE, 2023). The UNESCO Learning City of Hamburg launched the Climate Schools Project in 2009 as part of its Climate Protection Plan programmes (City of Hamburg, n.d.). Participating schools develop their own Climate Action Plans to reduce carbon emissions and develop climate literacy within the school community. Since the programme began, Hamburg has provided advice, teacher training, materials and funding to nearly 100 schools. Local governments might also create outdoor schools in partnership with local schools and school divisions.

Rural municipalities can support green agricultural learning through joint activities, funding and other forms of support (Nandhivarman and Golda, 2020; Soil Scientists Program, 2022). For instance, local governments can designate unused public land for lab-to-field initiatives where university and community groups test innovative farming practices and technologies. This can even generate revenue, which can then be used to finance further research and initiatives (Ameh, Wonah and Nwannunu, 2018).

c) Community places

Community places such as CLCs, libraries, museums, art galleries, hospitals, youth centres, faith-based spaces and NGO offices, among others, have many features that make them important sites for sustainability learning. Because many community places sit at the intersection of formal, non-formal and informal learning, they are useful for making climate and sustainability issues more meaningful to learners. For example, school visits to community gardens, youth group visits to museums and conversations between elders and young people in youth centres can build connections across formal curricula, non-formal programming and informal learning, and across generations. Programmes in community places can also inspire creative engagement with climate and sustainability issues by using participatory, hands-on approaches such as innovation labs, art, music and theatre. Finally, in polarized communities, these sorts of places can offer neutrality and provide increased opportunities for open, respectful dialogues.

Because community learning places are able to support non-formal learning programmes, they tend to be more flexible than formal education. This flexibility makes them ideal places for meeting the learning needs of diverse populations, in particular adults and senior community members. **Adult learning and education** aims to 'equip people with the necessary capabilities to exercise and realize their rights and take control of their destinies' (UIL, 2015a, p.8). ALE is particularly important for socially, economically and culturally marginalized people in communities who hold low levels of literacy (UIL, 2015a). Adult learning activities vary widely. For example, some ALE opportunities offer pathways for learners to earn credentials or make up for lack of initial schooling (UIL, 2015a). Others offer formal literacy programmes to learn to read, write and solve problems in an increasingly technological and information-rich world (UIL, 2015a). A key dimension of ALE is to generate opportunities that empower citizens to engage with social, environmental and economic issues (UIL, 2015a). CLCs are key providers of adult learning through provision of degree and non-degree programmes that serve diverse learning needs (UIL, 2022a). The design and administration of CLCs can vary greatly depending on local context. As such, they represent a variety of sectors and are organized by different funding structures, programme types and target groups (UIL, 2022a). CLCs are particularly relevant in rural areas where access to educational opportunities may be limited (UIL, 2022a).

Cultural institutions such as libraries, museums, art galleries and faith-based places sit at the intersection of culture and learning, and their role in climate and sustainability learning is becoming more widely recognized in the policy space. For example, the role of cultural heritage, including traditional and local knowledge and Indigenous ways of knowing, is recognized as a key thematic target area in the UAE Framework for Global Climate Resilience, which was adopted at the 2023 COP28 UN Climate Conference in Dubai (UAE) (UNFCCC, 2023, 2024). After a series of cross-sectoral roundtable discussions at UN Climate Conferences, the International Federation of Library Associations and Institutions (IFLA) identified key recommendations to bolster the role of cultural institutions in promoting climate learning (McGuire, 2023). These include setting learning objectives in line with institutional greening strategies, supporting capacity-building for the general public (i.e. promoting access to materials and training) and increasing knowledge exchange and cooperation between cultural institutions (McGuire, 2023).

Libraries are increasingly engaging in learning activities that localize, humanize and create communities to address unsustainable consumption and environmental issues (IFLA, 2024). Libraries generally have strong ties with municipalities and community organizations including garden clubs, schools and health and wellness organizations (Reiman, 2024). Their foothold in local communities make them an important learning place and site for capacity-building. For example, librarians can support educators in adapting curriculum and can offer accessible learning programmes or lectures to the general public (Reiman, 2024). Libraries can also increase the number of educational materials and activities focused on conservation, sustainability, biodiversity and environmentalism in collections. Finally, libraries can offer free or low-cost gathering places for greening learning activities, thus supporting capacity-building across the community. The IFLA and UNESCO Public Library Manifesto, updated in 2022, is a key reference for public libraries wishing to improve sustainability uptake (IFLA and UNESCO, 2022).

Museums have a long tradition of capacity-building across formal, non-formal and informal learning. They increasingly engage visitors in narratives related to critical local and global issues such as biodiversity loss and the climate crisis through collections, interpretation and learning programmes (Sforzi et al., 2018). Museums offer a unique opportunity for visitors to connect cultural and natural heritage and can help shape collective narratives for a desirable future (McGuire, 2023). In municipalities where climate change may be a polarising topic, museums can serve as a safe place for visitors to engage in informal learning (Hamilton and Ronning, 2020). In recent years, museums have also been a notable gathering place for youth activists, which highlights their importance as a place for informal learning on environmental issues (Newell, 2020). Increasingly, museums devoted to the environment are also being created. These are dedicated institutions that provide opportunities to learn about biodiversity loss and climate issues. Some notable climate museums around the world include those in Rio (Brazil) and Oslo (Norway) (Newell, 2020; MCCN, n.d.).

Art galleries and/or creative places can also play a key role in place-based learning and bringing communities together for climate and sustainability action (The Climate Reality Project, 2022; UNESCO, 2021). As a form of non-formal and informal learning, art can push people to redefine their relationship with nature, for instance, by depicting the human impact of inaction and the transformative power of systems approaches (The Climate Reality Project, 2022).

Faith-based places also provide important learning locations to foster formal, non-formal and informal learning on climate and sustainability. Congregation places and accompanying religious programming (e.g. Sunday schools, camps) are important for sustainability messaging to reach learners across diverse age groups.

While carrying out their local, national and global advocacy, **NGOs** often provide non-formal learning opportunities through public webinars and workshops held in their offices. **Youth centres and organizations** are vital learning places for providing non-formal and informal learning about sustainability issues. The learning places created by youth movements, youth-led organizations and youth-serving entities allow young people to build knowledge, exercise leadership and engage meaningfully in shaping sustainable futures.

Farmer field schools provide hands-on experimental learning where farmers and food producers can learn about sustainable production and value chain practices and systems in their everyday contexts, which makes green learning more relevant and accessible to diverse communities. Farmer field schools also play an important role in promoting agricultural development in rural areas by providing agricultural research, education and consultancy services. For example, **lab-to-land** and **lab-to-field** approaches are strategies that aim to bridge the gap between scientific research with real-world practical application. Farmer field schools can benefit from interdisciplinary collaboration to solve complex problems and have 'also supported the integration of local, Indigenous knowledge that can be usefully combined with the latest scientific findings' (FAO, 2018, p. 6).

What can local governments do to support community places to green communities through learning?

Municipalities can support community places for learning about climate and sustainability by establishing funding mechanisms to support the provision of non-formal climate and sustainability education places in the community (UIL, 2015a). Funding is vital for supporting not only the learning activities offered in community places, but also the maintenance of physical and digital places for these activities to take place. Municipalities might also subsidize room rentals for youth organizations and artist collectives or repurpose publicly owned land into multi-use places for resource-strapped organizations to use in their programmes. Local governments can play an important role in ensuring the quality of learning in adult and municipal learning centres, for example by providing training for adult educators and linking funding to quality measures. For instance, partnering with organizations working in environment, climate and sustainability-related fields can enhance the relevance of adult and community learning programmes to their social context. Curriculum globALE, an international cross-curricular competency framework for training adult educators, includes sustainable development and climate change aspects (UIL, DVVI, DIE and ICAE, 2021, p.37). In communities that lack permanent infrastructure, local governments may wish to partner with CLCs, cultural institutions and NGOs to carry out mobile and outreach-based strategies such as mobile classrooms, learning caravans, and pop-ups to expand the range of learners that can be reached. For example, India's Science Express, a 16-coach train that houses interactive science exhibits devoted to climate, biodiversity and sustainability, has travelled more than 1.5 million km and reached more than 20 million people since 2007 (Sarabhai and Sharma, 2020). Local governments can also support artists as climate and sustainability stakeholders by providing opportunities for artist collectives and networks to showcase climate change and sustainability-specific works in public festivals and exhibitions (Creative Carbon Scotland, 2024).

d) Everyday places

In a whole-of-community approach to greening through learning, the places community residents visit every day, including their family homes, markets, grocery stores and workplaces, are crucial sites of climate and sustainability learning. While everyday places do intersect with the other places described in the sections above, they are an important place for intergenerational dialogue, storytelling and cultural rituals and therefore can serve as powerful, culturally rooted places for learning about climate and sustainability.

Family homes play a fundamental role in shaping environmental values from an early age. Family learning refers to 'learning that happens in the home and in communities, including online, and that involves different members of the family' (UNESCO, 2020b, p. 2). Family learning is a collective process with a strong social dimension that can break down barriers between homes, schools and communities (Binesse et al., 2025). Regardless of socio-economic status and education levels, families can provide rich environments to support literacy through play, leisure and conversation (Binesse et al., 2025). Expanded notions of family literacy also emphasize the importance of intergenerational learning, especially in Indigenous and Global South communities (Binesse et al., 2025). Intergenerational learning is multidirectional, meaning that children can learn from adults, adults can learn from children, children can learn from relatives outside of the nuclear family and so on. Intergenerational exchange is a key site of informal learning where different forms of knowledge and learning are shared, transferred and transformed across generations (Binesse et al., 2025). Family learning is ripe for opportunities for informal climate and environmental learning. For example, grandparents may share knowledge of caretaking land practices or young children may share climate change and environmental learning from digital places with extended family.

Integrating climate and sustainability issues into **workplace** learning not only equips employees with necessary green skills but also helps employers in all sectors to enhance operational efficiency and reduce costs. **Businesses** can also be key partners for community-based sustainability projects.

Peer learning **networks** are one way that people can gain green skills for the workplace. Networks primarily involve collaborations between public, private and civil society actors (Schubert and Veil, 2016). Networks operate at local, sub-national, national, regional and global levels. Importantly, networks can also provide a foundation for fostering collaboration between local governments and key stakeholders to implement and sustain lifelong learning initiatives to green communities. Therefore, local networks often include members from local government departments, universities, colleges, schools, NGOs, businesses and the broader community (Golda, 2021). By contrast, global networks such as the Local Governments for Sustainability (ICLEI), with a membership of over 2,500 local and regional governments from over 125 countries, offer opportunities to learn about policy and practice from a variety of municipalities and contexts (ICLEI, n.d.). The UNESCO Global Network of Learning Cities (GNLC) is an international lifelong learning policy-oriented network that includes more than 400 cities worldwide, providing members with capacity-building and peer exchange opportunities related to a range of themes, including lifelong learning for climate action (UIL, 2025). The United Nations University (UNU) Regional Centres of Expertise (RCEs) are another important network for greening communities through learning (UNU, 2025). Established in 2005, RCEs are networks of organizations and individuals devoted to formal, non-formal and informal learning that facilitate learning for sustainability for learners of all types and all levels. There are over 190 RCEs operating at local and regional levels. They can involve local government officials, educators, NGOs, scientists, researchers, museums, zoos, botanical gardens, representatives of local businesses and many more.

Networks often serve as communication centres and hubs for planning and implementing joint projects such as community-based non-formal and informal learning opportunities (National Platform for Education for Sustainable Development, 2017). For example, networks may provide in-person or virtual professional development opportunities to improve green capabilities. Some networks, such as professional associations, host conferences where members can learn about the latest insights in the green learning field through peer exchange and workshops. As a result, members of green learning networks are often well situated to offer insights about existing local climate and sustainability learning initiatives or ways to make 'green' topics more locally appropriate.

To foster sustainable consumption habits in households, governments can develop public awareness programmes and supply green infrastructure (e.g. recycling and composting management services) to help encourage waste reduction practices at the family level. Local governments may wish to organize or support events that instruct residents how to take locally relevant climate and sustainability action. For example, local climathons are in-person or virtual events that bring together citizens to collaboratively develop local responses to climate change over 1–2 days and support families in their green learning (Climate KIC, 2025). Annual festivals and event series can also be an effective way of building the capacity of families and others to take climate and sustainability action. By collaborating with stakeholders and change agents from across the city, such events can benefit from valuable and diverse expertise, experiences and resources. During the Green Living Series of the UNESCO Learning City of Wyndham (Australia), for instance, residents, local environmental leaders and community groups are brought together for in-person and virtual events covering themes related to conservation, zero waste, sustainability and gardening to enhance community resilience (UIL, 2024d).

Local governments can support local employers and employees to implement green business practices through sharing best practices that have been modelled elsewhere. For example, workplace learning can include a brown bag luncheon series on green business practices or workshops for employers on planning for circular economies, conducted in partnership with local business associations. Local governments can play a key role in supporting or participating in peer learning networks at different levels to foster the greening of communities through lifelong learning. There may already be networks devoted to greening communities through learning operating in the local area. This means it is important for municipal actors to know the stakeholder landscape in their community to avoid duplication of effort. Local networks can be identified using a technique called 'stakeholder mapping' (see Section 5 for more information). If it is necessary to build a new network, municipalities can act in a coordination capacity and ensure the goals and activities of the network will meet a need for local stakeholders (BNE-Kompetenzzentrum, 2023).

e) Natural places

Natural settings such as **parks, gardens, forests, beaches, green roofs, wetlands and permeable pavements** can be harnessed to both mitigate and adapt to climate change, as well as address other sustainability challenges. **FAO Globally Important Agricultural Heritage Systems (GIAHS)** sites and **UNESCO sites**, including Biosphere Reserves, World Heritage sites, and Geoparks, are another type of natural place that municipalities might leverage to develop practical green learning activities. These places can provide real-world, localized examples of climate and sustainability challenges and solutions which can connect people to their local environment and culture. For example, natural places can create experiential opportunities for the public to learn local solutions for managing rainwater to minimize flooding from storms, installing green roofs to battle urban heat islands, and planting native species to increase biodiversity (EIC Council, 2024). For example, in Mexico, the Viva Azteca by Wyndham Hotel in Playa del Carmen, Quintana Roo has implemented a coastal restoration project titled Coastal Green to promote climate action and build resilience against climate change (FEE, 2025b). The hotel's Blue Flag beach has involved tourists and local people in planting 400 native plants to prevent erosion, promote biodiversity and stabilize sand. The planting project is complemented by workshops and talks that highlight the importance of ecosystem restoration. Blue Flag sites across the globe including beaches, marinas and sustainable tourism boats, are being harnessed as places for engaging local communities and visitors in lifelong learning for climate action and environmental education more broadly (FEE, 2023). In addition, in The Bahamas, Global Action Days have united 21 learning settings using place-based learning to restore ecosystems across Nassau, Grand Bahama, and Abaco. The campaign, which is managed globally by the Foundation for Environmental Education (FEE), provides a comprehensive activity guide with lesson plans and hands-on activities to mobilize entire communities to restore ecosystems (FEE, 2025c). This initiative shows how place-based learning can foster a shared vision for a sustainable future and strengthen community unity in even the most remote Small Island Developing States.

Citizen science, defined as the participation of non-scientists in the scientific process, is one innovative way individuals and communities can learn about local climate change impacts and sustainability issues (UNESCO, 2024a). For example, during a citizen science project led by Al-Bukhari Library at the Universiti Teknologi MARA in Malaysia, 52 students, faculty and local community members identified 499 distinct species to help preserve the region's rich biodiversity. Citizen science projects not only enable community members to learn about nature and perceive changes in their own living places but can mobilize citizens to produce solutions to these changes (Bonney et al., 2014). At its most inclusive, citizen science involves volunteers as partners in the entire scientific process, including determining research questions, methodologies and means of disseminating results. Citizen science projects can therefore be an important tool for encouraging participatory and inclusive forms of knowledge creation.

Natural places are an area where municipalities can have a particularly large learning impact given their role in creating and protecting such places as part of urban development. By planting native species, re-wilding natural areas and adding landscape features to control stormwater, local governments can increase biodiversity and build community resilience against extreme weather events. Local governments can transform existing natural places such as parks, gardens and forests into sites of learning by providing interpretive signage that explains important natural features in the area. Such signage should be accessible for all types of learners. Local governments may also wish to partner on green learning initiatives with cultural institutions, NGOs and schools. As described in the section above on School Places and Section 4.1 on 'How to teach', outdoor places are important for connecting learners to nature and creating experiential and action-based learning opportunities. Citizen science initiatives can provide low-cost, volunteer-driven ways to collect data to determine if green initiatives are having an impact on local plant and wildlife, while also providing learning opportunities to the citizens collecting data. Finally, partnering with UNESCO sites, state (provincial, canton, etc.) and national parks, if there are any nearby, can increase community member access to natural places. Many of these parks have pre-existing interpretive infrastructure and educational programming that can build green capacities and skills in citizens. Practical suggestions and ideas for educators and site managers on how to mobilize and collaborate with UNESCO sites are available in the guide *UNESCO Sites as Partners for Education for Sustainable Development: An Implementation Guide (UNESCO, 2025).*

f) Digital places

Digital learning environments are critical learning places, especially for younger generations. These environments provide a range of tools to enrich learning about climate and sustainability issues (Il and Kocak, 2024). Digital tools such as social media, virtual and augmented reality and online repositories (Rennie et al., 2020) can support learning in a variety of ways. For example, digital technologies can connect communities with similar challenges and facilitate peer-to-peer learning and collaboration (Bergdahl et al., 2018; Rennie et al., 2020; UN Habitat, 2024). Digital learning environments can also provide opportunities to share learning materials and resources (Bergdahl et al., 2018; Rennie et al., 2020). In some rural and remote areas, connectivity and infrastructure challenges may complicate access to digital learning environments. However, concrete strategies can be used to address obstacles to digital learning. For example, working closely with the private sector (e.g. telecom providers and technology companies) may facilitate access to ICT devices such as computers, tablets and software, while enhancing internet connectivity (UIL, 2022b). This can help to make green learning opportunities via digital learning environments accessible to a wider range of learners (ibid). Radio and SMS services might also be used creatively in such environments to engage individuals (ibid).

Social media platforms are a significant digital learning place for non-formal and informal learning. For example, organizations may launch social media campaigns on climate and environmental learning to help the public engage with these issues. Social media also provides opportunities for peer learning through networks. Holidays and themed international days, such as Earth Day or International Women's Day, may also present opportunities for climate and sustainability messaging on social media.

Virtual reality (VR) and augmented reality (AR) enhance climate and sustainability learning by providing immersive experiences. When integrated in formal, non-formal and informal learning places, VR and AR can make learning materials more interactive and understandable (Wang, 2020). As a result, learners may better understand environmental issues, experience an enhanced sense of environmental responsibility and be more encouraged to participate on environmental issues (Bower et al., 2017; Santos, 2021). In addition, VR and AR have the potential to generate social benefits for learners and enable broad participation by removing geographical and physical barriers. Having access to such learning opportunities can be especially beneficial for individuals living in rural and remote areas (Liu et al., 2018). The integration of AR and VR can be applied in diverse learning places. For example, VR laboratories in formal educational settings can enable students to experience the effects of different climate scenarios on the ecosystem (Gomez, 2021). In community contexts, VR can be used to offer individuals or groups virtual field trips to explore various natural environments (Liu et al., 2018). In a municipal setting, people walking in a city can learn about environmental issues in the surrounding area through AR applications and thus be engaged in local environmental awareness campaigns (Santos, 2021).

Sustainability and climate change games (game-based learning and gamification) are an effective tool to engage diverse audiences in learning and action (Wu and Lee, 2015), taking various forms such as workshop simulations, digital games, and board games. As such, climate change and sustainability games may be digital or analogue in nature. When designed as serious games, with a primary focus on education rather than entertainment alone, they help players better comprehend the scientific processes, social and physical impacts, and the mitigation and adaptation options of climate change. This field has expanded significantly, with the number of identified climate- and sustainability-related games growing from 52 in 2011 (Reckien & Eisenack, 2013) to more than 100 in the 2020s (Galeote & Hamari, 2021; Gerber et al., 2021). Climate change and sustainability games are no longer

a niche topic and will continue to play a vital role to support climate and sustainability learning. Examples include simulations such as C-ROADS and The World's Future (Climate Interactive, n.d.; Games4Sustainability, n.d.); digital games like Terra Nil and Stop Disasters (Terra Nil, n.d.; UN Office for Disaster Risk Reduction, n.d.); and board games including Daybreak and CATAN: New Energies (Daybreak, n.d.; Catan, n.d.).

Online repositories are another way to facilitate non-formal and informal learning opportunities to green communities. Online resource centres can provide access to learning resources such as e-books, articles, toolkits, videos, documentaries, podcasts, and infographics that explain key sustainability concepts and showcase real-world examples of sustainable practices relevant to the local and regional context. There are also platforms that provide online professional training courses, certificate programmes, webinars and workshops to those interested in pursuing a career in a green subject (SDG Academy, 2021). Stakeholders managing the development of the online repository should ensure that learning content is regularly updated and accurate information considering that information on climate change and sustainability is dynamic (IPCC, 2018). To ensure widespread utilization of this digital tool, online repositories should also be developed with the local context in mind. Effective localization of content should consider local languages, customs, values, and educational standards, and aim to enhance the relevance and impact of these resources across different regions. At the same time, the interface should be simple and allow access even for individuals with little knowledge of technology (UNESCO, 2017).

While **Artificial intelligence (AI)** tools such as ChatGPT and Perplexity.ai can be useful for developing green learning modules, training courses and awareness campaigns, they should be employed with care. For example, it is important to verify the accuracy of information provided by the AI tool with reputable scientific sources (Vaghefi, Stammbach, Muccione et al., 2023). Further, AI tools may not have been developed in ways that prioritize transparency, fairness, human rights, dignity and human oversight of such systems (UNESCO, 2022). This means AI tools such as chatbots may have limited perspectives on diversity issues, including a bias towards Western knowledge (Afreen, Mohaghegh & Doborjeh, 2025). Finally, it is important to consider that AI itself is a growing source of emissions and other environmental impacts (McKenzie and Gulson, 2023; Zewe, 2025). For further information on this topic, you may wish to consult UNESCO's Recommendation on the Ethics of Artificial Intelligence (ibid).

How can local governments support digital places to green communities through learning?

For local residents to benefit equally from the learning opportunities digital technologies offer, it is important to expand internet access and close the digital divide, especially in rural and low-income areas. Collaboration between governments, international organizations, and the private sector can help close this divide and improve robust digital infrastructure (World Bank, 2020). Local governments can also take advantage of digital learning environments in several ways. For example, social media can provide an effective medium for sharing about municipal initiatives to green the community. Municipalities might partner with local museums on climate change and environmental exhibits that use VR and AR technologies. When considering the development of an online repository or resource centre, municipalities should consider that this is a costly undertaking. Municipalities might consider partnering with existing platforms to develop locally appropriate resources rather than taking on the expense of developing and maintaining a platform (UNESCO, 2017).

3.2 Practice-based examples of green learning places

Below are inspirational examples from around the world on how diverse learning places can be utilized to support lifelong learning for climate action and sustainability in your community. These examples illustrate how learning places can foster conditions for impactful formal and non-formal opportunities with diverse learners.

Table 6. Examples of diverse learning places to support lifelong learning for climate action and sustainability

Where: Municipalities as 'living labs', formal education settings, everyday places

Poland – SmartFood Urban Living Lab

The SmartFood Urban Living Lab is a platform for transforming urban food systems in the city of Łódź (Poland). The aim of the Lab is to inspire the city's residents to implement sustainable practices in people's lives and communities. Through collaborations with city residents, Polish and Norwegian scientists, public authorities and enterprises, the Lab offers numerous hands-on, non-formal learning opportunities in the hyper-local context of an urban apartment block in Łódź. For example, community gardens offer residents a chance to observe and engage in sustainable food production practices, while also fostering deeper connections with food and the environment. Visitors can also take educational tours to explore vertical farms, aquaponics systems and other innovative setups that illustrate how technology can enhance urban food production. Collaborations with local schools support the integration of sustainable food learning into curricula, including through resources for instructors to incorporate lessons on urban agriculture, food security and environmental stewardship in classrooms. The SmartFood Urban Living Lab demonstrates how offering learning opportunities across a variety of learning places is instrumental in engaging diverse groups in shared and environmental goals.

Learn more: SmartFood

Where: Everyday places (farms)

Mexico – The Farmer's School: Escuela Campesina (Milpixqui Tlazocamatili)

The Municipality of Huejotzingo (Mexico) founded Escuela Campesina after joining the UNESCO Global Network of Learning Cities (GNLC). Project partners include Escuela Campesina, the Municipality of Huejotzingo and Colegio de Postgraduados Campus Puebla.

Since 2021, this initiative has trained more than 150 rural and Indigenous farmers, producers, families and students to practice sustainable family agriculture in a way that combines traditional knowledge with innovative approaches. As part of the initiative, two model plots have been created, where farmers can practise pruning, fertilization and intercropping. Participants also learn how to produce and apply organic fertilizer, work with livestock, rotate crops and cultivate avocados and orchard fruits. The programme helps participants to adapt the way they manage their land in response to climate impacts.

In 2021, Huejotzingo received the UNESCO Learning City Award for outstanding progress in providing lifelong learning opportunities for its citizens, with Escuela Campesina identified as a significant part of this effort.

Learn more: Huejotzingo

Where: Natural places (wetlands)

Islamic Republic of Iran – The Integrated Communication, Capacity-building, Education, Participation and Awareness (CEPA) Centre project

The *Integrated Communication, Capacity-building, Education, Participation and Awareness* (CEPA) ***Centre*** project aims to educate the community about the importance of wetlands and mangrove forests in mitigating climate change in the UNESCO Learning City of Bandar Khamir (Iran). Through engaging diverse learners of all ages, the project fosters community engagement through multiple learning programmes. Such efforts include specialized wetland conservation programmes for school-aged children, dedicated adult learning workshops on sustainable living and environmental careers, and public events in recognition of significant days including World Wetlands Day and National Children's Day. These programmes invite residents to engage with mangroves and wetlands and learn more about their role in tempering natural disasters and mitigating climate change. Examples of local climate action that resulted from the project included residents becoming involved in tree-planting initiatives, managing mangrove nurseries, and adopting eco-friendly practices to protect mangrove ecosystems, all of which have led to better flood prevention measures and carbon storage capabilities. The project is a collaboration between local NGOs, the tourism sector, and the Iranian Department of the Environment. Its funding stems from three main sources: municipal budgets, collaborations with private learning facilities, and financial contributions from companies. Through these diverse learning programmes, the CEPA Project effectively utilizes natural places to bring residents together to protect local biodiversity and boost climate change awareness.

Learn more: Integrated CEPA Centre project

Where: Natural places (oceans, coastal regions)

India, Indonesia and Sri Lanka - Ocean Literacy for All initiative

The *Ocean Literacy for All* initiative is a project which aims to raise awareness on the conservation, restoration and sustainable use of our oceans through local, community-oriented learning programmes. Led by a team of oceanography professionals and others, The initiative offers outdoor, experiential, and coastal field trips for students, school groups, college courses, community and citizen science groups. Importantly, youth are encouraged to pursue oceanography and marine biology careers as a means to promote local capacity-building. The initiative also trains diving communities to work with students with disabilities, tourists, and local communities to promote responsible and accessible tourism. Finally, through use of the UNESCO Ocean Literacy Toolkit (UNESCO, 2018b), the initiative offers ocean literacy modules that can be adapted into curricula in different school contexts. The Ocean Literacy for All initiative is a result of a partnership between the Young Environmentalists Programme Trust and the UNESCO Green Citizen Project, supporting the UN's 2030 agenda of protecting the health of the world's oceans.

Learn more:

Ocean literacy for all: a toolkit

Ocean Literacy by Young Environmentalists Programme

Young Environmentalists Programme Trust

Where: Digital places (virtual reality and augmented reality)

Singapore - Sustainable Singapore Gallery (SSG)

As part of the ArtScience Museum, the Sustainable Singapore Gallery (SSG) offers visitors a rich learning experience structured around interactive 'zones' that allow users to learn about the city's sustainability efforts. Through the use of AR and VR technologies, the zones provide an overview of climatic threats Singapore faces as a low-lying island. The zone themes encompass learning on Singapore's water supply, native flora and fauna, energy efficiency, waste management, and a summary of the country's work in relation to the 2030 SDGs. Visitors are encouraged to commit to helping achieve these goals.

The gallery offers programming to corporations, NGOs, governmental organizations and schools which are invited to learn more about how they can support Singapore's sustainability efforts.

Finally, the gallery hosts special free events for the public including community sustainability markets, eco-poetry nights, escape rooms, and upcycling workshops. All of SSG's programming and events have been designed with the SDGs in mind. Through the innovative use of VR and AR technology in its exhibits, visitors are immersed in an interactive learning experience to learn more about Singapore's journey to become a sustainable city.

Learn more: Sustainable Singapore Gallery

Additional examples are available at: https://uil.unesco.org/en/greening-communities-guidance



SECTION 4

How and what to instruct in greening communities?

This section is about 1) how to facilitate transformative learning towards greening communities, and 2) what content to focus on. The section offers an overview of considerations for facilitating learning about on climate and sustainability. The section also explores how to ensure that instructing towards greening communities is holistic by engaging across 'learning dimensions' and through places, communities and stories. These learning dimensions include cognitive, social and emotional, and behavioural or action orientations to climate and sustainability issues. The section ends with some examples of learning content, drawing on areas from the Greening Curriculum Guidance.

In this section

4.1 How to facilitate green learning in communities

- Offers an overview of considerations for developing holistic green learning content and methods based on the latest research
- Highlights the importance of engaging across 'learning dimensions' through relationships with places, communities and stories

4.2 Instructional approaches with disengaged community members

- Offers considerations for communicating with segments of society that are uninterested about, or resistant to climate and sustainability action

4.3 What to instruct in greening communities

- Defines six topics related to climate change and sustainability, in alignment with the Greening Curriculum Guidance
- Presents examples of learning objectives and outcomes for holistic green learning opportunities

4.4 Practice-based examples

- Provides inspirational examples of holistic green learning approaches from communities around the world

4.1 How to facilitate green learning in communities

a) Engaging across the learning dimensions

Historically, there has been a focus on learning facts about climate and sustainability, which has meant a focus on science or on increasing public awareness (UNESCO and MECCE Project, 2024; UNESCO, 2019b). However, research increasingly shows that cognitive learning about the environment and climate change is insufficient to drive the adoption of sustainable behaviours at the scale needed. Knowledge of climate change and environmental issues is only a small predictor of whether someone will support responsible action (Hornsey et al., 2016). For example, a sense of efficacy and involvement with social groups that accept climate change are stronger predictors of pro-climate action than knowledge of climate change (Busch et al., 2019). In addition, knowledge of change and environmental issues comes with a range of potential emotional responses, which can lead to anxiety, grief or even denial, which, in turn, can reduce action taken (UNESCO, 2024a). Instead, what can empower action is seeing and participating in examples of climate and sustainability action (UNESCO, 2024a). These research insights have helped spur a recent shift to the use of holistic green learning approaches. In addition to providing learners with accurate information about climate change, holistic approaches to climate and sustainability learning also aim to address the learner's emotions, which may include denial, anger, grief and anxiety (UNESCO, 2024a). The learner is also considered in context, which means attending to social factors such as the learner's language and values as well as the priorities of the different communities they interact with. Holistic approaches also provide learners with opportunities to engage in systemic and participatory forms of action (UNESCO, 2024a).

UNESCO has been using a heuristic of 'learning dimensions' for more holistic and transformative approaches to sustainability instruction and learning (e.g. UNESCO, 2019b; UNESCO 2024a). These interconnected dimensions include cognitive, social and emotional, and behavioural or action learning (or 'head, heart, and hands'). The cognitive dimension is considered to encompass the acquisition of knowledge on sustainability issues, from various disciplinary backgrounds and in relation to local and global contexts. The social and emotional dimension includes the capabilities required to manage the emotions that arise from increased knowledge of climate change and sustainability challenges, as well as the ability to collaborate and communicate with others about issues and action. The behavioural or action dimension includes being enabled to take and advocate for climate and sustainability action, both at individual and societal levels (UNESCO, 2017). While these are separated out here to help ensure all are addressed, the learning dimensions are ideally interwoven and mutually reinforcing in learning and action. For example, learners could be engaged in action learning on a particular issue, rather than passively learning about the facts in a transmissive mode (UNESCO, 2019b).

More detailed definitions of the learning domains are presented in Box 4.

Box 4. Definitions learning modalities

Cognitive: aimed at acquiring knowledge and understanding and practicing critical thinking about local, national, regional and global climate and sustainability issues; the interconnectedness and interdependence of different countries and populations; as well as the social, economic and environmental aspects of sustainability. This may also involve explaining the sustainability strategies of efficiency, sufficiency and consistency as prerequisites for the realization of a 'post-carbon economy' that must be implemented at both individual and societal levels.

Social and emotional: aimed at developing the emotional intelligence and/or interpersonal skills that enable people to manage emotions and feelings about climate change, environmental challenges and their impacts, and to more effectively collaborate, negotiate and communicate with others to address these challenges. This can include self-reflection skills, knowledge, values, attitudes and motivations that enable learners to build their own capacity to take action on climate and sustainability issues.

Behavioural: To act effectively, creatively and responsibly at local, national and global levels to promote a more peaceful, inclusive, green and sustainable world. This domain nurtures the ability of learners to act in responsible, compassionate, respectful and non-violent ways, building constructive and sustainable relationships, and leading the change in their local communities. It also refers to action competencies, such as participating constructively in community projects that promote sustainability in one's immediate environment and beyond. Finally, the behavioural dimension helps learners apply their knowledge and skills to challenge unsustainable local community social norms or broader societal standards.

Source: UNESCO *Greening Curriculum Guidance, 2024a*

b) Engaging through relationships with places, communities and stories

To operationalize these learning dimensions in formal, non-formal or informal learning means using instructional approaches that go beyond a focus on facts. It also means engaging with others and in action on climate and sustainability issues. One way to achieve this is to use approaches that focus on relationships, including through communities, places and stories when instructing about climate and sustainability issues (Figure 4 and MECCE Project, 2024).

Figure 4. Places, communities and stories and quality greening education



**This figure represents key findings from 20 MECCE Project case studies from around the world, mecce.ca/data-platform/case-studies*

A focus on **place** helps learners become more interested in the local impacts of, and solutions to, climate change and sustainability issues. For example, climate and sustainability learning can improve understanding of how climate change and environmental issues are impacting local natural places. Connecting green learning to place can therefore help learners feel more confident to take locally meaningful, systemic climate and environmental action that addresses those impacts. A growing body of research shows that land-based Indigenous knowledge is key in climate and sustainability learning and action (UNESCO, 2020a).

How can local governments engage relationships with place when developing green learning opportunities?

Broader place-based learning methods can help bridge content knowledge with social and emotional and action-oriented learning, resulting in more meaningful and change-oriented outcomes (UNESCO, 2024a). Place-based approaches have been found to enhance learner engagement, motivation and overall learning outcomes (Torres, 2020; Fukuda, Ah, Sam and Wang, 2010). Experiential teaching methods, also known as active or participatory methods, are also approaches that bridge the gap between knowledge and action. These can include experiential, relational, place-based and project-based learning approaches. While this includes common formal learning approaches such as labs and field trips, it can also include more creative activities such as role-playing, arts-infused learning, and games (MTS PAKIS, 2023).

When green learning is framed in relation to the existing values and priorities of communities, people are empowered to feel more connected to climate and sustainability issues and are more likely to take action (Corner et al., 2018). Research shows that values and political affiliations are the greatest predictors of concern about climate change (Hornsey et al., 2016). Specifically, political ideology and affiliation is more predictive of whether a person will have climate-responsible values than education, gender, knowledge of climate change, or experience with extreme weather (Hornsey et al., 2016).

How can local governments engage relationships with communities when developing green learning opportunities?

Green learning should ensure that climate and sustainability issues are relevant and meaningful to learners and their interest groups (Monroe et al., 2019). Green learning approaches should also consider the livelihoods of community members, and address the role of politics and local economies, to support engagement and action on climate and sustainability issues (MECCE Project, 2024). For instance, hands-on activities such as community mapping, eco-audits and mini action projects can help learners make links between human activities and climate change. This can help local communities understand how to combat climate change by solving local problems, shifting habitual ways of doing and fostering the initiation of tangible, community level action.

Finally, it has become increasingly important to build proactive social narratives, or stories, about climate and sustainability to encourage learners to feel the need to take action. As climate change becomes increasingly politicized, misinformation about it is becoming widespread on social media (Corner et al., 2018; McKenzie, 2022). Some industry actors undermine climate action through their lobbying efforts (McKenzie, 2022). In addition, narratives about climate change are dominated by 'doom and gloom' stories, complex climate science and an overwhelming focus on the Global North and Western scientific knowledge (UNESCO and UNFCCC, 2016; MECCE Project, 2024). Instead, examples and stories of positive climate action and community connection to place can foster more relational and sustainable approaches that further the greening of communities.

How can local governments engage with stories when developing green learning opportunities?

There are many ways local governments might engage with stories which promote learning to greening communities. For example, research shows that providing learners with hopeful visions of a green future rather than fear of climate impacts may be more effective in spurring action (Stevenson and Peterson, 2015). The Hope Wheel is a recent teaching approach that provides guidance for constructively engaging in honest, hope-oriented, transformative green learning. Not only does the model provide a way to address climate anxiety, mis-/disinformation and false hope, it also provides avenues to explore the connections between societal and planetary challenges (Finnegan and d'Abreau, 2024). Making abstract environmental and climate science concepts more easily understandable, including through the use of local languages and cultural norms, is also important for developing culturally-relevant green learning experiences (Development Alternatives, 2023). Instructional methods, such as peer-to-peer, participatory, and intergenerational approaches can help learners interrogate stories told about pasts, presents and futures in relation to climate change (MECCE Project, 2024).

Storytelling through crafts and arts-based approaches, whether in print or through digital media, with peers or elders, are effective ways to understand and inspire action on environmental issues for learners of all ages from early childhood to older adults. Using learner-centred approaches, where the learner is actively involved in constructing knowledge rather than being a passive recipient, can be more empowering in motivating action (UNESCO, 2018).

In addition, climate change and environmental issues carry significant justice implications as those least responsible for causing it are most likely to experience its impacts, including Indigenous communities. In addition, the prevailing discourses on climate change tend to prioritize Western scientific knowledge over lived experiences and Indigenous, traditional knowledge. When seeking to integrate Indigenous knowledge and locally adapted green practices into teaching materials, it is important to work with communities, elders and knowledge-keepers. This is discussed more in Section 2.3.d. on 'change agents'. In addition, a variety of participatory approaches are discussed throughout this guidance document.

4.2 Instructional approaches with disengaged community members

While recognizing the knowledge and leadership of those most affected by environmental degradation, it is important not to offload responsibility for action to those same groups. Rather, sustainability learning and action should be significantly targeted to those who are most responsible for environmental impacts, and/or who are taking the least action.

These community members are likely to range in attitudes. Some will be concerned and ready to act if exposed to the proper learning opportunities, while others may be disengaged from, or even sceptical towards, climate and sustainability action (Yale Program on Climate Change Communication, n.d.). Audience segmentation studies suggest there are numerous psychological, cultural and political factors that influence the extent of support for responsible sustainability behaviours (Box 5). This research has identified different segments of populations that reliably predict belief, concern and motivation to act on environmental issues. Whether someone is 'alarmed' or 'concerned' or 'dismissive' about environmental issues is largely impacted by variables such as political identification and affiliation, age, gender, education level, ethnicity and income (Ballew et al., 2023). Importantly, research shows that the percentage of people who are supportive of climate action is increasing over time (Yale Program on Climate Change Communication, n.d.), although some research is finding recent declines in agreement that climate change is caused by human activities (Hatch, Alrasheed, Bider, et al. 2025).

Box 5. Audience segmentation on sustainability belief, concern and motivation (example of climate change)

Alarmed: urgently believe climate change is happening and caused by humans. They strongly support climate policies but most do not know what actions will help solve the problem.

Concerned: believe climate change is happening and caused by humans. They believe climate change is a serious threat but that its impacts are far away (in the future and location). They are supportive of climate policies but think climate change is a low priority.

Cautious: have not yet made up their minds about whether climate change is happening, human-caused, or serious.

Disengaged: are uninformed about climate change and report rarely or never hearing about it in their lives.

Doubtful: either do not think climate change is happening or think that it is part of a natural cycle. They report not thinking much about climate change, and do not consider it a serious risk.

Dismissive: do not think climate change is happening, caused by humans, or a threat. Some may also question mainstream scientific explanations or view the issue through alternative perspectives.

Source: Yale Program on Climate Change Communication (2024)

The individuals in some of these groups may be rightly cautious. Other groups, such as workers in fossil fuel intensive industries, may have been excluded from conversations about post-carbon livelihoods. In some communities, the local government itself may not support or prioritize implementing climate and sustainability action.

It is therefore important to adopt nuanced, rights-based approaches when communicating with and engaging these groups and communities (Degeling and Koolen, 2022; Hine et al., 2014). Moreover, early engagement of all community groups is of paramount importance to maximize the benefits of greening through learning for as many members of the community as possible. One guidebook that can help with better understanding communities and audiences is the Six Americas Super Short Survey (SASSY), which is available in most major languages around the world (Lin, Thompson, and Marlon et al., 2024). The SASSY is a four-question survey that rapidly identifies whether someone is alarmed, concerned, cautious, disengaged, doubtful or dismissive. The guidebook provides tips and case study examples to illustrate how to use the tool to better engage audiences. Deep canvassing is one technique that can be helpful for having difficult discussions (Neighbours United, 2022). It involves having in-depth, non-judgemental, vulnerable conversations that bridge understandings to help people find common ground. Storytelling and honest curiosity are key features of the technique. Deep canvassing is described in more detail in the case study in Section 4.4. A deep canvassing toolkit is available for free from Neighbours United, a Canadian NGO that is a world leader in the technique (Neighbours United, 2022). Climate Outreach also provides tips on how to engage people who have historically been left out of the climate conversation in their working paper Ten Key Principles: How to Communicate Climate Change for Effective Public Engagement (Sippel, Shaw, & Marshall, 2022). Climate Outreach's resource Principles for Effective Communication and Public Engagement on Climate Change: A Handbook for IPCC Authors provides helpful tips for communicating complex scientific concepts to non-technical audiences (Corner, Shaw and Clarke, 2018).

4.3 What content to include in instructing to green communities

This part of the guidance presents learning objectives and outcomes for six topical areas that relate to sustainability issues, drawn from the Greening Education Partnership's Greening Curriculum Guidance. The six areas are climate science, ecosystems and biodiversity, climate justice, resilience-building, post-carbon economies and sustainable lifestyles. These topical areas are not intended to cover climate and sustainability issues exhaustively but can help identify the type of content that might be covered in relation to locally appropriate climate and sustainability issues and initiatives in formal, non-formal and informal learning settings.

Each subsection below provides a brief definition of the topical area, followed by a table with example learning outcomes for different types of learners (see Table 2). The example learning outcomes are the type expected when learners are provided with holistic, relational learning opportunities. They are therefore organized according to the cognitive, social and emotional and action learning dimensions, and reflective of the types of outcomes that result from the instructional methods considerations discussed in Section 4.1 above.

The examples are illustrative and should be adapted to particular groups of stakeholders and change agents (see Sections 2.2, 3.1 and 4.1 for more detail on this). Additional learning objectives and outcomes are available in the Greening Curriculum Guidance. In addition, partnerships can be a fruitful way of generating learning content to green communities, particularly when municipalities or other stakeholders may not have the required content expertise.

a) Climate science

Climate change is caused by the greenhouse effect. Learning in this topical area will therefore address how greenhouse gases cause overall warming of the planet's atmosphere as well as the impacts of climate change on ecosystems and biodiversity (UNESCO, 2024a). Climate science learning should be made locally relevant, for instance by focusing on the melting of glaciers in mountainous regions, climate change impacts on oceans in coastal areas and the impact of sea level rise in island states (UNESCO, 2024a). Learning should also convey the complexity of climate modelling and reinforce the scientific consensus that climate change is anthropogenic (IPCC, 2023).

Table 7. Examples of learning objectives and outcomes across the learning dimensions under the 'climate science' topical area

Cognitive outcomes	Social and emotional outcomes	Action outcomes
LEARNING OBJECTIVES: By addressing pollution and waste issues, local governments will improve the health of community members and local ecosystems, while also addressing global warming. Local stakeholders and change agents should be able to:		
• Explain that the Earth has limited resources for making new things and describe the benefits of recycling • Identify major types and sources of pollution and waste in the community and understand whether and how this impacts vulnerable groups more severely	• Feel responsibility to conserve Earth's limited resources • Show care about the impacts of pollution and resource utilization on future generations	• Discuss resource conservation tips with community members • Collaborate with relevant government departments and civil society organizations to develop pollution control and waste reduction policies and practices
LEARNING OBJECTIVES: Energy efficiency and renewable energy are central to helping achieve 'net zero.' Local stakeholders and change agents should be able to:		
• Explain the concept of fossil fuels and that burning them generates CO2, • Describe different types of renewable energy resources such as solar radiation, wind and water, and explain which are most appropriate for their local environment • Explain how energy efficiency and renewable energy help with the achievement of 'net zero'	• Show concern that global warming due to people's greenhouse gas emissions may cause problems to people and animals • Value the use of renewable energy as a solution to climate change • Feel passionate about lowering one's carbon footprint to achieve personal 'net zero' emissions	• Raise community awareness about the ways in which locally used fuels create CO2 and add to global warming • Engage in imaginative play, art or writing that involves a world powered by the sun and wind • Explore with family members the potential of renewable energies and better insulation/shading to reduce CO2 emissions for heating and cooling
LEARNING OBJECTIVES: While projections show that global warming may exceed 1.5C or 2C in this century, there are many local actions that community members can take to mitigate and adapt to climate change. Local stakeholders and change agents should be able to:		
• Describe some of the local and global effects of global warming, such as heatwaves, drought, wildfires and increased ocean temperature • Synthesize key findings from IPCC reports through a culturally relevant lens	• Express feelings about taking action, like feeling hopeful, empowered or motivated to make a difference • Cooperate with others to explore culturally relevant efforts to mitigate and adapt to climate change	• Collaborate with local social enterprises to mitigate the risk of climate events such as heatwaves, drought and wildfires using Indigenous knowledge • Create cultural artwork, poems, or stories that capture locally appropriate climate solutions

b) Ecosystems and biodiversity

A multitude of human activities contribute to biodiversity loss, including deforestation, agricultural expansion, pollution, climate change, and the spread of exotic species (IPBES, 2019). Biodiversity loss and ecosystem degradation impacts human health and security, and has severe social and economic ramifications (IPBES, 2019). Green communities play a significant role in preserving biodiversity by promoting sustainable use of resources, protecting endangered species, and restoring habitats (PBR, 2002; European Commission, 2021; UNDER, 2021; GBF, 2022).

Table 8. Examples of learning objectives and outcomes across the learning dimensions under the 'ecosystems and biodiversity' topical area

LEARNING OBJECTIVES: Local action can be taken by municipal governments to protect biodiversity. Local stakeholders and change agents should be able to:		
Cognitive outcomes • Understand the importance of laws and regulations that support natural ecosystems • Provide arguments for why the results of nature conservation programmes should be monitored to track changes in biodiversity	**Social and emotional outcomes** • Appreciate the importance of local governments in conserving local natural places • Feel passionate about using their skills to influence political action with local government officials	**Action outcomes** • Work with policy-makers at local through to national levels to create or improve laws and policies that establish areas that are permeable to wildlife (e.g. wildlife corridors) • Engage collaboratively with NGOs and other groups to implement strategies to influence decision-makers to protect biodiversity
LEARNING OBJECTIVES: Local action can be taken by community members to protect nature. Local stakeholders and change agents should be able to:		
Cognitive outcomes • Identify and develop activities that can be carried out by community members to protect a specific local ecosystem • Plan climate mitigation and adaptation projects that protect local ecosystems from climate change impacts • Identify more sustainable food choices	**Social and emotional outcomes** • Develop a sense of personal and collective responsibility to reduce the prevalence of invasive species • Feel empathy towards local species that are becoming extinct due to climate change • Feel a sense of connection to beneficial species, such as pollinators	**Action outcomes** • Preserve and enhance local ecosystems through activities such as planting native species in community gardens • Make more environmentally conscious food choices, including for catering meetings and events held by the organization
LEARNING OBJECTIVES: There are strong and specific cultural connections between humans and nature. Local stakeholders and change agents should be able to:		
Cognitive outcomes • Understand how urbanization, mechanization and human preferences for convenience and comfort have increased the distance between humans and nature • Research how a local culture venerates some aspect of nature, and how this has been maintained over time	**Social and emotional outcomes** • Feel inspired by people who advocate degrowth and increased connections with nature • Enjoy time outside in natural places • Appreciate how animals are seen as spiritually linked to humans in a local culture	**Action outcomes** • Increase time spent in local natural places and adopt more sustainable living practices • Engage in intergenerational dialogues with senior members of the local community about how relationships between humans and nature have changed over time • Actively listen to Indigenous people about how their culture connects to animals, plants and ecosystems

c) Climate justice

Climate justice links development and human rights when addressing climate change. It emphasizes safeguarding the most vulnerable and sharing the burdens and benefits of climate change and its impacts equitably and fairly. Achieving climate justice requires all community members to have the capability to address inequities related to climate and sustainability issues (UNESCO, 2024a). Systems of oppression and discrimination persist in every country, and these systems form the foundation of the disproportionate impacts of climate change on marginalized groups (UNESCO, 2024a). Examples of groups most impacted by climate change include young people, girls and women, Indigenous peoples, people with disabilities, displaced people, older adults and informal workers (UNESCO, 2024a).

Table 9. Examples of learning objectives and outcomes across the learning dimensions under the 'climate justice' topical area

LEARNING OBJECTIVES: People, communities and countries are not equally impacted by climate change. These differential impacts have been shaped over the centuries by local and global economic and political processes such as colonialism, capitalism, globalization and conflict. Local stakeholders and change agents should be able to:		
Cognitive outcomes • Explain that developed countries are wealthier, more powerful and have greater access to resources that help them cope with climate events more easily • Identify actions and decisions within their organization that could promote climate justice for marginalized populations • Recognize values, assumptions and practices that perpetuate climate injustice in their sector	**Social and emotional outcomes** • Empathize with people, communities and countries that are more impacted by climate change • Use feelings of unfairness as motivation to enact positive change today, particularly for those who have historically been treated unfairly • Appreciate that Indigenous knowledge is informed by a sense of care and concern for future generations	**Action outcomes** • Hold themselves and others within their organization accountable to take climate actions that promote equality, fairness and justice • Speak up and motivate others to speak out against unfair, unjust and unethical practices • Promote policy changes centred on the achievement of climate justice within their organization and community
LEARNING OBJECTIVES: Everyone can play a role in addressing the unfair impacts of climate change, however key players should take greater responsibility for climate mitigation and adaptation. Local stakeholders and change agents should be able to:		
Cognitive outcomes • Identify business practices they can take to contribute to a fairer, greener present-day and future • Explain how, while everyone has a role to play, those entities that have contributed the most to climate change must take greater responsibility to mitigate against further climate change and support others to adapt to it	**Social and emotional outcomes** • Feel inspired to use business practices that help their community to transition to more sustainable and equitable futures • Value collaborations with diverse community groups to implement local climate solutions that also address underlying systemic vulnerabilities of marginalized populations	**Action outcomes** • Adopt policies and practices to reduce the impacts of climate change in their communities • Help family and friends to understand that people, communities and countries that experience the worst effects of climate change may need help from those with more money and resources
LEARNING OBJECTIVES: Policies, institutions and economic systems play a role in creating and exacerbating climate injustice but should also play a fundamental role in addressing the climate crisis. Local stakeholders and change agents should be able to:		
Cognitive outcomes • Explain how some decisions made by local stakeholders can perpetuate unfair advantages for privileged groups to adapt to climate impacts at the expense of marginalized populations, such as Indigenous peoples • Understand the need to hold those most responsible for climate change to account	**Social and emotional outcomes** • Feel the importance of creating campaigns and exhibits that highlight the need for groups most impacted by climate change to be included in climate-related decision-making • Feel sceptical about those who wield power and make climate-related decisions without transparency or accountability	**Action outcomes** • Advocate that local decision-makers and institutional leaders pursue policies and practices that green their institution • Develop campaigns and exhibitions that convey the importance of holding to account powerful actors who knowingly continue to engage in activities that cause climate change

d) Resilience-building

Resilience-building requires learners to anticipate, absorb, accommodate and recover from the effects of climate change, environmental shocks and natural hazards in a timely and efficient manner (UNESCO, 2024a). Community members should therefore not only understand different dynamics of climate change and natural disasters and the associated risks and potential impacts but also be able to identify actions and solutions to reduce these risks and potential impacts in equitable and adaptive ways (UNESCO, 2024a).

Table 10. Examples of learning objectives and outcomes across the learning dimensions under the 'resilience-building' topical area

LEARNING OBJECTIVES: There are specific actions individuals and communities can take to respond to climate change including through mitigation, adaptation, risk reduction and emergency responses. Local stakeholders and change agents should be able to:		
Cognitive outcomes	**Social and emotional outcomes**	**Action outcomes**
• Critically evaluate existing infrastructure, policies and practices to determine their adequacy in addressing climate risks • Use scientific evidence to explain the link between climate change and increased frequency and severity of extreme weather events • Develop a local adaptation and emergency response plan for different types of extreme weather and natural disasters for their local institutions	• Feel committed to taking collective action to keep their community from extreme weather and related disasters • Feel confident to prepare for and respond to extreme weather and natural disasters • Manage their own and other community members' emotions in response to extreme weather and natural disasters	• Integrate risk reduction and mitigation practices into their day-to-day lives and adopt safe behaviours during extreme weather and natural disasters • Share ideas with family and friends about how to plan for different types of extreme weather and natural disasters • Push local municipal authorities to strategically plan, upgrade infrastructure and develop programmes to prepare the community for extreme weather and natural disasters
LEARNING OBJECTIVES: It is necessary to identify fake news and disinformation about climate change, and to build media and information literacy. Local stakeholders and change agents should be able to:		
Cognitive outcomes	**Social and emotional outcomes**	**Action outcomes**
• Understand the difference between facts and opinions • Determine effective messaging such as the role of framing, storytelling, visual communication and emotional engagement, when developing municipal climate communications • Consider strategies to strengthen science-based communication and counter misinformation, such as addressing the use of unverified expertise, selective evidence, unrealistic expectations, or misleading narratives when developing municipal sustainability initiatives	• Value the importance of critical thinking skills in navigating complex modern media landscapes in developing municipal sustainability initiatives • Appreciate that some information is shared with the intention to promote a certain point of view, and the importance of being aware of this when developing municipal climate communications • Feel passionately about the importance of science in supporting the development of responses to climate change and its impacts	• Apply techniques for identifying and debunking misinformation related to climate change in their work and daily life • Share with family and friends how to assess the reliability and bias of information sources • Educate community members about common science denial strategies used in climate misinformation
LEARNING OBJECTIVES: All community members, regardless of their age, can contribute to disaster risk reduction and resilience-building. Local stakeholders and change agents should be able to:		
Cognitive outcomes	**Social and emotional outcomes**	**Action outcomes**
• Explain the need to include young and older people in local decision-making processes related to disaster risk reduction and resilience-building • Explain the unique roles, opportunities and challenges for young and older people in contributing to disaster risk reduction and enhancing resilience-building in the local community	• Feel confident in the ability of young and older people to contribute to disaster risk reduction and resilience-building in the local community • Collaborate with young and older people to make decisions and solve problems about locally-appropriate disaster risk reduction and resilience-building solutions	• Spearhead the creation of a climate council which includes young and older people in local decision-making related to disaster risk reduction and resilience-building • Encourage knowledge exchanges between young and older people to promote intergenerational understandings and learning about disaster risk reduction and resilience-building

e) Post-carbon economies

Post-carbon economies recognize the economic impact of carbon energy dependence and climate change and signal the need for transformation in our carbon-dependent structures (POCACITO, 2014; UNESCO, 2024a). Current economic and development models are linear and are based on the assumptions of unlimited growth and continuous access to infinite natural resources (UNESCO, 2024a). These models have resulted in the prioritization of profits over people and environment. In fact, traditional economic planning does not factor in the cost of economic activities, considering environmental impacts 'negative externalities' (UNESCO, 2024a). Pre-requisites for post-carbon economies include the 'sustainability strategies' of efficiency, sufficiency and consistency, along with durability and fairness (UNESCO, 2024a). These strategies should be understood, implemented and practiced at both individual and societal levels.

Some important areas in this key concept include energy consumption, circular economies and green finance. Energy consumption is a major contributor to greenhouse gas emissions (UNESCO, 2024a) and as a result, many green learning initiatives are focused on reducing energy consumption and implementing renewable energy sources (UNESCO, 2024a). Circular economies are based on the premise of sustainable use of natural resources, reducing waste and pollution and optimizing the value of materials, components and products throughout their lifecycle (Velenturf and Purnell, 2021). Finally, green finance focuses on financial and investment activities and the role of the financial system to support the transition to sustainable production and consumption systems (Zhao and Rehman, 2024).

Table 11. Examples of learning objectives and outcomes across the learning dimensions under the 'post-carbon economies' topical area

LEARNING OBJECTIVES: Reducing energy consumption and implementing renewable energy play an important role in climate change mitigation due to lowering CO2 emissions. Local stakeholders and change agents should be able to:		
Cognitive outcomes • Explain to community members how energy efficiency improvements are one of the most important means for reducing greenhouse gas emissions • Make informed choices about energy consumption and resource utilization in community places	**Social and emotional outcomes** • Value the importance of renewable energy in the post-carbon transition for the good of the planet • Express concern to community members that environmental damage caused by non-renewable energy is larger than that caused by renewable energy	**Action outcomes** • Practise energy-saving behaviours within municipal institutions, community places, including places of worship • Advocate for policy and financial support for the adoption of renewable energy with local municipal officials
LEARNING OBJECTIVES: All members of society, including individuals, businesses and local governments, play a role in transitioning to post-carbon economies. Local stakeholders and change agents should be able to:		
Cognitive outcomes • Describe how decisions made by corporations significantly impact the environment and society • Understand that governments and regulatory bodies are an important driver of sustainable practices	**Social and emotional outcomes** • Feel responsible for communicating their product preferences to influence producers' decisions to embed circular features in product design • Appreciate that corporations have social responsibilities to protect the environment	**Action outcomes** • Advocate for environmentally friendly local products and services • Actively communicate with local government officials about economic policies to transition to post-carbon economies
LEARNING OBJECTIVES: The current model of economic growth and consumption is a driver of the environmental crisis. Local stakeholders and change agents should be able to:		
Cognitive outcomes • Explain that economic growth has historically been closely related to fossil fuel consumption, which leads to greenhouse gas emissions • Evaluate economic growth at different levels by using data and measures • Discuss how local manufacturers might employ circular economies to help address waste and pollution and mitigate climate change	**Social and emotional outcomes** • Feel concern about the economic costs of inaction in combating climate change • Value the importance of incorporating social and environmental factors when assessing the results of economic development	**Action outcomes** • Advocate for the importance of adopting sustainable practices within local manufacturing facilities • Discuss ways to promote sustainable economic growth with municipal authorities, business owners and manufacturers • Explore, share and promote creative circular economy ideas

f) Sustainable lifestyles

Sustainable lifestyles require making personal choices and habits that reduce our impact on the planet, as well as recognizing that systemic changes are necessary to support present and future generations (Green Protocol, 2018; APSCC, 2020). Community members with sustainable lifestyles take strides to ensure their choices in food, products, shopping, transportation, resource use and so on are sustainable and based on the availability of resources. Sustainable lifestyles intersect with justice as a variety of environmental, social and economic pressures impede the widespread adoption of sustainable lifestyles. For example, the Global North and the world's wealthy contribute the most to greenhouse gas emissions, waste generation and environmental degradation (UNESCO, 2024a). Given that our present choices and everyday habits have long-term impacts on future generations, practicing a sustainable lifestyle reflects an ethical orientation to provide a safe and liveable future for everyone. Ultimately, sustainable lifestyles will create equitable access to a good quality of life with enough food, justice, peace, education, healthcare, clean water and clean energy.

Table 12. Examples of learning objectives and outcomes across the learning dimensions under the 'sustainable lifestyles' topical area

LEARNING OBJECTIVES: Local governments can create policies and plans to provide communities with sustainable transportation options. Local stakeholders and change agents should be able to:		
Cognitive outcomes	**Social and emotional outcomes**	**Action outcomes**
• Classify, compare and rank different modes of transport based on how sustainable they are • Explain the different benefits to nature and society of adopting sustainable transportation such as walking, cycling and public transportation for their constituents, using scientific evidence • Evaluate policies and approaches that other local authorities have taken to encourage green transportation, travel and tourism	• Respect that alternative modes of transportation are needed for the sake of the planet and people • Value individuals and communities who use sustainable forms of transportation • Feel motivated to create policies and approaches that enable accessible sustainable transportation, travel and tourism in their constituency	• Discuss the importance of policies and approaches that encourage sustainable transportation with their constituents • Advocate for more sustainable transportation options with elected officials in local, state and national governments • Work with diverse stakeholders to co-develop policies and approaches to promote sustainable transportation within their local community
LEARNING OBJECTIVES: There are numerous ways of designing and building sustainable living places across all areas of social and economic life. Local stakeholders and change agents should be able to:		
Cognitive outcomes	**Social and emotional outcomes**	**Action outcomes**
• Compare and contrast different strategies for designing and building places using sustainable materials • Understand the roles of Indigenous cultures in preserving and enhancing sustainable environments in local and national contexts • Argue in favour of sustainable planning, landscaping and construction to benefit Indigenous peoples and others	• Feel motivated to strengthen citizen resilience to climate and environmental challenges through the creation of sustainable living places • Value cultures that encourage sustainable lifestyles at local, national regional and global levels • Develop the ability to persevere when faced with inertia when trying to change policies that support high-carbon economies	• Demonstrate culturally appropriate strategies and practices to achieve sustainability, quality of life, functionality and nature-friendliness in living places • Partner and collaborate with Indigenous organizations to design and manage natural or semi-natural areas according to traditional knowledge • Adopt sustainable urban planning approaches to encourage the development of sustainable living places
LEARNING OBJECTIVES: Nature and biodiversity are necessary for humankind to build stronger, more resilient societies that can respond to the challenges of today and tomorrow. Local stakeholders and change agents should be able to:		
Cognitive outcomes	**Social and emotional outcomes**	**Action outcomes**
• Research how people connect with nature in different parts of the world • Understand that different communities have unequal access to natural places, and the potential consequences to physical, mental, social and economic wellbeing, using supporting literature	• Feel curious about the links between stress, depression and urban life • Appreciate that some communities cannot easily access nature because it is either too far away or inhospitable and these communities are more likely to be marginalized	• Carry out or support research studies that explore the relationships between nature, happiness and health • Use effective science communication strategies to advocate for research-informed policies to conserve nature

4.4 Practice-based examples of green learning processes

Below are some inspirational examples from around the world on how the holistic cognitive, social and emotional and behavioural learning dimensions can be integrated into instruction about climate and sustainability. The examples also show how learning can link to learners' communities, places and stories.

Table 13. Examples of integrating learning dimensions and linking to communities, places and stories

How: Deep canvassing

Canada – Deep canvassing for climate polic

Neighbours United is an organization devoted to bringing people together in rural Canada to increase support for policies that help people and nature. The organization is a pioneer in a method known as 'deep canvassing.' Deep canvassing is a practice of having nonjudgmental conversations that last 10–25 minutes with people who feel differently about an issue. In the context of climate policy, this method directly engages with the psychosocial aspects of climate change, by identifying core barriers, values and stories to engage people. Deep canvassing draws out cognitive dissonance on a climate policy issue in a supportive way in order to wrestle with both sides of the issue. It has been shown to be an effective method to shift the underlying belief that is holding someone back from supporting a particular policy. After being canvassed, 1 in 3 people shift their position in favour of a solution they are presented with. Through deep canvassing, Neighbours United has helped over 100,000 people in 14 communities in Canada say yes to 100% renewable energy projects in their local communities. Neighbours United has been a recipient of numerous awards such as Nonprofit of the Year award (2020) and Business of the year (2019). Deep canvassing demonstrates the importance of meaningfully engaging with the economic concerns of rural communities and engaging with the social and emotional dimensions of learning to generate positive climate outcomes.

Learn more: Neighbours United

How: Experiential instructional methods

Kenya – Wildlife Clubs of Kenya (WCK)

The Wildlife Clubs of Kenya (WCK) is an NGO founded in 1968 by Kenyan students with the goal of preserving Kenya's biodiversity, protecting natural resources, and promoting environmental awareness. WCK's work emphasizes experiential learning in natural places. For example, through WCK's tree-planting campaigns, participants learn about the advantages of trees in mitigating global warming while practicing tree planting skills and taking care of seedlings. The WCK's Community Conservation Outreach programme uses workshops and seminars for villagers to learn about the need to preserve natural resources. These gatherings provide communities with practical knowledge about how water management, forest preservation and sustainable agriculture can be incorporated into daily life.

Another WCK initiative, the Wildlife and Environmental Conservation Education programme, takes youth on field trips to national parks and conservation areas in Kenya to foster connections to nature. These experiential experiences provide participants with a close-up look at diverse wildlife including the big five – lion, leopard, elephant, rhinoceros and buffalo – and can help instil feelings of care and responsibility for the natural surrounding environment. Through a range of experiential learning initiatives, WCK has helped educate over 10 million young people in Kenya and supported their involvement in conservation. WCK has also successfully spurred the creation of wildlife clubs around the world.

Learn more: Wildlife Clubs of Kenya

How: Alternative communications media

India – The Radio Bundelkhand Community Radio Station

Radio Bundelkhand is a community radio station in a region in India with low literacy and high poverty rates. This popular, cost effective communication medium uses a participatory approach to empower women, youth, farmers and disadvantaged groups to take climate action. The station uses an 'edutainment' approach, translating abstract concepts about climate change into accessible, local language that is relevant in the local context. The radio station also acts as a bridge between the farming community, scientists and policy-makers. For example, as part of radio programmes, community members are interviewed about perceptions and challenges related to climate change. Not only do radio hosts then address community questions in subsequent programming, the radio station also shares this community feedback with relevant experts and government authorities. In a community that holds low literacy rates, community radio is a powerful strategic medium for engaging marginalized populations in learning to 'green' communities. In addition, the radio station's community engagement approach allows local journalists to improve journalistic skills by crafting effective climate change stories for radio programmes. The case of Radio Bundelkhand demonstrates the advantages of matching climate communications media to learner needs and boosting community engagement to green communities.

Learn more: Community Radio: Sustainable Farming Through Broadcasting. India Case Study (Full Report) - MECCE

How: Indigenous knowledge and design

USA – Cool Kids, Cool Places, Cool Futures: Exploring health, equity and climate risk

In Tempe (USA), through the Cool Kids, Cool Places, Cool Futures project, young people are building their future visions for a more resilient, inclusive city while learning about climate justice and a complex history of city planning, Indigenous peoples and the management of extreme heat.

The programme includes history modules which explore the systematic oppression of the area's Indigenous peoples – the Salt-River Pima Maricopa Indian Community, Pascua Yaqui Tribe and Gila River Indian Community – which forced them to give up their cultural traditions, spiritual practices, language and sometimes their children. The training highlights the displacement of Indigenous peoples to neighbourhoods with a lack of tree canopy, green places, and access to nature, which put them at risk from extreme heat. The programme participants also participate in a facilitated dialogue to discuss the lived realities of Tempe's past and present residents.

The programme's ultimate goal is to shift heat resilience from individual to collective responsibility, and the students have taken on a variety of action projects to mitigate heat. For example, 25 students from the McClintock High School's Sustainability Club planted over 30 desert-adapted, native trees on the school grounds. The students are also building a large courtyard garden after learning about Indigenous growing and farming practices from the Indigenous Design Collective. The McClintock students also partnered with the City of Tempe to design and establish a bioswale (a curved channel that collects and diverts stormwater runoff), which includes native plants.

The programme was co-designed by professors at Arizona State University (ASU) and the ASU Indigenous Design Collaborative, researchers and equity consultants, and inspired by community-focused youth coalitions in the Kingdom of Morocco and New Zealand.

Learn more: C40 Cities

How: Behavioural Science and Insights

Zambia – Strengthening university and TVET education for green transitions under FACE-NDC project

The Facility for Action for Climate Empowerment to achieve Nationally Determined Contributions (FACE-NDC) project is a transformative initiative financed by the International Climate Initiative (IKI) that is empowering Zambia to achieve its ambitious target of reducing greenhouse gas emissions by 47 percent by 2030. Implemented by an FAO-led consortium comprising also UNESCO, UNITAR, the University of Zambia (UNZA), and the Copperbelt University (CBU), the project uses behavioural science to transform Zambian educational system to drive the country's transition toward a green and low-carbon economy.

FACE-NDC focuses on strengthening both formal and non-formal education systems to promote sustainable practices, develop green skills, and foster climate-friendly behaviours across key sectors such as agriculture, forestry, and energy. Within higher education, the project is updating academic curricula, creating interdisciplinary training modules, and improving research infrastructure in Zambian universities. A new Renewable Energy Laboratory is being established to provide hands-on learning and applied research opportunities, enabling students and professionals to drive the uptake of renewable energy technologies and energy efficiency solutions nationwide.

The project also works closely with Technical and Vocational Education and Training (TVET) institutions to build the competencies of teachers, extension workers, and trainers. Updated teaching materials, e-learning modules, and in-service training programmes are being developed to enhance technical expertise in sustainable agriculture, forestry management, and energy systems. By strengthening university-industry linkages, FACE-NDC facilitates employment pathways and the creation of green jobs.

FACE-NDC integrates behavioural science approaches into curricula and training materials to bridge the gap between knowledge and action, encouraging long-term adoption of sustainable practices, habits and consumer behaviours, driving the green transition in Zambian communtities.

Learn more: Facility for Action for Climate Empowerment to achieve Nationally Determined Contributions (FACE-NDC)

How: Games

People's Republic of China – The Planet-E climate change board game

Planet-E is a climate change board game developed by Enviroally for use in secondary schools, universities and educational institutions. The game's objective is for a team of 4-6 players to collaborate to build a new city on Planet-E, a fictional Earth-like planet. The game has seven different types of land – such as wetlands, forests and farmland – which are surrounded by coastal, desert or mountain ecosystems. The landscape changes in each game, which makes the playing experience different each time. Each ecosystem poses unique challenges and opportunities to settlement, and the players must balance the ecosystem, economy and climate change when building their city. Players learn about climate change while practicing collaboration, communication and strategic thinking skills. The board game is available in Chinese, English, French and German.

Learn more: Columbia Student Presents Climate Change Board Games at COP27

How: Adapting complex content for different audiences

Peru – Working towards a sustainable economy with artisanal fishers

The Study of Artisanal Fishery Resources on the South Coast of Peru project was launched by the Development Bank of Latin America and the Caribbean (CAF) in strategic partnership with the Istituto Per la Cooperazione Universitaria (ICU). The project sought to implement concrete actions with artisanal fishers in the south of the country to contribute to sustainable economic development in the aquaculture sector.

The project held information sessions with 1,500 people from 60 organizations of artisanal fishers in fishing villages between Ica and Tacna. The sessions shared proposed actions for repopulating and cultivating marine species with participants. The project also held training sessions where participants learned about farming techniques that would help repopulate sea urchins and seaweed in areas where these species had been severely depleted.

Because sustainable aquaculture is a longer term process than status quo approaches, which could impact the fishers' income, the project used several strategies to gain the trust of potential participants. For example, the project used a 'see it to believe it' approach which showcased successful, similar approaches being used in Peru and Chile. For example, workshops and internships highlighted how other fishing villages were undertaking sustainable aquaculture. In addition, strong support from the local government (especially in Atico) and other partners helped motivate participating fishers. Importantly, the entire process was carried out with the active participation of the fishers, from designing solutions to evaluating results.

Between 2013 and 2015, the project trained over 600 artisanal fishers from 53 organizations to sustainably produce and manage seaweed, sea urchins and clams. Strong partnerships, institutional support and management processes between the Peruvian Ministry of Production, regional governments, local governments and social organizations of artisanal fishers in Ica, Arequipa, Moquegua and Tacna were instrumental in the project's success.

Learn more: Nuevos Caminos para el Desarrollo (CAF)

Additional examples are available at: https://uil.unesco.org/en/greening-communities-guidance

SECTION 5

Developing a green learning strategy for communities

This section of the guidance provides steps local governments can take to develop locally appropriate green learning strategies for their community. Specifically, the section aims to help local governments develop comprehensive, evidence-based strategies for learning to green communities, including through engagement of a range of stakeholders **(who)**, places **(where)**, approaches **(how)** and topics **(what)**. This section builds on the others by outlining a step-by-step process for developing a green learning strategy for communities. This process can be adapted by other stakeholders, including change agents, to develop a green learning strategy within the scope of their operations.

When developing a green learning strategy for communities, it is key to take stock of existing policies, initiatives and opportunities at the local, national and international level. In most cases, there is no need to start from scratch and relevant work can be built upon to ensure synergy and avoid duplication.

In this section

5.1 Overview of the process

- Outlines a systematic process for developing a green learning strategy for communities

5.1 Overview of the process

- Provides an overview of different steps and considerations to develop and implement a strategy

5.3 Moving forward

- Provides considerations for communities at different points in the greening process – from those with no strategy to those who are experienced with such strategies – on how to use the process described in the section

5.4 Practice-based examples

- Provides inspirational examples of green learning strategies for communities along with examples of participatory monitoring and evaluation (M&E) methods

5.1 Overview of the process

The process outlined below provides a systematic way that local governments can develop lifelong learning strategies to green communities. The process is inspired by the UNESCO-UNFCCC guidelines for developing a National Action for Climate Empowerment Strategy and uses a Results-based Management framework (UNESCO and UNFCCC, 2016). Guiding principles for developing strategies are provided in Box 6.

Box 6. Guiding principles for developing a strategy

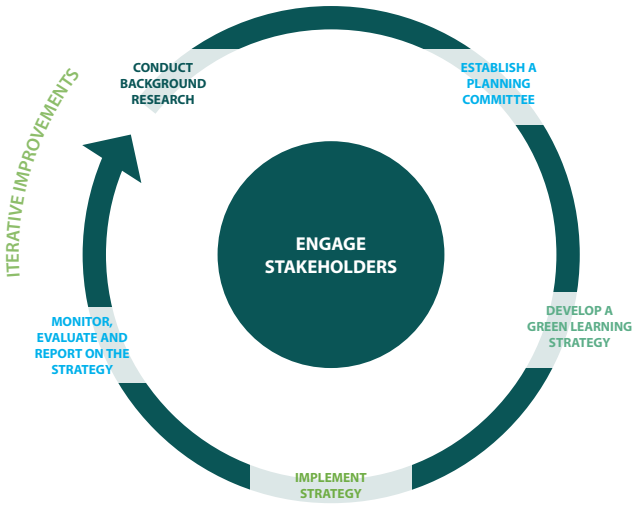
While local strategies for greening communities through learning will vary between contexts, they are likely to share many of the following core principles:

- Locally driven
- Cost effective
- Flexible
- Phased approach
- Equitable
- Multi-sectoral
- Multi-stakeholder
- Participatory
- Holistic
- Systematic
- Iterative improvements
- Scaled up over time

Adapted from UNESCO and UNFCCC (2016)

Depicted in Figure 5, the process of developing a strategy comprises 6 steps which will not necessarily be carried out sequentially and may not all be suitable for your context. The steps may also overlap and you may need to revisit and revise work done in previous steps during the process. For example, once findings from initial M&E are available, the key learnings should be used to inform the strategy and it may be advisable to update the work done in the earlier steps.

Figure 5. Steps towards developing a strategy



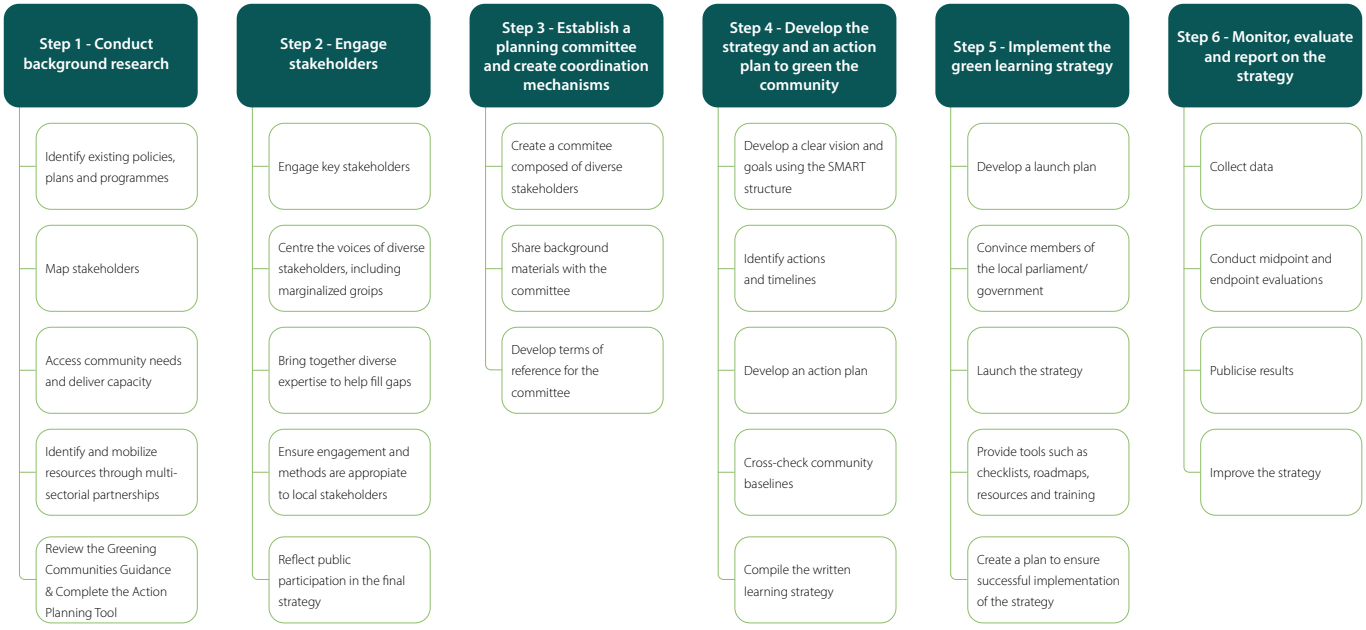
The creation of the strategy therefore is likely to be **iterative**. One of the benefits of this approach is that the community can set more ambitious targets over time, scale up initiatives that are working, and reallocate resources being used by initiatives that are not working. In particular, communities with small populations and limited resources, hesitant stakeholders or sparse institutional support may find a **phased approach** to be most strategic. The first strategy might be designed to lay a foundation by creating the relationships and buy-in that will allow for more ambitious work to be done in the future.

Your strategy should **reflect the current realities** of your community. Consulting key stakeholders, including change agents, as early on in the process and taking steps to **centre traditionally marginalized voices** will ensure your strategy is grounded in your community. Examples of community-based engagement such as intergenerational dialogues and citizens' assemblies are provided throughout this document. Working with **local partners**, conducting consultations in **locally appropriate languages** and ensuring **broad and diverse voices** are included throughout the planning, creating and implementation phases, will increase the likelihood of success.

5.2 Creating a green learning strategy for communities

While the steps below and summarized in Figure 6 are framed for local governments, they are sufficiently open that they can be adapted to fit contexts by and for other stakeholders, including change agents. It is important to note that partnerships will be particularly important in communities where the local government is unsupportive of environment and sustainability action. The strategy in these cases should likely include a plan to develop relationships with government officials with the aim of building shared projects and partnerships that will create a basis for future, more ambitious collaborations.

Figure 6. Developing a green learning strategy for communities



Step 1 - Conduct background research

During the first step, research can be undertaken to develop an understanding of the community's existing environment, climate and sustainability learning landscape. The preparation work done here will help identify which actions will be most useful to include in the learning strategy. Components of this research, such as a mapping of relevant policies, existing programmes and key stakeholders, can also be included as background information in the written strategy.

a Identify existing policies, plans and programmes relevant to learning for greening communities

Existing policies, plans and initiatives should be collected from all relevant government departments (e.g. recreation, public works, community development, environment) and key relevant stakeholder sectors (e.g. non-profit, business), at local, national and international levels. Since environment, climate and sustainability learning crosses so many community sectors, there are likely to be many existing policies, plans, programmes and stakeholders relevant for municipalities developing a learning strategy. There are also many international policy programmes devoted to sustainability learning, including the SDGs and the UNFCCC's Glasgow Work Programme on Action for Climate Empowerment, which is associated with the Paris Agreement, and the Kunming-Montreal Global Biodiversity Framework (GBF) under the Convention on Biological Diversity (CBD).

Importantly, it may be possible to build the strategy on what is already in place, rather than starting from scratch. For example, municipal-level sustainability policies and plans may include learning components. Aligning your lifelong learning strategy with existing policies and plans, such as local government development plans, environmental policies, climate adaptation plans or education sector policies, can help ensure that the work of greening communities is a core component of existing systems.

Having a clear idea of the broader policy context also helps ensure the strategy is in tune with local needs and existing efforts. It can also be helpful for the learning strategy to strategically align with national and international efforts, which can help streamline resource use and access funding (UN Habitat, 2024).

There are some existing resources that can help identify relevant policies, plans and programmes on learning for greening communities. For example, many countries describe climate and sustainability learning activities in national communication reports to the UNFCCC. Information is also available in country profiles of national climate learning activities (MECCE Project, n.d.; UNESCO, n.d.a, n.d.b). It may also be beneficial to commission research if feasible, particularly if there is no existing capacity. This can help ensure the methods used to conduct the data collection are systematic and rigorous, which means the result may be more comprehensive, and thus allow for a more informed and impactful strategy.

Once collected, this background research can be saved in a database (see Annex 2 for a template, which is shown in Figure 7 below). The policies, plans and programmes can be classified according to relevance, size, impact, and potential for scale-up. Questions to consider and summarize a response to at this stage include:

- What needs are being addressed by existing initiatives?
- Who are the target groups?
- How successfully have the objectives been met?
- Is there scope for scaling-up?
- Who are the implementers?
- Are there opportunities for partnering or collaborating?
- Who are the funders?
- What other resources support this work?
- Where are the gaps in the existing initiatives?

(UN Habitat, 2024, p. 20; UNESCO and UNFCCC, 2016).

Figure 7. Policy, plan and programme mapping template (provided in Annex 2)

Document name	Type of document	Description	Scope of policy, plan, programme	Relevance to greening education	Opportunities for strategic alignment	Potential for scale-up	Document author (contact and organization)	Opprtunities for partnerships	Notes

b Map stakeholders that are playing a role in climate and sustainability learning in the community

Because different types of stakeholders play different roles in learning for greening communities, stakeholder mapping exercises should be broad enough to identify a wide array of organizations and individuals. For example, in some communities, governmental actors and international organizations may play a greater role in facilitating such learning (UN Habitat, 2024). In others, universities and think tanks might be leading in capacity (ibid). As a result, when mapping stakeholders, it can be useful to focus on specific categories of stakeholders, such as those listed in Section 2 of this guidance. Identifying major initiatives can also be a useful starting point for finding key stakeholders who are already contributing to learning to green the community. There may be existing lists of relevant stakeholders (e.g. a collaboratively developed global database of organizations focused on climate change and environmental learning) (MECCE Project, 2025).

While mapping relevant community stakeholders, it may be helpful to create a directory with the names, contact information, social media accounts, and mission statements, as available. Even at this initial stage, it can be helpful to consider how to engage these stakeholders through the process of developing a strategy and in its implementation. An example template for a mapping database is provided in Annex 2 and shown below.

Figure 8. The stakeholder mapping template (provided in Annex 2)

Stakeholder name	Stakeholder type	Stakeholder descriptiond	Stakeholder mission	Greening education expertise	Opportunities for strategic alignment	Potential resources	Contact information	Opprtunities for partnerships	Notes

Understanding the value stakeholders bring to fostering lifelong learning for greening communities, such as expertise, resources and motivations, along with their vulnerabilities and challenges, can offer a foundation upon which to base collaborations. Mapping exercises can therefore also assess the current capacities, interests, needs and resources of stakeholders. Similar to the policy, plan and initiative mapping, questions to consider at this stage include:

- What needs are being addressed by existing stakeholders?
- Who are the target groups of existing stakeholder activities?
- How successfully are the stakeholders achieving their objectives?
- Is there scope for scaling up the approaches being used by stakeholders?
- To what extent are existing stakeholders using holistic, quality green learning approaches?
- Are there opportunities for partnering or collaborating?
- Who are their funders?
- What other resources support this work?
- Are there key stakeholder groups who would be helpful for greening communities through learning who are not yet involved?

(UN Habitat, 2024, p. 20; UNESCO & UNFCCC, 2016).

c Assess community needs and delivery capacity for environmental, climate and sustainability learning

It may also be helpful to assess community needs and delivery capacities for learning towards greening the community. Community needs assessments are intended to help uncover the opportunities and gaps for local governments to support opportunities to green municipalities. Examinations of delivery capacity consider the municipality's current ability to provide lifelong learning for greening. This includes existing resources that could be harnessed to implement the learning strategy. It is important to explore community needs and delivery capacity as comprehensively as possible across learner types, learning places and learning approaches, and in relation to the types of content that should be covered within the community. One helpful way to begin this process is to think about the who, where, how and what of green learning in your community, and identify gaps and opportunities. Annex 2 has a worksheet (shown below) you can use to assist in this process.

Figure 9. The community needs and delivery capacity mapping template (provided in Annex 2)

Question	What do the policies, plans or programme documents we collected say?	Which partners and stakeholders can we speak with about this?	Is there prior research on this? (e.g. polls, community needs assesments)	Does our community have any gaps in this area?	What strengths does our community bring to this area?	How can we build the capacity or resources needed?
Who are the different types of learners in our community?						
How supportive of climate and sustainability action is the community in general? Are there specific groups that are more supportive? Less supportive?						
What are the learning spaces in our community?						
What types of climate and sustainability action does our community need and want?						

There are several ways to collect information when assessing community needs and delivery capacity. For example, similar needs assessments may already have been conducted by other groups when determining what types of environmental, climate and sustainability learning initiatives to develop. Further, policies and plans may contain this type of information in background sections. It can also be helpful to collect reports on evaluations of policies, plans and initiatives that may have been carried out in the community recently preferably during the stakeholder mapping. Surveys, interviews, focus groups and community consultations are all methods of engaging stakeholders in the assessment process.

The end result should be a list of identified needs for advancing green learning in the community, and potential actions that could be taken to meet those needs. Questions to consider at this stage include:

- What types of climate and sustainability action does our community need and want?
- What are the community's vision and priorities for greening through lifelong learning? What are the priorities for different types of learners?
- How supportive of climate and sustainability action is the community?
- Where are there opportunities for partnering or collaborating with stakeholders and change agents to meet the community's needs?
- Are there learning places available to meet the community's priorities?
- What are the community's unique strengths for meeting its priorities?
- Who are the gatekeepers of the learning places? Do we have relationships with them? If not, how do we go about developing relationships?
- Does the local government currently have the capacity to meet the learning needs identified by the community? If not, how do we build that capacity through partnerships and learning?
- How do we develop the resources needed to better meet the community's needs?

d Identify and mobilize resources through multi-sectoral partnerships

It is important to ensure all stages of the learning strategy are adequately resourced. This means sufficient and long-term funding must be mobilized to develop the strategy, implement its priority actions and monitor and evaluate the outputs, outcomes and impacts. Resources can range from human and financial to natural such as parks and protected areas, cultural such as museums and libraries, and technical such as existing mobile apps and expert knowledge.

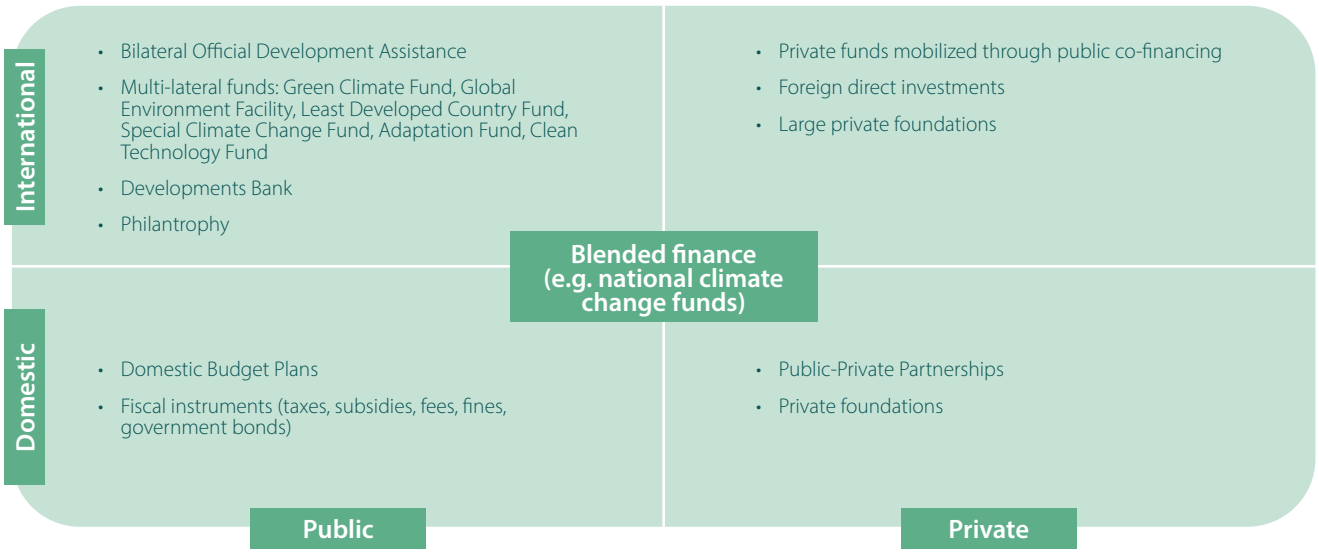
It is common that local governments will have limited resources to implement a strategy. The prior planning work undertaken to map existing stakeholders, initiatives and delivery capacities may have identified resources that can help with implementation, including through partnership with stakeholders. Strong partnerships rely on trust and should be based on common interests. When successful, partnerships allow the strengths and resources of each partner to produce outcomes that are greater than any one partner would be able to achieve in isolation. Partnerships can be challenging, however, so it is important to carefully plan and prepare for them. It can be helpful to not only explicitly delineate alignments in goals, values and priorities but also the resources each partner will bring and the benefits provided to each partner (Reid, 2016). Tracking and reporting these commitments and impacts can help provide accountability, which can in turn strengthen the partnership further (World Vision International, 2015).

In terms of locating possible financial support, there are likely to be a broad range of domestic and international public and private finance mechanisms to help fund the implementation of learning for greening communities. Some international organizations provide opportunities, including the Global Environment Facility Small Grants Programme, which supports 'the development and implementation of innovative local actions that address global environmental issues' (UN Habitat, 2024, p. 207). This includes support for grassroots climate resilience initiatives that integrate Indigenous knowledge. The Global Center on Adaptation supports the scaling up of locally-led adaptation action by linking local efforts with international funding sources (UN Habitat, 2024). Finally, the European Commission's initiative Communities for Climate (C4C) supports community-led climate change-related projects (UN Habitat, 2024).

Other environmental and climate finance options might include domestic sources such as national development banks, national municipal development funds and foundation grants. Microfinance support may be available in some cases; for example, microfinance funding has been made available to smallholder farmers to provide capital for sustainability-related projects (FAO, 2025). For example, in Madagascar, the Women's National Platform for Sustainable Development and Food Security (PNFDDSA) uses funds from Village and Savings Loan Associations (VSLA) to train women in business plan development. The VSLA also provides loans and organizes trade fairs to support start-ups such as tree nurseries (ibid). These mechanisms provide critical support for the country's smallholders by offering accessible ways to obtain production inputs such as seeds and equipment (ibid).

Beyond this, large scale corporate entities are increasingly establishing funding mechanisms to support Environmental Social Governance (ESG) initiatives in efforts to engage members of traditionally under-represented groups in environmental learning. Finally, private citizens may wish to contribute as a philanthropic effort. Fundraising campaigns can also help while raising awareness around key local climate and environmental issues. For instance, residents of the local community sometimes contribute to funding programmes through crowdfunding processes. Often, public and private funding sources are blended to support climate and sustainability action (UNESCO and UNFCCC, 2016).

Figure 10. Possible funding sources for greening communities through learning



(Source: Adapted from Hammill, 2016)

e Review the guidance and complete the Action Planning Assessment Tool for Greening Communities Through Lifelong Learning

The background research conducted in Step 1 should provide a comprehensive idea of the community's current strengths and capacity to green through lifelong learning using policies and stakeholders. At this point, it may be helpful to compare the who, where, how and what of greening communities through lifelong learning from the Greening Communities Guidance to the results of the background research. This comparison can help give a preliminary idea of your community's gaps and opportunities.

Annex 1 of this document includes an action planning tool, which can help you assess the extent to which your community already meets the standard of a community that is greening through lifelong learning. The assessment will classify your community as either a 'Greening Learner' or a 'Greening Leader' and will provide you with ideas of the types of targets and actions you might include in your community's strategy.

Step 1 activity checklist:

- ☐ Conduct desktop research and/or commission research on local, national or international policies, plans, programmes and stakeholders that may inform or collaborate on a strategy to green your community.
- ☐ Create a database of this research and provide an overview to key questions such as: whose needs are being addressed by existing initiatives and stakeholders, what resources should support this and where are the gaps?
- ☐ Assess community needs and delivery capacity through existing needs assessments, surveys, consultations, contacting authorities and expert interviews.
- ☐ Identify financial and other resources to support learning activities, including through mapping existing resources and identifying new partnerships, funding programmes or philanthropies.
- ☐ Review the Greening Communities Guidance and complete the action planning tool in Annex 1 to identify targets and actions to include in the strategy.

Step 2 - Engage stakeholders

After conducting the background research in Step 1, the next step is to move forward with engaging **key stakeholders.** Engaging stakeholders early in the development of the strategy can help increase the chances of success over the long-term (Amri et al., 2022). For instance, working collaboratively can help ensure the strategy is reflective of the needs and interests of a broader stakeholder base. This can help increase buy-in and develop relationships that will be important and can lead to speeding up implementation and enabling a more rapid scale-up of projects. Importantly, receiving input from a diversity of stakeholders also helps increase the likelihood of the strategy being informed by relevant policies, plans and initiatives from all relevant municipal departments and across sectors (e.g. government, private sector and civil society). This increases the likelihood that the learning strategy will be widely integrated into the policies, plans and initiatives of the stakeholders being consulted. In addition, engaging with learners with diverse backgrounds to shape the strategy may bring fresh understandings that challenge existing, unsustainable practices. Different stakeholder groups may have different understandings of values and norms which can help negotiate the social changes needed to transform communities. Multi-stakeholder engagement can also more effectively identify and consider structural barriers to participation and provide unexpected opportunities for innovation and evolution (Arnstein, 1969).

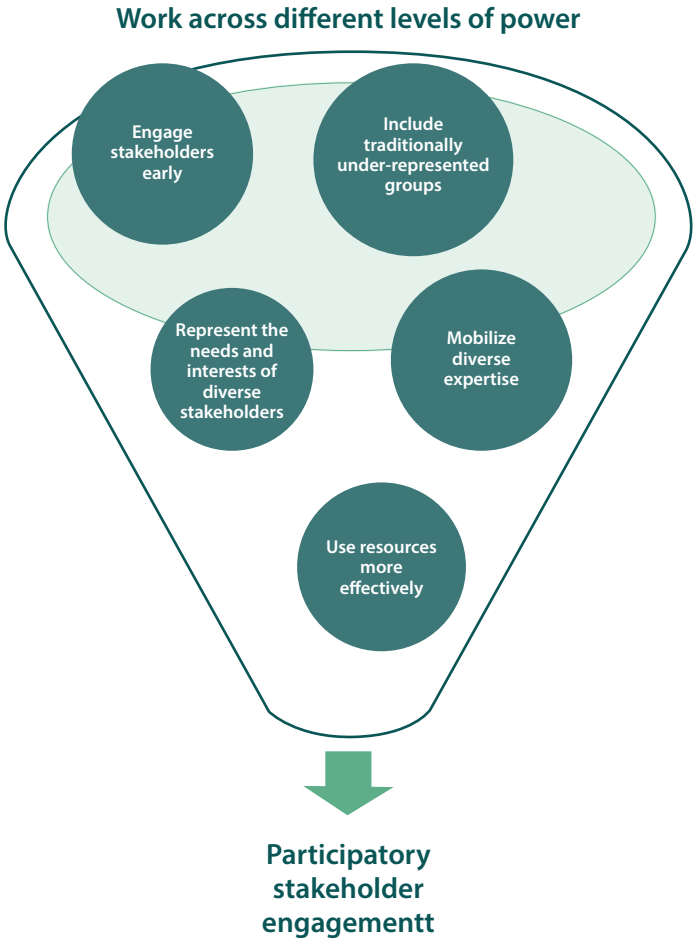
Further, early engagement of a broad stakeholder base can help local governments make more effective use of limited resources. For example, the non-profit sector may already be offering high quality climate and sustainability programmes, and local government support may wish to partner with those stakeholders, rather than create programmes which risk duplication. Early engagement can likewise help identify gaps that might be effectively filled by the municipal government. For example, a national government may already be conducting climate and environmental awareness campaigns, but the content may not be adequately tailored to the local community.

Finally, mobilizing a broad stakeholder base also helps to bring together diverse expertise. For example, if a local government lacks professional environmental educators or climate change experts, collaborating with other sectors can fill this gap. Having access to different types of expertise is likely to be especially important as the impacts of climate change and sustainability issues may require the development of new, innovative solutions.

For systemic change to occur, it can be particularly important to involve members of traditionally marginalized groups, including those who are disproportionately affected by climate change, including women, people with disabilities, older adults, young people, minorities and certain groups of migrants, in efforts to build a clear vision (UN Habitat, 2024, p. 120). Traditionally under-represented groups face structural inequalities and as a result may lack trust in government. It is important to anticipate that potential tensions may arise when using participatory approaches to develop strategies for

greening communities through learning. Participatory co-design can be a powerful tool to build a shared vision while being attentive to power imbalances among stakeholders during the consultation process (Moon and Blackman, 2014; Ruiz-Mallén, 2020). As shown in Figure 11, by working together, across levels of power and inequalities, stakeholders are empowered as active agents in decision-making which supports collective leadership for learning to green communities.

Figure 11. Considerations for participatory stakeholder engagement



Stakeholder engagement usually includes three steps. First, stakeholders are notified that a consultation process will be taking place. The notification can draw on the stakeholder analysis conducted in the planning phase to ensure anyone affected by or interested in the learning strategy can participate. Effort should be made to ensure stakeholders receive the necessary information to enable effective participation in advance. Notification should be sent out well in advance of the consultation.

The second step, stakeholder participation, should be thought of as 'a two-way flow of information exchange with the interested and affected members of the public' (UNESCO and UNFCCC, 2016, p. 41). Public participation should be well planned to ensure access-related barriers for traditionally under-represented groups are overcome. Stakeholders should be provided with all of the information they need to provide advice and it should be made clear to the stakeholders how to provide input and how the input will be used. Moreover, stakeholders should be provided with sufficient time to become familiar with the background documents, submit input, and consider potential ramifications of participating. Opportunities for information exchange can be in-person and online.

During participatory co-design processes, the attendees analyse local challenges and brainstorm ways to take action to solve them. During the planning stage, stakeholders are invited to present ideas and co-define the purpose of the policy, plan, programme or vision being co-developed. Stakeholders are also involved in subsequent stages such as collecting and analyzing data, prototyping, and communicating results. Early discussions about funding implementation and maintenance of learning initiatives to green communities can also be a key topic for dialogue with diverse actors (see Step 1 for further guidance on resource mobilization for lifelong learning for climate and sustainability action). Engaging a strong facilitator who can hold working sessions in appropriate languages can help ensure that the voices of marginalized groups or smaller parties are heard from the beginning. A case study of community-based intergenerational dialogues provides relevant learnings in Section 2.4.

There are many types of stakeholder consultations, including informal consultations, circulating proposals for public comment, public hearings, advisory bodies, climate assemblies, dialogues between governments and stakeholders, forums, meetings, round tables and focus groups. It is important to consider whether different approaches may be needed to engage

different types of stakeholders and the varied reasons why different stakeholder groups may wish to participate. For example, members of Indigenous communities may wish to engage in co-designing the strategy to advance their community's traditional rights, capacity, and agency. It may be appropriate to invite Indigenous groups to tailored working sessions organized in a format that respects the specific community's ways of working. For example, instead of having a formal meeting with an agenda, structuring such meetings to provide opportunities to exchange local knowledge on climate learning and storytelling over food may be more effective.

Once the participation phase has been completed, the final step in the stakeholder consultation process is for the planning committee to use the inputs and outcomes from the public participation to inform the learning strategy. A draft statement or summary outlining how the public participation outcomes and input received were taken into account should be included in the final strategy. To maximize the benefit of stakeholder consultations, they should be integrated across the process of developing, implementing and monitoring the learning strategy (OECD, 2015).

Step 2 activity checklist:

- ☐ Notify stakeholders that an initial consultation will be taking place on learning towards greening the community.
- ☐ Create opportunities for a two-way flow of information with diverse stakeholders, through in-person consultation as well as other avenues such as online submissions.
- ☐ Engage in participatory co-design processes as part of the learning strategy development.
- ☐ Ensure early and broad engagement and methods appropriate to local stakeholders, including indigenous community members. Explain the limitations of individual action and present opportunities for systemic and political influence.
- ☐ Include a summary of public participation processes and outcomes in the final strategy.

Step 3 - Establish a planning committee and create coordination mechanisms

It can be helpful to create a committee that will be responsible for developing the learning strategy to ensure broader engagement and leadership. The committee should be multi-sectoral, with representatives from relevant municipal departments and key stakeholders, such as civil society actors, higher education institutions, educators, health care providers, young people, Indigenous groups, people with disabilities and business entities. The committee members should be diverse (e.g. age, gender, political affiliation, cultural background) and have the time and energy to devote to a planning process.

Bringing in professionals with diverse, relevant knowledge bases will also be important. Representatives from municipal departments responsible for sustainability, culture, community programmes, energy and infrastructure are likely to provide a comprehensive base for beginning to identify relevant existing laws, policies, strategies, and other important frameworks. Well-networked members familiar with a diversity of learning types (formal, non-formal and informal), relevant local initiatives, and local learning places will help with prioritizing which actions the community might pursue. Communications specialists may provide helpful insights regarding tailoring content and conducting outreach during the planning and implementation phases. Local academics can bolster capacity for conducting the background research, as well as monitoring, evaluating and reporting on the strategy.

It will likely be necessary to provide the committee members with background documents to support future planning work. For example, this guidance and the Greening Curriculum Guidance developed in the context of the Greening Education Partnership may provide a starting point to ensure members understand the aims and processes of learning in relation to greening communities. Members can also be provided with documents that outline learning places in the municipality, and good practices in climate and sustainability learning. Materials summarizing the results of the research in Step 1 can also be shared with committee members.

It is important to note that the committee membership may evolve as the types of helpful skill sets and knowledge bases become clearer. Moreover, the committee members may or may not be responsible for implementing the strategy once developed. As such, it is important to develop a clear charter or terms of reference when the committee is established to ensure all members are on the same page about current and future responsibilities. Finally, it is important to keep the process manageable and appropriate for the size and resources of various municipalities, so in some cases a small committee may be more feasible, with broader engagement occurring through consultations.

Step 3 activity checklist:

- ☐ Create a committee of a manageable size with as diverse as possible representation from inside and beyond government.
- ☐ Provide the committee with background materials to support participation.
- ☐ Develop terms of reference for the committee to clarify roles and responsibilities.

Step 4 - Develop the strategy and an action plan to green the community

The learning strategy for community greening should be as comprehensive as possible and validated by a broad base of stakeholders. A core challenge in this step is to identify and prioritize the best actions and opportunities for the local government to foster learning towards greening within the community. The ultimate output of this stage is a strategy to green your community that includes an overall vision, a set of long-term objectives, and an action plan that specifies how the vision and objectives will be achieved.

a Co-develop a vision and objectives for the greening community through lifelong learning

A clear **vision and goals** for the learning strategy should be developed. The vision and goals should lay the basis for a comprehensive, holistic local learning strategy that is relevant to a broad range of stakeholders. In developing the vision, you may wish to consider links to broader climate and sustainability goals and initiatives, such as the SDGs and the Greening Education Partnership, as well as relevant existing environment, climate, sustainability and learning policies and plans. The vision should place value on, and recognize the importance of, non-formal and informal learning.

Developing a strong vision statement and clear goals is likely to be an iterative process. While the committee may be the ones who draft the vision and goals, it may also be desirable for the vision to be co-developed through initial consultations with relevant key stakeholders (see Step 2). Co-creating a vision with a broad base of stakeholders can help to strengthen cooperation and increase the likelihood that stakeholders will buy-in to the strategy development and implementation processes.

The specific goals and objectives should be described using the '**SMART**' structure, which helps to develop goals and objectives that are more easily implementable and measured. SMART stands for specific, measurable, achievable, relevant, and time-bound (First Nations Development Institute, n.d.)

b Identify actions and measures to include in the strategy

The preparatory work conducted in previous steps should provide a comprehensive basis for creating a draft learning strategy for community greening. In order to begin prioritizing which actions to pursue in the strategy, the planning committee should systematically examine the needs and actions identified in the previous phases using a process similar to the one illustrated in Figure 12.

The Action Planning Assessment Tool in Annex 1 is available to assist you in determining which actions to include in your action plan. There is a simple rapid assessment to help you get started, and a full assessment to support more in-depth planning. The tool also provides an assessment of how close your community is to being a green community, and gives an idea of where it will stand after implementing its green learning strategy.

Figure 12. Assessing options for actions to green communities through lifelong learning



There are likely to be several considerations that will need to be **balanced** when deciding on which actions to pursue. First, the **actions should be categorized** by learner types impacted **(who)** and learning places in the community **(where).** The committee can determine which learning approaches **(how)** and topics **(what)** would be most impactful and feasible to implement within the time-frame covered by the strategy, in relation to these learners and places, and overall which actions can support and further these efforts.

Annex 2 includes a worksheet template (shown in Figure 13 below) to assist you in mapping possible actions you might include in your action plan. In completing the template, you will consider the who, where, how and what of green learning described in Sections 2, 3 and 4 of this guidance document. The template also provides space to consider each action's alignment with your local community context.

Figure 13. The action plan mapping template (provided in Annex 2)

Action	WHO: Learner types	WHERE: Learning places	HOW: Learning approaches	WHAT: Green topics to be addressed by action	Alignment with community's vision and goals for green learning	Alignment of with current community attitudes	Feasibility of implementing the action	Potential for scaling up the action in the community	Notes

Depending on the community's needs, capacity and priorities, it may be beneficial to approach this categorization with a creative, open mindset. This is particularly true in communities with low capacity and resources. The committee can also consider how well the proposed actions correspond to the vision and goals developed initially. Other considerations might include the potential for scaling up the activities and their alignment with the local community (e.g. social, cultural and political factors that may help or hinder the community's engagement with the activities).

At the end of this analysis, the committee should balance the different considerations to identify key actions to target in the first version of the strategy. For example, there may be actions that are more feasible to implement within the intended time period of the strategy. In addition, there may be actions that cannot be carried out in the community until certain conditions are met. In this case, the action plan might include foundational work that will extend into the next version of the strategy.

Focusing on a discrete set of actions, while not overextending the community's delivery capacities, will enable the municipality to maximize resources and increase the quality of the initiatives pursued (Halpaap, Horstbrink and Abreu, 2013, p.25).

C Develop an action plan with targets and timelines

At this point, the action plan can be created and it should clearly outline the who, where, how and what of each action, of which there may be many, depending on the type or scope of the actions. The action plan should also include potential implementation partners and the anticipated timelines for each activity. An estimate of technical and financial resources required to implement the actions can also be created.

You may also wish to also define the intended inputs, outputs, outcomes and impacts of each activity (Box 7). Inputs can be thought of as the resources that are required to implement actions. Outputs are concrete products or deliverables that are created because of the actions. They can include things like the number of participants who completed a green learning programme, the number of views on a social media campaign, the number of natural places created, tonnes of waste diverted, kWh of renewable energy generated and litres of water saved. This may include things like the value of in-kind resources that partners contributed to developing the green learning strategy (input) and the number of people trained to implement the strategy (output). Outcomes refer to shorter-term changes such as knowledge and skill acquisition and medium-term changes such as behavioural shifts. Impacts are large-scale shifts in a community or society and can be thought of as long-term outcomes and impacts.

Box 7. The links between actions and inputs, outputs, outcomes and impacts

Actions: the actions delivered as part of the strategy. This might include developing policies and creating specific learning programmes to green communities.

Inputs: resources required to implement the action, such as staff and budgets.

Outputs: concrete products or deliverables created as a result of the actions, such as policies, lesson plans and learning resources.

Outcomes: changes, as a result of actions, to learners or broader outcomes in the community. Outcomes can be broken down into short, medium, and long-term. Rather than focusing on set time-frames, it can be helpful to think of short-term (or initial) outcomes as changes in knowledge, skills, and attitudes. Medium-term (or intermediate) outcomes can be thought of as changes in behaviour. Long-term outcomes are often called impacts.

Impacts: broad, large-scale shifts across sizeable segments of a municipality. It may not be possible to attribute large-scale shifts solely to one action.

Sources: CDC, 2024; Rossi et al., 2004; Martin, 2019

Defining inputs, outputs, outcomes and impacts at this stage is helpful for several reasons. First, it can assist with planning as you will be required to map out the types of resources needed to implement each action in the strategy. You may also find you lack the resources to implement the action as originally intended, at which point you may need to revisit the scale, implementation timeline or financing plans. It can be helpful to define the types of outputs that the actions will produce in the early stages as well. Getting a head start provides time to ensure output creation is adequately resourced, of sufficient quality and able to meet the needs of the community. Finally, when defining outcomes, it is important to link back to the overall visions and goals of the larger strategy. You may find that some actions are not strongly linked to the overall vision or goals, which means they may need to be altered or removed from the strategy altogether. Having a good idea of the inputs, outputs, outcomes and impacts also allows you to better plan for monitoring and evaluating the strategy (see Step 6).

Annex 2 includes an action plan template (shown below) where you can enter all of the above information for each action in the plan. The completed action plan will be incorporated into the final strategy document, as described in the next step.

Figure 14. The action plan template (provided in Annex 2)

Action	Status	Priority level	Start and end dates	Key milestones	Point person and organization	Resources required	Inputs	Outputs	Outcomes		Impacts	Notes
									Short term changes in knowledge, skills and attitudes	Medium-term changes in behaviour	Long-term shifts	

d Compile the strategy

At this point, a draft written strategy can be created. The strategy may outline how the municipality plans to offer lifelong learning opportunities to a broad spectrum of learners through a diversity of learning places in a range of ways to further green the community. The learning strategy will be tailored to the local community, which means that some types of learners, learning places and the content learned will be prioritized according to the municipality's context. The document should include a summary of the preparatory research conducted (existing policies, plans, initiatives, stakeholders, community needs, and delivery capacity), as well as the vision, objectives, results of prioritization analysis, action plan and implementation partners. A potential structure for this document is provided in Box 8.

Box 8. Potential structure of a draft strategy

1. Introduction and background
    b. Overview of the community, including current and future climate impacts
    c. Description of the community's baselines
        iv. Relevant existing policies, plans and initiatives (local to international)
        v. Key stakeholders (local to international)
        vi. Community needs and delivery capacity
2. The strategy
    c. Vision and objectives
    d. Prioritization results
    e. Action plan
    f. Implementation partnerships
    g. M&E plans

Step 4 activity checklist:

- ☐ Develop a clear vision and goals for the learning strategy via the committee using the SMART structure and updating as needed.
- ☐ Identify actions to include in the strategy by considering the who, where, how and what of lifelong learning for greening communities, as well as feasible timelines.
- ☐ Develop an action plan with timeline and targets, which may address actions, inputs, outputs, outcomes, and impacts (see Box 7 and Annex 1).
- ☐ Cross-check with the community baselines to ensure the learning strategy is informed by relevant local, national and/or international policies and agreements, is connecting with key stakeholders, and meeting the community's needs and delivery capacity.
- ☐ Compile the written learning strategy (see Box 5 for a potential structure).

Step 5 - Implement the green learning strategy

The outputs of this phase include a comprehensive public launch strategy and the roll-out of the priority actions identified in the plan. Once the co-designed learning strategy to green the community has been finalized, it must be effectively communicated to ensure all stakeholders are aware of the strategy and understand how they can participate in its implementation. It is vital for the dissemination strategy to consider all types of stakeholder audiences, including ways to reach those with little knowledge and/or belief in climate and sustainability action. Using a range of communication types to reach a broad stakeholder base will also help to speed implementation of the strategy. For example, while communicating the strategy through the municipality's social media channels and website will raise awareness of the strategy broadly, providing tools such as checklists, roadmaps and learning resources will better support stakeholders to actively implement the strategy. Implementation partners will also provide technical, human and financial resources to assist with launching and implementing the strategy.

It is important to ensure proper implementation of the strategy and the actions within it (Durlak, 1998). Programme drift can occur when implementation gradually shifts away from the original plan due to modifications or omissions of programme activities over time, which can impact outcomes (Durlak, 1998). There are many ways to increase the chances of successful implementation of the strategy and actions within the strategy. For example, having an implementation plan with realistic short-, medium-, and long-term implementation goals can improve adherence to the strategy (Rossi et al., 2004). A strong foundation for implementation can be built by launching the strategy in phases, pilot testing before scaling up and using rapid or process evaluations (McNall and Foster-Fishman, 2007). These sorts of gradual rollouts can help identify challenges and solve process-related problems at smaller scales before full implementation.

Finally, it is crucial to integrate implementation and maintenance of the strategy into organizational cultures and the way we work (UN Environment Programme, 2024). Integrating the strategy and action plan into existing policies and plans, within local government and across stakeholder groups, will help to keep the strategy alive over the long term. The stability afforded by policy integration is vitally important for mainstreaming green learning in the event of political and staffing changes. Incorporating greening into organizational missions and mandates, creating clear accountability mechanisms and integrating green learning into staff roles, are all important to ensure resulting action (UN Environment Programme, 2024). It may also be advisable to provide training for those tasked with overseeing implementation, as well as those responsible for the day-to-day actions in the strategy, to ensure proper execution (UN Environment Programme, 2024).

Step 5 activity checklist:

- ☐ Develop a strategy launch plan.
- ☐ Convince members of the local parliament/government to adopt, approve and fund the draft education strategy.
- ☐ Launch the learning strategy via broad communication across stakeholder groups, including via social media.
- ☐ Provide tools such as checklists, roadmaps, resources and training to help stakeholders join in the strategy's implementation.
- ☐ Create a plan to ensure successful implementation of the strategy.

Step 6 - Monitor, evaluate and report on the strategy

Feedback and accountability mechanisms are also important for ensuring proper implementation of the strategy and actions within it (Rossi et al., 2004). Well-designed M&E of the progress, effectiveness, benefits and impacts of the learning strategy will help improve programme design, support decision-making about resource allocation, and increase buy-in among stakeholders.

M&E are complementary but they fulfil different purposes. Monitoring is an ongoing process that uses indicators to track the extent of progress made by a policy, programme or project in achieving pre-set targets (Rossi et al., 2004). Consistently and regularly tracking performance indicators can help ensure strategy implementation is going to plan and allow timely adjustments to be made to address challenges. By contrast, evaluation provides a more in-depth assessment of a policy, programme or project that is conducted periodically (OECD, 2002; Rossi et al., 2004). Evaluations provide information about why intended outcomes and impacts were achieved (or not) and how to make improvements. Evaluations can also be used to provide information about implementation processes, which can help show why an initiative is (or is not) working as intended (Rossi et al., 2004). Definitions of M&E are provided in Box 9.

Box 9. Definitions of monitoring and evaluation

Monitoring: The systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing development intervention with indications of the extent of progress and achievement of objectives.

Evaluation: The systematic and objective assessment of an on-going or completed project, programme or policy, its design, implementation and results in relation to specified evaluation criteria.

Source: UNESCO and UNFCCC, 2016

There is no 'one size fits all' approach to monitoring and evaluating a learning strategy for greening communities (MECCE Project, 2023). Rather, M&E should be tailored to the objectives, inputs, outputs, actions and intended outcomes in the strategy (UNODC, 2016). M&E should also be tailored to the community in which the learning strategy is being implemented. For example, in larger urban centres with substantial technical infrastructure, it may be possible to compile monitoring data from a variety of existing databases. When partnering with Indigenous communities, local governments may consider developing evaluation methods that attend to Indigenous protocols such as justice and equity, reciprocity and relational accountability, and alignment with Indigenous worldviews and self-determination (Brant et al., 2023). Consider integrating Indigenous research methodologies when appropriate and ensure the integrity of the knowledge is protected (i.e. not culturally appropriated) (Brant et al., 2023). Learning and M&E efforts may take place in a familiar community setting and alongside an elder or community member (Brant et al., 2023).

Designing a plan to monitor and evaluate should begin by examining the inputs, outputs, outcomes and impacts (see Box 7) defined in the action plan (see Step 4). Often, the priority will be to determine whether the strategy achieved its intended outcomes and impacts (Rossi et al., 2004; CDC, 2024). Outcome measures capture shorter-term changes such as knowledge and skill acquisition and medium-term changes such as behavioural shifts while impact measures capture long-term changes that may be challenging to link directly to the action plan. Input measures capture the resources required to implement the action, such as staff and budgets whereas output measures are tied to products or deliverables created as a result of the actions. When defining measures, it is important to use the SMART framework to ensure they are informative and high quality:

- **Specific:** The indicator should accurately describe what is intended to be measured and not include multiple measurements.
- **Measurable:** The indicator should be able to be measured with data that can be collected or accessed.
- **Achievable:** Collecting/accessing data for the indicator should be straightforward and cost-effective.
- **Relevant:** The indicator should be closely connected with the input, output, process, or outcome being measured.
- **Time-bound:** The indicator should include a specific time-frame. This may be dictated by the data that are used.

Ideally, a standardized set of citywide measures that can be collected by multiple stakeholders would be collected and compiled into one database to support decision-making. However, that is not often feasible.

The type of data you collect for a measure will depend on what kind of information you need. Outcomes and impacts are often better captured by descriptive or 'qualitative' data, which is better at showing the extent to which something is happening in the community. For example, you may wish to measure the extent to which a change agent community has been meaningfully engaged. In cases like this, you might want to measure 'increased collaboration' or an 'increased sense of ownership.' The policy mapping conducted in Step 1 above may have identified broader national and international measures,

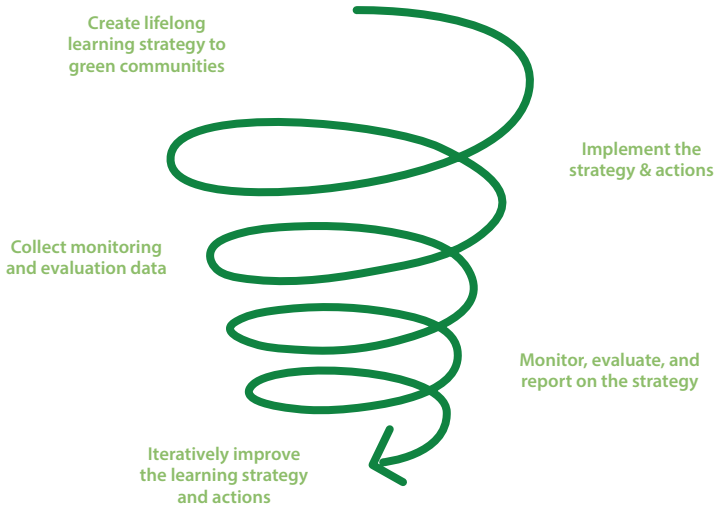
such as the UN SDGs (UN, 2025) that might be relevant to your community. This type of measure can be better 'answered' by collecting stories or speaking with programme participants (e.g. through interviews and focus groups) to get a sense of programme impacts. However, there are a variety of data sources such as polls, surveys, and standardized assessments that regularly collect high quality data and may be available for your community to use at little or no cost. There may also be research groups in your area that have relevant data for your community from their prior studies. It can be challenging and costly to measure outcomes and impacts, so it is often helpful useful to also look at inputs and outputs (Pizmony-Levy, 2018; MECCE Project, 2023).

Both input and output measures are often captured by simple counts (numerical or 'quantitative' data). Both input and output data is often collated from programme and administrative data that is tracked on an ongoing basis. For example, it will often be possible to collate data on the number of staff on a project or a programme's budget (inputs) or the number of participants who completed a green learning program and the number of views on a social media campaign (outputs). It may be also possible to leverage municipal data such as the number of natural places created, tonnes of waste diverted, kWh of renewable energy generated and litres of water saved.

Finally, you may also want to collect data from partners; for example, to assess the value of in-kind resources that partners contributed to developing the green learning strategy. The partners will also likely collect data tailored to their specific programmes, so formal partnership agreements might include data sharing protocols between partners. It may also be beneficial for local governments to work with key stakeholders to align programme-specific indicators with those of the learning strategy's M&E plan during consultations. Such municipality-wide monitoring tools can act as a learning resource for citizens who wish to learn more about municipal efforts to green the community. Memoranda of Understanding, grant agreements and contracts signed with implementation partners should clearly map out the partners' responsibilities, which can include reporting on indicators to assist with municipality-wide M&E and increase the likelihood of proper implementation (Mayne, 2017). One helpful resource for developing measures and data collection strategies is the Monitoring, Evaluating, and Reporting on Action for Climate Empowerment Toolkit (MECCE Project, 2023).

In addition to regularly collecting monitoring data, a comprehensive evaluation of the learning strategy should also be conducted periodically, for example, at the midpoint and end of the strategy period. Surveys, focus groups, interviews, public meetings and workshops with stakeholders can help understand whether the learning strategy is achieving its intended results in the community. The evaluation can collect success stories that can be shared with the community to highlight the benefits of the learning strategy to the municipality. The evaluation should also produce lessons learned and recommendations to iteratively improve implementation of the current and future learning strategies, as well as any policies and programmes arising out of the learning strategy.

Figure 15. Iteratively improving the strategy through monitoring, evaluation and reporting



The results of M&E should be publicized to increase transparency and encourage public participation in efforts to green the community. In addition to sharing results with community members, stakeholders at a variety of levels will likely find evaluation results of interest. Local stakeholders will be able to use the findings to improve their green learning initiatives. The findings can also support policy decision-making at local, state, national and intergovernmental levels. For example, the United Nations recommends local governments report on progress made towards achieving the SDGs through Voluntary Local Reviews (UN-Habitat, 2025). National governments may wish to include the findings in reports to the UNFCCC, including Voluntary National Reviews, National Adaptation Plans and Nationally Determined Contributions as appropriate (International Institute for Sustainable Development, 2022).

Step 6 activity checklist:

- ☐ Implement the M&E portion of the learning strategy through collection of data, including in collaboration with stakeholders.
- ☐ Conduct midpoint and endpoint evaluations of the impact of the strategy during its time frame.
- ☐ Publicize the results of the M&E to increase transparency and encourage participation in community greening.
- ☐ Iteratively improve the strategy and the actions created through the strategy.

5.3 Moving forward

With the environmental, climate and sustainability crises demanding increasingly urgent global action, the transformation of municipalities into green communities is vitally important. Local action requires all community members to learn towards greening communities. By harnessing the power of a whole-of-community approach to green learning, communities are not only helping today's citizens, but also those of future generations.

This guidance has provided background considerations of the who, where, how and what of engaging stakeholders in learning towards greening communities. This section provides a step-by-step process for developing a strategy to green your community.

Through a whole-of-community approach, this guidance serves as a valuable tool to think expansively and comprehensively about lifelong learning in your local community. The primary audience of the guidance is local governments, due to their crucial role in developing and implementing policies and other supports that enable this learning and systemic change towards a more sustainable future. However, this guidance document also serves as a valuable resource and planning tool for a broader range of community stakeholders including change agents. Any stakeholder can develop a strategy to green their 'community' through learning, whether that community is a small non-profit organization, manufacturing facility or a mega-city. The learning strategy can be developed for your specific context and consider ways in which your context might engage externally with other key stakeholders.

Smaller, remote communities and organizations, or those with no strategy to green through lifelong learning will likely find it productive to review the steps outlined in Section 5 of the guidance to think about developing a locally appropriate strategy. The 'Action Planning Assessment Tool' in Annex 1 will assess the extent to which your community already meets the standard of a community that is greening through lifelong learning. The tool will also help identify which targets and actions to include in the action plan to green your community through lifelong learning. Following that, it may be helpful to identify potential partners and collaborators who are already working to green your community through lifelong learning (as in Section 2) and determine where such learning opportunities are taking place (as in Section 3).

Your first strategy to green through lifelong learning may be largely focused on building partnerships and local capacity. A further focus may be on creating green learning policies as well as reviewing and updating existing green learning initiatives to ensure they reflect research-based insights for content and instructional approaches (as in Section 4). Finally, it is advisable to develop the infrastructure required to monitor and evaluate the strategy and actions within it in order to support decision-making to iteratively improve your community's ability to green through lifelong learning.

If your community or organization already has a strategy to green through lifelong learning, completing the 'Action Planning Assessment Tool' will provide you with information about the extent to which your community is meeting the standard of a green community. The tool will also indicate the extent to which you have already undertaken essential targets to meet the green community standard. Reviewing your green learning strategy against the **who, where, how** and **what** concepts in this guidance will help you determine what your next steps will be. It may be useful to conduct a formal evaluation of your existing strategy to determine whether it is being implemented as planned and/or what kinds of outcomes it is producing.

Your focus might next turn to leveraging your community's existing capacity to create more ambitious, innovative strategies to green through lifelong learning. The evaluation might show the need to update policies, plans and programmes to incorporate new research-based insights and advancements in instructional approaches, processes and technologies. There may also be new partners and funding that can be accessed to support your community's efforts. Further, there may also be a need to respond to new impacts of climate change that were not considered when developing your previous strategy. Finally, it may be possible to develop new infrastructure to support coordinated M&E of green learning across the community to assist with policy and decision-making. In refreshing your strategy, referring back to the step-by-step process in Section 5 along with the who, where, how and what outlined throughout this guidance document will help ensure the strategy is as comprehensive as possible.

5.4 Practice-based examples of learning strategies

Below are inspirational examples from around the world on how greening learning strategies and/or climate action plans have been developed in different cities. Note that these examples emphasize the importance of government and multi-stakeholder collaborations in successfully leading and implementing green learning strategies. An example of a participatory data analysis approach is also included.

Table 14. Examples of lifelong learning strategies and participatory data analysis

Hamburg (Germany) – Education for Sustainable Development (ESD) Master Plan 2030

The idea to create the Hamburg ESD Master Plan was initiated in 2016 under the leadership of the Ministry for the Environment, Climate, Energy and Agriculture. The Master Plan was developed through the extensive involvement of six working groups, covering the fields of early childhood education, schools, vocational training, universities, extracurricular learning and districts. In total, over 100 people from over 70 institutions participated in the working groups that developed the Master Plan.

To begin, common goals and needs were identified across all the working groups. These included establishing a coordination office, developing a consultation and M&E process, creating a communication and public relations strategy, incorporating green content in all levels of education, and establishing a knowledge database. Each of the working groups also developed actions, goals and measures specific to their fields.

This ESD Master Plan was ultimately adopted by the Hamburg Senate, the city's highest government. Since 2021, the administration has been funding projects in all educational areas, thus supporting the greening of the city through lifelong learning.

Hamburg has received several awards for its ESD efforts, including being named City of the World Decade four times and being a recipient of the UNESCO Japan Prize on Education for Sustainable Development, a biennial prize that recognizes outstanding projects that advance ESD.

Learn more: Hamburg Masterplan ESD 2030

Quito (Ecuador) – Programme for Environmental Education for Sustainable Development and Good Environmental Practices

Through a participatory approach, the UNESCO Learning City of Quito (Ecuador) developed a public policy instrument titled Programme for Environmental Education for Sustainable Development and Good Practices. The policy fosters the adoption of sustainable habits and lifestyles through knowledge exchange and interdisciplinary capacity-building approaches, while helping to mainstream environmental issues in planning and management instruments. The policy also fosters a structured, periodic and adaptable approach to M&E, counting on simple tools (i.e. forms, photos, reports) local stakeholders use to track progress and strengthen implementation.

The policy's end goal is to educate environmentally and socially responsible citizens by supporting them to actively build solutions in response to local socio-environmental challenges. Importantly, the policy considers previous developments in Quito (i.e. the city's La Hora Ambiental initiative and Quito a Reciclar campaign), relevant local and national legislation, the SDGs and the Tbilisi Declaration.

To date, this public policy has directly benefitted over 1,500 people and underpinned a wide range of local activities. These include fostering the restoration and maintenance of streams and protected water areas; providing plants to municipal educational institutions; supporting reforestation in the community and the implementation of capacity building efforts to cement good environmental practices.

Learn more: Distrito Metropolitano de Quito

Okayama – ESD Promotion Commission

The UNESCO learning city of Okayama (Japan) has developed an ESD Promotion Commission that brings together over 370 organizations from academia, local government, civil society, formal education, CLCs (Kominkans), and the private sector, among other sectors. The primary role of the ESD Promotion Commission is to promote ESD through the Okayama ESD Project. The ESD Project has taken a 'whole-of-community' approach to foster opportunities for lifelong learning. For example, ESD activities and training are organized in schools, parks, shopping malls and natural places. Young children are exposed to ESD learning in elementary school and older adults are offered a broad range of courses and localized learning programmes at the Kominkans. Local residents play a critical role in planning and implementing ESD projects that are locally relevant and meaningful for the community. The Okayama ESD Project received the UNESCO-Japan Prize on Education for Sustainable Development.

Learn more: Okayama: A city united for education for sustainable development

Shanghai (People's Republic of China) – Community Action Plan on ESD

In 2022, the Shanghai Community Action Plan on Education for Sustainable Development (ESD) (2022-2023) was launched at the 10th Shanghai Forum on Lifelong Education. It aimed to build on work to promote four action areas: Community Health, Community Environment, Community Harmony, and Vocational Capabilities. With a focus on action and practice, it aimed to stimulate the engagement of young people from diverse educational institutions, enterprises, and social organizations in sustainable development; leverage digital tools to support quality ESD and strengthen the core capabilities of community educators and researchers. In addition, it sought to strengthen Shanghai's cooperation within domestic and international sustainable development education networks, to foster ESD through a lifelong learning approach. From a lifelong learning perspective, this strategy set out to engage older people and children to diversify approaches to ESD.

The Shanghai Municipal Institute of Lifelong Education (SMILE) managed the strategy's implementation, mobilizing a broad coalition of actors to support this. These included sixteen district community colleges, over two hundred community and senior schools, various educational institutions, government agencies like the Municipal Ecology and Environment Bureau and the Municipal Water Affairs Bureau, along with businesses and NGOs, who are united in their pursuit of ESD for Shanghai's citizens. These entities clearly assumed responsibility for their work, in the context of this community action plan.

Importantly, the action plan built on existing efforts to foster ESD in Shanghai, drawing on experiences from citizens already engaging in learning opportunities, along with the city's involvement in the UNESCO Global Network of Learning Cities. It represents the second phase of city-wide action to promote ESD, building upon the successful completion of the initial Shanghai Sustainable Development Education Community Action Plan (2020-2021).

In short, this action plan's development was a key step forward in Shanghai's commitment to fostering ESD and lifelong learning for climate action, more specifically, at the local level. Shanghai Municipal Government's support for institutions like SMILE at ECNU exemplifies this commitment, aligning educational efforts with community action.

Learn more: Shanghai Community Action Plan on ESD 2022-2023

Additional examples are available at: https://uil.unesco.org/en/greening-communities-guidance

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ANNEXES



ANNEX 1

Action planning for greening communities

This annex presents an Action Planning Assessment Tool and practical inspirations to begin and advance the process of greening communities through lifelong learning. The tool has two purposes: 1) it will support you in developing the action plan for your community's green learning strategy (as described in Section 5), and 2) it can help you determine how close your community is to meeting the standard of a green community. There are two versions of the tool. The first is a rapid assessment for those who only need to get a sense of the above, and the second is a full assessment for those who wish to go more in-depth into action planning.

The actions in the tool are not exhaustive. Rather, they are meant to inspire all stakeholders, including municipalities, civil society organizations, education or academic entities, change agents and private sector entities to use and adapt to their specific contexts. The tool therefore provides space for brainstorming locally appropriate actions that are adapted to your community. There is also a template to assist you with brainstorming actions, and a template for you to develop your action plan.

There are two action planning tools, each with step-by-step instructions:

- **Rapid assessment:** this tool will help you to quickly determine how close your community is to being a green community. It can be used to provide a sense of the types of actions your community may wish to include in its action plan.
- **Full assessment:**
    - **Part A** will assist you in identifying actions to include in your strategy in the short, medium and long term. Some of these actions may already be occurring. You may be in the process of developing others and you may be in the process of planning others.
    - **Part B** provides a more in-depth tool to assess how close your community is to being a green community and gives an idea of where your community will be after implementing its green learning strategy.

The tool is meant to **guide conversations** with partners, collaborators and stakeholders to determine what greening your community through lifelong learning might look like. For example, you can brainstorm and identify actions within your planning committee as well as through community dialogues, expert interviews and change agent focus groups. If you wish to adapt the actions in the tool to better match your own community, the tool provides blank rows in each section. The intention is to provide you with the flexibility to add your own ideas as you co-design and co-create your action plan and strategy.

After engaging with the tool, you should have an idea of your community's **current green community status**, as well as your community's potential to grow its ability to further green through lifelong learning, regardless of whether your community is a Greening 'Learner' or 'Leader'.

If your community is identified as a **Greening Learner**, your next steps will likely involve planning and implementing new initiatives and partnerships. Use the planning tool to identify which essential actions will best help you grow to 'Leader' status. You may need to map the landscape of green learning in your community. Section 5, Step 1 'background research', outlines ways you can get a sense of relevant local, national or international policies, plans, programmes and stakeholders that may inform or collaborate with your green learning strategy. Your work to develop the strategy (as outlined in Section 5) should involve

consultations with key stakeholders (including those outlined in Section 2) to ensure the actions you develop address a range of learner types (Section 2) and places (Section 3), while also ensuring that the content and learning approaches used (Section 4) are appropriate for your community.

If your community is a **Greening Leader**, it has significant existing capacity for greening through lifelong learning and it is likely it already has a green learning strategy in place. At this stage, it may be useful to conduct an outcome evaluation of your existing policies, plans and/or programmes to determine whether the content and learning approaches being used (Section 4) are reflective of the latest knowledge in the green learning field. For example, it may be advisable to assess whether policies, plans and programmes are addressing the learning dimensions through relationships with places, communities and stories. There may also have been advancements in instructing approaches and technologies that will allow you to create more ambitious, innovative initiatives. For example, participatory governance bodies such as climate assemblies and youth councils represent newer, innovative methods to green communities through lifelong learning. Such work can be carried out in collaboration with existing and new partners. This refresh in the 'how' and 'what' of green learning in your community can be conducted alongside an update of your community's strategy. The updated strategy should also align with the who, where, how and what outlined in this guidance document. Finally, you may wish to develop infrastructure to monitor and evaluate the updated strategy in collaboration with stakeholders and change agents across the community. Collecting coordinated, community-wide, longitudinal data is a powerful method of supporting policy and decision-making at local, state, national and international levels.

Rapid assessment of green community status

The rapid assessment tool is intended to help you quickly determine how close to being a green community your municipality is. The tool can be used by those who wish to get a sense of their community's status, those in low-resource environments who may not be able to invest in a more complete planning process, or those who are just beginning their planning journey and find a full assessment daunting. It is recommended to read Sections 2 and 3 of the guidance before beginning, to ensure you are familiar with the types of learning places below.

Below we provide a list of 'essential' actions communities must take to be considered one that is greening through lifelong learning.

Step 1. Review the list items below and check off any items that your local government already has in place or is currently actively planning to put in place.

Step 2. Add up the total number of checkmarks.

Step 3. Compare the total number of checkmarks to the cutoffs provided.

The rapid assessment tool is intended to help you quickly determine how close to being a green community your municipality is. The tool can be used by those who wish to get a sense of their community's status, those in low-resource environments who may not be able to invest in a more complete planning process, or those who are just beginning their planning journey and find a full assessment daunting. It is recommended to read Sections 2 and 3 of the guidance before beginning, to ensure you are familiar with the types of learning places below.

Below we provide a list of 'essential' actions communities must take to be considered one that is greening through lifelong learning.

Part A: Essential actions for greening communities through lifelong learning

The local government in my community currently has, or is actively planning to have:

- ☐ Adopted, funded and implemented at least one municipal policy, plan and/or strategy to green the community through lifelong learning.
- ☐ Created and implemented at least one programme to strengthen local policy-maker capacity to take environment and sustainability actions in the community.
- ☐ Led the implementation of at least one municipality-wide programme to green communities through lifelong learning for a range of learners (e.g. cautious and disengaged segments, young people, women and girls).
- ☐ Secured financial and other resources to support the development and implementation of green learning initiatives for a range of learners.
- ☐ Provided resources to support the development and implementation of green learning initiatives for a range of learners in the community.
- ☐ Led the implementation of at least one green learning initiative with partners in a local formal education setting (i.e. pre-primary education, primary education, secondary education, higher education, technical and vocational education and training institutions and/or agricultural schools).
- ☐ Led the implementation of at least one municipality-wide green learning initiative in a community place for a variety of learners and/or change agents.
- ☐ Created family-friendly learning opportunities for greening communities.
- ☐ Created green learning opportunities in at least one natural place in the community that is easily accessible by all community members.
- ☐ Implemented digital public awareness campaigns to strengthen local community member capacity to take climate and sustainability action.
- ☐ Created locally appropriate digital learning environments to green communities.

Part B: Green community status

Our community has _____ checkmarks, which means we are a:

- ☐ Greening Learner (0-5 checkmarks)
- ☐ Greening Leader (6-11 checkmarks)

Full assessment – Part A: Identifying actions to include in your action plan

The checklists below are intended to support you with identifying which actions to include in your strategy. They present **examples of the types of actions your community might implement**. The actions are organized by the learning places described in Section 3 of the guidance and grouped by similarity. The actions at the beginning of the checklist are the most fundamental, with later actions being more advanced and ambitious.

Fill in the checklist while looking at the steps below:

Step 1. **Review the guiding questions and actions:** Beginning with the 'Municipal Places' section, review each **guiding question** and the **actions** underneath. Remember that it is the ideas that are important, so the guiding questions can be interpreted openly and flexibly according to your own community's context. Mark an 'X' in the column if:

a. Your community has implemented this action, or something similar.

b. Your community is currently planning this action or a similar action. If you are still having initial discussions, you can still choose this option.

Skip over any checklist items that are not applicable to your community.

If you do not know how to answer the guiding questions, you might collect the answers as part of the background research (Section 5, Step 1) and stakeholder engagement (Section 5, Step 2) steps described in the Section on developing a strategy.

Step 2. **Add your own actions:** The actions provided in the checklist below are not intended to be exhaustive, and may not be appropriate for all communities. Rather, the checklist is intended to provide ideas and suggestions. There may be other kinds of actions that are more appropriate for your cultural or community context, for example. If you brainstorm other actions, you may add them to the blank rows.

Step 3. If you are using the tool to develop the action plan of your strategy: **Integrate the actions you selected into the action plan of your strategy.** Create the action plan by mapping out the inputs, partners, outputs and outcomes for each action to create the action plan, as described in Section 5 of the guidance.

1) Municipal places

Has your local government adopted, funded and/or implemented at least one municipal policy, plan and/or strategy to green your community through lifelong learning?

Check the boxes for any actions your community is taking:

- ☐ Uses the Greening Communities Guidance document as a basis for developing a green learning strategy for your community, with a monitoring, evaluation and reporting framework
- ☐ Develops a green lifelong learning policy that is informed by and complements relevant local, national and/or international policies and agreements
- ☐ Creates a strategy that centres climate justice by enshrining participatory governance structures with representatives from marginalized communities
- ☐ Uses other lifelong learning plans as inspiration to develop a green learning plan across diverse spheres of learning in collaboration with diverse stakeholders
- ☐ Monitors, evaluates, and reports on the progress made by the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government created and implemented at least one programme to strengthen local policy-maker capacity to take climate and sustainability action in the community?

Check the boxes for any actions your community is taking:

- ☐ Organizes internal training for staff across municipal government departments about working with community stakeholders to promote lifelong learning to green communities (e.g. professional development workshops, peer learning programmes)
- ☐ Organizes training that brings together diverse stakeholders (e.g. local government officials, civil society groups, youth groups, local businesses, women's groups and others) to explore and develop cross-sectoral collaborations aimed at greening communities through lifelong learning
- ☐ Invites (and compensates if possible) local change agent groups (e.g. youth group, women and girls organization) to instruct local government officials about existing non-formal and informal green learning initiatives in the community
- ☐ Engages external national and/or international stakeholders to provide training sessions for local officials on how to create inclusive opportunities for climate and sustainability learning in their community
- ☐ Organizes a peer learning café event for local policy-makers to exchange knowledge about their efforts and learnings related to advancing lifelong learning to green communities
- ☐ Creates an online peer learning platform, discussion place or social media group for local policy-makers to exchange effective lifelong learning practices to green communities and identify possible avenues for collaboration

  Monitors, evaluates, and reports on green learning initiatives for policy-makers to showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government implemented at least one municipality-wide programme to green communities through lifelong learning for a range of learners (e.g. cautious and disengaged segments, young people, women and girls)?

Check the boxes for any actions your community is taking:

- ☐ Creates comprehensive public campaigns to build public resilience against climate change misinformation
- ☐ Instructs community members about local sustainability actions they can take through a municipality-wide public awareness campaign co-developed with diverse stakeholders, including change agents
- ☐ Creates an annual festival and/or year-round event series focused on building a greener community through learning
- ☐ Organizes an annual 'Green Community' day where local stakeholders share sustainability tips and showcase green capabilities
- ☐ Develops and disseminates learning resources which are accessible to those with learning disabilities to instruct community members about key climate and sustainability actions they can take
- ☐ Provides learning materials to explain the proper use of local waste reduction and management initiatives (e.g. circular economy, composting)
- ☐ Hosts a hackathon/climathon where community members collectively develop solutions to local environmental and climate challenges over 12-48 hours, in partnership with key local stakeholders
- ☐ Monitors, evaluates, and reports on green learning progress to showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government secured financial and other resources to support the development and implementation of green learning initiatives for a range of learners?

Check the boxes for any actions your community is taking:

- ☐ Identifies and pursues relevant regional, national and international funding opportunities (including domestic public sources, international public sources, private sources and citizen contributions) to support lifelong learning for climate action in your community
- ☐ Builds green learning components into funding proposals for broader climate change-related initiatives (e.g. green infrastructure, climate adaptation programmes, early warning systems)
- ☐ Applies for grants and funding with implementation partners to support your community's strategy
- ☐ Develops relationships with potential partners who are able to provide financial and/or in-kind support for collaborative green learning initiatives
- ☐ Pursues participatory financing mechanisms to support collaborative climate learning projects (e.g. participatory budgeting, community investment funds, matching grants)
- ☐ Organizes climate and sustainability awareness-raising events for prospective donors (e.g. businesses, international organizations, citizens)
- ☐ Creates a crowdfunding page to mobilize resources for collaboratively organized green learning initiatives
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government provided resources to support the development and implementation of green learning initiatives for a range of learners in the community?

Check the boxes for any actions your community is taking:

- ☐ Provides financial or in-kind resources to support local organizations to create non-formal green learning initiatives targeted towards different groups (e.g. change agents, women and girls, disengaged community members)
- ☐ Implements a green learning funding committee/position to oversee resource mobilization to community-based initiatives
- ☐ Creates a dedicated green learning fund that emphasizes collaborative climate learning projects
- ☐ Provides scholarships to support change agents (e.g. Indigenous individuals, women and girls, older people) to focus on climate and sustainability in their schooling
- ☐ Creates a dedicated fund to support youth-led lifelong learning initiatives for climate and sustainability action
- ☐ Provides grants for non-formal learning initiatives that empower marginalized communities to adapt their homes to changes in climate and increase in extreme events (such as heat waves)
- ☐ Provides grants to young entrepreneurs working on sustainability and climate action in the community
- ☐ Provides grants to women's organizations to create non-formal gender-informed climate and sustainability learning opportunities
- ☐ Requires initiatives being supported by financial and in-kind contributions to monitor, evaluate and report on their green learning initiatives to showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government created participatory governance mechanisms for climate and sustainability issues?

Check the boxes for any actions your community is taking:

- ☐ Develops a training programme on climate and sustainability action to equip community members with the tools to effectively engage with policy- and decision-makers through political channels (e.g. presenting at city council, creating letter writing campaigns, etc.)
- ☐ Creates a local environment or climate assembly, with participants identified through a democratic lottery and/or selecting participants to be representative of the community
- ☐ Develops tailored outreach campaigns that share assembly outcomes in order to recruit members of traditionally under-represented groups (i.e. youth, women, migrants, refugees, older learners, persons with disabilities and others)
- ☐ Creates governance mechanisms that value multiple sources of knowledge in the development of green learning initiatives (e.g. multi-stakeholder engagement, town halls, culturally sensitive formats, gender sensitive approaches, youth engagement, engagement with Indigenous communities)
- ☐ Establishes two-way communication mechanisms where community members and local government officials both instruct and learn about local climate and sustainability issues
- ☐ Creates a youth environment/green council to hear young people's ideas about environment and sustainability learning initiatives to take in the community
- ☐ Involves women in local decision-making processes regarding climate and sustainability learning (e.g. gender-focused commissions, consultations)
- ☐ Involves older people in local green learning decision-making processes (e.g. dedicated committees, targeted consultations)
- ☐ Creates infrastructure to monitor, evaluate, and report on the progress of green learning through participatory governance to showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Does your local government communicate with the public about how local infrastructure improvements enable utilization of green capabilities?

Check the boxes for any actions your community is taking:

- ☐ Builds attractive green infrastructure for pedestrians and bikes (e.g. dedicated pedestrian roads, cycle highways), and create a public awareness campaign that empowers citizens to take green transportation
- ☐ Organizes regular (e.g. monthly, bi-monthly) community resilience-building workshops to support disaster risk reduction through greening infrastructure
- ☐ Develops an early warning notification system for natural disasters and related shocks, and distributes materials to instruct the public about how it functions and how they can adapt their homes to different kinds of natural disasters
- ☐ Constructs roof rainwater harvesting systems on public buildings, and implements a communications campaign that shares the initiative with community members and provides concrete actions for how community members can conserve water
- ☐ Teaches citizens about green roofs, walls and/or facades by providing volunteer opportunities to create and maintain green infrastructure on public buildings
- ☐ Creates bike hiring and car sharing schemes, and distributes resources that empower citizens to use green transportation options
- ☐ Creates solar-powered public WIFI stations close to community green learning areas to attract new learners
- ☐ Creates infrastructure to monitor, evaluate, and report on green learning progress through green infrastructure and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Use this space to brainstorm actions to co-create or support green learning in municipal places.

2) Formal education places

Has your local government developed green learning partnerships with local ECCE providers?

Check the boxes for any actions your community is taking:

- ☐ Creates a municipally-led green learning programme focused on local climate and sustainability action that early childhood educators can adapt for students at different levels
- ☐ Collaborates with local libraries and museums to provide child-friendly green learning opportunities
- ☐ Offers field trip opportunities to local natural places, with age appropriate interpretative tours and/or signage
- ☐ Climate-proofs municipal playgrounds and play areas for children that connect them with their natural environment
- ☐ Creates outdoor classrooms with native plants where schoolchildren can enjoy cognitive, social and emotional and physical benefits and an appreciation for nature through experiential learning
- ☐ Partners with local ECCE providers to monitor, evaluate, and report on green learning progress and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government developed green learning partnerships with local primary and secondary schools?

Check the boxes for any actions your community is taking:

- ☐ Partners on a programme where students carry out action and inquiry projects focused on local climate and sustainability issues, in partnership with local school divisions, non-formal education organizations, cultural institutions and/or private sector entities
- ☐ Creates outdoor classrooms where schoolchildren can engage with formal education curricula through experiential, action and place-based learning
- ☐ Provides quality resources to support instructors to integrate locally-relevant green learning concepts and methods into local curricula
- ☐ Provides workshops to equip educators from different backgrounds and learning institutions with the skills to instruct about climate and sustainability action
- ☐ Creates community events focused on providing students with opportunities to act on local climate and sustainability challenges
- ☐ Partners on a programme where scientists visit schools to instruct young people about climate and sustainability topics
- ☐ Creates an intergenerational learning programme where older people and students collaborate to develop local climate and sustainability solutions
- ☐ Partners with local primary and secondary education settings to monitor, evaluate, and report on green learning progress and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government developed green learning partnerships with local higher education institutions?

Check the boxes for any actions your community is taking:

- ☐ Includes academic researchers on the planning committee tasked with developing the strategy to ensure the strategy includes the latest research insights
- ☐ Establishes formal partnerships with local academic researchers to develop research-informed green education policies and practices
- ☐ Commissions local academic researchers to iteratively improve the strategy
- ☐ Partners with universities to develop targeted green learning programmes for change agents
- ☐ Partners with higher education institution internship/co-operative programmes to provide learners with green work placements
- ☐ Works with university/college laboratories to pilot test climate and sustainability-related technologies being developed by local academics and learners
- ☐ Partners with local higher education settings to monitor, evaluate, and report on green learning progress and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government developed at least one green learning partnership with a local technical and vocational education and training institution?

Check the boxes for any actions your community is taking:

- ☐ Co-designs training programmes on renewable energy, energy efficiency, waste management with TVET institutions and community members
- ☐ Develops training programmes on green technology and innovations in collaboration with TVET institutions and the private sector
- ☐ Partners with local Indigenous communities and TVET institutions to develop green skills training programmes for Indigenous learners
- ☐ Partners with local Indigenous communities and TVET institutions to create carbon-neutral construction and technology training programs that integrate Indigenous knowledge and practices
- ☐ Works with TVET institution laboratories to pilot test in-development green technologies
- ☐ Partners with TVET institution internship/co-operative programmes to provide learners with green work placements to develop green skills
- ☐ Partners with TVET institutions to provide graduates with green jobs
- ☐ Funds the development of green skills courses for women
- ☐ Partners with local TVET institutions to monitor, evaluate, and report on green learning progress and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government developed at least one green learning partnership with a local agricultural school?

Check the boxes for any actions your community is taking:

- ☐ Partners with agricultural schools to develop educational materials (e.g. booklets, activity packs, videos) and practical training opportunities on sustainable and resilient agriculture for urban, rural and/or remote communities
- ☐ Partners with agricultural schools on programmes where learners use integrated pest management techniques in public natural places
- ☐ Establishes urban gardens focused on instructing marginalized communities and other stakeholder groups to grow their own food using climate adapted micro-gardening and/or micro-farming techniques
- ☐ Partners with agricultural school internship/co-operative programmes to provide learners with green work placements
- ☐ Partners with agricultural schools to provide graduates with green jobs
- ☐ Establishes a lab-to-land/lab-to-field programme to allow agricultural school learners to test out farming techniques on public land
- ☐ Funds agricultural schools to provide them with access to modern sustainable agricultural technologies and techniques
- ☐ Partners with local agricultural schools to monitor, evaluate, and report on green learning progress and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Use this space to brainstorm actions to co-create or support green learning in school places.

3) Community places

Has your local government led the implementation of at least one municipality-wide green learning initiative within a community place for a variety of learners and/or change agents?

Check the boxes for any actions your community is taking:

- ☐ Offers municipally-led community-based green learning programmes at CLCs on preserving local ecosystems (e.g. through planting native species, rewilding techniques)
- ☐ Creates an intergenerational learning programme that views older people as both students and instructors for environmental action in collaboration with community-based learning places
- ☐ Collaborates with local leaders to organize community meetings that communicate about climate risks and adaptation strategies in locally-appropriate ways
- ☐ Offers a workshop series to equip multidisciplinary formal and non-formal educators to instruct about climate justice issues
- ☐ Creates community events to bring diverse change agents together to learn about sustainable food choices and build their capacity to mobilize others to take action
- ☐ Provides resources to support community-based learning places (e.g. NGOs, CLCs, adult learning programmes) to develop their own locally-relevant green learning initiatives
- ☐ Provides local non-formal educators with free access to community places with the aim of creating hubs for learning about and participating in local circular economy initiatives
- ☐ Utilizes tools such as the Hamburg ESD Check for Municipalities to assess the extent to which greening is being integrated at the local level
- ☐ Provides community places to act as green learning hubs for students in the formal education system
- ☐ Monitors, evaluates, and reports on green learning progress and showcases successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government worked with cultural institutions (e.g. libraries, museums, art galleries, faith-based organizations) to co-create learning programmes that build their climate and sustainability leadership?

Check the boxes for any actions your community is taking:

- ☐ Includes cultural institution representatives on the planning committee tasked with developing the strategy
- ☐ Provides long-term funding mechanisms to allow cultural institutions to maintain and grow their role in greening communities through learning
- ☐ Partners on the co-creation of local environmental action programming with local cultural institutions
- ☐ Partners on the development of green learning programmes at local cultural institutions for traditionally under-represented learner groups in the local area
- ☐ Establishes partnerships between municipal government, libraries, museums, art galleries, faith-based organizations, civil society organizations, and others to offer green learning programmes
- ☐ Creates forums to support exchanges between local cultural institutions and municipalities that foster institutional cultures of experimentation around green learning
- ☐ Provides cultural institution staff, volunteers and leaders with training on how to implement local climate and sustainability policies
- ☐ Organizes learning activities (e.g. professional development workshops, online courses) to build the capacity of cultural institution staff, volunteers, and leaders to create opportunities for sustainability learning
- ☐ Includes cultural institution leaders in town halls meetings to share information about locally appropriate environmental and sustainability actions through their institutional lenses
- ☐ Supports the establishment of interfaith councils, workshops and forums that bring together faith-based leaders from diverse backgrounds to discuss environmental and sustainability action strategies
- ☐ Actively promotes and pursues local, national and international opportunities to recognize the efforts of local cultural institutions in promoting green learning
- ☐ Organizes workshops or training sessions to help cultural institution staff and leaders develop the capabilities needed to effectively communicate about climate change and its moral implications to their congregations
- ☐ Partners with local cultural institutions to monitor, evaluate, and report on green learning progress and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government worked with Indigenous communities and organizations to co-create learning programmes that build Indigenous climate and sustainability leadership.

Check the boxes for any actions your community is taking:

- ☐ Actively involves Indigenous organizations and networks in the development of local greening learning strategies through the adoption of culturally-sensitive meeting formats (e.g. storytelling sessions, exchange of knowledge over food)
- ☐ Develops strategic partnerships with local Indigenous organizations to co-create and establish initiatives that promote the embedding of Indigenous knowledge systems into local green learning strategies
- ☐ Partners with Indigenous communities/organizations, higher education and TVET institutions to develop culturally-relevant learning opportunities to adapt to changing climate realities (e.g. green job training)
- ☐ Co-develops climate and sustainability learning programmes with indigenous communities and non-formal learning organizations that align Indigenous knowledge systems with nature-based solutions, and tailor them for different types of change agents
- ☐ Co-develops an intergenerational, intercultural programme where elders and young people produce community maps highlighting significant environmental features and incorporating Indigenous wisdom about local ecosystems
- ☐ Co-creates local green learning programmes with Indigenous leaders to integrate the importance of traditional practices in fostering sustainability (e.g. biodiversity preservation, living in harmony with nature, meeting the needs of future generations)
- ☐ Co-develops a citizen science programme in partnership with Indigenous organizations and research institutions where community members document and observe seasonal changes in relation to indicators based on Indigenous knowledge (e.g. plant blooming, animal behaviour)
- ☐ Develops equitable, culturally-relevant, mutually-beneficial partnerships with Indigenous networks to promote climate and sustainability action, centring dialogue, trust-building, joint ownership, and respect for Indigenous rights
- ☐ Facilitates cultural knowledge exchanges with Indigenous and other change agent groups to share knowledge and practices related to climate adaptation and resilience building through Indigenous worldviews
- ☐ Hosts community collaborative learning activities where members of Indigenous communities and change agents co-create climate adaptation and resilience building initiatives
- ☐ Invites Indigenous elders to speak at co-organized local community events on living sustainably and taking climate action
- ☐ Provides financial and/or in-kind support for Indigenous-led community events on sustainability and climate action
- ☐ Provides financial support for Indigenous language preservation programmes to ensure that traditional knowledge about the environment, climate and sustainability is passed down through linguistic channels
- ☐ Partners with local Indigenous organizations and communities to monitor, evaluate, and report on green learning progress and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government worked with youth organizations to co-create learning programmes that build youth climate and sustainability leadership?

- ☐ Creates a programme where young people explore environment and sustainability topics through media and arts (e.g. podcasts, vlogs, documentaries, storytelling, poetry, song, photography)
- ☐ Creates youth assemblies or commissions which design, implement and monitor policies and programmes related to lifelong learning to green communities
- ☐ Establishes or supports intersectional intergenerational mentoring programmes where young people learn with and from others about protecting local ecosystems and biodiversity
- ☐ Develops a peer mentoring programme in which local young people are connected with others in the city and beyond to develop solutions to green their communities
- ☐ Partners with youth organizations and local media outlets on news programmes where youth discuss ways viewers/listeners can motivate others to be more sustainable (e.g. adopt renewable energy, make environmentally-conscious food choices and engage with political leaders on climate issues)
- ☐ Establishes a local Youth Environmental Leadership Academy where young people network with experts and participate in capacity-building opportunities to create youth-led environmental initiatives
- ☐ Organizes an annual or monthly youth forum to foster exchanges on environmental and sustainability action
- ☐ Creates a youth festival that utilizes participatory methods to bridge the gap between knowledge and action on the environment, climate and sustainability
- ☐ Supports youth-led workshops and online courses on the environment, climate and sustainability action
- ☐ Creates opportunities for youth from diverse backgrounds to discuss, plan and implement local learning initiatives to green communities
- ☐ Supports local youth participation in international environmental initiatives and conferences
- ☐ Partners with local youth organizations to monitor, evaluate, and report on green learning progress and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government co-created or supported learning programmes to build the leadership of women and girls in climate and sustainability action?

Example actions:

- ☐ Ensures that committees tasked with developing the strategy are gender balanced
- ☐ Creates a gender-sensitive local green education strategy that comprehensively considers how to work with and support women as change agents for the environment, climate and sustainability action
- ☐ Develops a professional development workshop for municipal staff that improves understandings of how climate change-related threats intersect with threats to women's safety, health, access to education, information and livelihoods
- ☐ Organizes gender-sensitive citizens' forums where residents co-plan green learning initiatives with policy-makers and key stakeholders
- ☐ Creates partnerships with women's organizations to develop programmes that build the capacity of young women to advocate for policies that centre climate justice
- ☐ Develops an intersectional programme that connects experienced female leaders with younger generations from diverse backgrounds to exchange knowledge on environment and sustainability action
- ☐ Hosts seminars with local, national and international experts about the importance of gender-sensitive approaches to green learning for key local stakeholders, including change agents
- ☐ Provides learning resources to support women-owned businesses to take environmental actions that promote equality, fairness and justice
- ☐ Identifies and pursues national and international opportunities to engage with and learn from women climate leaders (e.g. the C40 Cities Women4Climate Mentorship Programme)
- ☐ Partners with local women's organizations to monitor, evaluate, and report on green learning progress and showcase success of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government co-created or supported learning programmes to build the leadership of older people in climate and sustainability action?

Check the boxes for any actions your community is taking:

- ☐ Works with media outlets that are followed by older individuals to implement a comprehensive outreach campaign that promotes local environmental and sustainability actions that older people from diverse walks of life can carry out
- ☐ Provides local government staff with training on how environmental learning initiatives can meet the diverse accessibility needs of older generations in collaboration with civil society groups and local associations that work with older people
- ☐ Partners with care homes, local social clubs, NGOs, educational institutions and CLCs on programmes that build the capacity of older people to act as change agents for environmental action, through public talks, workshops and local events
- ☐ Creates Universities of the Third Age to promote intergenerational dialogue and learning for environmental and sustainability action
- ☐ Develops intergenerational learning programmes to preserve intangible cultural heritage and promote climate and sustainability action in communities
- ☐ Creates an intergenerational learning programme that views older people as both learners and instructors for environmental and sustainability action in collaboration with local CLCs, educational institutions or civil society organizations
- ☐ Hosts a town hall where older people provide historical insights into locally-appropriate environmental and sustainability action
- ☐ Organizes a public art exhibition with art from older people that illustrates traditional wisdom on environmental and sustainability action
- ☐ Partners with organizations that provide green learning opportunities to older people to monitor, evaluate, and report on green learning progress and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government co-created or supported learning programmes to build the leadership of artists in environmental and sustainability action?

Check the boxes for any actions your community is taking:

- ☐ Develops partnerships between culture and leisure departments and art galleries that support artists working to raise awareness around environmental and sustainability action
- ☐ Integrates arts-based projects that explore humanity's connections with nature into municipality-led green learning opportunities
- ☐ Creates dedicated public places that give artists a platform to share work that raises awareness around invasive species
- ☐ Commissions climate art exhibits and creates festivals to explore the disparity of impacts of climate change between those with different levels of power
- ☐ Invites citizens to support the creation of local climate-focused art by donating old belongings via government websites, social media accounts, newsletters and public announcements
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Use this space to brainstorm actions to co-create or support green learning in community places (e.g. markets, hospitals) and/or with other types of change agents (e.g. athletes, influencers).

4) Everyday places

Has your local government created family-friendly learning opportunities for greening communities?

Check the boxes for any actions your community is taking:

- ☐ Creates family-focused exhibits on pollution and biodiversity loss in municipal libraries, museums and community centres
- ☐ Creates public service announcements that instruct people on how to discuss concerns about environmental and sustainability issues with their family and friends
- ☐ Creates workshops at community centres to support family members to plan and implement climate adaptation and mitigation strategies in their homes
- ☐ Creates a town hall series to instruct family and friends about planning for different types of extreme weather and climate disasters
- ☐ Establishes an annual green learning festival that empowers families to take climate and sustainability action through experiential and inquiry-based learning activities
- ☐ Distributes learning resources to the community with tips about how parents and caregivers can engage in intergenerational dialogues with children about climate change or other environmental issues
- ☐ Creates locally appropriate resources to support families to make informed decisions about purchasing renewable energies for heating and cooling their homes
- ☐ Partners with local markets or grocery stores to create signage that helps families make more environmentally-conscious food choices
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government created and implemented at least one workplace-based green learning programme?

Check the boxes for any actions your community is taking:

- ☐ Co-develops a workplace training programme with a local TVET institution to build employee capacity to green local businesses through policies and practices
- ☐ Creates environmental and sustainability learning programmes to support young entrepreneurs to green their workplaces
- ☐ Collaborates with trade unions to develop green skills through inquiry-based experiential learning opportunities for members to green their workplaces
- ☐ Creates green learning workshops that build local business capacity to strategically plan in relation to circular economies
- ☐ Partners with business associations on a brown bag luncheon series to build local capacity to develop green skills, green jobs and green businesses
- ☐ Offers online professional development courses that use action learning to empower employees to advocate for environmental-responsible practices in the workplace
- ☐ Disseminates learning resources with tips to support local employers to create emergency response plans for different types of climate and related natural disasters
- ☐ Partners with local employers to monitor, evaluate, and report on green learning progress and showcase success of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government supported an existing or built a new peer learning network to foster learning for greening communities?

Check the boxes for any actions your community is taking:

- ☐ Facilitates opportunities for green learning through informal governance networks by providing resources, sharing expertise and/or institutional support with an existing green learning network
- ☐ Organizes a series of workshops about how to align network activities with the strategy, explaining the limitations of individual action and presenting opportunities for political influence
- ☐ Establishes or uses an existing online platform to allow green learning network members to exchange knowledge about how to advance lifelong learning to green communities in different contexts
- ☐ Arranges for experts to present to the network about locally-appropriate strategies to mitigate and adapt to climate change
- ☐ Organizes brown bag luncheon series for network members to explore avenues for collaboration to advance green learning at the local level
- ☐ Disseminates communications (e.g. using print media, social media channels, community event booths) that share how the network is contributing to greening the community with tips for how others can achieve similar impacts
- ☐ Partners with local green learning networks to monitor, evaluate, and report on progress and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government created peer learning opportunities to build community capacity for climate and sustainability action?

Example actions:

- ☐ Develops a peer mentoring programme that connects local stakeholders with those at national and international levels to build public resilience against climate change misinformation
- ☐ Organizes peer learning cafés for informal exchanges among different types of stakeholders, including change agents, on promoting the use of sustainable transportation within the local community
- ☐ Exchanges effective practices for implementing research-informed responses to climate change and its impacts with other municipalities
- ☐ Shares your municipality's efforts to green communities through lifelong learning by participating in local, national, regional and/or international city networks
- ☐ Presents at conferences and networking events to share how your municipality is greening the community through lifelong learning
- ☐ Exchanges lessons learned with other municipalities on effective practices to strengthen local climate assemblies
- ☐ Creates infrastructure to monitor, evaluate, and report on green peer learning programme progress and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Use this space to brainstorm actions to co-create or support green learning in everyday places.

5) Natural places

Has your local government created green learning opportunities in at least one natural public place that is easily accessible to all community members?

Check the boxes for any actions your community is taking:

- ☐ Recruits volunteers to clean-up local natural and public places (i.e. parks, forests, fields, beaches etc.) by removing invasive plant species and adding native plant species, to support collective learning about local ecosystems and biodiversity
- ☐ Provides active learning opportunities by recruiting community members to create wildlife corridors and green tunnels that decrease wildlife habitat fragmentation and improve biodiversity
- ☐ Establishes a botanical garden devoted to native plants and provides interpretive tour opportunities for school children to learn about local conservation efforts
- ☐ Provides tours of local natural places that allow diverse groups of change agents to learn about local climate challenges and solutions
- ☐ Creates an ecovillage that is open for free demonstration and learning
- ☐ Adds interpretive signage to local natural places to explain how people can act to preserve unique local ecological and geological features
- ☐ Establishes community gardens and organic farms to provide local learning and ecotourism opportunities
- ☐ Creates a green learning partnership with a nearby UNESCO site, state park, national park or botanical garden
- ☐ Creates infrastructure to monitor, evaluate, and report on natural and public place contributions to greening communities through learning and showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Use this space to brainstorm actions to co-create or support green learning in everyday places.

6) Digital places

Has your local government implemented a digital public awareness campaign to strengthen local community member capacity to take climate and sustainability action?

Check the boxes for any actions your community is taking:

- ☐ Creates strategic, local public campaigns on social media to build public resilience against misinformation about climate change and other environmental issues
- ☐ Develops tailored outreach campaigns on social media to ensure members of traditionally under-represented groups (e.g. youth, women, migrants, refugees, older learners, people with a learning disability) are aware of your local environmental assembly's work
- ☐ Publicizes results of local green learning initiatives, with success stories and learner testimonies, via the local government's social media channels to increase transparency and encourage public participation in environmental and sustainability action
- ☐ Creates a local environmental and sustainability action challenge through social media platforms
- ☐ Circulates recommendations from participatory environmental governance bodies through print and social media campaigns
- ☐ Creates a social media campaign where local scientists share their research on how to climate-proof infrastructure
- ☐ Creates infrastructure to monitor, evaluate, and report on public awareness campaigns to green communities to showcase successes of the strategy
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Has your local government created locally appropriate digital learning environments to green communities?

Check the boxes for any actions your community is taking:

- ☐ Develops an online course to empower community members to take locally appropriate environmental and sustainability action
- ☐ Creates virtual or augmented reality exhibits to tour unique local ecosystems in partnership with local museums and higher education institutions
- ☐ Creates a digital games or other forms of gamification to support citizens to take locally relevant environmental and sustainability actions
- ☐ Develops a virtual map where citizens contribute art (e.g. stories, photographs, videos, digital paintings) that explores how climate is impacting their favourite local places
- ☐ Partners with an existing online repository to create locally appropriate green learning resources
- ☐ Creates a citizen science challenge where community members track changes in their environmental and carbon footprints as they adopt more sustainable lifestyles
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Use this space to brainstorm actions to co-create or support green learning in everyday places.

7) Other learning places

If there are learning places in your community that are not covered by the places in the guidance, use this space to brainstorm actions to co-create or support green learning in those places.

Full assessment – Part B: Assessing your green learning activities

In Part B, you will tally the actions your community is already undertaking to green through learning alongside the actions you plan to include in your action plan. After completing Part B, you should have an idea of your community's current 'green community' status, as well as your community's potential to grow its ability to further green through lifelong learning.

Step 1. **Review the actions in the table below:** Using your answers to the checklist items in Section A, mark an 'X' in the 'currently in place or in progress' column if 1) your community currently has the measure in place or 2) if your community is in the process of being developed. For example, if you are currently creating a municipal strategy to green your community through lifelong learning, you would place an 'X' in the column. If you are unsure if your community meets the measure's requirements, Section B provides examples of the types of actions that would allow you to place an 'X' in the column.

You may not know the answers to the questions in the table. Collecting the answers to the tool might be part of the background research described in Section 5, Step 1 and stakeholder engagement described in Section 5, Step 2.

Please note that the actions are ordered according to the learning places described in Section 3 of the guidance. Within each learning place, the actions are presented in order of importance, starting with the most fundamental.

In addition, eleven of the measures are marked with a star (*). These measures are essential to have in place for your community to be considered a community that is greening through learning. In order to be considered a 'Leader', you must have at least six essential measures in place or in progress in your community. Note that the ideas behind the essential actions are what is important for this process. These actions should be flexible enough that your community should be able to adapt the actions to your local context if needed.

Step 2. **Develop your own actions:** The actions provided in the tool below are not intended to be exhaustive. If you can think of more appropriate actions for your community, enter them into the blank rows provided in the table.

Step 3. **Add up the number of actions** that are currently in place or in progress in your community and put the number in the total row at the bottom.

Step 4. **Compare the total number of actions** to the cut offs provided to determine whether your community is a 'Learner' or a 'Leader' of greening communities through lifelong learning.

Step 5. **If you are using the tool to develop your strategy:** Integrate the actions you selected into your strategy, ensuring they link to your overall vision and objectives. It is recommended that your municipality prioritizes essential actions before less essential areas.

Learning place	Currently in place or In progress	Include in strategy	Actions
1. Municipal places			* Adopt, fund and implement at least one municipal policy, plan and/or strategy to green your community through lifelong learning.
			* Create and implement at least one programme to strengthen local policy-maker capacity to take environmental and sustainability action in the community.
			* Lead the implementation of at least one municipality-wide programme to green communities through lifelong learning for a range of learners (e.g. cautious and disengaged segments, young people, women and girls).
			* Secure financial and other resources to support the development and implementation of green learning initiatives for a range of learners.
			* Provide resources to support the development and implementation of green learning initiatives for a range of learners in the community.
			Implement participatory governance on environmental, climate and sustainability.
			Communicate with the public about how local infrastructure improvements enable utilization of green capabilities.
2. Formal education places			* Lead the implementation of at least one green learning initiative with partners in a local formal education setting (in reference to at least one of the below categories of educational institution).
			Develop green learning partnerships with local ECCE providers.
			Develop green learning partnerships with the local primary and secondary school system.
			Develop green learning partnerships with local higher education institutions.
			Develop at least one green learning partnership with a local technical and vocational education and training institution.
			Develop at least one green learning partnership with a local agricultural school.
3. Community places			* Lead the implementation of at least one municipality-wide green learning initiative in a community place for a variety of learners and/or change agents.
			Work with **cultural institutions** (i.e. libraries, museums, art galleries, faith-based organizations) to co-create learning programmes that build their climate and sustainability leadership.
			Work with **Indigenous communities** and organizations to co-create learning programmes that build Indigenous climate and sustainability leadership.
			Work with **youth organizations** to co-create learning programmes that build youth climate and sustainability leadership.
			Co-create or support learning programmes to build the leadership of **women and girls** in climate and sustainability action.
			Co-create or support learning programmes to build the leadership of **older people** in climate and sustainability action.
			Co-create or support learning programmes to build the leadership of **artists** in climate and sustainability action.

Learning place	Currently in place or In progress	Include in strategy	Actions
4. Everyday places			* Create family-friendly learning opportunities for greening communities.
			Create and implement at least one workplace-based green learning programme.
			Support an existing, or build a new, peer learning network to foster learning for greening communities.
			Create peer learning opportunities to build community capacity for climate and sustainability action.
5. Natural places			* Create green learning opportunities in at least one natural place in the community that is easily accessible to all community members.
6. Digital places			* Implement digital public awareness campaigns to strengthen local community member capacity to take climate and sustainability action.
			* Create locally appropriate digital learning environments to green communities.
6. Other learning places			
Total number of measures			

Green community status

Our community currently has _____ essential measures in place, which means we are a:

- ☐ Greening Learner (0-5 checkmarks)
- ☐ Greening Leader (6-11 checkmarks)

When we implement our green learning strategy, our community will have _____ essential measures in place, which means we will be a:

- ☐ Greening Learner (0-5 checkmarks)
- ☐ Greening Leader (6-11 checkmarks)

ANNEX 2

Tools and templates

A2.1 Worksheet template – Mapping policies, plans and programmes

The purpose of this worksheet is to help organize information collected about relevant policies, plans and programmes as part of the background research for the green learning strategy. The information collected can support identifying strategic opportunities for aligning the green learning strategy with other important community priorities, policies, plans and programmes. The information collected can also be used to identify opportunities for partnerships in planning, creating and implementing the strategy.

Document name	Type of document	Description	Scope of policy, plan, programme	Relevance to greening education	Opportunities for strategic alignment	Potential for scale-up	Document author (contact and organization)	Opprtunities for partnerships	Notes

A2.2 Worksheet template – Mapping stakeholders

The purpose of this worksheet is to help organize the information collected about stakeholders as part of the background research for the green learning strategy. The information can support identifying strategic opportunities for alignment in partnerships.

Stakeholder name	Stakeholder type	Stakeholder descriptiond	Stakeholder mission	Greening education expertise	Opportunities for strategic alignment	Potential resources	Contact information	Opprtunities for partnerships	Notes

A2.3 Worksheet template – Mapping community needs and delivery capacity

The purpose of this worksheet is to assist with organizing information collected during the community needs assessment and delivery capacity mapping as part of the background research for the green learning strategy. Add your needs assessment questions to the template and then fill in the answers to the questions to find a path forward. It can be helpful to think about the who, where, how and what of green learning in your community as a starting point.

Question	What do the policies, plans or programme documents we collected say?	Which partners and stakeholders can we speak with about this?	Is there prior research on this? (e.g. polls, community needs assessments)	Does our community have any gaps in this area?	What strengths does our community bring to this area?	What strengths does our community bring to this area? How can we build the capacity or resources needed?
Who are the different types of learners in our community?						
How supportive of climate and sustainability action is the community in general? Are there specific groups that are more supportive? Less supportive?						
Where are the learning spaces in our community?						
What types of sustainability actions does our community need and want?						
What are the community's vision and priorities for greening through lifelong learning?						
Etc.						

A2.4 Worksheet template – Mapping possible actions

The purpose of this worksheet is to assist with identifying and prioritizing the types of actions to include in the action plan.

Action	WHO: Learner types	WHERE: Learning places	HOW: Learning approaches	WHAT: Green topics to be addressed by action	Alignment with community's vision and goals for green learning	Alignment of with current community attitudes	Feasibility of implementing the action	Potential for scaling-up the action in the community	Notes

A2.5 Plan template – Action plan

This template captures key elements of the action plan. It can be used as a project management tool to keep track of the progress being made to achieving each action's key milestones and the contact information for the different point people/organizations and partners and collaborators involved in the action. The template also includes spaces for each action's inputs, outputs, outcomes and impacts which can be linked to M&E of each action, as described in Section 5.2 Step 6.

Action	Status	Priority level	Start and end dates	Key milestones	Point person and organization	Resources required	Inputs	Outputs	Outcomes		Impacts		Notes
									Short term changes in knowledge, skills and attitudes	Medium-term changes in behaviour	Long-term shifts		

ANNEX 3

Members of the drafting group

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WORLD SCOUTING

Greening communities guidance

Lifelong learning for climate and sustainability action

To address the climate crisis and build green, resilient societies, climate change education must extend far beyond the classroom walls to non-formal and informal learning environments. To this end, a lifelong learning approach that engages individuals of all ages in climate action is needed in communities worldwide.

This guide supports the development, implementation and ongoing improvement of action-oriented, whole-community efforts to drive concrete climate action forward in diverse localities across the globe. It offers clear principles, minimum requirements and concrete actions for greening communities from a lifelong learning perspective in a wide range of contexts, from megacities to small rural villages. Exploring who can support greening communities through learning, where this can take place, what should be learned and how this can be achieved in practice, this publication provides practical guidance on developing a green learning strategy for communities and shares a series of useful planning resources.

This resource will therefore contribute in expanding and strengthening the creation of green communities around the world, in line with the main objectives of the Greening Communities Pillar of the Greening Education Partnership.

4 QUALITY EDUCATION

Sustainable Development Goals