

**SGP** The GEF  
Small Grants  
Programme



# Sustainable cities: for people and planet



# Sustainable cities: for people and planet

Over the past century, urbanization has reshaped our world: around 4.4 billion people live in cities today, or 56 percent of the global population, while in 1950 this figure was around 750 million, less than 30 percent of the then population. Projections indicate that this trend will continue, with nearly 70 percent of the world's population, or almost nine billion, residing in urban areas by 2050.<sup>1</sup>

This shift from rural to urban living has transformed the world's economic base and social structure. Cities have become economic powerhouses, responsible for 80 percent of global gross domestic product. Not only do they concentrate people, investments and resources, cities also promote opportunities for economic development, innovation and social interaction.

However, the rapid and largely unplanned expansion of cities has often prioritized immediate economic gains at the expense of sustainable urban development. As a result, many people who move from rural to urban areas in search of better opportunities and wellbeing may instead find themselves facing many challenges such as strained infrastructure, housing shortages, limited access to sanitation and clean water, lack of efficient public services, food insecurity, and social and economic inequalities driven by wealth concentration.

These challenges have particularly profound effects on the more than one billion people dwelling in slums and other informal urban settlements under precarious conditions, which exacerbate social tensions and conflicts. The urban poor also disproportionately endure the worst of environmental problems caused by rapid urbanization, such as ecosystem



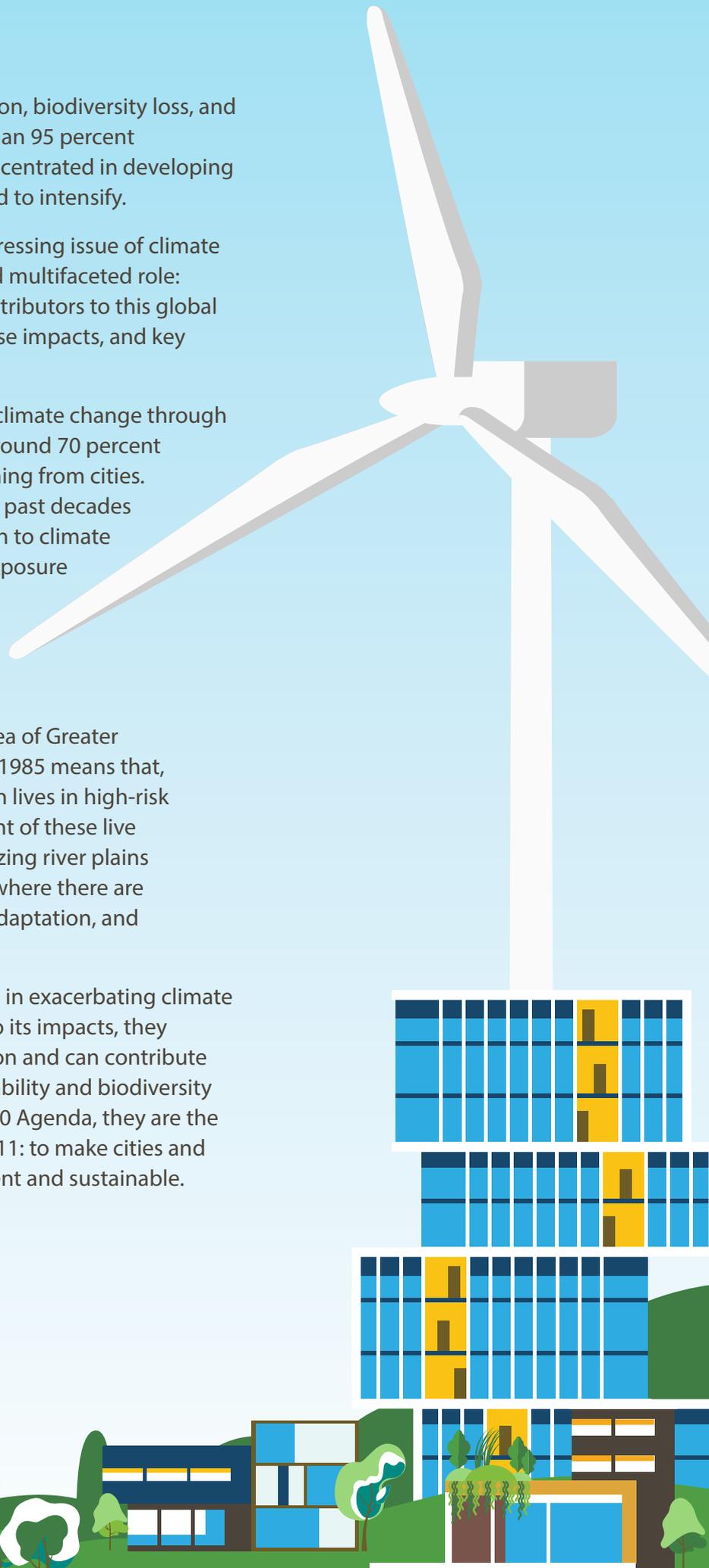
degradation, habitat destruction, pollution, biodiversity loss, and natural resource depletion. With more than 95 percent of projected future urban expansion concentrated in developing countries,<sup>2</sup> these challenges are expected to intensify.

Adding to this complex scenario is the pressing issue of climate change, in which cities play a pivotal and multifaceted role: they are at the same time significant contributors to this global crisis, particularly vulnerable to its adverse impacts, and key to effectively addressing it.

Rapid urbanization has been a driver of climate change through high urban energy consumption, with around 70 percent of global greenhouse gas emissions coming from cities. The scale and rate of urban expansion in past decades has not only amplified cities' contribution to climate change, but it has also increased their exposure to its impacts, especially sea level rise and more frequent and intense weather events.

For example, the urbanization of more than 76,000 km<sup>2</sup> – about 50 times the area of Greater London – in flood-prone locations since 1985 means that, today, a quarter of the global population lives in high-risk flood zones.<sup>4</sup> Moreover, almost 90 percent of these live in densely populated and rapidly urbanizing river plains and coastlines in developing countries, where there are fewer resources for climate mitigation, adaptation, and resilience strategies.

With cities playing such a significant role in exacerbating climate change while also being so vulnerable to its impacts, they have become key players in climate action and can contribute significantly to achieving global sustainability and biodiversity targets. Within the framework of the 2030 Agenda, they are the focus of Sustainable Development Goal 11: to make cities and human settlements inclusive, safe, resilient and sustainable.



# Sustainable urban solutions



Developing and implementing innovative solutions that foster sustainable urban planning to make cities inclusive, safe, resilient and sustainable is crucial to tackling not only climate change, but also biodiversity loss.

With urban areas more than doubling in size since 1992, rapid urbanization has played a key role in the unprecedented global decline of nature, with biological diversity within species, between species and of ecosystems dropping at rates never seen before in human history, and around one million animal and plant species threatened with extinction today, according to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). In cities, possible actions and pathways for tackling this biodiversity loss include the promotion of nature-based solutions; increasing access to urban services and a healthy urban environment for low-income communities; improving access to green spaces; sustainable production and consumption; and ecological connectivity within urban spaces, particularly with native species.<sup>5</sup>

This implies a paradigm shift in urban planning, one that embraces innovation, inclusion and sustainability to forge a future where cities are able not only to withstand the negative impacts of climate change and biodiversity loss, but also to actively contribute to a more environmentally conscious and resilient global community.

Despite often being hotspots of socio-economic and environmental problems, cities have the potential to lead to an efficient use of resources if they are built to be sustainable. The fact that urban areas concentrate people, investments and resources means efficient cities can offer lower costs for public services, such as water and sanitation, healthcare, education, and electricity, particularly in developing countries.

To make this happen within the complex context of cities, it is essential that local governments, civil society organizations (CSOs) and the private sector collaborate through innovative partnerships to develop bottom-up, locally led urban solutions for sustainable growth. CSOs are particularly important for sustainable urban transformation, as they represent the voices of the most vulnerable, raise awareness about environmental concerns, and can help influence political leadership.





# SGP's approach

The Global Environment Facility (GEF) Small Grants Programme (SGP), implemented by the United Nations Development Programme (UNDP), is at the forefront of supporting local communities in developing their own sustainable urban solutions. Currently active in 127 countries, including 37 Small Islands Developing States and 40 Least Developed Countries, SGP provides financial and technical support to CSOs and community-based organizations at the local level to drive initiatives that address global environmental issues while improving livelihoods.

SGP takes an integrated management approach to address urbanization challenges, focusing on improving the capacities of key service providers at the local level to promote community-driven and integrated solutions to address low-emission and resilient urban development. SGP supports urban solutions that target vulnerable people and communities in urban contexts, including Indigenous Peoples, women, youth, and persons with disabilities.

Key areas of focus for SGP's work on sustainable cities include clean energy access and sustainable transport, urban waste and chemical management, urban green space management and biodiversity conservation, land use planning, climate action and disaster risk reduction, capacity development, policy dialogues, education, awareness and advocacy, among others. This publication showcases examples of SGP projects that have successfully managed to address key urban environmental issues across these multiple focal areas.



# Recycling metal and electronic waste in Saint John's, Antigua and Barbuda



SPG Antigua Barbuda

Antigua and Barbuda, a Small Island Developing State in the Caribbean, suffers from the indiscriminate disposal and unsafe management of waste, including electronics and other products made with hazardous chemicals and persistent organic pollutants. Without specialized treatment and disposal facilities, hazardous waste is commonly burned to extract valuable metal and recyclables. This releases dangerous fumes and other pollutants, which contaminate soil, air and water, directly affecting the health of humans and the environment.

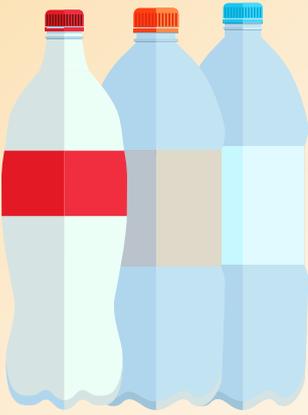
In the capital city of Saint John's, SGP partnered with Will's Recycling, a local business that purchases and exports scrap metal diverted from the only landfill on the island of Antigua, which is already over its designed capacity. Will's Recycling worked with CSO Zero Waste Antigua and Barbuda, the National Solid Waste Management Authority, and the Ministry of Tourism and Investment, to identify how to reuse different types of metal and electronic waste, thus preventing it from reaching the landfill and reducing the impact of burning.

The project started in 2018 with an extensive round of consultations with a wide range of stakeholders. Next, waste pickers were interviewed and, based on their feedback, Will's Recycling purchased a granulator that can separate 30 tonnes of copper wire from its plastic insulation every year, making both materials fit for re-use and eliminating one of the needs for burning electronic waste. The project hired a supervisor to manage operations at the wire-stripping centre that houses the granulator, where landfill waste pickers can process their recyclable wire scrap under cleaner and healthier work conditions, while benefiting from increased revenue for better quality materials. The company also purchased a gas recovery machine to extract the gas from air conditioning units, and implemented a public outreach campaign to raise awareness and educate the public about the importance of environmentally sound waste management practices.

This project directly served 240 people and contributed to improving air, soil and water quality in communities near the landfill site. Besides generating direct and indirect employment, it also provided economic benefits for people who can sell metal waste to the wire-stripping centre instead of illegally dumping it in the landfill.

Much of the project's success has been due to strategic partnerships with key organizations and the extensive stakeholder engagement process. This participatory and collective approach helped facilitate implementation and improve the sustainability of the project in the long term, as it ensured stakeholder involvement and empowerment and project ownership, and reduced the burden of implementation on any one stakeholder. Since the project was concluded in 2019, Will's Recycling and several partners have continued working to influence policy makers in Antigua and Barbuda to shift towards sound waste management systems and practices, mainly through consultations with government and non-governmental agencies and participation in high-level technical waste management workshops, training and conferences.





## Improving quality of life in vulnerable communities in Corrientes, Argentina

Corrientes is a city in north-east Argentina with a population of around 350,000, the capital and socio-economic centre of the province after which it is named. In the Independencia neighbourhood, La Chola is a vulnerable settlement where around 270 low-income families live without access to basic services such as clean water and sanitation, waste management or electricity. In 2019, SGP supported the *Fundación Propuestas para la Iniciativa Solidaria* (Foundation Proposals for the Solidarity Initiative) to launch a project to improve the quality of life and environmental conditions in La Chola by building adequate sanitary modules with solar water heaters, using sustainable and recycled materials.

The project installed a recycling station to convert waste such as wood and plastic bottles into construction materials, including eco bricks made up of used plastic bottles filled with unrecyclable plastic waste. The project also built four sanitary modules of around 10 m<sup>2</sup> to serve the community, each with a kitchen and bathroom to replace the existing latrines. Equipped with solar water heaters, the modules can eliminate parasites and other pathogens from water, improving personal hygiene and cooking conditions, and providing hot water on a permanent basis.

The project trained around 50 residents on how to recycle waste and reuse materials to improve their homes. This has contributed to their livelihoods by giving them access to cheap and clean building materials, by reducing the cost of improving their homes, and in some cases providing income from producing and selling the materials. La Chola and surrounding neighbourhoods also benefited from better waste management, which improved local environmental conditions and provided economic savings related to household waste removal and the purchase and transportation of conventional construction materials. Moreover, the incorporation of solar panels and water heaters made it possible to satisfy the community's lighting, heating and cooking needs, improving not only quality of life, but also energy efficiency.

"Having a bathroom and kitchen for me and my family is a dream because the little money my son earns is not enough to do this ourselves," said Alicia Carrizo, a resident of La Chola who had a sanitary module installed in her home. "All this time I had to use the bathroom of my other daughter who lives next door, and I had to cook outside because we only have one room and barely any furniture fits in there."

After the project ended in 2021, the *Fundación* replicated it in several other vulnerable neighbourhoods around Corrientes, in collaboration with the municipal and provincial governments. In 2024, the organization plans to expand the project through a partnership with the Bernardino Rivadavia Technical School in the city of Corrientes, so it can be implemented as a socio-environmental initiative led by students in construction and electromechanics to produce solar panels and water heaters.



**"Now we have water so we can shower in winter in a warmer place and stop borrowing the neighbours' bathroom. And being able to cook and wash even if it rains, no need to get water from the neighbour with a hose anymore. With this module, we can live better."**

– Alicia Carrizo, La Chola resident



# Making nature accessible to persons with disabilities in Thimphu, Bhutan



SGP Bhutan



SGP Bhutan

Despite being renowned for its rich biodiversity, Bhutan still lacks inclusive access to nature for persons with disabilities (PwDs). Research shows that contact with nature has significant health and well-being benefits at both personal and community levels. However, urban playgrounds and parks are often not user-friendly in terms of accessibility, facilities and information for persons with disabilities.

In 2021, SGP supported the Zhenphen Group, a youth community-based organization for PwDs, to launch the Nature for All project, in collaboration with the National Biodiversity Centre. This initiative aimed to allow PwDs to experience nature like anyone else through universal design elements, in alignment with the global #NatureForAll movement. The focus was on improving the accessibility and inclusivity of the Royal Botanical Garden (RBG) in Serbithang, a popular retreat for Thimphu residents that still posed accessibility challenges for PwDs.

By actively involving over 15 PwDs who are members of the Zhenphen Group in the project planning and implementation stages, the project equipped the RBG with accessible toilets and disability-friendly footpaths, including ramps, railings, and tactile flooring.

“Through the establishment of this inclusive nature garden, the Zhenphen Group aims to set a positive example for Bhutan and serve as a catalyst for societal change,” explained Mr. Sonam, Chairman of the Zhenphen Group. “By providing a space where PwDs can freely engage with nature, the project will not only address the existing accessibility gaps, but also foster a sense of belonging and empowerment among individuals who have often been marginalized.”

The project also installed braille interpretation boards and made sign-language videos available to enhance visitors’ understanding of the diverse flora and fauna found in the garden. Moreover, the project fostered environmental awareness among PwDs, engaging them in bird-watching programs as part of a citizen science effort and training them in the use of musical instruments so they could compose a nature song.

Advocacy efforts during White Cane Day and International Disability Day highlighted the project's commitment to disability rights, while fundraising events reinforce the project's impact and generated funds to support more activities to improve the lives of PwDs. Since the Zhenphen Group completed the project in 2023, RBG has seen an increase in the number of annual visitors, and the improved facilities and infrastructure continue to actively serve both PwDs and the general public.

“RBG was established with a vision to provide recreational space for all the urban dwellers of Thimphu, but somehow the initial concept missed the needs of PwDs,” said Mani Prasad Nairola, a former biodiversity officer at the National Biodiversity Centre. “With SGP’s support, the garden is now accessible to everyone, including PwDs. It has now realized its vision of providing benefits of nature for all.”

**“I miss going out and being in nature. When I am feeling low and depressed, I feel a lot better when I am out in nature. There are parks in Thimphu, but they are inaccessible for wheelchairs, so it has been a challenge.”**

– Phurba Wangchuk, a wheelchair user who lives in the capital Thimphu.



# Mobilizing youth through sustainable urban transport in Fayoum, Egypt

Cycling was once a common mode of transport in Egypt before being replaced by cars and motorcycles. Now, young urban residents have started to turn to cycling again, but traffic, poor air quality, and an absence of separate cycling lanes still make bicycles very rare on the busy city streets. Transport is one of Egypt's largest sources of greenhouse gas emissions and air pollution, and with millions of cars crowding the streets, improving air quality is at the forefront of the country's environmental priorities.

However, developing effective strategies and messaging to encourage people to change their behaviour and choose bikes over motorized transport poses a significant challenge. Further barriers that need to be overcome are affordability in poor communities, often non-optimal infrastructure and lack of coordination.

Since 1998, SGP has funded 38 projects that have distributed more than 15,000 bikes across Egypt through a revolving fund mechanism, including in pioneering cooperation with universities to encourage bicycle use among students. To further increase access by university students to this sustainable mode of transport, in 2019 SGP supported the Environmental Protection Association in Fayoum to launch a bike-sharing program for students and staff at Fayoum University, through a unique partnership between the government, private sector, civil society, academia and the start-up Baddel, which developed a tailored smartphone app for the initiative.

The Fayoum Governorate and the Fayoum City Council installed three bike stations outside university grounds, near strategic locations such as bus stations, to ease and accelerate the commute for students coming from outside the city. Meanwhile, the university agreed to maintain the bicycles and infrastructure on its grounds. Eight locking stations were installed on campus, three of which are located near female dormitories.

The opening ceremony of the bike-sharing programme happened during University Girls' Week, when more than 3,500 female students from 30 Egyptian universities were hosted by Fayoum University to take part in various cultural and sport activities. After the ceremony, many of these universities directly expressed their interest in replicating the bike-sharing model. The project also organized several activities and events to raise awareness among thousands of students about sustainable transport and climate change.

The bike-sharing operation system is designed to be cost effective and to eventually cover the operation and maintenance costs with revenues generated from membership fees and support from the university and local government authorities. Until then, it is supported by another grant from the Dutch Embassy in Egypt to continue the operation and support the system's handover to the University of Fayoum.

Bike-sharing schemes have been showing promising results as key urban strategies for sustainable transport that can significantly reduce greenhouse gas emissions. This unique partnership initiative pioneered in Fayoum provides a model that has made its mark in Egypt and can be replicated in other cities across the country.



SGP Egypt



SGP Egypt

**“We frequently ride public transport, but not everyone here belongs to a high social class to afford these expenses, so this bike project will facilitate many things for everyone here.”**

– **Passant Ibrahim, student at Fayoum University**



# Making buildings more energy-efficient through waste management in Aksukent, Kazakhstan



Aksukent, a rapidly growing town in southern Kazakhstan, is home to 78,000 people, who face high unemployment due to limited job opportunities and several environmental challenges such as rocky soil, limited vegetation and infrequent irrigation, as the main water canal from the Aksu River has been diverted to irrigate fields on the town outskirts. A further significant problem in this urban area has been the increase in spontaneous landfills for solid household waste since the closure of four out of nine waste-disposal sites.

In 2019, SGP supported the Origins of Good Public Association to address this issue in multi-apartment residential buildings. The organization started a project in Aksukent Settlement's Condominium LC to implement a scheme for the separate collection and disposal of solid household waste. Besides directly tackling the waste problem, the project aimed to generate funds for residents' needs and communal purposes, particularly the modernization of the multi-apartment residential buildings to make them more energy efficient.

The core concept was to motivate residents to separate their household waste through an eco-cashback system that provides direct payments to the bank accounts of building administrations, which can then use these funds for various initiatives, such as yard landscaping or building repairs. As a result, the project actively engages and motivates residents, offering them the opportunity to earn resources for their building from managing their waste.

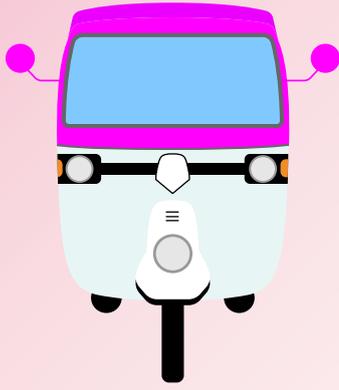
The project engaged more than 280 residents in eight apartment buildings, where it installed containers for separate waste collection at five demonstration sites. The buildings administrations sold the solid waste collected at these sites as secondary raw materials for processing, generating income to support various communal needs, including the creation of an Energy Saving Fund. This fund served to renovate 123 apartments with energy-efficient equipment, such as LED lighting and cables. It also replaced outdated incandescent and mercury-containing lights at the building entrances with modern LED ones equipped with motion sensors, to reduce energy consumption.

Over one year of implementation, the project prevented 26,280 kg of solid waste from entering landfills and reduced CO<sub>2</sub> emissions by 26 tonnes, directly benefiting 1,453 people, including 600 women and 350 youth. Throughout the project, information about the activities was widely disseminated through social and mass media, while an extensive resident outreach campaign informed and engaged the community about the benefits of energy-efficient technologies and waste management. This initiative not only addressed the environmental challenges in Aksukent, but also empowered local communities by providing tangible incentives for promoting better waste management and energy-efficient practices.

After its conclusion, the project earned its director Vladislav Golyarko the Dmitry Tereshkevich Youth Environmental Prize for 2020. Golyarko also won Kazakhstan's first environmental reality show, EcoMeken. This helped attract international attention, prompting offers of cooperation from neighbouring countries. Within Kazakhstan, the model has already been replicated in the cities of Uralsk, Kyzylorda, Almaty and Astana. Currently, the project is being digitized to enable people to dispose of waste and receive payment through a mobile application.

**“Waste is a part of the economy, not the garbage dump.”**

– Vladislav Golyarko, project director at Origins of Good Public Association



## Promoting a women-led fair energy transition in Umán, Mexico

The *Guerreras Fénix de Umán* (Phoenix Warrior Women of Umán) are a cooperative of 40 women who work as motorcycle taxi drivers in the city of that name, in the Mexican state of Yucatán. The organization was created to bring together women who were previously excluded from the transportation sector, which tends to be dominated by men. Established as a cooperative, it generates decent work opportunities for women who, to take care of their families, urgently need the benefits that come with a formal job, such as health insurance. It is hard to miss their well-maintained and easily identifiable three-wheeled vehicles, painted in white and pink, with their licensed female drivers dressed in neat uniforms, ready to provide an inclusive and safe transportation system for women in their city.

After fighting against gender discrimination, now the *Guerreras Fénix* are also tackling climate change: in July 2023, the cooperative launched a pilot project with support from SGP to upgrade their fleet of motorcycle taxis to electric vehicles. “For us, the first reason to make the transition to clean energy is the environment, it is a way for us as women to tackle climate change,” said Verónica Ocaña Domínguez, president of the cooperative. “The second reason is that this transition must be economically profitable, with savings in gasoline, oil and maintenance costs.”

The main goals of the pilot project were to develop a prototype of an electric motorcycle taxi and train the *Guerreras* to convert their gas engines into electric engines charged by solar power. “This project excites me because of everything we are going to learn,” said Karen Aldape, who is in charge of mechanical maintenance. “I have always really liked mechanics, and now learning this new technology motivates me. While preparing for the project, I realized that handling electrical parts is easier than mechanical parts, so I am sure it will be a great success.”

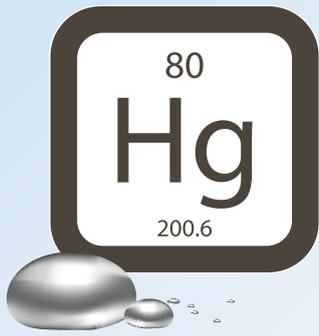
In collaboration with the Model University of Mérida and the City Council of Umán, by the end of 2023 the women had successfully developed and tested a prototype electric engine, which uses lithium batteries that can last an entire day of work, and which allows enough space for people with disabilities to take wheelchairs in the taxi. According to the cooperative’s estimates, the electric engine tested could save the women drivers around US\$5,000 per year.

In early 2024, the *Guerreras Fénix de Umán* were preparing for an exchange trip to Cuba, where they were going to share their newly gained knowledge and learn from the experience of Cuban women who participated in a similar project supported by SGP. After the pilot phase of the project ends in 2024, the women want to start implementing the second phase of the project, in which they plan to convert their entire fleet of motorcycle taxis to electric engines and share their experience with other stakeholders involved in the renewable energy sector, especially other women.



**“As women, we want to be the pioneers of the energy transition and inspire other women in Mexico to innovate in the field of clean energy.”**

– Verónica Ocaña Domínguez,  
President of *Guerreras Fénix de Umán*



## Eliminating mercury from the health sector in Bharatpur, Nepal



Chemicals are an integral part of everyday life, especially in urban centres where they make a significant contribution to local economies. However, their sound management is essential to avoid risks to human health and the environment, particularly regarding chemicals that are highly toxic, such as persistent organic pollutants, and mercury (a persistent inorganic pollutant). These chemicals remain in the environment for a long time and can travel over large distances through air, migratory species and water currents. As a result, they contaminate ecosystems and are absorbed by both wildlife and humans.

In Nepal, the Center for Public Health and Environmental Development (CEPHED) has been working to reduce and control the use of chemicals that are particularly harmful to human and environmental health. For the past 10 years, CEPHED has been engaging in research, awareness-raising, capacity-building and advocacy to reduce, and eventually phase out completely, the use of harmful chemicals in Nepal's health sector. "We started a campaign to make the health sector in Nepal mercury free," said Ram Charitra Sah, CEPHED's executive director.

In 2017, the organization launched a project with support from SGP to address the medical waste management problem in Bharatpur. The city is known for its advanced healthcare system, and is also located just north of Chitwan National Park, a renowned World Heritage Site home to many endangered species. Without a proper waste management scheme, more than 964 tonnes of medical waste were either burned or dumped on the banks of the Narayani River each year. Both methods resulted in mercury and persistent organic pollutants contaminating the waters and fish of the river and, consequently, the local people.

The project helped create a central waste treatment facility and trained more than 1,700 local healthcare professionals to use it. It also supported the development of a model waste management system in Manakamana Hospital, where doctors, nurses and other workers used to suffer effects from the unmanaged medical waste containing mercury.

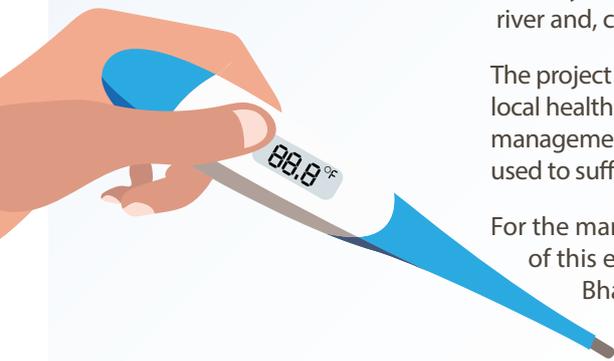
For the manager of Green Nepal City Waste Management, Uttam Aryal, the results of this experience are clear: Instead of mixing all waste together, hospitals in Bharatpur now have an on-site system to separate and contain different kinds of waste, which makes the waste management done by his organization much easier and safer.

To scale up the successful model and have larger impacts beyond the city, CEPHED also succeeded in influencing several related national policies. In 2019, Nepal banned the use of mercury dental amalgam, a liquid applied to fill cavities, in children as well as pregnant or breast-feeding women. It was also agreed that its use would be phased out for all other groups of people within five years. Meanwhile, all hospitals in Bharatpur decided to stop using mercury, making it the first city free of medical mercury in Nepal.

The model waste management system developed at Manakamana Hospital has been replicated by other institutions, while mercury-free healthcare facilities and dental clinics are multiplying spontaneously throughout the country. Another significant improvement in the country is a requirement for universities to revise their dental curriculum to reduce and eventually ban the use of mercury, promoting a shift to alternative materials. The results achieved by CEPHED have been recognized as it won the 2021 WWF Nepal Conservation Awards and the 2023 Future Policy Award from the World Future Council.

**"We have completely shifted to mercury-free dentistry practice in our hospital, and also suggest all other dental doctors and hospitals to follow suit and use alternative restorative materials."**

– Dr. Usha Kharel, dentist





# Conserving urban wetlands in Colombo, Sri Lanka

The Kolonnawa wetlands are one of the last remaining havens for wildlife around Colombo, the capital of Sri Lanka. Part of the Colombo marsh complex, which also includes the Kotte and Heen marsh, this urban wetland is an important habitat for several bird species and for the endangered fishing cat, *Prionailurus viverrinus*, the largest terrestrial predator in the area. It also provides essential ecosystem services for the 5.6 million people living in the Colombo metropolitan area, including flood control, water and air purification, and carbon sequestration. Moreover, it supports local livelihoods by supplying water for agriculture and cattle rearing, freshwater fish, and firewood.

These wetlands have been shrinking due to urban development, leaving Kolonnawa now surrounded by highly populated and industrialized sites. Improper waste disposal, pollution, deforestation, agricultural run-off, over-extraction of water for irrigation, unsustainable fishing practices, unauthorized encroachment, and land reclamation have been rapidly degrading the marsh, which reduces its capacity to mitigate floods and puts neighbouring communities at risk.

From 2018 to 2021, SGP supported the non-profit Emotional Intelligence and Life Skills Training Team to implement a project that engaged local youth to safeguard the Kolonnawa marsh complex. The project's primary goal was to conserve the biodiversity of 28 hectares of marsh land in the Gotatuwa area and enhance the area's ecosystem services.

The Emotional Intelligence team adopted a multifaceted approach, engaging the community and especially youth to raise awareness. The involvement of local youth is a unique aspect of this initiative: through project activities, they were empowered to form a society dedicated to wetland protection, educating their communities, leading clean-up campaigns, and recycling non-degradable waste that was later repurposed into various products, creating economic opportunities. The project also set up a loan system to support eco-friendly social entrepreneurs, besides conducting biodiversity surveys, water quality analysis, and aerial photographic surveys to assess the wetland's condition.

The project made a significant impact, directly benefiting 100 youth and over 500 community volunteers. Thanks to this initiative, the Lassana Kolonnawa Wetland Conservation Youth Network was created and registered as an environmental community-based organization, with its own constitution and an appointed president, secretary, treasurer, and other committee members. The success of this initiative improved the leadership skills of the youth network and helped it secure grant funding from other international organizations to ensure the sustainability of conservation efforts in Kolonnawa.

This initiative also led to a reduction in invasive species and waste dumping in the Kolonnawa wetlands, protecting its native biodiversity and endemic species, contributing to promoting ecotourism in the area, and reducing pollutant loads in the Kelani River. By improving the state of the marsh, the project had a positive impact on the health and well-being of neighbouring communities, demonstrating the transformative power of youth-led initiatives that implement sustainable solutions for ecosystem and biodiversity conservation in urban areas.



**“The Lassana Kolonnawa project exemplifies the transformative impact of youth-led conservation efforts, demonstrating that by harnessing the energy, skills, and passion of the younger generation, we can build a sustainable and beautiful coexistence between urban life and vital wetland ecosystems.”**

– Isura Ranaweera, President of the Lassana Kolonnawa Wetland Conservation Youth Network

# Expanding a community-based model for integrated domestic waste management in Ha Long Bay, Viet Nam



Ha Long Bay in north-eastern Viet Nam is a UNESCO World Heritage Site with more than 1,600 islands and islets spread over 43,400 hectares, forming a spectacular seascape that attracted 14 million visitors in 2019. Although only 40 of these islands are inhabited, nearly 500,000 people live in the three urban districts around Ha Long Bay.

This means it is greatly affected by land-based pollution, with more than 28,000 tonnes of plastic waste generated in the area every year, of which more than 5,000 tonnes end up in the ocean. Despite being directly dependent on the health of Ha Long Bay's rich ecosystem and biodiversity, the local tourism and fishing industries are also major sources of pollution.

To address this, SGP has been supporting the Farmers' Association of Quang Ninh province to mobilize coastal communities around Ha Long Bay to increase the rate of solid waste collection and treatment, while reducing the amount of plastic waste generated by local households. With funding from the Norwegian Agency for Development Cooperation (Norad) and the Quang Ninh Provincial People's Committee, the project's focus is on developing a community-based model for integrated domestic waste management.

Through the project, 1,000 tonnes of plastic waste have been properly separated and 150 tonnes of plastic have been collected via freelance waste workers, both in their individual households and by fishing and tourist boats. The project raised awareness and built the capacity of local communities, government officials, and civil society, while also providing financial and technical support to waste pickers, most of whom are women.

"The communities now realize that plastic waste has a negative impact on the environment," said Nguyen Van Duong, head of the Farmers' Association of Quang Ninh. "Changing people's behaviour on plastic is a lengthy process that needs time, patience, consistence, knowledge, information, and effort from every single member of society."

The project has significantly improved the coastal areas of Ha Long Bay, benefitting more than 83,000 people, half of them women. It developed various effective models for waste separation at the source in households, fishing boats, and tourist boats, as well as models for waste pickers' groups, composting, and recycling. This created jobs and increased the income of local women, in addition to promoting the connection of women and fisher groups who support each other and take care of poor households in their communities.

The project in Ha Long Bay was inspired by a previous initiative in which SGP supported the Hoi An Women's Union to develop a long-term waste management plan, while creating jobs for vulnerable women. The impressive role of these women as informal waste workers and the project's innovative way of collaborating closely with the informal sector made it a shining example of the integrated approach to waste management. Besides Ha Long Bay, Norad has also supported the replication of Hoi An's successful model in four other Vietnamese cities. This is boosting waste segregation, collection, recycling, composting, and collaboration with businesses to introduce the circular economy approach and foster investments in green technologies.

Recognizing that Viet Nam needs innovative ways to tackle waste pollution, these initiatives have sought to actively engage all actors from both the formal and informal sectors. "For the first time, informal waste workers feel they have contributed to their city's clean environment," said Thu Huyen, SGP's National Coordinator in Viet Nam. "They formed groups to support each other and, more importantly, they feel proud of their work."

**"The project means a lot to us. Previously, we didn't know how to separate the waste, how to compost or why we need to reduce plastic."**

– Đinh Thị Luyện, farmern

# Improving food security through agroecology in urban schools in Zimbabwe



Zimbabwe is a country that faces persistent challenges in food security and nutrition, exacerbated by natural and economic shocks. Chronic malnutrition is still a concern today, with a notable deterioration in dietary consumption patterns that was intensified by the COVID-19 pandemic. According to government data, only 11 percent of Zimbabwean children between six and 23 months old receive a minimum acceptable diet, a lack which stunts development throughout childhood for the majority.

In response to these challenges, SGP has been supporting civil society organization SCOPE Zimbabwe since 2017 to implement various agroecology projects targeting youth with the aim of improving food security and nutrition resilience. SCOPE is a vibrant and practical environmental education programme, assisting schools to redesign and rationalize land use for sustainable resource use.

In 2022, SGP supported SCOPE to launch the Green Schools for Nutrition Enhancement Project in five schools in the cities of Harare, Gweru and Bulawayo. The primary goal is to improve the technical capacity of these urban schools to make them centres of learning and advocacy to improve the adaptive capacity of students and local communities to address food security shocks in the context of climate change. To achieve this, the project focuses on implementing integrated land-use design and setting up permaculture and agroecology practices in the target schools, in support of the nationwide school-based food programme.

This is a follow-up to an earlier project supported by SGP that SCOPE implemented in three schools in Shurugwi District. Both of these projects build upon an existing initiative by SCOPE that introduced the integrated land-use design approach to schools across Zimbabwe, with the aim of regenerating schoolyards into diverse food production zones by knitting together different agro-systems, reclaiming degraded landscapes and demonstrating good ecological practices, including crop diversification and organic soil fertility management.

Under the latest SGP-supported project, SCOPE has been implementing various activities, including permaculture, sustainable living, and systematic thinking courses for both students and teachers. Five women-led households in the communities around each school also received permaculture design training. Additionally, the project installed wood-saving stoves and solar pumps in schools, and produced educational materials on rainwater harvesting, traditional seeds, integrated pest management and other topics. Finally, it promoted an annual permaculture experience exchange for teachers and a permaculture camp for children and youth twice a year.

These activities are already making an impact. School nurseries and livestock integration generate income for the schools, while school gardens provide fresh vegetables and fruits, saving funds for the school-based feeding programmes. The introduction of boreholes and rainwater harvesting in school grounds improved access to clean water. Agroecology initiatives, such as free-range chicken rearing, not only generated income, but also supplied manure to enhance the garden and field food production. The success of the SCOPE approach has led to its replication in more than 200 schools within Zimbabwe. Internationally, SCOPE chapters in Malawi, Kenya, Uganda, and Zambia adopted the integrated land-use design approach. The project's impact has also been shared globally through the Global Ecovillage Network, where SCOPE Zimbabwe actively participates.



**“Young people are the agents of change, therefore let’s include and empower them to create a sustainable lifestyle.”**

– Linda Kabaira, SCOPE National Coordinator in Zimbabwe

# Conclusion

The rapid transformation of the world through urbanization has been a defining feature of the last century. This shift has elevated cities into economic powerhouses that foster innovation, economic development, and social interactions. However, this has come at a cost: often prioritizing immediate economic gains, the fast and unplanned expansion of cities around the world has created a variety of challenges that have a negative impact on both people and the environment, significantly contributing to the intensification of the global climate and biodiversity crises.

Global projections show that urbanization is continuing, and concentrated in developing countries, where the urban poor disproportionately endure the worst of the environmental problems caused by this trend. In this context, sustainable urban solutions developed and led by local communities are more important than ever if we are to make cities more inclusive, safe, resilient, and sustainable, as aspired to by Sustainable Development Goal 11 under the 2030 Agenda.

The diverse examples from around the world featured in this publication demonstrate how SGP's decentralized, community-led and scalable efforts can effectively contribute to a paradigm shift towards sustainable urban planning, accelerating a systemic change to conserve our planet and improve the lives of urban dwellers. Their success shows that channelling funding directly to local communities is key to enabling innovative and efficient solutions developed at the local level to be expanded, replicated, and adapted elsewhere, with improved access to partnerships and larger financing at the national, regional, and international levels.

Tackling the variety of urban environmental issues mentioned in this publication requires integrated, innovative, and inclusive solutions, which is why SGP's unique role in supporting civil society and local communities is crucial. As the world strives for sustainable cities, SGP will continue to engage local communities and civil society across the world, providing them with access to knowledge and information, capacitating them through learning-by-doing and skills development, and delivering technical and grant assistance for interventions that enhance wellbeing and socio-economic conditions, while also conserving, protecting and restoring the planet's natural resources.



## REFERENCES

- <sup>1</sup> World Bank. 2003. Urban Development: Overview. Webpage available at <https://www.worldbank.org/en/topic/urbandevelopment/overview>.
- <sup>2</sup> UN Department of Economic and Social Affairs. 2013. World Economic and Social Survey 2013: Sustainable Development Challenges. E/2013/50/Rev. 1 ST/ESA/344. Available at <https://sustainabledevelopment.un.org/content/documents/2843WESS2013.pdf>
- <sup>3</sup> Megha Mukim and Mark Roberts (eds.). 2023. Thriving: Making Cities Green, Resilient, and Inclusive in a Changing Climate. World Bank. Available at <https://openknowledge.worldbank.org/entities/publication/7d290fa9-da18-53b6-a1a4-be6f7421d937>
- <sup>4</sup> World Bank. 2003. Urban Development: Overview. Webpage available at <https://www.worldbank.org/en/topic/urbandevelopment/overview>.
- <sup>5</sup> IPBES. 2019. Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (eds.). Available at <https://www.ipbes.net/global-assessment>.



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