



COVID-19
Rapid Response
Solutions for Cities
by the 2020 Local Pathways Fellows



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CONTENTS

04

Foreword

05

Introduction

06

Methodology

08

Solutions of the 2020 Local Pathways Fellows

09

SDG 11.1 solutions

14

SDG 11.2 solutions

18

SDG 11.3 solutions

21

SDG 11.4 solutions

24

SDG 11.5 solutions

26

SDG 11.6 solutions

31

SDG 11.7 solutions

35

SDG 11.a solutions

37

SDG 11.b solutions

40

Conclusion

41

About Us

FOREWORD



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I welcome with great pleasure the launch of the Covid-19 Rapid Response Solution for Cities, prepared by the Local Pathways Fellowship program of the Sustainable Development Solutions Network (SDSN Youth).

This report is very timely, highlighting innovative solutions pioneered by our 2020 fellows to various urban challenges exacerbated by the COVID-19 crisis. As the world grapples with the extraordinary events of the past few months, communities around the world are looking for innovative, rapid, and scalable solutions that can help stem the spread of the virus, ease the pain on vulnerable communities, and shape an effective recovery.

There is no doubt that COVID19 is complicating the implementation of the SDGs including SDG11 and its targets. These disruptions and challenges on the city-level require direct and immediate intervention and mobilization of all stakeholders and this report shows how youth from communities around the world have stepped up to the challenge.

This report not only show-cases solutions to the challenges posed by COVID19, but it proves how young people from all over the world have connected together during these challenging times to tackle the most pressing urban issues that cities are facing as a result of this pandemic. I hope the interventions outlined in this report can guide and inspire other young leaders and policymakers to replicate and adapt these ideas for their communities.

INTRODUCTION

By 2050, cities will be home to almost 70% of the world population, leaving no doubt that the achievement or failure of the Sustainable Development Goals (SDGs) will be determined in cities.

In this rapidly urbanizing world, cities are forced to ask tough questions about how they can solve the unprecedented challenges ahead of them and COVID-19 has come to stress these and the urge for a change.

Half of the world's population today is under the age of 30, with a large majority of them already living or aspiring to live in urban areas. Young people are 40% more likely to move to cities, and what they bring along is an unwavering belief in a great future and readiness to contribute their energy, creativity, ambition, capacity for activism, boundless imagination, and ability to conceive of a better world.

This is the opportunity that the Local Pathways Fellowship leverages.

Every year the Local Pathways Fellowship welcomes a select group of young innovators from cities around the world and provides them with the tools and resources they need to advance problem-solving for sustainable development at the local level. The Local Pathways 2020 cohort is made up of 140 fellows, under the age of 30, from 100+ different cities.

The Local Pathways Fellowship Program supports capacity building in cities by training young urban sustainability leaders by educating them on the process of “localizing” SDG 11 which is to “Make cities and human settlements inclusive, safe, resilient and sustainable”. The fellowship empowers young people by helping them answer the critical questions of “what can I do” and “how”.

Given the strong impact that COVID-19 has had on cities, the 2020 cohort of the Local Pathways Fellows developed a set of rapid response solutions for cities that address the SDG 11 targets.

METHODOLOGY

During May the 2020 cohort of Local Pathways Fellows worked on developing a set of rapid response solutions for cities that address the following SDG 11 targets:

11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.

11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.

11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage.

11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

11.a Support positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning

11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.

These solutions presented in this report were designed through peer-to-peer engagement between fellows in the program. Fellows were split into focus groups based on the SDG 11 targets they specialize in. There were a total of 22 groups of 3-8 fellows from different cities. Within their groups they discussed and assessed the following questions before designing their solutions:

- How was this SDG 11 target area affected by the current pandemic crisis in their cities?
- How did their cities respond to the current crisis? Specifically related to the SDG 11 target of focus.
- How can their cities prepare and be less vulnerable to pandemics?
- Should social distancing be the long-term global norm to prevent disease outbreaks?
- Should other long-term threats, such as climate change, be treated with this same disruptive level of urgency?
- In what ways will the world be a better place for us having survived this crisis together?

The goal was to comprehend the importance of urban-prompt response in times of crisis; analyze how this global pandemic affected the different SDG 11 targets and the challenges that arose within them to then be able to come up with concrete and feasible solutions to mitigate the virus in urban areas.

A webinar was held on June 30th, 2020 where some of the most innovative solutions were presented. The recording of this presentation is available at <https://bit.ly/2Ykefof>.

SOLUTIONS OF THE 2020 LOCAL PATHWAYS FELLOWS



SDG 11.1

By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.

In this first set of solutions, the fellows tackled the different indicators of target 11.1. The solution titled: “Mobile Hand Washing Stations for Viruses Mitigation” focuses on ensuring that populations are using safely managed sanitation services. In addition, the second solution presented by the fellows titled: “Improving Housing Stability and Resiliency for Migrant Laborers in Delhi, India” points out the importance of ensuring the eligible population is covered by these social safety nets amid the current pandemic. The solutions titled: “Universal Homeliness: The Public-Private Partnership Approach” and “Addressing Homelessness in the Time of COVID-19” provides a framework for adopting the Private-Partnership model to address the issue of homeliness on the global scale.



Universal Homeliness: The Public-Private Partnership Approach

Team

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Problem

Today, more than 900 million people across the world live in inadequate housing with numbers bound to rise as high as 2 billion in upcoming years; with an expectation of more than 70% of the population of the world residing in cities by 2050. If the issue remains unresolved post-COVID-19, then the vulnerable and marginalized portions of society - of which at least 17% are the 'extreme poor' of the world - is expected to get trapped into a cycle of diseases and poverty for many years to come (A Home in the City, Volume 12 of UN Millennium Project task force reports, P. Garau, E. Sclar, G. Y. Carolini, 2005).

Solution

Public-Private Partnerships (PPPs) can play a vital role in providing affordable housing in urban settlements. Governments should identify land in the cities and lease it to private firms for a specific time. Initially, governments are expected to give credit-based subsidies as well as cross-subsidies to private investors simultaneously relaxing the Foreign Direct Investment norms. Similarly, marginalized and vulnerable groups of the population are to be classified based on income and social levels. This will ease the distribution of government benefits and subsidies. As one of the immediate responses, the 16 million vacant hotel rooms worldwide can be utilized as temporary shelters for the urban poor with local governments ensuring daily food demands. Other immediate responses include supportive housing made from prefabricated modular homes to ease overcrowding of homeless shelters.

Impact

The strategy emphasizes providing adequate housing and protecting the lives of urban poor from 'House Trap' while simultaneously providing the long term benefits to both private firms and governments involved. It aims to **uplift the living conditions of more than 600 million economic and socially marginalized people** – a large number of whom earn less than \$1.25/day and are involved in formal and informal sector jobs residing in inadequate urban settlements. This strategy will draw investment in the implemented region and help in creating social capital for the private firms in the future with further contracts and tax benefits from the governments thereby increasing the reach of their products in a sustainable manner. The governments involved will be able to win the confidence of the people and improve the national economy while balancing their SDG 11 target.

Addressing Homelessness in the Time of COVID-19

Team

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Problem

The global challenge of homelessness has intensified during the COVID-19 global pandemic. The responses to homelessness and their urgency vary tremendously across space and scale. While in some locations, addressing homelessness has typically been through national directive for local municipal implementation, in other locations an absence of specific responses exists instead. Existing temporary housing solutions have rendered questions surrounding access to water and sanitation and the provision of food for the most vulnerable citizens during this crisis. Given that the homeless population is estimated at 800 million globally (OHCHR, 2020), this is clearly a problem that demands the utmost attention.

Solution

To immediately tackle the problem of homelessness we advocate for organising adequate living spaces for homeless people and rough sleepers. Towards this purpose, vacant spaces should be surveyed, and where possible and none exists previously, shelter provided in these spaces. Both the provision of food, basic utilities (especially water), and the organisation of these spaces following the internationally recognised guidelines for sanitary safety should be priorities. Addressing homelessness during disasters is typically done through governmental services. However non-profit and private organizations played an important role in supporting these temporary solutions by offering assistance to local government/municipalities. Following these structures, we suggest strengthening cooperation between these parties.

Impact

The solutions mentioned above are short-term oriented and will sporadically improve the living conditions of homeless people. Furthermore, they are an efficient and quick curative response to an “unpredictable” event, which is key to a resilient and sustainable city. These facilities could also be the entry point to a long-term reinsertion program inspired by the Housing First policy that aims to offer affordable housing in the first place and then [provide the supportive services and connections to the people in need to keep their housing and avoid returning to homelessness](#). This is particularly useful for people coming from foster homes, psychiatric and prison institutions, or migrants who represent a crucial proportion of the homeless.

Mobile Hand Washing Stations for Viruses Mitigation

Team

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Problem

In 2019, billions of people still have no access (<https://sustainabledevelopment.un.org/sdg6>, May 2020) to a place for handwashing with soap at home. Considering all kinds of surfaces that people touch during the day, handwashing becomes critical to stop or mitigate the spread of COVID-19 or other diseases. The project aims to target people that do not have access to water in their households and /or people with no access to housing whatsoever. Also, this project aims to address the lack of hygiene education, in terms of handwashing within informal settlements in the midst of the current pandemic.

Solution

The proposed solution is a mobile hand washing station that provides access to handwashing facilities and encourages good hygiene practices. The intention is to limit possible cross-contamination among users. The solution calls for the mitigation of the spread of viruses by improving access to cost-efficient, scalable, and accessible hygiene and sanitation facilities in public areas and informal settlements, and through raising awareness and increasing the community knowledge and skills on preventing localized transmission of diseases.

Impact

The proposed solution intends to target vulnerable populations in congested settlements, homeless people, and areas that have limited access to water supply and sanitation. In addition, the solution could help people who are prone to contracting the virus like frontline workers. [Hand-washing stations can be both temporary or permanent solutions, which could impact people that live in a permanent situation of vulnerability](#), along with people that are currently being affected by the pandemic.

Improving Housing Stability and Resiliency for Migrant Labourers in Delhi, India

Team

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Problem

Vulnerability related to housing insecurity is at the centre of the COVID-19 crisis in India. Currently, 1/3 of Delhi residents live in inadequate housing where personal hygiene and social distancing are impossible. During this crisis the threat of displacement and homelessness has risen. This vulnerability is particularly acute for migrant laborers, 43% of Delhi's population, who moved to urban areas to overcome poverty. Many of these workers are daily wage workers, including informal sector workers, who've lost their income since the beginning of the lockdown and have faced the threat of eviction, despite a partial government ban. Additionally, many migrant workers have been forced to stay in government shelters, which are often in poor conditions and lack access to basic necessities.

Solution

Our solution presents a slate of mid-term housing policy strategies focused on strengthening renter protections and supports in Delhi, such as:

- Strict rent control measures capping rent to 25% of the tenant's monthly income
- Offering support tools such as grants, emergency funds, interest-free loans, rental vouchers, and other forms of supplemental rental assistance
- Incentives for landlords (e.g. property tax abatements, etc.) that provide rental housing options
- Retrofitting and in situ upgrading of the existing housing stock, including informal settlements

Such policies are targeted towards the rental market and are designed to improve the stability, security, and resiliency of Delhi's current housing system for migrant laborers as they migrate (back) to Delhi as this crisis normalizes.

Impact

Here, we've focused on mid-term policy solutions, aligning with SDG target 11.1, to [improve the security, stability, and resilience of Delhi's housing ecosystem as displaced and new migrant labourers return or relocate to Delhi](#) in search of employment. Housing is a fundamental tenet of a social safety net, and solutions addressing Delhi's acute shortage of affordable housing can help mitigate, rather than magnify, the harms of economic disruption and keep vulnerable populations safe.

SDG 11.2

By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

In this section fellows spotted some of the urban mobility challenges that were triggered by COVID-19. Some mobility curtailed as people were asked to socially distance and stay home as much as possible, while essential workers and delivery services were forced to step up in this time of need. Cities faced shutdowns or decreased services on mass transit which lays at the core of mobility in many cities. The solutions presented in this section are “ Drive 4Good”, “Strategies to Promote Micro-Mobility as an Alternative to Public Transport During & Post Covid-19”, and “Strategizing Transit Solutions in the Post-COVID World”. These range from spiking up micro-mobility and network improvements to innovative platforms that facilitate ride/vehicle sharing by bringing together public and private stakeholders.



Team

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Problem

Transport is a derived demand. While trips for work and recreation were curtailed worldwide due to COVID-19, essential services like groceries, medicine, public hygiene, etc. were unavoidable. Hence, a prominent issue that COVID-19 shed light on is the difficulty of elders and disabled people to move and execute ordinary tasks, such as getting their groceries done, during a pandemic. Also, due to the partial or total shutdown of public transit modes, the inability of some categories of workers that critically need to get to work to support proper city functionality became evident.

Solution

An Online Platform to link those who have private transportation and are willing to help with people who need aid: whether for the elderly and vulnerable that need to do groceries or buy medicines; or for key workers that need to move around town. The Platform will filter and show the closest available requests/offers for each platform user based on their location. Another component of the platform is a bike-sharing system, through which people will also be able to share their bikes and scooters for free. For successful deals confirmed on the Platform, the volunteers will receive incentives which later on can be exchanged for goods and services from local business (theater and cinema tickets, restaurant tickets, different goods in supermarkets, car services etc). The platform has a two-side grading system to serve as a checks and balances system. Technically, the solution assumes prior agreement between a municipality and local businesses, where the municipality supports local businesses. It will also be linked to a call center, for those who are having difficulties using it like the visually impaired, the hot-line will be their way to have their application considered. Furthermore, before every service use, the platform will provide a checklist as a reminder to all users to take all health and sanitization measures.

Impact

This proposed solution will [help vulnerable groups](#) in these uncertain times while [encouraging citizen engagement](#). It will [support local businesses](#) and also provide them with opportunities to be socially responsible. The [increase in micro-mobility usage](#) will result in a more resilient city.

Strategies to Promote Micro-Mobility as an Alternative to Public Transport During and Post COVID-19

Team

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Problem

The most prominent guideline to limit contagion is social distancing. This significantly impacts the usage of public transport, which is the heart of the urban mobility system in most cities, as a result, it increases walking, cycling, and private vehicle usage. The most severely affected are the vulnerable groups who lack means to access private transport or alternatives, but need to travel for daily and essential activities. Micro-mobility presents a viable and inclusive option, as it caters to the needs of the vulnerable groups as well as the overall population.

Solution

Working on key elements such as road Network Improvement, micro mobility improvement , mobility management and street safety supports micro-mobility and provides alternatives to public transport During and post-COVID-19. This can be done through:

- Reallocation of space to allow for physically-spaced walking and cycling.
- Developing more robust cycling and walking infrastructure through the enhancement of (i) traffic calming systems, (ii) drainage coverings and ramps, (iii) parking docks Prioritising pedestrian movement by reclaiming street space from car parkings and travel lanes, (iv) creating emergency cycle lanes and (v) lowering speed limits
- Usage of information & communication technologies and intelligent transport systems
- Strengthening measures to manage excess post-confinement car traffic
- Frequent sanitisation of docking stations and touch-points on e-scooters and bicycles.

If micro-mobility is introduced as an alternative during and post COVID-19, it is crucial that it is accompanied by a set of regulations and policies embedded in the larger mobility plan of the city. To address the lack of information among users on these plans, civic participation & engagement should be prioritised.

Impact

Micro-mobility creates enormous economic, social, and environmental benefits, [supports inclusive growth, helps mitigate climate change, and reduces pollution, thus creating sustainable cities](#) by increasing the liveability of the city. Public engagement in the form of micro-mobility plans would ensure open participatory processes and raise awareness among citizens about public authorities' obligations and duties. In sync with COVID-19 prevention measures, micro-mobility measures such as walking and cycling limit the risk of close contact and allow adjusting trajectories to avoid close passing.

Strategizing Transit Solutions in the Post-COVID-19 World

Team

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Problem

The pandemic presents us with an opportunity to reimagine sustainable mobility solutions for people. Promoting walking, cycling, and integrating public and private transport systems during this time ensures that people can access jobs, education, and essential services safely. Before cities reboot and rethink the way they operate, it becomes imperative and fundamental for citizens to have access to real-time mobility service information flows to ensure that needed services are not disrupted.

Solution

Real-time information platform for mobility. An online platform that will collapse private, public, and joint mobility services (public and private metro service) into a single search and outreach engine ensuring business continuity for mobility companies and ensuring that people can get to work. By bringing public and private stakeholders together, the platform can ensure business continuity for an array of mobility providers, and help secure jobs and services that depend on mobility. Connecting those groups can also reduce the number of people socio-economically affected by the outbreak and enable them to benefit from future mobility systems improvements (such as digitization, on-demand services, multimodality). By making a variety of mobility options and needs visible to commuters (who might not own a vehicle), and mobility service providers, we may ensure that needed services are not disrupted. Such when information, available to organizations that need to mobilize essential workers, can ensure our mobility systems can be resilient, safe, inclusive, responsive, and sustainable.

Impact

Ensures sustainable options for commuting are available across different scales of the urban environment and [satisfy mobility different needs considering the limitations of social distancing](#). Ensure multiple groups can leverage mobility solutions to break down barriers and take collective action to aid in recovery.

SDG 11.3

By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

The fellows, as part of their work on SDG target 11.3, tackled important aspects associated with progressing integrated and sustainable human settlements in urban areas, namely employment and information management. The solution titled “MassiveSmall Employment Initiative” recognized the impact of COVID-19 on the livelihood of migrant workers in the cities, and focused on creating a job search and upskilling platform tailored to meet the unique needs of migrant workers. The second solution, playfully titled “Toilet Paper Wars Retaliation”, is focused on proactively tackling misinformation that has resulted in, for example, toilet paper shortages or hate speech towards certain groups of the population. The solution designs a city-wide and city-led outreach program, tailored to vulnerable populations. Both solutions can be applied globally, across cities of various sizes and demographics.



Massive Small Employment Initiative

Team

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Problem

The spread of COVID-19 is disproportionately affecting migrant workers in cities across the globe. In addition to limited access to health care and support services, millions of migrant workers are facing loss of employment. In London, there are around 1.8 million migrant workers, 397,000 of them are undocumented (London's children and young people who are not British citizens: A profile", Greater London Authority, City Hall, 2020). Many sectors where migrants usually work have been affected by COVID-19 such as retail, hospitality, and the construction sector. With this, thousands of low-paid migrant workers are facing temporary or even permanent loss of income and employment. The plight of migrant workers calls for an immediate but sustainable response to mitigate the negative impact of the pandemic.

Solution

An app that facilitates training for digital literacy among migrant workers and eases up access to alternative employment opportunities. The app will address the difficulties in seeking out employment opportunities in these unprecedented times and provide temporary and permanent livelihoods to migrants. It allows employers to post vacancies and search for candidates, while migrant job seekers can search and subscribe to job alerts, upload and update their information on the platform. Besides, the platform would include features like job swapping to help people find work closer to home and pro-bono digital literacy training that allows migrants to succeed in a post-coronavirus world and offer their services digitally.

Impact

Through this initiative, we should be able to **connect ~18,000* migrant workers with more than 300 companies in London and increase their job options by 20% in comparison with traditional job searching methods**. It will also increase migrant women's participation by 13% in comparison with men when they apply through our online portal. More than 30% of total registered users will receive training, and at least 50% of these will be women. These training modules will be available in 6 different languages, which will enable migrants to understand the essentials of the content. Also, the app informs more than 9,000 people about social programs and legal advice thanks to the collaboration with the Greater London Authority.

*Assumption: The numbers are based on the registration of 1% of the total migrant population living in London. However, we considered that 50% or less would apply to on proposed portal.

Toilet Paper Wars Retaliation

Team

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Problem

While COVID-19 has tested healthcare around the globe, it has not provoked new challenges, but rather triggered other urban challenges and probed city sustainability. Various cities have faced misinformation and panic among people caused by scarcity of communication channels between sectors of society. These channels would have ensured reliable data on the pandemic, educated people to take responsibility and assess risks, and laid the foundation for revival and future mitigation measures.

Solution

The proposed solution is a mass outreach program to stop the spread of fake information and provide relief to those facing a critical situation due to limited access to resources or physical constraints. This program must include qualified information, ways to participatory surveillance, and a monitoring system on what and how coping measures are being held. Extensive outreach can ensure that people are aware that essential services are available to them through a trusted toll-free phone number or online portal.

Impact

This solution will ensure that there is no increase in misinformation, communal hate speech, and deaths due to reasons other than the COVID-19. Although the entire society will benefit from the solution, it specifically targets vulnerable communities in different geographical contexts. The idea aims to [support individuals and communities in coping with the virus in the most “informed” way possible. On an individual level, this will improve trust between people.](#) For instance, the observed “toilet paper wars” during the pandemic is the result of mistrust that a neighbor could take more toilet paper than needed. This will also reduce the spread of hate speech, which was also observed as people looked for culprits to blame - local virus-infected people, tourists, Chinese, etc., but proper communication channels will ensure adequate information and reinforce a sense of compassion.

SDG 11.4

Strengthen efforts to protect and safeguard the world's cultural and natural heritage

Target 11.4 seeks to strengthen efforts to protect and safeguard the world's cultural and natural heritage. The first solution presented in this regard titled: " Cultural Manifesto for Post-Pandemic Rebuilding" provided a macro guideline on how states can ensure the re-opening of cultural venues amid the current pandemic crisis and the tight health guidelines imposed by states. Besides, the second solution "The Amsterdam City Doughnut: A tool for Transformative Action" referred to the theoretical framework of the City Doughnut to protect the city's natural and cultural heritage by regenerating food production, reducing resource consumption, and building development through flexible zoning and regenerative design.



The Amsterdam City Doughnut: A Tool for Transformative Action

Team

Noah Baars (Amsterdam, Netherlands), Priya Gosain (Ahmedabad, India), Priyanka Kulkarni (Thane, India), Yasmina Bendikha (Montpellier, France)

Problem

A thriving city meets the core societal needs of all: from education to health, housing, gender, and racial equality. At the same time, thriving cities must safeguard the boundaries of both the local and global environment: to minimize climate change, loss of biodiversity, ocean acidification, and minimize the risk of outbreaks of new pandemics. But how can cities best navigate their policy development amidst this complex context?

Solution

The pandemic crisis caused by the COVID-19 outbreak has more than ever shown us the interlinkages and interconnectedness of a globalized world. Environmental and sustainability issues cannot just be perceived from a local perspective but have to be put into a global context. The Amsterdam City Doughnut offers a compass for any city to ask and answer the following questions: What would it mean for the people to thrive? (social: local) What would it mean to thrive in its natural habitat? (environmental: local) What would it mean to respect the health of the whole planet? (environmental: global)

Impact

Applying the values and criteria outlined in the Doughnut has given city officials an analytical compass to navigate initiatives that contribute positively to both the social and ecological prosperity of the city. For Amsterdam, this meant the [collaborative development of 17 policy initiatives that span the city's ecosystem](#). Some examples work toward encouraging citizens to become more responsible and respectful to their natural and cultural heritage are (1) Regenerative food production fosters local nutrient cycles while creating business opportunities for local communities; (2) Reducing resource consumption: 'Bundles' household appliances as-a-service model, promote access over ownership. By extending the life of materials, city residents gain access to a range of quality products; (3) Building development: through flexible zoning and regenerative design (to promote sustainable and healthy lifestyles for all), urban districts should adapt to evolving area-specific demands in the provision of regenerative energy, water, and waste systems, such as 'Buiksloterham'.

Cultural Manifesto for Post-Pandemic Rebuilding

Team

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Problem

Despite being essential to communities in terms of mental health, belonging, and livelihood, culture/cultural heritage has been left out from the list of essential services in the course of the COVID-19 pandemic. This is problematic at several levels including the following:

- Funding is diverted from cultural projects and community initiatives — there is a risk that much of the progress made at several fronts for many years will be lost.
- Culture plays an important part in healing for many communities (especially vulnerable ones) — the loss of cultural platforms adds to the vulnerability of them.
- There is a loss in terms of sources of livelihood for people who worked in the area of cultural products, tourism, and cultural heritage preservation.
- Not all governments mandated ground rules for hygiene and social distancing, this left several cultural institutions free to set their own regulations, which can jeopardize the safety of workers and visitors.

Solution

The proposed solution is to advocate the role of culture in enhancing community resilience, healing, and recovery during and post-pandemic. Our solution will entail two initiatives that we consider important: (1) Create a toolkit for cultural heritage as a vessel and an economic tool for post-pandemic recovery / Recommendations for local authorities to support civil society organizations to use cultural heritage as a tool in the creation of economic regeneration projects. (2) Provide guidelines for the gradual reopening of cultural heritage sites (historic sites, museums, libraries, archives, etc.)

Impact

The following impacts are expected as a result of the proposed intervention: (1) [Assisting cultural institutions](#) in unprepared countries (under conflict, hit heavily by COVID-19); (2) [Assessing risks before recovery](#); (3) [Empowering the local economy](#) by supporting civil society organizations/community rebuilding; (4) [Ensuring the safety of workers and visitors to cultural sites](#).

SDG 11.5

By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

Out of all the 169 targets across 17 SDGs, target 11.5 is probably one of the most aligned with the current pandemic. This section presents the solution “How to Guarantee Safe Work Conditions for Food Riders During COVID-19 in Brazil by the provision of Personal Protective Equipment”. This solution helps not only the already existing workers for food delivery applications but all the new people who lost their jobs due to COVID-19 and joined these platforms during this time to decrease their direct economic losses caused by the COVID-19 disaster.



How to Guarantee Safe Work Conditions for Food Riders During COVID-19 in Brazil by the Provision of Personal Protective Equipment (PPE)

Team

Cibele Damasceno de Oliveira (Belo Horizonte, Brazil), Hien Dang (Singapore, Singapore), José Gil (Mexico City, Mexico); Nazmi Ahmed (Washington, D.C., United States)

Problem

In Brazil, more than four million people work for food delivery applications ([BBC News, 2019](#)). Companies like [Rappi](#), [iFood](#), [99 Food](#), [Loggi](#) and [Uber Eats](#) do not provide or provide insufficient PPE to the food riders, people who deliver the food. This puts the majority of food riders at high risk of being infected with COVID-19 and spreading the virus. As gig workers, food riders are not covered by Brazilian Workers' Law and have no insurance. Should they be infected with COVID-19, there will be no support for their treatment and their families.

Solution

To help food riders get the appropriate protection, we propose a partnership between delivery apps and masks producers. The apps' function would be to provide one additional functionality to their clients in the application to allow them to tip riders with vouchers to buy masks on top of providing a tip. The donation would be transferred by the app directly to the masks producer of small businesses who would use it to buy the necessary material. With the vouchers, riders would be able to acquire masks for their protection from masks producers'. In this sense, we propose to delivery apps to partner with (1) [Tampa Cara Movement](#): a collective of 12 women entrepreneurs in Belo Horizonte; (2) [Trama Pela Vida Project](#): a project held by the Minas Gerais State University in which fashion design students and professors are producing and donating masks; and (3) [Remexe Favelinha](#): a collective in the favela Aglomerado da Serra in Belo Horizonte which is producing and sealing masks for the symbolic price of 5 reais.

Impact

Our solution would impact Brazil economically and socially. Socially, the creation of the masks for the delivery workers physically keeps them from being exposed and exposing others. This can greatly [decrease the spread of COVID-19](#). Economically, it would [promote the ongoing business of the garment and the food & beverage sectors during the pandemic](#). The service sector of Brazil's GDP makes up 72.7% (2017). Food riders are helping the Brazilian economy by keeping the food and beverage industry active but exposing and endangering themselves in doing so. It is important to mention this because these workers are not classified as employees despite the fact that platform companies manage and control their activities and represent their main source of income.

SDG 11.6

By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

The various solutions presented in this section are unique and comprehensive in their nature. The solutions of “Municipal Management and Collection of Increased Biomedical Waste” and “Protection of Solid Waste Management Workers through Safe and Healthy Practices” tackle the issue of management and collection of Personal Protective Equipment (PPE) and chemical waste on the municipal level. The solution of “Innovating Urban-Prompt Solutions in Milan, Italy During COVID-19 Pandemic” sheds light on the importance of advocating for a green sustainable transportation system with the final goal of avoiding congested public transportation systems following the re-opening of the economic activities. Finally, the “SafeWasteNet- a Waste Workers Wellbeing Network” solution is an innovative mobile app that provides various services to informal waste pickers during the pandemic period. These services range from physical and mental support to educational assistance.



Protection of Solid Waste Management Workers Through Safe and Healthy Practices

Team

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Problem

(1) Solid waste management (SWM) systems lack appropriate segregation at the local collection level, leading to inappropriate processing of the waste; (2) This exposes the workers to foul odors and possibly dangerous chemicals such as a mix of degradable waste with other liquid waste and leaked batteries and other electronics; (3) The long-term environmental implications harmful to the residents and most importantly onsite workers due to inappropriate landfills and incineration; (4) Another major gap is that the collection of recyclables is commonly constituted by an informal sector, with bad remuneration for the workers and unsafe working conditions due to lack of personal protective equipment (PPE); (5) Many cities suspended the collection of recyclable waste during the pandemic.

Solution

Training workshops and awareness campaigns for all, on safe SWM practices.

- Provision with PPE by the responsible local government agency.
- List of penalties for all those who do not act in compliance with the new practices, including the workers, government agencies, etc. The money from these penalties must be used for the improvement of the SWM system only.
- Incentives for SWM workers who maintain a good record of carrying out their roles and responsibilities through-out.
- An over framework will be set by the state government or city corporation, but the responsibility will lie with the local government area council only in terms of monitoring and evaluation.
- Financial incentives for recycling of waste. Individuals dealing in the production of solutions that recycle waste should be offered investment incentives to attract more innovation and enterprise in the field so that waste that is harbored in landfills is effectively put to use.

Impact

A [policy framework that focuses on the safety of waste management workers](#) through the provision of measures to be taken, incentives for the workers and fines, and other penalty notices.

Municipal Management and Collection of Increased Biomedical Waste

Team

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Problem

With the onset of the COVID-19 outbreak, weaknesses have been exposed in systems that affect all aspects of life, including the handling of biomedical waste. As wearing masks and gloves in public becomes the new normal, municipal governments must deal with litter in these spaces. Improper disposal of single-use masks and gloves is not only detrimental to the environment but also increases the risk of infection for sanitation workers. As one of the epicenters of the virus with a strong municipal services system, New York City (NYC) offers opportunities to implement behavior-changing solutions.

Solution

The project consists of a three-pronged solution to manage the amount of single-use masks and gloves being thrown away or dropped in public spaces. NYC government should: (1) Create a physical and online public awareness campaign on LinkNYC and public transit to catch residents' interest on how to dispose of masks and gloves, and direct them to the donateNYC and DSNY mobile apps for more information through the use of a QR code; (2) Add a section in the donateNYC and DSNY apps that addresses the disposal of masks and gloves. This section should include information on collection areas and schedules, as well as sound practices for reusable masks (3) Install custom-designed Zero Waste collection bins to meet all their functional and design needs in areas where free PPE is distributed, such as in popular parks.

Impact

NYC is home for more than 8.3 million people and it is the most densely populated major city in the United States. Using New York City's public transit system (bus interior/exterior, bus shelters, subway entrances) and more than 1,700 LinkNYC kiosks will expose a significant proportion of residents to the awareness campaign about the risks of improper disposal of PPE. Once the residents are linked to the page on the donateNYC and DSNY mobile apps, they will have access to more information. The collection sites will [reduce the amount of PPE on the streets and make it safer for sanitation workers](#). Education is important so residents know that a solution exists, and the network of collection sites makes it easier for residents to follow the guidelines that they have learned about. Together, this creates [behavioral change and can be scaled up within NYC and to cities around the world](#).

Safe Waste Net, Waste Workers' Wellbeing Network

Team

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Problem

UN-Habitat (2010) has found that informal waste pickers (IWPs) collect between 50 and 100% of waste in cities in low-income countries, at no cost to the urban local body. It is also a source of livelihood for many families in low- and middle-income countries. IWPs face innumerable socio-economic challenges, despite performing an integral function in the waste management system. IWPs have been disproportionately affected by the COVID-19 pandemic because the lockdown restrictions inhibit them from operating. It is imperative to protect them from getting engulfed in the poverty trap. There are no digital platforms addressing issues relating to the wellbeing of IWPs, especially in times of pandemic.

Solution

A web/app-based platform called SafeWasteNet offering:

- Physical and Mental Health support: This part of the platform will connect health experts, NGOs working on mental health, and unions working for IWPs to protect and strengthen the wellbeing of IWPs.
- Financial planning support: The government is extending financial support to the marginalized population to support them during this trying time. With IWPs having no/weak education on handling bank accounts, this measure aims at training IWPs to understand and use the banking system to create a financial system that can support them in such times. This part of the platform will connect Banks as well as NGOs working on financial literacy for the poor with IWPs.
- Education for IWP's children: Creating a network of local teachers, college students to ensure sustained education and wellbeing (through NGOs collaborations to provide stationery and other educational tools).
- Social support: This service will focus on the welfare of children/ families of IWPs by connecting the IWPs with NGOs to provide essential goods (basic commodities such as food and sanitary pads for women).

Impact

This network will [empower the Informal Waste Pickers make them resilient enough to face trying times like the current pandemic.](#)

Innovating Urban-Prompt Solutions in Milan, Italy During COVID-19 Pandemic

Team

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Problem

This region is among Europe's most polluted areas and has been greatly impacted by the COVID-19 pandemic. Milan is a densely populated city with 1.4 million inhabitants, 55% of whom use public transport to travel to work. Under the nationwide lockdown, traffic congestion has dropped by about 75%, which has also resulted in local decreases in air pollution and improvements in local air quality (Enrique Dans, "What Do We Want Our Cities To Look Like After The Pandemic?", Forbes, 2020). As municipal representatives are developing a plan to re-open the economy, it is important to evaluate the transportation patterns of the city to avoid resurgence in fuel-based transportation. Representatives must collaborate with residents to find sustainable transportation alternatives with the final goal of avoiding congested public transportation systems and maintaining the improvements in air quality.

Solution

To combat the spread of COVID-19, Milan has developed the Milan 2020 Adaptation Strategy. This strategy was designed to re-evaluate public services, such as transportation, to promote social distancing, develop sustainable forms of transportation, and reduce commute times. These goals are closely linked to the Open Streets Strategy, specifically focused on promoting individual-level sustainable behaviors and urban safety. This strategy aims to change citizens' habits in the short term with five practical solutions. One idea that is being pursued is the development of cycling paths to directly connect the city center to suburban areas, which has the potential to greatly reduce the vehicle emissions in Milan and will improve the air quality of this heavily polluted area.

Impact

Construction of 25 km (22 miles) of cycling and walking spaces with 30 kph (20 mph) speed limits to protect commuters have been proposed. This solution places emphasis on limiting the number of cars in circulation and congestion and limiting increases in urban air pollution as much as possible. After the bicycle and foot traffic lanes are added to Milan, it is expected that there will be [significant reductions in traffic-related air pollution and improvements in local air quality](#) similar to those experienced during the COVID-19 pandemic.

SDG 11.7

By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

Public spaces are often considered the heart of the city. In dense urban areas, these spaces represent a place for both mental and physical health. COVID-19 came to stress the disparity in access to public spaces. This section includes "Considerations for Prioritizing More Accessible, Flexible, Resilient and Safe Public Spaces", "Public Spaces, Sanitary Emergencies and Vulnerable Populations", and "A Global Solution to Streets" which propose solutions that will help us share best practices, resume the use of public spaces safely as social distancing measures start to ease, and reduce the disparities around accessibility to public recreation spaces.



Considerations for Prioritizing More Accessible, Flexible, Resilient and Safe Public Spaces: A Post-Pandemic Context for Recreation Spaces

Team

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Problem

With countries starting to ease restrictions on social distancing amid the COVID-19 pandemic, a “return to normal” scenario is hardly possible. As the virus gets relatively under control in numerous countries, more people are expected to increasingly resume the use of public spaces. Nonetheless, this transition has stirred mixed opinions at various scales globally.

Solution

- Repurposing thoroughfares to explore recreation opportunities by enacting temporary and partial closures to active transportation. One technique that is currently used by many cities around the world is closing local streets to create newer open spaces that are near houses and neighborhoods. By closing streets to create public spaces, there is a shift in our understanding of how public spaces can come to exist.
- Technical urban planning considerations that can increase equitable access to safe recreation spaces. Density is pivotal, cutting the usage capacity of such spaces to between 30 and 60% of their actual capacity is one way to do so. Adding hand washing stations in public spaces can as well aid the control of spreading infections.
- Reserving blue and green spaces for enhancing the psychosocial well-being in the urban citizenry. Creating more public spaces is a great way to ensure less density, thus, more sustainable and safer public spaces. By changing the mindset of decision-makers and other stakeholders to see these spaces as healthy ecosystems for local public markets a more diverse interest would be cultivated in the reservation of such spaces.

Impact

Closing streets and converting them into recreation spaces could [level the playing field and reduce the dimension of privilege around accessibility to public recreation spaces](#). The use of streets as recreation spaces comes likely with a decrease in crime. Also, coastal cities should prioritize the reservation of land around the perimeters of water bodies for the creation of blue corridors. As flooded cities become a common scene, public green and blue spaces can adopt flexible designs that serve as urban flood control and stormwater treatment for cities. These spaces could also act as lightning rods for promoting waterway literacy and conservation within the community. In times of physical distancing, recreating public spaces hold psychosocial benefits for urban populations.

Public Spaces, Sanitary Emergencies and Vulnerable Populations: Sharing Lessons Learned from COVID-19 and Knowledge for the Future

Team

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Problem

Research and data suggest that the COVID-19 pandemic is increasing existing socioeconomic inequalities among the most vulnerable populations, namely women, children, the elderly, the disabled, migrants, indigenous communities, racial minorities and LGBTTIQ.¹ Whereas urban centers may be better equipped to respond to the COVID-19 crisis, they also have the highest risk of infection. This has led to many restrictions regarding public spaces in² urban areas, which are not only particularly important for socially vulnerable populations, but also³ leading to the increase of such disparities.

Solution

We propose the creation of a global knowledge hub for making knowledge and best practices more easily accessible, reusable, scalable, and increase our ability to effectively plan ahead for the next pandemic or sanitary emergency. This can lead to faster decision making, catalyze innovation, centralize knowledge and data, and make ready to-use knowledge available, by providing fast solutions to emergencies and improving response time for helping vulnerable populations in the public space realm. In short, we wish to create a platform for SDG 11.7 and the pandemic: Problems + Solutions; Guidelines + papers + case studies; Data; Networking + Exchange.

Impact

The only way to create resilient cities is by planning and planning needs evidence. This knowledge hub will provide extensive resources that anyone could access, but at the same time, will [serve as a catalyst for creating networks and innovative solutions](#). Collaboration will be the main aspect of this solution, as this could be a starting point for policy makers to join forces. Also, this will enable adaptation for potential “Forever” Changes in the public space, in⁴ relation to vulnerable populations. The level of collaboration within and between countries will have a significant impact on the effects of COVID-19, the same we can say for the next pandemic.⁵

1 Honey-Roses, J., Anguelovski, I., Bohigas, J., Chireh, V., Daher, C., Konijnendijk, C., ... Nieuwenhuijsen, M. (2020, April 21). The Impact of COVID-19 on Public Space: A Review of the Emerging Questions. <https://doi.org/10.31219/osf.io/rf7xa> || 2 COVID-19: Protecting people and societies, OECD, 2020 <https://tinyurl.com/oecd-covid19> || 3 Isabelle Anguelovski, Anna Livia Brand, James J. T. Connolly, Esteve Corbera, Panagiota Kotsila, Justin Steil, Melissa Garcia-Lamarca, Margarita Triguero-Mas, Helen Cole, Francesc Baró, Johannes Langemeyer, Carmen Pérez del Pulgar, Galia Shokry, Filka Sekulova & Lucia Argüelles Ramos (2020) Expanding the Boundaries of Justice in Urban Greening Scholarship: Toward an Emancipatory, Antisubordination, Intersectional, and Relational Approach, *Annals of the American Association of Geographers*, DOI: 10.1080/24694452.2020.1740579 || 4 How to rebound stronger from COVID-19 Resilience in manufacturing and supply systems, *World Economic Forum* || 5 The world remade by COVID-19. Recover: Planning scenarios for resilient leaders, Deloitte, 2020

A Global Solution to Streets

Team

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Problem

It is a right of all inhabitants of a city to have access to safe outdoor spaces. Data from the World Economic Forum from May 2020 suggests one is less susceptible to the virus in outdoor spaces. While there is already a discussion on how to tweak public spaces in the COVID-19 era, the role of streets also needs to be brought into question. Jane Jacobs has always identified streets as public spaces and spaces where interactions occur. In the context of today, streets have a major role in facilitating social distancing recommended by the World Health Organization in contrast to what they are meant for, i.e. mobility and interaction. Around the world, streets are becoming spaces where people can access services safely. There is a need to recognize the need for expanding sidewalks, especially, to guarantee the safety of those who move around and use urban spaces for recreation.

Solution

Using semiotics to ground our intervention in theory, we have looked into how some cities are already communicating social distancing and other safety measures. We have found that there are already campaigns in place around the world, such as masking tape to denote where people should queue in public spaces. Our solution uses easy-to-understand, symbol-based stickers that could be placed on any sidewalk (narrow or broad) to communicate COVID-19 safety campaign messaging.

Impact

The suggested intervention [enhances a safer public space for pedestrians, especially for those in most vulnerable conditions roaming the streets](#); Wayne Hunt says “graphic cues are useful because people are generally terrible at approximating distances”. It is cost-effective, easy to replicate, and mimic by a wide range of users at different scales (e.g. governmental stakeholders, NGOs, individual initiatives). Similar case studies have been implemented globally such as the chalk graffiti at a vegetable market in Chennai, India, the Traffic cones at polling stations in Wisconsin, USA, the Lines in Karachi, Pakistan, and the Circles in Nairobi, Kenya. The concept of customized 2D figures gives an open-source component that is resilient against local urban configurations and a powerful tool to raise awareness and most importantly, it helps rethink public spaces in the times of social distancing.

SDG 11.a

Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning

The fellows involved with SDG 11.a focused on surfacing methods for strengthening economic, social, and environmental links in peri-urban living, as aligned to the overall goal of this SDG 11 target. The proposed solution is titled “Edible Resilience: Community Gardens to Localize Food Systems and SDG 11.a with Urban and Peri-urban Agriculture for a Resilient Post-COVID-19 World”. The community garden approach is especially highlighted to be of relevance due to the impact of COVID-19 on food supplies and supply chain. Not only will this solution strengthen the economic and social wellbeing of the community, but will also create resilience in the food system for future pandemics or disruptions in food supply chains. The idea of community gardens is global and can be replicated across many communities of various economic and developmental needs.



Edible Resilience: Community Gardens to Localize Food Systems and SDG 11.a with Urban and Peri-urban Agriculture for a Resilient Post-COVID-19 World

Team

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Problem

Due to the current COVID-19 pandemic, complex food systems between urban and rural settlements are being disrupted. This has restricted access to basic resources such as food. In particular, peri-urban under-serviced communities have been greatly impacted by this, as they are more vulnerable and marginalized (Lwasa et al., 2014). Therefore, they face a greater food insecurity risk in the case that they are being cut off from urban and rural resources, such as during this pandemic crisis. In a post-COVID-19 world, how can we ensure local communities are self-sufficient in generating adequate food resources for the long-term?

Solution

Community gardens are a solution to design sustainable, resilient, and inclusive food systems at the local level, building self-sufficient communities (De Zeeuw et al., 2011). This solution is based on the three pillars of sustainability: equity, economy, and environment (Sachs, 2015).

- Equity: community gardens boost community participation and act as a “social glue”, being a platform for community building. Moreover, they have an educational function, emerging as “free public learning spaces” and delivering workshops and courses for the community.
- Economy: by improving food accessibility and food security, community gardens reduce the cost of food for marginalized, vulnerable, or migrant peoples, generally people living in under-serviced peri-urban areas.
- Environment: community gardens play an important role in planning for disaster risk reduction and climate mitigation by acting as carbon sinks and temperature regulators, stormwater attenuation mechanisms while ensuring food security and biodiversity protection.

Impact

Community gardens act as carbon sinks for the heavily industrialized and urbanized areas and as green public spaces for the community. They improve the efficiency of a circular economy approach to the food supply chain in communities. Community gardens bridge gaps, [fostering social integration between otherwise segregated groups of people](#). They [further build community awareness on the environmental impacts of their lifestyle choices](#). Lastly, community gardens act as [Disaster Risk Reduction, providing a shield to communities in case of economic, health, or environmental disaster in the future](#) (Barthel & Isendahl, 2013; Lwasa et al., 2014; Tsuchiya et al., 2015).

SDG 11.b

By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels

The proposed solutions relating to target 11.b focused on aspects that would promote mitigation and adaptation to climate change, as well as increase community resilience. For the team involved with “Access To Social Service And Urban Mobility”, COVID-19 is presented as a compelling condition to develop local markets as well as dedicated, secure lanes for non-motorized transport to enable social distancing. The second team, with a solution titled “Decreasing water insecurity in urban areas through the implementation of rainwater harvesting systems”, focused on the growing impact of climate change on water availability while recognizing that communal water collection sites could increase the risk of virus infection. Both solutions - though with varying approaches - can apply to cities globally where the need for local markets, or rainwater harvesting, is important.



Access to Social Service and Urban Mobility

Team

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Problem

COVID-19 and the resulting lockdown have exaggerated Ecuador's economic crisis which was already suffering from low oil prices (about 50% national GDP comes from oil) and rampant corruption, leading to massive layoffs in the government sphere, which is a major employer in Quito. Ecuador is a middle-income country and unlike developed countries, like the USA, it cannot provide social pay/social security to its citizens during the lockdown. This means a total lockdown is not possible nor sustainable as people need to continue working to earn their wages. As a result, the lockdown has to be lifted and the challenge at hand is how to facilitate safe public transportation for the masses while ensuring social distancing.

Solution

The proposed solution involves the construction of local markets so that each neighborhood is self-sufficient in terms of provisioning supplies, as well as the construction of secure lanes for the promotion of non-motorized transport (NMT) so that people can travel to work-places while maintaining social-distancing.

Local markets and NMT infrastructure would help contain the spread of COVID, as rather than locking cities, neighborhoods could be locked while the availability of markets would ensure minimum trips for getting essential and non-essential goods.

Each neighborhood could also set a committee to help all its households buy and deliver their essential needs from markets. Committee members would need to investigate what each household needs once per day/a couple of days and buy and drop the goods at the doors. The process of investigation could be online or by phone calls.

Impact

The availability of local markets limits the probability of getting infected as it reduces travel distance required while purchasing essential items and provides an alternative to congested, centralized markets. Delivery by a committee within the neighborhood could reduce the number of people going to market, and therefore **reduce people's risk of being exposed to COVID-19**. It also strengthens the organizational skills of the neighborhood. Lastly, the promotion of sustainable low carbon-intensive transit trips, in the long term, would **reduce air pollution and vehicular emissions**.

Decreasing Water Insecurity in Urban Areas Through the Implementation of Rainwater Harvesting Systems; Particularly in the Face of COVID-19 Disruptions

Team

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Problem

Water is one of the most precious resources for humanity as it is a fundamental requirement for sustaining life, yet, there is still a lack of access to water throughout the world, as a consequence of water scarcity and mismanagement. This water insecurity is particularly prevalent in informal settlements, where 20% to 80% of a city's total inhabitants experience water insecurity at a much higher rate than those in formalized settlements. Additionally, those experiencing water insecurities are at greater risk of negative health outcomes, such as contracting diseases as a result of contaminated water sources, or during the current COVID-19 crisis, due to increased risk of infection at communal water collection sites.

Solution

Rainwater harvesting (RWH) systems are recognized as one of the most promising alternatives to tackle the increasing phenomena of water scarcity. RWH refers to the collection and storage of rainwater, principally, from roofs, and other purpose-built catchments. These RWH technologies can be tailored to the existing conditions in a community and can range from simple collection tanks to integrated, smart RWH systems that manage the collection, sanitation, and disbursement of water as well as reacting to peak/low flows. We proposed that RWH systems be implemented in informal settlement communities around the world to increase the number of people with access to safe drinking water. These systems can be implemented by the communities themselves with the help of governments and NGOs and can target a range of water-related needs within a community.

Impact

Effective implementation of RWH has been proven to [increase a community's resilience to water insecurity in urban areas as well as increasing various health and livability outcomes in informal settlements](#). RWH technologies also:

- Ensure populations living in informal settlements have access to their basic needs;
- Decrease peak discharges, runoff volumes and velocity, during rainfall and generates more efficient stormwater management;
- Decrease the amount of energy required to pump and transport water to homes;
- Improve the health of the communities;
- Mitigate flood risk, which some cities are prone to.

CONCLUSION

The COVID-19 pandemic has revealed the frailty of many of the urban systems that are currently in place and presents us with an opportunity to rethink them from the ground up. Using the SDGs as a framework to design our future increases our overall resiliency levels against future crises.

The Local Pathways fellows comprehend the importance of urban-prompt response in times of crisis and came up with a set of solutions that showcase the energy, creativity, and ability to conceive a better world than the one we had.

This report showcases 22 concrete examples of what can be done when youth urbanists from all over the world connect to share knowledge and how capable they are to promote local ownership of the SDGs.

These include proposals ranging from short term immediate solutions to the challenges that arose amid COVID-19 as well as long term planning solutions that prepare us for future disasters. The fellows tackle challenges ranging from how can cities face shutdowns or decreased services on mass transit which lays at the core of urban mobility to the management of personal protective equipment and chemical waste which is rising rapidly. Many of these can be applied to different cities around the globe while some others are designed specifically to be used in a particular city.

The Local Pathways Fellowship is proud to offer a program that builds capacity among the youth and pushes cities to capitalize on their potential. We empower young urban leaders to take actions in the communities that they call home. Currently, our network consists of 253 fellows from 170 cities across 78 countries through which we facilitate network learning and best practices city exchanges.

This report continues to highlight the importance of giving the youth a seat on every decision making table.

We value your interest in having read this exciting report and appreciate your support in spreading the word about it!

ABOUT US

About SDSN Youth

UN Sustainable Development Solutions Network Youth (SDSN Youth) is the official youth initiative of the UN Sustainable Development Solutions Network (SDSN) launched by former UN Secretary-General Ban Ki-moon. Founded in 2015, the network currently has approximately 1000 member organizations in 85 countries, being coordinated by 26 regional centres, to support localization and implementation of the Sustainable Development Goals. Working with partners from the UN, academia, civil society, business, and government, SDSN Youth trains and supports young leaders and organizations to tackle the most urgent problems in their communities and help shape a sustainable future. The core projects include programs on innovation and entrepreneurship, education, sustainable cities, and sustainable campuses, all designed to respond to community challenges through practical, structured, and science-based approaches.

For more, visit www.sdsnyouth.org

About the Local Pathways Fellowship

The Local Pathways Fellowship was launched in 2016 in Quito at the UN Conference on Housing and Sustainable Urban Development (Habitat III) intended to build on the momentum around the adoption of the New Urban Agenda.

The fellowship is open to young people across the globe, passionate about sustainable urban development. The program, which is in its third year, offers a practically-oriented training program designed to enable young fellows to understand the process of “localizing” SDG 11 in the cities they represent and guide them through the development of their own projects.

The latest 2020 cohort consists of 140 young urban innovators from 100+ different cities around the globe.

For more, visit www.localpathways.org

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LPF FELLOWS





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