TECA
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TECA Waveseeding Workshop in the City of Santiago:

The Atlas of Opportunities for Urban Climate Ventures

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Purpose of the Workshop

On April 27th, 2023, BFA Global convened 20 climate change experts in Santiago de Chile as a part of its TECA (Triggering Exponential Climate Action) red wave program, which seeks to build ventures that solve issues of urban climate adaptation and resilience.

Participants brought a wealth of experience across government, university, non-profit, and private sector backgrounds. Four groups were formed to discuss the impacts of climate change on the city and to brainstorm adaptation solutions. This 'Atlas of Opportunities' will serve as a resource and inspiration for TECA Fellows as they develop new climate ventures as well as an organizing structure for the new wave. In the future, the stakeholders who were involved in this workshop will have the opportunity to mentor and collaborate with future fellows during their venture launching process.

Watch the workshop recap video featuring participant testimonials here


courtesy @bfaglobal youtube

Waveseeding: Goals for TECA Waves

TECA was launched in 2022 to seed fintech-enabled solutions for building climate resilience in emerging markets around three focus areas: blue waves for coastal and marine systems, green waves for terrestrial systems, and red waves for urban systems. TECA identifies priority geographies facing challenges in one of these areas and supports high-potential entrepreneurs who are passionate about building climate change solutions.

This program requires place-based, local knowledge related to climate and environment, finance and technology, and entrepreneurship and innovation. The TECA Waveseeding process helps to nurture the local climate innovation ecosystem by building a Community of finance professionals, climate experts, government officials, community members, and non-profit leaders.

In addition to mentoring and advising Fellows, community members shape the TECA program by collectively prioritizing which innovation areas are most needed and promising for ventures. Stakeholders are also instrumental in the Fellow recruitment process, as they can leverage their diverse networks to identify potential talent pipelines. Through this work, TECA looks to create a sustainable support system for its Fellows and future entrepreneurs, solving pressing climate issues and innovating towards a more resilient future.

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What is Urban Climate Innovation?

Urban and peri-urban areas feature high population density and a built environment, creating unique challenges around public health, equity, economics, and infrastructure in the context of climate change and population growth. These include urban heat island effects, disease transmission, and infrastructure and service failures following natural disasters.

Urban innovation refers to problem-solving with the intent of addressing specific challenges within and around cities. TECA red wave programs identify and tackle the most urgent climate needs within cities, building more resilient urban ecosystems and economies via entrepreneurship.

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Climate Impacts in Santiago

Santiago de Chile is no stranger to climate change. The intensity, frequency, and duration of extreme heat events in the city are increasing, especially over the past ten years, resulting in drought, wildfires, and other serious threats to human health. Parts of Chile have experienced a decade-long water crisis and enacted water rationing measures in 2022. The 2023 wildfire season was one of the worst in Chilean history, with hundreds of fires burning 430,000 hectares of land and claiming the lives of two dozen people.

In addition to causing devastating health and environmental impacts, urban extreme heat events in Santiago will exacerbate socioeconomic inequalities. For example, Santiago is highly segregated by socioeconomic status, and socioeconomic status is shown to have an inverse relationship with vegetation and heat island probability, meaning the communities with the fewest resources to combat the impacts of climate change will experience the most severe heat waves. Extreme heat is also expected to result in losses of billions of U.S. dollars from decreased productivity and lost income, which would disproportionately affect lower-income neighborhoods.

Santiago's heat waves are drawing attention and resources to urban climate resilience measures that help communities adapt to their warming environments while supporting the city's long-term environmental and economic sustainability. For example, Cristina Huidobro was appointed as Chief Heat Officer in 2022. In addition, Governor Claudio Orrego rolled out extreme heat protocols and educational materials to save lives, after the devastating heat waves in 2023. Through these initiatives and acting on the opportunitiy areas listed below, Santiago can strive to adapt and thrive under changing climate conditions.

Atlas of Opportunites

Seven areas of opportunity were developed and four overarching approaches through stakeholder engagement during the workshop, interviews, and desk research. These categories serve as the foundation of urban climate resilience ideas, within which local entrepreneurs and future TECA Fellows can explore and innovate. These ideas will require a supportive ecosystem of private, public, and social sector actors to launch and grow successful ventures to further Santiago's climate resilience capabilities.

The Atlas of Opportunities categorizes and summarizes the content generated during the session. While not all opportunity areas were generated during the workshop, the additional topics were deemed important based on supplementary research on challenges and solutions deployed by cities experiencing similar effects of climate change.

Atlas of Opportunities - Innovation Subcategories

Overarching Approaches

A. Solutions Tailored to Local Climate and Culture
B. Leveraging Fintech to Lower the Adaptation Barrier*
C. Public Incentives for Ensuring Long-term Sustainability
D. Doing More with Less

Infrastructure and Materials

A. Nature-based Solutions
B. Organic and Waste-Based Materials
C. Water Efficiency
D. Energy Efficiency

Regeneration and Biodiversity

A. Payment for Urban Ecosystem Services
B. Conservation/Restoration of Natural Urban and Peri-Urban Areas

Urban Food Systems

A. Urban Agriculture
B. Waste Management
C. Rural-Urban Connect*

Transportation

A. E-mobility and Public Transportation
B. Bicycle Infrastructure and Safety
C. Amphibious Vehicles*
D. Incentivized Carpooling

Renewable Energy Access

A. Energy Generation
B. Carbon Credits*

Climate Information Services

A. Early Warning Systems
B. Education and Awareness Platforms
C. Data Services

Health Services

A. Cooling Stations
B. Disease Monitoring
C. Healthcare Adaptation

* Areas of opportunity that were not extensively discussed during the session but evident from the literature review

Overarching Approaches

Solutions tailored to local climate and culture

Comprehensive city-wide planning is essential for creating resilient urban communities, and climate adaptation must be incorporated into the fabric of a building or city before the design phase begins. During this phase of TECA, it is imperative to **understand the local climatic and cultural contexts** of a site and to tailor plans and designs to take advantage of these factors wherever possible. For example, architects can leverage wind patterns to decrease dependency on HVAC systems to cool and ventilate interiors even in the hottest climates. These designs are made even more powerful when they incorporate local design features, such as modern Middle Eastern architecture drawing inspiration from traditional Islamic Mashrabiya styles that promote passive cooling.

> architects can leverage wind patterns to decrease dependency on HVAC systems to cool and ventilate interiors even in the hottest climates

Public incentives to ensure long-term sustainability

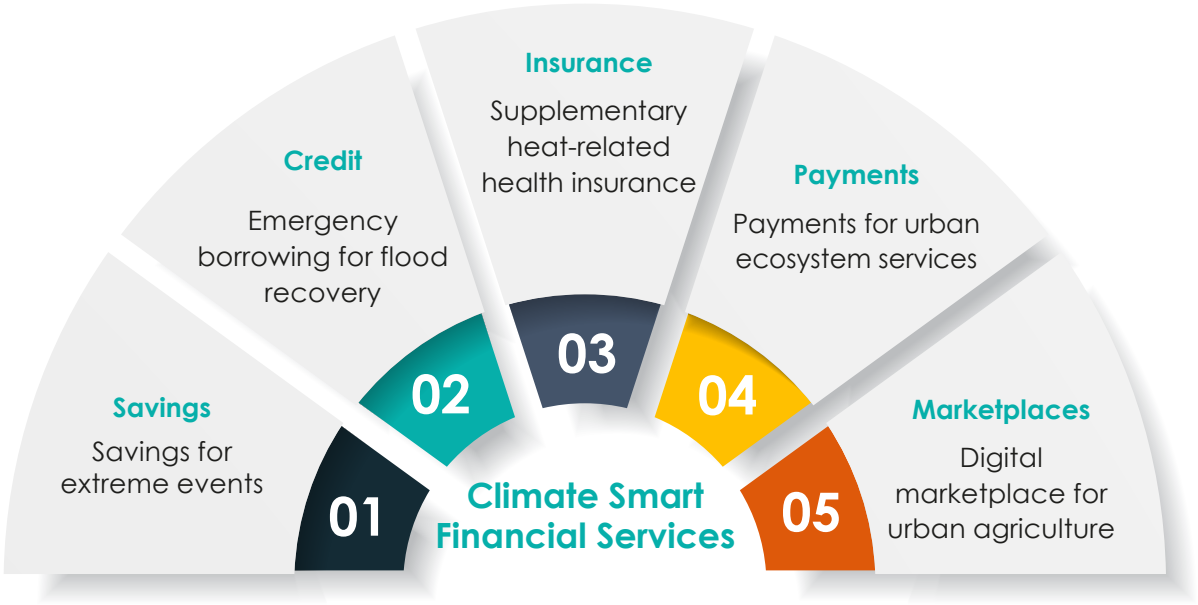
National and local governments have the ability to set policies that **require or incentivize climate adaptations** in building and urban design. The state should have a leading responsibility and be a driving force in the sustainable design and energy efficiency of cities.

A key component of the adaptation policy should focus on **designing for durability and longevity** and applying principles of resilient construction**.** The reliability of buildings and critical infrastructure during heat waves and other extreme weather events is important for community safety and security.

Leveraging fintech to lower the adaptation barrier

Financial services and fintech solutions can play a critical role in building climate resilience. Often, the first barrier that climate-vulnerable populations face is access to finance, but by **bundling financial services with climate solutions**, we can increase the accessibility, usability, and sustainability of such solutions.

Based on the Atlas of Opportunities developed during the Santiago workshop, **Figure X** provides examples of financial services that build climate-resilient capabilities for vulnerable populations.



Microfinance services including **microcredit, microinsurance, and micro savings**, are common tools through which financial products can be accessed by low-income and vulnerable populations at a smaller scale. Microcredit can help individuals and organizations diversify their capabilities, improve infrastructure, or expand production through capital investments. This improves climate resilience as recipients will be more capable of withstanding climate shocks and stresses. For example, SEWA provides loans to women in India looking to improve the integrity of their homes, bolstering their ability to survive extreme weather events. And in Bangladesh, the Bangladesh Unemployed Rehabilitation Organisation offers savings accounts that require small deposits over time to withdraw large sums in the event of a disaster, serving a similar role to insurance. In Chile, Fondo Esperanza is a large provider of microcredit and microinsurance through a community bank format.

Doing more with less

Implementing **circular economy principles** would promote the reuse and recycling of existing materials and is critical for reducing waste and greenhouse gas emissions. For example, the modular design uses discrete, individual components that enable repairs instead of total demolition. These pieces can be produced locally and shorten the construction value chain.

Governments, NGOs, and entrepreneurs should adopt a **systems thinking approach** to developing new policies and innovations around construction and design. This methodology views systems as interconnected elements that impact one another in immediate and distant ways by flowing in and out of systems through feedback loops.

Infrastructure and Materials

Nature-based solutions

Architects should consider **nature-based solutions** as ecological alternatives to synthetic infrastructure wherever possible, including plants to improve air and water quality, trees for shading, and green roofs for insulation.

China, facing simultaneous water, pollution, and flooding crises across its rapidly urbanizing landscape, implemented the '**Sponge City**' urban water management program in 2014. This strategy deployed green stormwater infrastructure through greenspace and wetland preservation and restoration and through limiting impervious urban development. One strategy is to develop bioswales to absorb and filter surface runoff. However, the Chinese case study illustrates how urban water management must take an integrated, city-wide approach instead of focusing on individual mitigation efforts.

Organic and waste-based materials

There is a huge opportunity for cities to scale organic and waste-based materials in urban buildings and infrastructure. These materials can have lower extraction and processing emissions compared to materials like concrete and steel, and some are capable of sequestering or absorbing carbon.

For example, **bamboo** is receiving a lot of attention as a fast-growing grass with a carbon sequestering potential greater than mass timber, and it is a traditional building material used throughout Asia.

Cutting edge **carbon negative materials** that absorb carbon from the atmosphere are currently being developed, such as an innovative concrete-like material that can self-heal when damaged, developed by the Center for Low Carbon Built Environment at the University of Michigan. Such solutions offer cities a win-win for mitigation and adaptation.

Water management

Prolonged extreme heat can lead to droughts and stress municipal water sources, resulting in water shortages and restrictions. Droughts can reduce the absorption capacity and permeability of soils, resulting in increased runoff and flooding.

Design solutions exist to help cities adapt to changing rainfall patterns. For example, flood-prone cities like New Orleans are mandating **permeable pavements** in parking lots to allow water to flow into the soil and recharge aquifers instead of running off into nearby channels, rivers, and lakes. While greywater recycling is allowed in Santiago, it has not been widely adopted. For green spaces that require watering, the city can implement **greywater irrigation systems** to reduce demand on freshwater systems.

Energy efficiency

For communities facing extreme heat, tactics that improve energy efficiency are crucial to mitigate the impact of heat waves, reduce energy and resource consumption, and improve grid reliability.

Adding **reflective coatings and films** help reflect sunlight away from buildings, reducing solar heat absorption and stabilizing internal temperatures. Initiatives in cities around the world are painting roofs white to cool buildings.

At the system-level, building codes such as the Building and Urban Planning Ordinance (OGUC) should be updated to **require that new construction meet specific energy efficiency criteria**. Santiago can draw on measures implemented in other cities which utilize financing support or sustainable building certifications that offer tax reductions and expedited permitting. In tandem, officials should update social housing standards to ensure that energy-efficient homes are accessible to everyone.

> Adding reflective coatings and films help reflect sunlight away from buildings, reducing solar heat absorption and stabilizing internal temperatures.

Photo by Francisco Kemeny on Unsplash

Regeneration and Biodiversity

Conservation and restoration of urban and peri-urban areas

Green spaces and recreational areas are essential to creating livable and sustainable cities and also have the potential to help communities adapt to climate change.

Conservation and restoration of greenspaces provide valuable ecosystem services to local communities. For example, wetlands provide numerous essential ecosystem services, including water purification, flood control, and wildlife habitat creation, and prioritizing the protection of wetlands helps to maintain urban biodiversity and ecological balance. Forests, streams, and cultivated land also contribute to human and environmental well-being in urban areas and should be protected.

Strategic use of urban flora and tree planting programs can provide effective cooling, reduce surface temperatures, conserve water, and boost urban biodiversity. Careful selection of **drought-tolerant plants** can keep spaces beautiful and healthy while limiting water intake. Growing **fire-resientant vegetation and implementing firebreaks** (i.e. open bands without vegetation in high-risk wildfire areas) can minimize the spread of fire and accelerate ecosystem recovery.

Cities can also **maximize greenspaces** by converting unused land to greenspace, which also have community benefits. This will not only connect people to nature but also improve biodiversity, manage stormwater, and insulate buildings. One opportunity is to repurpose outdated infrastructure as public spaces, similar to New York City's High Line, a park built on an antiquated rail line.

Payment for urban ecosystem services

As payments for ecosystem services grow in popularity, interest is growing in urban settings. Urban greenspaces like wetlands and forests can generate numerous health, environmental, socio-cultural, and economic benefits to communities, and payments for ecosystem services can be an innovative way to support conservation and restoration efforts. These payments are typically made from government bodies or NGOs to landowners for preserving land or ecosystems. They sometimes put a monetary value on services that are previously unquantified. These agreements are typically made to stymie development or reduce pollution that would interfere with critical ecosystem services.

In urban settings, payments for ecosystem services may be extended to sites far removed from the city, and watershed protections are the most common application of this concept. New York City paid an estimated $1.5 billion USD to protect an upstate watershed that collects, filters, and stores water to the entire city - services that would otherwise cost more than $10 billion USD to establish. In another example, farmers bordering a national park in Bolivia's, Los Negros valley, received payments to preserve forests and limit hunting activities. This program was initially funded by the US Fish and Wildlife Service as an effort to preserve migratory bird habitats and by municipal governments to maintain water supplies for downstream communities. Annual in-kind payments through beehives, training, and barbed wire, per the request of the upstream landowners, and a monitoring and enforcement program were established to ensure appropriate protections are in place.

Urban Food Systems

Urban agriculture

Urban and peri-urban farms support household survival and livelihoods, and they are equally as vulnerable to the impacts of climate change as their rural counterparts. Improving the adaptive capacity of urban agriculture can ensure long-term productivity and improve food security.

Community gardens can foster stronger communities as people come together to collectively grow herbs, fruits, and vegetables. This can help provide food for food-insecure populations and create new community green spaces.

There is an opportunity to increase the production of **drought- and heat-resistant crops** leading to higher resilience of urban agriculture systems. In addition to providing the same heat and water management benefits as non-food plants and greenspaces, urban farms are important sources of food and income for vulnerable and food-insecure communities.

Waste management

Organic waste can be diverted for use as compost or manure on urban farms to improve yields. This provides an inexpensive alternative to petrochemical-based fertilizers while reducing the burden on municipal waste facilities.

Photo by Diego Marín on Unsplash

Rural-urban connect

Strengthening supply chains between urban, peri-urban, and rural communities is an important climate adaptation tool, especially for urban food systems. Zona Central, where Santiago de Chile is located, is the agricultural heartland of the country. Warmer temperatures can increase spoilage rates, leading to food waste, lost income, and illness, and as the region experiences hotter weather due to climate change, **cold storage, transportation, and processing solutions** will become an increasingly important infrastructure for feeding cities. However, these systems must be designed with sustainability in mind, with careful selection of equipment and refrigerants to avoid further contributing to climate change.

Examples of bolstering agricultural supply chain resilience include providing solar-powered freezers to fisherwomen and female farmers or solar-powered milk cold storage and app-enabled sales tracking for farmers in rural Kenya.

Progress can also be pursued at the federal scale. Chile is a signatory of the Rome Declaration on the Contribution of the Montreal Protocol to Food Loss Reduction through Sustainable Cold Chain Development, which seeks to develop national sustainable cold chains and improve international cooperation.

> as the region experiences hotter weather due to climate change, cold storage, transportation, and processing solutions will become an increasingly important infrastructure for feeding cities.

Transportation

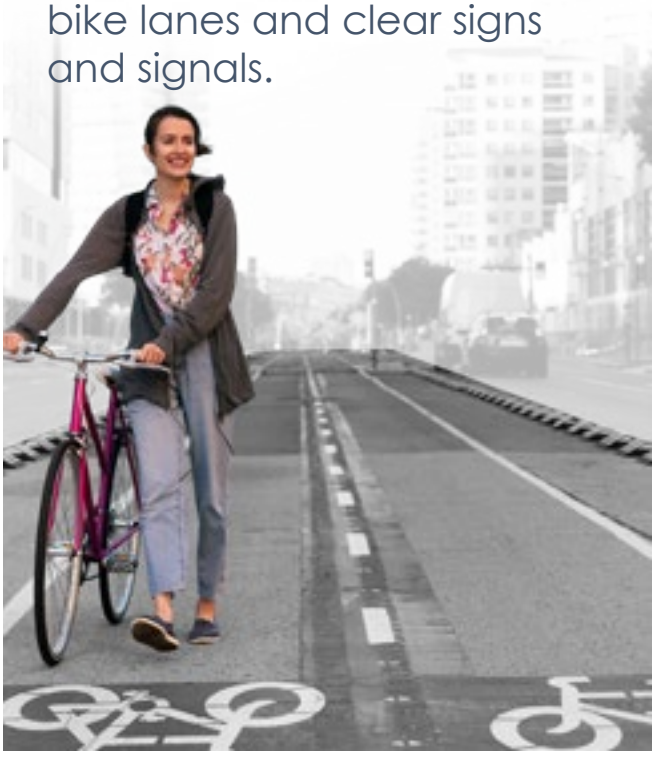
E-mobility and public transportation

Electric public transportation options offer simultaneous climate mitigation and adaptation benefits to urban communities. They have the potential to reduce fossil fuel emissions while reducing exposure to adverse weather events such as heat waves during a commute. Further, widespread public transportation systems are also important for building an equitable society, as those who are most reliant on public transportation are also those most impacted by climate change.

To start, Santiago received 900 **electric buses** through ZEBRA (Zero Emissions Bus Rapid-deployment Accelerator) program led by P4G (Partnering for Green Growth and the Global Goals), C40, and the International Council on Clean Transportation. However, there is a need to expand this fleet and electrify other modes of transportation. The city has plans to reach 2,000 electric buses by the end of 2023.

Electrification alone isn't sufficient for a resilient transportation system. Cities must consider **cooling infrastructure around bus and train stations** where passengers are exposed to the elements. SIngapore piloted a "smart" bus stop that features air filtration and cooling mists. While perhaps not viable in areas of water scarcity, this innovation is able to tackle both air pollution and heat exhaustion. Finally, Santiago can **reduce the number and distance of trips** through urban planning, drawing inspiration from the "15-minute city" concept which emphasizes self-sufficient neighborhoods in which residents have easy access to essential services within a short distance. These ideas must be implemented with heat waves in mind utilizing designs that facilitate cooling or shading for travelers.

> Bicycle infrastructure and safety includes protected bike lanes and clear signs and signals.



Bicycle infrastructure and safety

Bicycle infrastructure and safety includes **protected bike lanes** and **clear signs and signals.** The stakeholder noted that the wide range of solutions in this space can be implemented cheaply. Amsterdam, often hailed as one of the friendliest cities for cyclists, has launched a Bicycle Innovation Lab competition to **source for solutions to specific safety issues,** directly from the community.

Amphibious vehicles

Cities facing high flood risks may consider developing a fleet of **amphibious vehicles** that can operate on land and in the water to deploy during excessive rainfall and flooding events. Although these vehicles are typically used in military or tourism capacities, they could easily be deployed at the city level for disaster response scenarios. The UN World Food Programme is testing amphibious all-terrain vehicles in South Sudan to reach isolated communities during the rainy season.

Incentivized carpooling

Some individuals may be uninterested in transitioning away from private vehicles, but **incentive programs** can gain buy-in for sustainable commuting practices like carpooling. This can take the form of direct payments for carpooling and discounted or designated carpool parking, which create added financial benefits such as splitting the costs of expenses like gas, tolls, or parking.

Renewable Energy Access

Energy generation

Workshop groups were interested in rooftop solar not only for local energy generation but also for shade buildings and **reduction of solar heat absorption.**

Santiago can bolster residential adoption of solar panels by **subsidizing equipment and informing the public** of the benefits of energy independence, such as the possibility of selling energy to the grid. Similar strategies targeting small-scale rooftop solar employed in New Delhi have helped boost renewable capacity while reducing energy bills for low-income households.

Renewables are not limited to power plants or houses, and the government and developers should look to **maximize the spaces for energy generation** to cover collective needs. Istanbul is implementing an ambitious floating solar project, which will generate electricity for the national electricity grid and make use of the unused space on the city's water basins and ponds.

> Workshop groups were interested in rooftop solar not only for local energy generation but also for shade buildings and reduction of solar heat absorption.

Carbon credits

Urban carbon credits are new mechanisms that cities are using to protect greenspaces while establishing new revenue streams. City Forest Credits has registered urban carbon credits across the United States, focusing on preservation, restoration, and reforesting projects. Carbon credit schemes are expanding beyond forest sequestration and renewable energy credits, with **community projects** like the WASH (Water, Sanitation, and Hygiene) program in Ethiopia repairing water and sanitation infrastructure to reduce the need to boil water. The Darfur Sudan Cookstove project is another example, which generated carbon credits by replacing wood and charcoal stoves with low-emission alternatives. Companies like CoreZero are generating carbon credits by **reducing or diverting food waste** from landfills to decrease CO_2e emissions from decomposition.

Climate Information Services

Early warning systems

Systems can push **automatic alerts** when certain weather thresholds are surpassed. These can send heat wave warnings and inform the public about the most dangerous times to be outdoors, allowing individuals and communities to take proactive measures.

Similarly, **urban flood monitoring systems** like the one implemented in Buenos Aires can track precipitation, channel depth, and flow measurements to allow officials to take action and inform the public when flood risks arise.

Fire monitoring systems can trigger alerts to rapidly evacuate communities or share air quality warnings. Programs like the Global Wildfire Information System (GWIS) create a comprehensive view of wildfire regimes and effects. In addition, in California, USA Smoke Spotter app has been developed to share information around prescribed burns and Air Quality Index data with residents.

Fire monitoring systems can trigger alerts to rapidly evacuate communities or share air quality warnings.

> There is room to expand climate change education in Chilean schools with a focus on local changes and on how urban resilience measures work to mitigate the impacts of extreme heat.

Education and awareness platforms

Educational campaigns, community engagement, and a collaborative multi-stakeholder approach involving government, business, educational institutions, and the media are critical to raise public awareness and foster a collective commitment to address the challenges of extreme heat.

Participatory planning is a key element for urban resilience design. Communities must be involved throughout the urban design cycle and should share which problems and solutions they would like to see addressed. Encouraging participation not only improves community buy-in but also promotes knowledge sharing and skill development in sustainable practices.

There is room to expand **climate change education** in Chilean schools with a focus on local changes and on how urban resilience measures work to mitigate the impacts of extreme heat. They should be encouraged to design and test solutions that can directly benefit their communities.

Businesses can incorporate **extreme heat and other climate considerations** into their policies to protect employees and mitigate productivity impacts. For example, employers can adjust work schedules to reduce employee outdoor exposure during peak temperature hours, fostering a safer work environment and raising awareness around heat waves.

Data services

Every opportunity area requires or benefits from having city-wide data to identify at-risk communities or to track progress. This data can serve as the foundation for many ventures seeking to build climate resilience in Santiago de Chile.

Sensors and other data collection tools must be installed throughout Santiago to collect weather data, including temperature, humidity, and precipitation. Devices can also collect data on energy use and efficiency, public transportation ridership, air quality, and biodiversity. For example, some cities are **leveraging 3D imagery, tree monitors, and geospatial imaging technologies** to monitor the health and engagement of greenspaces. The accurate and comprehensive collection of data enables baseline and target setting across a range of metrics.

Cities also need **data management tools and trained professionals** to collect, clean, analyze, visualize, and communicate data and insights.

Once sufficient data is collected, cities can **identify communities most vulnerable to the impacts of climate change** and allocate funds and resources towards bolstering community resilience.

Finally, datasets pertaining to various urban climate and health issues should be **easily accessible to the public**. Communities can reference this information to prepare for extreme weather events in the short term or build adaptive capabilities in the long term.

Health Services

Emergency services

In tandem with transitioning to green infrastructure and resilient design, cities like Santiago must invest in emergency services to provide immediate relief during heatwaves, floods, and other extreme weather events.

Cooling centers are common emergency services in the United States, where energy is reliable and relatively inexpensive and air conditioning infrastructure is widespread. A review of US cooling centers found that the sites are most heavily used by vulnerable populations, although access can be an issue. This study also found that when using existing infrastructure for cooling, retrofitting costs were minimal and mostly associated with additional staff hours and providing water to visitors. Public pools and sprinklers are commonly deployed in hot climates but are not practical in geographies facing water shortages.

Disease monitoring and prevention

Shifting temperature, humidity, and precipitation patterns are transforming the range of tropical diseases and disease-bearing pests like mosquitos and ticks by creating optimal environments for their reproduction. These effects are exacerbated because air pollution accelerates the spread of diseases and melting ice may release ancient diseases, therefore waning the efficacy of natural immunity. Therefore, disease monitoring and preventative measures are key, including affordable and accessible healthcare to improve general resilience.

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Healthcare adaptation

Health systems will also need to build or **expand their capabilities to deliver care in the context of climate change,** as extreme heat and other impacts of climate change can cause severe stress. The World Health Organization has published guidance for climate-resilient and environmentally sustainable health care facilities. These guidelines include initiatives aimed at enhancing operations in key areas: health workforce, water, sanitation, hygiene, healthcare waste, energy, and infrastructure, technologies, and products.

Santiago is already upgrading its ambulance fleet to include air conditioning systems, which should improve survival rates for victims of heat stroke.

What is Next?

The TECA team is looking to capitalize on the momentum generated by this workshop to continue engaging its Community members, prepare for the official launch of the Santiago de Chile red wave, and expand the TECA wave model to new geographies.

Continuing to build the community

This workshop was only the beginning of TECA's work with the broader innovation ecosystem in Santiago de Chile. TECA plans to grow the Community over time and to continue engaging them through webinars, workshops, networking events, and mentorship programs with the TECA Fellows.

Activating young entrepreneurs

TECA will soon begin engaging with local founders, scientists, engineers, and students to better integrate them into the innovation ecosystem and raise awareness about its upcoming red wave. Upon the official program launch, individuals can apply to the urban innovation red wave through TECA's online portal.

The Fellows will work with the TECA team and Community members to develop urban climate solutions. The program walks the cohort through each step on how to build a venture through ongoing training and Masterclass sessions. The wave structure offers peer support, networking, and a pool of potential co-founders.

Fellows will explore and validate potential solutions before selecting a venture to pursue and pitch for a pre-seed investment. Ventures that receive pre-seed capital from TECA will use the funds towards further venture development, founder salaries, product testing, attracting customers, and other expenses. At the end of the program, they will also have the opportunity to pitch their business idea to external investors to attract follow-on funding.

Waveseeding in India and West Africa

TECA is a global program, with site selection driven by funding sources, partnerships, and climate vulnerability. BFA Global has begun researching the local innovation ecosystem and conducting introductory meetings in India and West Africa, the next potential TECA red wave sites. Part of the power of TECA is 'cross-fertilization' across regions. Entrepreneurs from different countries will be able to co-innovate and share lessons learned.

Call to Action

Interested in joining the TECA community of experts in Santiago?

Know young entrepreneurs in Latin America interested in climate innovation for cities?

Keen to follow what happens next in India and West Africa?

Reach out to our Waveseeding Lead, Tyler Ferdinand, at tferdinand@bfaglobal.com and local leader for Chile, Alfredo Urrutia, at aurrutia@bfaglobal.com

Appendix: Workshop Participants

Waveseeding - TECA Urban / Santiago de Chile April 27, 2023

Workshop: Atlas of Opportunities in Urban Climate Resilience for the City of Santiago

Online Participants		
Name	**Organization**	
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David del Ser	BFA	BFA Global
Gloria Moya	CORFO	Production Promotion Corporation

Open Invite		
Name	**Organization**	
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Workshop Leader		
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Participants		
Name	**Organization**	
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Carla Bardi	MOP	General Directorate of Public Works
Magdalena Gil	CIGIDEN	Research Center for Management Integrated Disaster Risk
Camila Fernández	R2R	Race to Zero and Race to Resilience
Gilles Flamant	CEDEUS	Sustainable Urban Development Center
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Jorge Valdés	PERI	PERI Chile
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Claudio Sanhueza	PASSED	Sustainable Patagonia
Felipe Briones	LIV MET	Living Metrics
María José Fuhrmann	2811	2811 Overall
John Edward Cordero	ABTAO INV	Abtao Investments
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