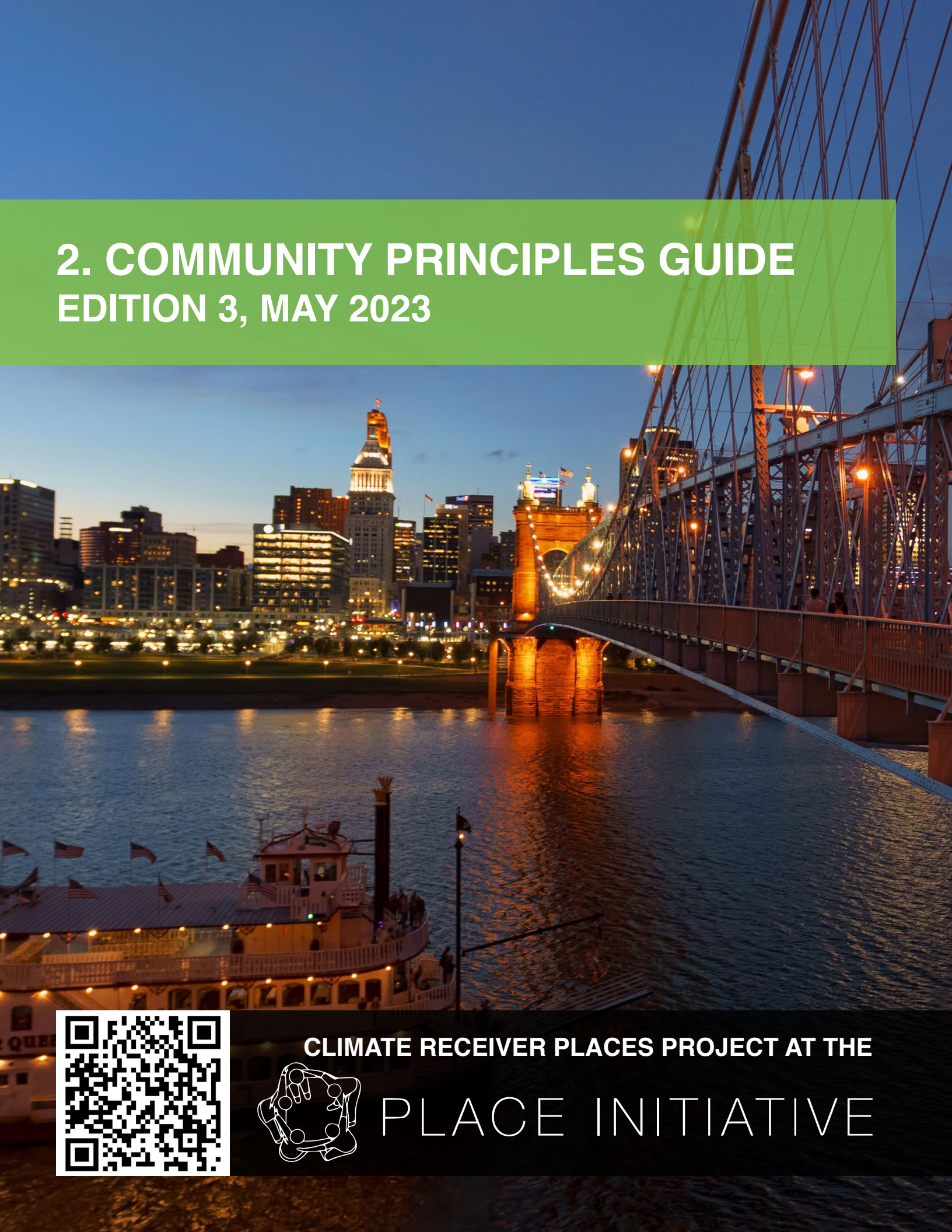# 2. COMMUNITY PRINCIPLES GUIDE
EDITION 3, MAY 2023

CLIMATE RECEIVER PLACES PROJECT AT THE

PLACE INITIATIVE

Community Principles Guide

Edition 3, January 2023. Released by the Climate Receiver Places Project at PLACE Initiative.

This project is also available at:
placeinitiative.org/projects/receiver-places/

This document is also published at:
placeinitiative.org/projects/receiver-places/02-principles/

Note: all updates in this edition are in blue text.

Overview

Climate Receiver Places Project

The goal of the Climate Receiver Places Project is to create a framework for communities to equitably strengthen their futures in response to incoming climate change migration. We will use the policy documents that we create to work with communities in climate-resilient geographies to promote and implement climate-resilient urbanism. Compact, complete, complex communities are a climate change solution for both mitigation and adaptation. Climate receiver places are communities that sit within geographies with low climate-change risk exposure, while maintaining interconnected spatial organizations that have the potential to adapt and grow into resilient communities. This project identifies and focuses on places with lower climate risk, but is applicable to intermediate receiver places and most communities in general. Whether or not a whole community or a portion of one can be a potential long-term receiver place, the principles of our work are relevant to all places and receiver zones within non-receiver places.

PLACE Initiative

This project is part of PLACE Initiative, which is a policy platform that operates in the intersection between climate change, social justice, and urbanism.

The materials for the Climate Receiver Places Project can be found at placeinitiative.org/receiver-places/
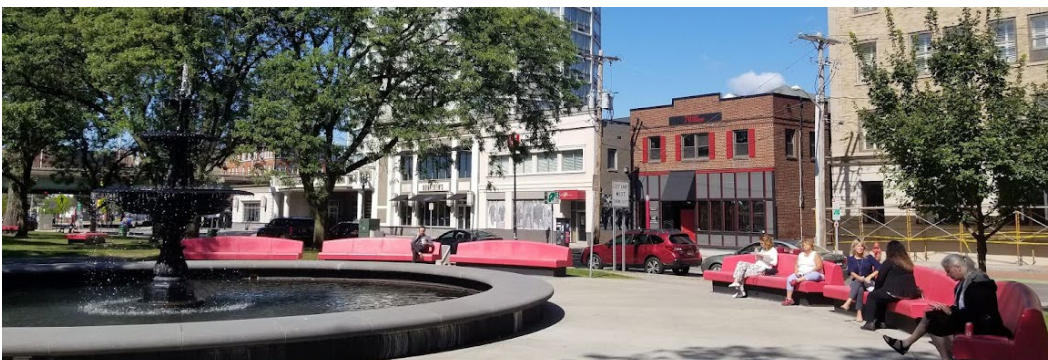

Project Documents

0. Project Summary – A brief introduction and overview of the Climate Receiver Places Project.
1. Receiving Geography Guide – A document to define receiving geography, specific cities, towns, and regions around these municipalities, and the methodology that got us to these conclusions. We also provide supplementary maps and data.
2. Community Principles Guide – A document to define equitable, climate-resilient community principles and how climate receiver places can use them to change mindsets, self-assess, plan, and implement.
3. Community Assessment Guide – A checklist and rating system to qualitatively assess current conditions of a community, direct that community towards certain priorities, and conduct a post-assessment.

We will revise and add to our set of tools and documents based on the outcomes of our first pilot projects.

Overview

Community Principles Guide

This document, the Community Principles Guide, is the second and focal document in a series of several resources that make up the Climate Receiver Places Guide.

In this document, we first define a set of goals for climate receiver places to strive for. These set the tone as ways of thinking and the lens through which the reader views the second part of this document, the principles.

In the principles section, we look at different areas of focus for places to consider when equitably strengthening their communities for the future. These go into more depth than do the goals, as the principles pinpoint more specific issues and practical concerns facing climate receiver places. These issues and concerns will be addressed directly by resources and solutions in the Climate Receiver Places Project's database.

Lastly, this document concludes with one potential next steps for places to begin implementing the goals and principles of this guide. However, every place and circumstance is different, and an alternate series of next steps may work better for a particular community than the set presented here.

B. Goals

Introduction to Goals

We invite receiver places to orient for success through the rocky transitions ahead by aligning ideas and actions to the broad objectives defined below. These six goals serve as beacons and targets that unify a wide range of meaningful measures to pursue, yet they are not definitive or absolute. Use them as a checklist to inform and be cross-referenced with strategy, messaging, monitoring, challenges, and solutions, as presented in this document's Principles and Next Steps. The goals can also be used in accordance with the other resources published through the Climate Receiver Places Project. Ideas and actions can be structured around these goals, as well as more locally appropriate variants.

List of Goals

The six goals listed below are the overarching ideals for which climate receiver places should strive. These are further detailed beginning on the next page.

1. Capable
2. Resilient
3. Thriving
4. Urbanist
5. Specific
6. Exemplary

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B.1 CAPABLE

Despite rising challenges, climate receiver places have what it takes to uphold high quality of life for all constituents of all backgrounds, circumstances, and experiences. Building on models of performance and sustainability, these places plan and invest for the long term. This means doing what it takes to ensure the function and maintenance of many layers of systems and services - no easy feat in times of disruptive change. However, this basic reassurance of community integrity combined with the ability to respond and evolve as conditions change is what all other goals and outcomes will rely on.

Receiver places should present a safe and welcoming destination to those departing zones more severely affected by climate change, accessible to all without prejudice. Inadequate capacity can hinder this goal, where basic infrastructure, housing, agriculture, services and economic conditions do not support even current residents. Places that lack this basic integrity will become vulnerable, unreliable, and prone to setbacks that further burden those in need of secure places to renew and rebuild their lives.

B.2 RESILIENT

Receiver places are prepared and buffered against catastrophe across critical social, economic, and environmental systems. Resilience is being willing and able to respond positively to new conditions and challenges as they arise. Resilient communities are structured intelligently and efficiently, while retaining essential diversification and surplus capacity to prevent single points of failure. Places can be proactive by continually assessing present

and future threats, while also recognizing and cultivating inherent strengths and opportunities in advance of crises. Flexibility allows for ease and speed of adaptation. Proactive places forecast the future and stand ready to respond. Resilient communities are sustainable through the three-part approach of social, economic, and environmental sustainability, with a mindset of balance.

Ultimately, resilience is necessary to succeed and carry on, meeting present-day needs without compromising to the future. The opposite of resilience is fragility, which leads to the breakdown of systems, places, and people whenever there is a challenge or acute stress. In an era of climate change, where the stresses are multiplied, fragility can lead to complete systemic collapse and decline of communities if they cannot adapt to challenging times.

B.3 THRIVING

Receiver places come into their own as communities that are dynamic, alive, appealing, and hospitable settings to the benefit of all residents. Communities also cannot thrive or be receiver places without first being equitable for those of all backgrounds, experiences, and circumstances. They are thriving communities - places that are not just functional but inviting and invigorating while meeting basic needs of wellness and livability across the board. Filled with vital social and cultural institutions and a variety of engaging public spaces, they are places that are deeply cared for and celebrated as the best expression of a diverse, invested populace.

The alternative path where communities fall behind under a rising tide of demands and

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stressors leads to malaise and terminal declines or vicious cycles of conflict and stagnation. In an increasingly mobile world, citizens will seek thriving places, and abandon dysfunctional ones, whether those place's failures are directly tied to climate impacts or simply the inability to cope with changing demands and conditions. Communities that fail to meet and overcome these interwoven challenges show high turnover, low diversity, increasing inequality, privatization, displacement, violence, corruption and injustice, on top of ill-advised opportunistic development patterns which are difficult to reverse.

B.4 URBANIST

Anticipating substantial population influxes to receiver places means planning and implementing smart urbanism for healthy growth, sooner than later. Urbanism doesn't just describe cities. This is about compact, walkable, small towns, too. Receiver Places promote planning that will encourage mixed-use, walkable, transit-connected, equitable, diverse, human-centric, resilient places. Such places are generally compact and complex and provide the essential elements of everyday life.

The above described essential elements of everyday life include places to live, eat, shop, work, play, learn, and gather, as well as places to access services, healthcare, arts and culture, government participation and services, amenities, entrepreneurial opportunities, and public spaces of both urban and rural varieties.

The built environment should promote ways for communities to come together and build a strong social fabric. They should be places that accommodate people at all stages of life, and not silo different generations off from one another. The goal is to avoid places with no "there" there. Unchecked sprawl has no sense of place, no community gathering spaces, and streets that are unsafe for children, elders, and everyone in between for walking and biking. Sprawl is a lost opportunity to grow receiver places into places in which people can enjoy living, build community, and thrive.

B.5 SPECIFIC

The approach to climate receiver places must be specifically adapted to the distinct characteristics and demands of each individual community. Places come in different sizes and stages of growth, with different makeups and histories. A place may be overbuilt while another is underbuilt. One place may have better access to transportation or natural resources than another place, driving communities to varying types of economies. Among places in climate-resilient geographies, climate risk factors and their severities will vary from one location to another, and at more granular scales within each place. Cultures and surrounding ecologies will vary. Some communities may be polycentric while others may be monocentric.

Recognizing these differences is important, with the awareness that every place is unique and requires customized solutions developed and refined over time. The opposite, prescriptive and generic places, sets up for disinvestment and failure. The same approach cannot work equally well under different sets of conditions. Without public participation and buy-in, a community's adaptations may fall flat, with limited effectiveness or even counterproductivity.

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B.6 EXEMPLARY

Receiver places take pride and gain advantages as they become centers of influence and engines of innovation and adaptation. Communities that embrace the opportunity to move decisively toward better futures given the unprecedented convergence of forces and circumstances, will be recognized as leaders and positioned to benefit greatly. This ultimate goal of demonstrating leadership and wielding influence will help others in turn to follow their example.

Towns, cities, and regions that stand out as Receiver places are the future that people will literally be moving into. Early adopters are acting ahead of the curve to grow 21st Century epicenters that bring out the best of an engaged, inspired, caring and creative citizenry. On the contrary, places that reject this reality and delay or create barriers will succumb to rising pressure and demands from current and newly arrived citizens, becoming locked in conflict and crisis or defensive protectionist stances. Demoralizing failures will push away people with options, capabilities, and capital. Such places will be stuck playing catch-up, and compensating for lack of preparedness. In a hyper-connected, well-informed and mobile world, these places will be chronically neglected.

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C. Principles

Introduction to Principles

In the principles section, we look at different areas of focus for places to consider when equitably strengthening their communities for the future. These go into more depth than do the goals, as the principles pinpoint more specific issues and practical concerns facing climate receiver places. These issues and concerns will be addressed directly by resources and solutions in the Climate Receiver Places Project's toolkit database. The principles of climate receiver places are curated to be at the core of each community's plan for equitably strengthening their future in the face of climate change.

List of Principles

The nine principles listed below are the main areas of focus that climate receiver places should consider when planning for a resilient future. These are further detailed beginning on the next page.

1. Equity, Affordability, and Access
2. Regional Focus and Partnerships
3. Resilient Infrastructure
4. Good Governance
5. High-Quality Built Form
6. Connected Communities
7. Resilient Economies
8. Environmental Sustainability
9. Hazard Risk Reduction

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Community Principles Guide

C.1   Equity, Affordability, and Access

Introduction

A climate receiver place cannot be successful unless it is equitable, affordable, and accessible for all. After all, the purpose of such a place is to provide a refuge from the worst impacts of climate change that creates improved outcomes and higher quality of life for anyone. This includes people of any background, circumstance, or experience, including new, incoming residents and community members as well as those already living in the place. Among new residents, those who migrate and seek refuge due to climate-related necessity are especially important to consider, as are underprivileged community members who have already lived in a place for generations. The community should structure itself in a way that positively is shaped by and impacts its people of all kinds in ways that celebrate, learn from, and share from and with people of all backgrounds and experiences. Equity is important within affordability, transportation, quality urban design, social capital and culture, access to representation, environmental justice, economic opportunity, resources for climate migrants and underprivileged groups, and justice system reform. Equity, affordability, and access can and should actively be fostered by from governments, non-governmental organizations, and others, while also being inherently baked into systems and the structure of places.

List of Subpoints

This principle can be broken down into the more detailed subpoints below. These will be explored in greater depth in this section of the guide, beginning on the next page.

1.1   Equity for Whom?
1.2   Addressing Gentrification and Displacement
1.3   Housing Affordability
1.4   Commercial Real Estate Affordability
1.5   Transportation Access
1.6   Equitable Urban Design
1.7   Access to Social Capital and Culture
1.8   Access to Representation
1.9   Environmental Justice
1.10   Economic Opportunity
1.11   Equitable Access to City Services
1.12   Equitable Policing and Justice Systems
1.13   Community Input

C.1   Equity, Affordability, and Access

1.1   EQUITY FOR WHOM?

Equity, affordability, and access should exist for those of all backgrounds, experiences, and circumstances. This includes both extant and new community members.

1.2   ADDRESSING GENTRIFICATION AND DISPLACEMENT

1.2.1   **Mitigation**. Upon increasing demand for a climate receiver place and community revitalization, gentrification and displacement are serious risks. A place should mitigate the impacts of gentrification, especially early on when this mitigation is most feasible. This can include, among other things, policies and programs that are designed to, directly and indirectly, prevent land control monopolies.

1.2.2   **Collaboration**. Steps towards becoming a receiver place and community revitalization should be done in collaboration with impacted communities, rather than being done to those communities from the outside.

1.2.3   **Successful communities**. In the case of gentrification and displacement, all under-resourced community members should continue to have access to walkable, car-optional, transit-oriented, accessible, safe, compact, resilient, high-quality places with strong senses of community and quality public space.

1.3   HOUSING AFFORDABILITY

1.3.1   **Equitable transit-oriented development.** New transit-oriented and walkability-oriented development should be structured to avoid harm towards vulnerable communities while including sufficient space for the under-resourced. Housing needs to be made available for residents with any level of income. Economic opportunities must be facilitated for entry-level businesses and entrepreneurs, to allow residents to build the lowest rungs of the economic ladder for one another. Transportation options should be plentiful and safe, and not force residents to use the highest-cost, highest-risk modes as a matter of infrastructure policy.

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C.1   Equity, Affordability, and Access

1.3.2   **Equitable access to varied affordable housing.**

1.3.2.a   **Qualities.** There are certain qualities that affordable housing should follow.

  i.   **Mixed-income Communities.** Places should strive to create mixed-income communities without displacement. These communities should be dispersed throughout receiver places without forcing the dispersion of extant communities.

  ii.   **Access**. Access to good transit and 15-minute neighborhoods is essential for the under-resourced.

  iii.   **Safety**. Affordable housing should be safe and in safe places, while reinforcing the safety of its surroundings.

  iv.   **Affordability**. Affordable housing should be energy and maintenance affordable, in addition to purchasing or rent.

  v.   **Walkable neighborhoods**. Everyone should have access to walkable neighborhoods that allow especially under-resourced households to go car-free or car-lite.

  vi.   **Serving diverse backgrounds**. Affordable housing should have variety that serves people of various backgrounds, experiences, and circumstances. This means a variety of quality, size, age, amenity, a gradient of levels of affordability, and other features are important within a place's housing stock, both affordable and otherwise.

1.3.2.b   **Typologies**. There should be a variety of housing typologies to meet the needs and resources of many different households. This includes townhomes, small multi-unit buildings, walk-up and elevator apartment buildings, accessory dwelling units, live-work units, mixed-use buildings, and many variations of these and other types of housing.

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1.3.2.c   **Types of affordable structures**

i.   **Subsidized affordable ownership**. Subsidize new construction in certain areas to be financially affordable. This can build generational wealth among those who need it, as well as limit displacement impacts of gentrification.

ii.   **Subsidized rentals**. Public housing and section 8 vouchers can create flexibility and mobility, which is crucial to many with limited resources. To avoid concentrated poverty, dispersed rather than aggregated subsidized units are encouraged.

iii.   **Subsidized affordable development**. In order for it to be financially possible to include affordability in new construction, some subsidization can occur.

iv.   **Bonus-driven affordable development**. Bonuses for extra development rights or other similar perks can drive the construction of affordable units within new housing development.

v.   **Intrinsic affordability**. Some types of housing are intrinsically more affordable. This could include a lack of features desirable to many, such as large spaces and the convenience of elevators. That being said, affordable housing should still be made readily available for those who do require features such as an elevator.

vi.   **Supplemental income**. For example, the opportunity to own a duplex with an accessory dwelling unit and an accessory commercial unit allows affordable ownership for the owner who can buy more house through the ability to rent out 2 apartments and a small commercial space. This type of affordability is only possible through a place that has small lots, allows for commercial activities at the very least as an accessory use on a property, and fosters ease of development for small, inexperienced individuals.

vii.   **Community land trusts**. Public lands ready to be converted into higher intensity uses, especially in the wake of projects such as urban highway teardowns, can be placed in the ownership of disadvantaged communities, giving under-resourced communities the opportunity for control and generational wealth.

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viii.   **Land banks.** Land banks can help put properties back to positive use, rehabilitating them for uses such as affordable housing and neighborhood-based business opportunities.

ix.   **Creation of small lots**. If a place subdivides public lands into small lots before selling to the private sector or makes it easy for the private sector to subdivide, small developers and small multifamily building homeowners have opportunities to build wealth, rather than just large developers working with large plots of land.

x.   **Cooperatives**. Cooperative housing allows community members to provide housing to one another at lowest costs by removing it from the profit-dependent market. Cooperative economic ventures allow community members to reduce risk by pooling resources to solve for the needs of the community first, especially for employee-owners and also for member-owner customers.

1.3.2.d   **For whom?** Affordable housing should provide a range of affordability to both low and middle-income households. This should work well for new residents to a community, current residents looking to avoid displacement, and young people starting off in the community that they are from.

1.3.3   **Reparations**. In light of increasing gentrification and displacement, reparations in the form of affordable housing can aid the efforts towards greater justice. This includes potential reparations for redlining, urban renewal, urban highways, racial covenants, housing discrimination, and lending discrimination.

1.3.4   **Oversight and accountability**. Communities must have significant oversight, accountability, and policies securing rights and justice. This must eliminate housing discrimination in terms of renting, owning, lending, applications, evictions, and more. This is especially true for undervalued properties in neighborhoods with unfair reputations, leading to a modern-day equivalent of redlining. A place must also work to eliminate health hazards in housing, including but not limited to lead and mold exposure, structural insufficiencies, exposure to weather extremes, and air quality concerns.

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1.4   COMMERCIAL REAL ESTATE AFFORDABILITY

1.4.1   **Affordable spaces**. Spaces should be available for retail, office, and other commercial uses. These spaces should be varied in terms of size, quality, usage, and permanence.

1.4.2   **Access for entrepreneurs.** Residents of affordable housing and under-resourced communities should have access to local entrepreneurial opportunities.

1.4.3   **Access for employees**. Residents should have access to employment within their communities, with options to work at locally-owned businesses.

1.4.4   **Access for consumers.** Affordable housing residents should have local access to affordable goods.

1.4.5   **Types of affordable structures.** Commercial real estate can be made affordable through public ownership of rented space, development requirements and bonuses for affordable space, and supporting programs for owner-operated affordable spaces purchased pre-gentrification. Other physical measures can be important as well, such as fostering a variety of quality and types of spaces, subdividing larger spaces into smaller spaces, or otherwise creating smaller marketable units that lease for lower total monthly rents.

1.4.6   **Oversight and accountability.** Elimination of discriminatory practices in commercial real estate for renting, owning, lending, application reviews, evictions and more is necessary. This can be achieved with significant oversight by the community, ensuring accountability and establishing policies to secure rights and justice goals.

1.5   TRANSPORTATION ACCESS

1.5.1   **Removing barriers**

1.5.1.a   **Reconnecting broken street networks**. Street network interconnectivity is essential to create more direct connections from place-to-place, stitching back together separated neighborhoods.

1.5.1.b   **Highways to boulevards.** Converting divisive urban highways to boulevards can help to break down barriers between neighborhoods, while returning land to a higher and more productive use that can better support transit. Newly freed up land can be placed in community land trusts for the benefit of underserved communities impacted by highways. Alternatively, other affordable structures can be used, such as lease-to-own.

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1.5.2   **Equitable transit-oriented development.** New transit-oriented development projects and upzoning should assure affordability in both residential and non-residential spaces, to ensure equitable transit access.

1.5.3   **Equitable traffic calming**. Traffic calming measures increase pedestrian safety by lowering vehicle speeds, and should be implemented in a variety of neighborhoods with a variety of affordability levels. However, these should not be implemented without community input.

1.5.4   **Transit to open spaces**. quitable access to nature, parks, and recreation spaces beyond the city should exist for all. The car-free, especially those unable to bear the extra expense of a vehicle, are important to consider.

1.5.5   **Avoid private transportation systems**. Some communities may have private transit that serves only certain groups, in parallel with public transportation. This may be transit for only university students, hospital workers, technology hub employees, or any other groups. These private systems are exclusive and duplicative while dividing communities. Instead, public transit needs to work to better provide baseline transit network services, supplemented by express, limited, and high-speed regional service to meet the needs of the traveling public in a future less wholly dependent on private automobile travel.

1.5.6   **Sidewalk and bike lane maintenance.** Sidewalks and bike lanes should be maintained fairly across a place, especially in destinations frequented by under-resourced individuals, and in a way that remains accessible consistently for all groups.

1.5.7   **Transit networks.** Networks are preferable to hub-and-spoke systems, as hub-and-spoke systems only focus on connecting the downtown with outer neighborhoods, for the convenience of commuters and downtown residents. Neighborhoods beyond the downtown should be well-connected by electric transit for those who need access to both non-downtown employment opportunities and all other relevant trips of daily and occasional occurrence. Additionally, local zero-emission transit needs to be seamlessly integrated with regional and national electric high speed transit systems, such as high speed rail, to ensure that the role of transit as a pedestrian trip distance extender is fully functional.

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1.5.8 **Micromobility**. In addition to transit, micromobility can fill in the gaps where transit doesn't efficiently reach, and provide an alternative to other transportation methods. This can take the form of shared systems, individual ownership of micromobility vehicles, and subsidies for individual ownership and users. Additionally, infrastructure is necessary to support micromobility, including areas to park vehicles, as well as protected lanes for safe travel.

1.5.9 **Transit subsidization.** Transit has many positive externalities for a community that outweighs its costs; it is a practical necessity for many under-resourced households. Therefore, it should be free or at least subsidized at scale for low-income residents.

1.5.10 **Sufficient hours of transportation**. Transportation should be available during as many hours of the day and with a schedule as frequent as is feasible.

1.5.11 **Safe, convenient, and comfortable.** Transportation should be made safe, convenient, and comfortable before, after, during, and while waiting for trips for all.

1.5.12 **Transitional measures.** Measures such as providing electric vehicle car-sharing services should be taken that help to comfortably and practically serve a community that is transitioning from car-oriented to a car-optional place. This can ensure that private automobile ownership is not a prerequisite to accessing economic opportunity social mobility by providing access to quality electric automobiles on an on-demand basis.

1.5.13 **Access to complete communities.** Transit, walking, and micromobility should provide consistent, safe access to all daily and occasional needs and places within a reasonable timeframe, as is described below in the list of places under the umbrella of access to complete communities and 15-minute neighborhoods.

1.6 EQUITABLE URBAN DESIGN

1.6.1 **Access to complete communities and 15-minute neighborhoods.** Communities should have equitable access to elements of everyday life, including places to live, eat, shop, work, play, learn, and gather, as well as places to access services, healthcare, arts and culture, government participation and services, amenities, entrepreneurial opportunities, and public spaces of both urban and rural varieties.

1.6.2 **Public space.** Public spaces should be built for many users and uses in all parts of the place, both inside and out, both urban and rural, and both use-driven and flexible, in a way that avoids driving displacement.

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1.6.3   **Walkable street systems.** Interconnected, pedestrian-friendly street systems should exist as a part of a complete pedestrian network that provides for equitable access to all destinations, regardless of vehicle access, especially including access to and from transit stops and other everyday destinations, as well as to open space and natural areas.

1.6.4   **Fine-grained urbanism**. The fine-grained development pattern subdivides buildings and spaces into smaller units. For example, a fine-grained block may be made up of 15 small buildings and many small commercial spaces, while a coarse-grained block may consist of just a couple of large buildings or one big box store. Fine-grained urbanism lowers barriers to entry by reducing size and cost for commercial spaces, as well as for small, local, democratized real estate development projects. This pattern also enables greater diversity within a block.

1.6.5   **Resource-efficient urbanism**. Compact communities ease infrastructure burdens that are greater per capita in more sprawling communities. Therefore, with lower maintenance costs in compact places, capacity for public spending on social programs and equity-driven initiatives increases.

1.6.6   **Avoid over-optimization.** Urbanism and buildings should avoid over-optimization, which could lead to homogeneous places and buildings. Instead, to enable diversity at all scales, places can interweave optimized and non-optimized conditions. For example, an apartment building may be more financially optimized by repeating the most in-demand unit type, but the building will then be filled with households of mostly the same demographic, family structure, and income.

1.7   ACCESS TO SOCIAL CAPITAL AND CULTURE

1.7.1   **Public art.** Equal access to creating, experiencing, and participating in public art and its creation should be available to all.

1.7.2   **Gathering spaces.** Local spaces for culture, cultural events, and grassroots community meetings should be readily available and easily accessible to all.

1.7.3   **Partnerships**. Communities can partner with universities and other institutions to provide access to cultural spaces in an equitable way, bringing social capital and culture to communities that may otherwise be underserved in this area.

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C.1   Equity, Affordability, and Access

1.7.4   **Creation and consumption.** There should be access to both the creation and consumption of culture and social capital, for both the well-being of individual participants as well as the general well-roundedness and equal representation aspects of a place's culture and civic engagement.

1.8   ACCESS TO REPRESENTATION

1.8.1   **Systems of representation.** These systems should be set up to serve under-resourced communities, uncorrupted by the influence of money and power.

1.8.2   **Active and passive participants in change**. From the perspective of the underrepresented, what you do without us becomes what you do to us. Instead, there must be an approach of "nothing about us without us."

1.8.3   **Intentional community engagement.** Community engagement needs to be intentional in engaging the community to identify needs, co-create solutions, and create purposeful multi-disciplinary plans. This should be done up front, not as an after-thought.

1.8.4   **Representation in districts.** Political districting should be a community-led, nonpartisan process that includes a meaningful conversation about whether district boundaries focused on each economic strata or intradistrict diversity better serve communities.

1.8.5   **Subsidiarity**. The level of decision-making should be tied to the scale and impact of what is being decided upon. There should be a preference for decision-making happening at the lowest level possible. A community should determine its own future, except protections must exist to prevent local communities from implementing systems that negatively impact newcomers such as climate migrants.

1.8.6   **Community committees**. Community committees can represent neighborhood-scale communities, with access to the mayor and city hall. They can engage in projects such as those including infrastructure and housing. Additionally, some of their members can be embedded into city project teams

1.8.7   **Access to meetings.** The under-resourced and time-constrained should be able to access and participate in public meetings, based on considerate scheduling, advance notice, convenient public transit, childcare, and other factors.

1.8.8   **The urban environment.** Communities should have representation and input in the creation of the urban environment around them.

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1.9   ENVIRONMENTAL JUSTICE

1.9.1   **Planning and neighborhoods.** There should be equitable access for all to live in and experience only neighborhoods and places that are successfully planned to be free of environmental hazards.

1.9.2   **Equitable urban reforestation.** Plantings and tree cover should be implemented, designed, and maintained to similar levels, quantities, and levels of quality in all neighborhoods, resourced and under-resourced alike.

1.9.3   **Pollution**. Equitable access should exist for all to live, work, and go about life within places without air pollution, water pollution, noise pollution, or pollution of other kinds.

1.9.4   **Industrial uses.** Industrial, toxic, and junkyard facilities should not be disproportionately placed or allowed in under-resourced neighborhoods.

1.9.5   **Climate risks**. Neighborhoods should be equitably protected from climate risks, and underresourced communities should not be relegated to flood-prone areas of climate receiver places.

1.9.6   **Climate migration.** Places should welcome people in with an inclusive culture and governance while remaining successful and equitable for extant communities. This is especially true for under-resourced climate migrants and refugees.

1.9.7   **Safety and health.** Equitable access to safe and healthy communities and situations should be available for all.

1.10   ECONOMIC OPPORTUNITY

1.10.1   **Entrepreneurship opportunities.** Entrepreneurship opportunities should be supported and made equitably available.

1.10.2   **Access to financing and capital**. Business and housing financing and appraisals should be available equitably, without discrimination against people or places.

1.10.3   **Real estate development**. Equitable lending for development and renovation, as well as equitable appraisals, should be available equitably, without discrimination against people or places. This especially includes locally-driven development in viable neighborhoods that face unfair bias.

1.10.4   **Investing in MWBEs.** Communities should invest in and support minority and women-owned business enterprises, to ensure equitable opportunity and fair representation of all groups among governmental and nongovernmental power structures alike.

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C.1 Equity, Affordability, and Access

1.11 EQUITABLE ACCESS TO CITY SERVICES

1.11.1 **Climate migration resources**

1.11.1.a **Resources for incoming climate migrants.** Accessible resources should be readily available for incoming climate migrants.

1.11.1.b **Integration into communities.** The opportunity but not necessity should exist for climate migrants to integrate with existing communities, cultures, and community members.

1.11.1.c **Celebration of new cultures**. New cultures of incoming climate migrants and refugees should be celebrated, and spaces should be made equitably available for these cultures to thrive, gather, and share.

1.11.1.d **Connect people with communities.** Incoming climate migrants and refugees should have easy access to the opportunity to become integrated and included members of their new communities.

1.11.1.e **Connect people with resources.** Communities should connect incoming climate migrants and refugees to resources to help them become acquainted with the place and relevant practical matters to assure a smooth transition.

1.11.1.f **Opportunites for socioeconomic advancement.** Climate receiver places should provide opportunities for socioeconomic advancement to incoming climate migrants and refugees while providing similar opportunities to extant under-resourced communities already within the place.

1.11.1.g **Translation and language learning resources.** A community should help incoming climate migrants and refugees overcome language barriers for a smooth transition and access to opportunity.

1.11.2 **Providing resources for under-resourced communities.** City programs, offices, and agencies can provide resources for the under-resourced.

1.11.2.a **Legal advice and services**. Legal advice and services can be made available to under-resourced communities.

1.11.2.b **Resources for children and parents**. Childcare, among other resources, can be of great assistance to under-resourced parents.

1.11.2.c **Education**

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i.   **Public education.** Quality public education should be conveniently available to all, regardless of address or transportation access. This includes preschool, primary, secondary, university, continuing education, and other levels.

ii.   **Tutoring**. Tutoring and other support services should be equitably available.

iii.   **Extracurricular activities**. Equitable access to extracurricular activities should be available to all students, including a reduction in financial barriers and other constraints that unevenly affect different communities and individuals.

iv.   **Training**. Training in business, trades, financial literacy, and other skillsets can be offered equitably to local communities.

v.   **Institutions**. Museums, other institutions, and related programs can be equitably offered to all.

vi.   **Partnerships**. Partnerships with local institutions such as universities can be leveraged to create and support spaces and programs for education.

1.11.2.d   **Libraries**. Libraries should be equitably provided to all communities across a climate receiver place, for public gathering, access to resources, and programming.

1.11.2.e   **Markets and business incubators**. Public markets and business incubators can foster entrepreneurship and resilient, locally-based economies while providing a space for opportunity to the under-resourced.

1.11.2.f   **Space programming**. Local neighborhood programming of public spaces can foster community. When done equitably, this can build community across all types of communities rather than in just those with the most vocal and resourced advocates.

1.11.2.g   **Services for the houseless**. Services should be available for the houseless in particular, in addition to other under-resourced individuals.

1.11.2.h   **Partnerships**. Nonprofit partners can work with climate receiver places to bring services to communities.

1.11.2.i   **Healthcare**. Healthcare services should be equitably and easily accessible, physically and financially.

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1.11.2.j   **Transportation**. Non-automobile transportation options should be available for all in a way that conveniently provides access to sufficient points of access for daily and occasional activities, including with transit, walking, and micromobility options (including bicycles and other low-speed fully zero-emission wheeled vehicles). This should work equally as well for both the disabled and able-bodied, as well as anyone else of any background, circumstance, or experience.

1.11.2.k   **Subsidies**. Subsidization can be a tool to more affordably and equitably bring services to underserved communities.

1.12   EQUITABLE POLICING AND JUSTICE SYSTEMS

1.12.1   **Restorative justice**. Restorative justice should be used to democratize and humanize the justice system.

1.12.2   **Community policing**. Community policing can be used to transform policing into something that is done with a community's best interests in mind, rather than something done to a community from the outside. This can include requirements that a majority (or all) of a police department's employees live within the community they serve, to prevent the "occupying army" effect.

1.12.3   **Safety**. Safety should equitably exist for all groups, including those typically mistreated by police and justice systems.

1.13   COMMUNITY INPUT

Within all of the above subpoints of the equity, affordability, and access principle, community input is important to ensure that a place fairly serves those of all backgrounds, circumstances, and experiences. This should be done in a way that gives a community a true voice regarding its future, without being exclusive towards those within or beyond that community. When there is insufficient community input, decisions are done to people rather than by and with them.

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C.2   Regional Focus and Partnerships

Introduction

Receiver places are not isolated strongholds, rather they exist embedded within surrounding landscapes and a web of associated population centers and ecosystems both near and far. Adhering to principles of coherent regionalism means acting and thinking more broadly beyond local boundaries to help cultivate relationships and boost capabilities across the wider field of effort so that benefits spread and multiply. A regional focus also can avoid incompatible strategies across jurisdictional boundaries. Engaging at the regional level means addressing important questions of governance, economics, resources, transportation, conservation, and much more that will impact multiple communities and systems.

Regional focus helps to energize and extend the capabilities and assets of a variety of connected places into a more effective whole. This distributed and decentralized approach boosts outcomes, adaptability, and resilience of all participants when it is cooperative rather than competitive. However, such initiatives may pose challenges to legacy bureaucratic frameworks or expectations and require an evolutionary approach to overcome resistance - either from within or without. Working to establish an enduring culture of collaboration and inclusive interest can be a crucial advantage in all subsequent efforts.

List of Subpoints

This principle can be broken down into the more detailed subpoints below. These will be explored in greater depth in this section of the guide, beginning on the next page.

2.1   Regional organization and coordination
2.2   Regional resources, funding, and assets
2.3   Regional awareness and information
2.4   Global interactions

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2.1   REGIONAL ORGANIZING AND COORDINATION

2.1.1   Regional planning

2.1.1.a   **Growth management.** Concerted visioning, planning, and implementation of appropriate development goals can balance the needs of a growing population with local values and long-term sustainability. Urban limit lines, growth boundaries, and direct open space land purchases can be set to focus growth inwards and up, rather than further and further out.

2.1.1.b   **Open space protection.** Prioritize conservation in key areas that will support habitat, ecosystem services, agricultural, and contiguous recreational uses in keeping with local character. Use acquisition of new lands for conservation, including agricultural lands, as a strategy to prevent urban sprawl by creating protected open space zones surrounding metropolitan areas and between cities.

2.1.1.c   **Affordable and equitable housing.** Create policies and circumstances for ample housing to match rising demand by market segment with energy-efficient, equitable transit-oriented development. Provide pathways to ownership for marginalized populations to avoid displacement by creating economic opportunities.

2.1.1.d   **Building density.** Promote compact development in walkable and bikeable neighborhoods to reduce sprawl and restore varied land use amidst healthy ecosystems. Allow neighborhoods and cities to naturally change over time using zoning strategies that facilitate evolution into more mature urban forms

2.1.1.e   **Seamless transit.** Coordinate clean, efficient, future-ready multi-modal transit networks from local to regional scale with a simple, unified, and reliable user experience.

2.1.1.f   **Equity.** Equity should be integrated into all aspects of regional planning, to share resources and burdens, so that failed systems and environmentally disastrous infrastructure do not overburden the communities with the least politically powerful voices, but rather pathways to ownership and economic opportunity are provided to communities of need so that benefits are also shared more equally.

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2.1.2   **Economic coordination**

2.1.2.a   **Economic development.** Align vision, leadership, and resources for mutually beneficial and sustainable local economic vitality through supportive policies and initiatives that enhance cooperative success throughout the region without compromising long-term positioning or adaptability. Focus on import replacement, growing the ability to provide products and services imported from outside the region.

2.1.2.b   **Community wealth building.** Multi-pronged approaches to community-led development institutions such as credit unions and cooperatives should be structured to produce lasting value and shared assets where the region favors principled investments and collaboration.

2.1.2.c   **Disaster mitigation.** Pooled investing, community coordination, and joint efforts toward large-scale infrastructure and preparedness can minimize impacts of future natural disasters.

2.1.2.d   **Local currencies.** Enable the creation and versatile utilization of a range of suitable alternative currencies that enhance local and regional economic vitality.

2.1.3   **Community alliances.** Uplift and connect ad hoc networks and coalitions, including grassroots citizen activities, in line with overarching community aims for comprehensive wellbeing to ensure visibility and accessibility to all.

2.1.4   **Inter-community partnerships.** Alliances and joint initiatives between multiple local governments or institutions can advance mutual interests and reinforce regional bonds. The collaboration between multiple adjacent places should be structured in a way that does not dilute urban or rural places with ideals imposed from neighboring communities, inconsistent with the inherent nature of these places.

2.1.5   **Environmental coordination**

2.1.5.a   **Ecological integrity.** Maintain a commitment to scientifically-backed inventory and prognosis of protective measures for critical components of the local biosphere in light of a changing climate, and act accordingly.

2.1.5.b   **Healthy air and water.** Monitor pollutants and regulate or eliminate sources to ensure continued safe living conditions for all. Provide clear and accessible information to the public.

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2.1.5.c   **Habitat conservation.** Establish a diverse baseline of intact habitat, plant communities, and wild foodwebs to ensure continuity of native species and ecosystem services. Acquire for protection and engage in restoration projects on other lands to add to ecosystem connectivity and the extent of protected lands.

2.1.5.d   **Flood control.** Flood prevention and disaster response are both addressed most effectively at the regional scale, using the best available science and technology including detailed climate forecasts, as well as green infrastructure and watershed restoration projects.

2.1.5.e   **Soil retention and carbon sequestration.** Prevent soil loss and degradation from flooding and other disturbances including excessive development, unsound agricultural practices, deforestation, and toxic waste. Hedge rows, fallow cropping in crop rotations, no-till or low-till farming, expanded riparian buffers, and conversion to perennial crops can all improve soil retention and carbon sequestration.

2.1.6   **Empower regional planning authorities.** Facilitate coordinated, hierarchical planning among local and regional jurisdictions for coherent development policy and efficient implementation. Nest regional visions that are tuned to meet regional policy goals, with local control over elements of local character (design standards, local street and sidewalk designs, public art, etc) that do not conflict but rather support the overall regional framework.

2.2   REGIONAL RESOURCES, FUNDING, AND ASSETS

2.2.1   **Education systems**

2.2.1.a   **Specialty knowledge.** Capitalizing on the ability to generate and curate locally relevant public knowledge resources that are accessible and valuable to citizens in multiple domains and communities.

2.2.1.b   **Facilities and equipment.** Connect institutions and educational centers to optimize the use of specialized facilities and technical capabilities to advance regional excellence and lend an advantage to local initiatives.

2.2.1.c   **Appropriate training.** Connect learning tracks, environments, and cohorts that accelerate skill development, qualification, retraining, and pooled know-how for the unique and novel challenges or opportunities that arise in changing climates.

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2.2.1.d   **Coordination.** Manage education systems regionally, rather than just by local districts, to ensure equality of educational outcomes across a region.

2.2.2   **Land use**

2.2.2.a   **Planning and zoning.** Standardized and model codes, guidance, or policy at the regional scale can help to bring adjacent communities forward together to meet rising challenges in ways that are still sensitive to local contexts. Plan for transit oriented development at the regional level, with a feedback loop to regional transit network planning as the mechanism to coordinate regional land use and transportation.

2.2.2.b   **Public spaces and lands.** Orient towards collaboratively managed inventories of shared landscapes that serve multiple purposes and improve environmental health and stability long term. Regional cooperation strikes a balance of local control over a pool of shared resources and capacity.

2.2.2.c   **Agricultural lands.** Many beneficial efforts supporting conservation, productivity, and sustainability in the agricultural sector function best at the regional scale, such as land trusts, economic alliances, and education efforts.

2.2.3   **Transport**

2.2.3.a   **Regional transportation systems.** It is at the regional level that transit systems and bicycle networks in particular must be planned, funded, developed, and maintained in order to adequately provide for seamless connectivity to employment, retail, housing, in inner urban areas, suburban places, and the regional open space network.

2.2.3.b   **Future of mobility.** Make way for promising and sensible emerging technologies and systems to provide better, safer, and cleaner transportation on-demand at scale in ways that reduce overall single occupancy vehicle travel rates while increasing the quality of the travel experience by aligning regional strategies, policies, infrastructure, and user experiences.

2.2.4   **Leveraging charitable foundations.** Foster growth and success via philanthropic networks and initiatives by maintaining regional focus and an integrative scope or framework informing these efforts.

2.2.5   **Private sector partnerships.** Encourage supportive associations, alliances, and joint or cooperative ventures furthering local and regional goals for strategic development.

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C.2   Regional Focus and Partnerships

2.2.6   **Public sector partnerships**

2.2.6.a   **Transit systems.** Focus on regional planning, funding, deployment, and operation of multi-modal transit in line with inclusive planning goals.

2.2.6.b   **Inter-agency coordination.** Ensure that public sector agencies are properly coordinating and sharing information to achieve regional policy goals, and adopting those goals within each organization to ensure policy implementation

2.2.6.c   **Housing, energy, and social services.** Foster collaboration across public sector entities for more resilient, regional, and equitable implementation of housing, energy, and social services.

2.2.7   **Public-private**. Build up the economy, culture, development, and other areas by bringing together partners from the private and public sectors.

2.2.8   **Private institutional partnerships.** Receiver places can gain much from working with private institutions such as universities, hospital systems, museums, and others.

2.2.9   **Metropolitan planning organizations.** Bolster the status of mandatory MPOs where active as an inter-governmental workspace for smart transit and development planning, in coordination with Councils of Government, with balanced representation of stakeholder interests across multiple timelines.

2.2.10   **Federal and state institutional support.** Each region may derive better outcomes from state and federal budgets and agency purview by ensuring close contact and healthy information flows for potential beneficiaries through dedicated local entities and representatives.

2.3   REGIONAL AWARENESS AND INFORMATION

2.3.1   **Media platforms and broadcasting.** Help maintain good local information sources and channels so that residents have access to clear and trusted news, guidance, and reference materials.

2.3.2   **Broadband internet access.** Connectivity, especially in outlying and rural areas, is essential for good regional integration and shared prosperity in the digital age.

2.3.3   **Information quality control.** Employ various means of content curation and trusted broadcasting, especially for critical situations such as emergencies, when mis- or dis-information can spread quickly and contribute to dangerous situations.

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C.2   Regional Focus and Partnerships

2.3.4   **Open data and tech frameworks.** Standards and structures can be adopted and promoted widely to improve public data access and utilization for the common good.

2.3.5   **Grassroots advocacy.** Open source and open-access tools, resources, and communication networks can enable informal citizen-driven initiatives to gain stature and flourish.

2.3.6   **Social apps and networks.** Communities can support or engage relevant social platforms and virtual spaces that provide services to area citizens with relevant content and prompts for cohesion, creativity, dialogue, or other healthy online interaction.

2.3.7   **Disaster preparation and response**

2.3.7.a   **Data and knowledge sharing.** Technical support, best practices, and ample infrastructure for good data collection and curation can serve the public as well as government and private sector needs.

2.3.7.b   **Realtime responsiveness**. Climate receiver places can optimize real-time communications across the board for smooth, reliable, and targeted information sharing during major events.

2.3.7.c   **Flood mitigation.** Coordinated and complementary initiatives and actions can advance flood prediction, preparation, planning, and response on multiple scales and timelines.

2.3.7.d   **Fire management.** Improve inter-agency response capabilities to future incidents while fostering a range of grassroots to federal level mitigation measures for healthier forests and sustainable land use.

2.3.7.e   **Other climate risk factors.** Communities can further the assortment of appropriate measures based on regional risk assessments and capabilities, including the potential for impacts in neighboring areas to displace large numbers of people.

2.3.7.f   **Temporary facilities.** Create options for scalable on-demand housing and infrastructure to meet sudden needs as the result of regional disruptions.

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2.3.8   **Zoning and development**

2.3.8.a   **Digital zoning atlas.** Share reference points and progressive updates to zoning practices at the regional level to reinforce common development patterns and best practices in support of wider objectives for climate receiver places.

2.3.8.b   **Planning urban form regionally.** Maintain high-level coordination councils for coherent planning beyond and between the boundaries of the municipality to suit an explicit vision for suitable long-term growth and evolution of land uses in support of regional policy goals.

2.3.8.c   **Reducing suburban sprawl.** Work jointly with peripheral communities to steer development towards densification and a regional transit orientation to improve efficiency and quality of life for more people with a lighter ecological footprint.

2.3.8.d   **Rural communities.** Seek balance and foresight among several competing interests for land use, including rapidly escalating housing and agricultural pressure in regions with more benign climate outlooks.

2.3.9   **Demographic data.** Ensure careful monitoring and reporting of regional demographic trends to inform planning and other processes or initiatives that respond to current and anticipated community needs.

2.3.10   **Identity and character.** Collaboratively characterize familiar and desirable elements of local community texture and flavor that create positive feedback and builds an ethos of care and affinity among community members.

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2.4   GLOBAL INTERACTIONS

2.4.1   **International relations and accords.** Pursue compliance with global and international targets, treaties, and sanctions where needed to complement or exceed federal actions, on a more granular and adaptive regional level.

2.4.2   **Civic leadership networks and organizations.** Associate with national or international bodies, initiatives, and support groups, public and private, which advance change-making efforts with a broader scope to reinforce positive local outcomes.

2.4.3   **Sister city links.** Celebrate friendship and ties between locales and regions across national boundaries, with the potential for greater exchange and mutual support through changes and growth into the future.

2.4.4   **Bioregionalism.** Expand on the social and political understanding of regional boundaries and identity to include deeper cultural, practical, and ecological continuities as a basis for a common cause.

2.4.5   **Climate mitigation measures.** Regional initiatives may lead by example and outperform federal mandates when it comes to innovative solutions and measures for reducing emissions and drawing down carbon from the atmosphere. This may include economic incentives like taxes or credits based on impact, funding for needed research and technology, aid and other benefits for affected populations, open space acquisition and restoration, regional planning to reduce greenhouse gas emissions across all policies, and more.

2.4.6   **Refugee organizations and issues.** Engage proactively with national and international resettlement organizations to create favorable local relationships and regional strategies to support and welcome newcomers in a sustainable manner.

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C.3   Resilient Infrastructure Systems

Introduction

Infrastructure Systems are crucial in the functioning of everyday life. In order to ensure Receiver Places provide a high quality of life for individuals, there must be infrastructure in place that not only meets basic needs but is responsive to climate change impacts and takes into account the influx of population (e.g. climate migrants). Moreover, infrastructure systems need to take into account various external factors, such as novel technologies, financing, social, cultural, cyber security, and politics. As a result, our infrastructure is continuously and unpredictably affected from various directions and by various amounts; this poses a great challenge for the management of infrastructure systems. Due to the integral nature of infrastructure systems, it is important that infrastructure system asset managers and departments across assets work together and coordinate to ensure resilience and sustainability. They should consider a hybrid approach of using gray (or "hard") infrastructure in combination with green infrastructure in the design and implementation phase. Lastly, but most importantly it is crucial to center equity and promote a culture of health in all infrastructure projects.

List of Subpoints

This principle can be broken down into the more detailed subpoints below. These will be explored in greater depth in this section of the guide, beginning on the next page.

3.1   Infrastructure system characteristics
3.2   Types of infrastructure systems with general recommendations
3.3   Governance of infrastructure systems
3.4   New solutions when listening to the community
3.5   Interdisciplinary
3.6   Mitigation
3.7   Smart technologies
3.8   Reuse and fix
3.9   Degrowth
3.10   Indigenous literacy
3.11   Law enforcement

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C.3   Resilient Infrastructure Systems

3.1   INFRASTRUCTURE SYSTEM CHARACTERISTICS

3.1.1   **Circular.** The production, supply, and consumption of materials for an infrastructure system are within a closed loop with these six principles in mind: refuse, reduce, reuse, repair and refurbish, recycle, and residual.

3.1.2   **Integrative and responsive.** Design infrastructure to coexist symbiotically with its environment. Allow for multipurpose use based on various conditions and a key understanding of the land, climate, hydrology, and ecology.

3.1.3   **Flexible and agile.** Infrastructure systems need to provide *graceful extendability*, as a component of the system comes offline, it triggers an adjacent system or process to kick in to provide backup. As well as *sustained adaptation*, which includes dynamic adaptive planning wherein we design the system with flexibility and agility so it can be changed as we learn. This will allow for some components to be rigid but others to be flexible lending themselves to adaptability as we glean more information.

3.1.4   **Reassess and maintenance.** Reassess every five years to gather data to keep learning faults, failures, and successes of the system. Ensure proper maintenance standards to keep the system functioning as intended.

3.1.5   **Built for an uncertain and unpredictable future.** It is important to build an adaptable system that can better cater to an uncertain and unpredictable future. To achieve this, it will require engineers and managers to encourage probing the system to various stressors and scenarios to know how a system will interact when perturbed.

3.1.6   **Built to fail.** If systems are not only built with redundancy in mind but also failure, engineers and managers will be well versed on how to act during a failure event. This is in contrast to creating an efficient system, this would be an effective system that works within the reality of unknown unknowns.

3.1.7   **Resilient.** The systems should be able to withstand the shocks and stressors that come with the changing climate and population shifts. Yet, it is crucial that resiliency is also married with sustainability, wherein the demands on energy and resources are not overextended.

3.1.8   **Tech-savvy.** Build reliability in the networks by utilizing up-to-date technology. Incorporate the newest technologies in stages to avoid catastrophic failures. Conduct test runs to fix bugs. Connect system of systems to one another so they speak to each other so when an event perturbs the system it is prepared to attend to any system changes that need to occur across the network.

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3.1.9   **Behavior-rewarding.** Infrastructure systems should encourage users to make sustainable choices. This characteristic must be built into the physical infrastructure and supported by policies. This can include pricing of infrastructure to incentivize and disincentivize its use, and through the provision of adequate infrastructure for people to make sustainable choices

3.2   TYPES OF INFRASTRUCTURE SYSTEMS WITH GENERAL RECOMMENDATIONS

3.2.1   **Buildings.** Seek higher building standards by following certificate standards that incorporate ecological design and low-impact development (e.g. LEED, ENVISION, Living Building). Utilize electric appliances and HVAC systems to properly be set up for the electrification and decarbonization of the energy grid. Repair and weatherize homes and buildings to have proper insulation to ensure the safety and health of inhabitants. Incorporate smart thermostats in buildings and homes. Allow natural ventilation to be used when the weather is appropriate, via operable windows and skylights.

3.2.2   **Transportation system.** Considering the multipurpose aspects of roads, incorporating green infrastructure reduces the concrete used and potentially reduces flooding along roads. For example, a bioswale, a green infrastructure component, will not only be more cost-efficient but work towards reducing the greenhouse gas (GHG) emissions as less pavement is used in its place. This also provides a level of aesthetics that can contribute to better overall community health. It is important to also think towards the future, incorporate charging infrastructure in and adjacent to roads to charge electric vehicles. Take into account the delivery and shared driver experience and implement street design accordingly, including areas for curbside pick up and charging that contribute positively to the street and work safely with the movement patterns of all modes.

3.2.2.a   **Arterials and local roads.** Roads should be designed to encourage and facilitate types of travel that are more sustainable. Adequate biking and walking infrastructure should be included, with emphasis on separating people walking and biking from motorized travel in time by prioritizing signaling for pedestrians at intersections and space via vertically separating physical barriers between motorized travel and bicyclists. This should be supported through high-quality design policies, asset management and maintenance, and safety programming.

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C.3   Resilient Infrastructure Systems

3.2.2.b	**Highways.** Consider the removal of highways from urban centers. Encourage the repurposing of highways into parks, greenways, multipurpose trails, housing, and other community needs such as public transit, potentially through community land trusts.
3.2.2.c	**Transit modes.** Increase the extent and reliability of public transit modes (metro and buses) to reduce the number of cars on the roads. Utilize electric medium and high-speed rail as a faster and more reliable service to connect regions.
3.2.2.d	**Micromobility.** Encourage the use of bicycles and scooters by providing integrated bike lanes throughout the urban area.
3.2.2.e	**Right of way infrastructure.** Establish wide and safe sidewalks to encourage walking, including heated sidewalks in cold regions for walkability year-round.
3.2.2.f	**Electric vehicles.** Create electrical outlet parking in garages and along sidewalks. Use innovative technology to ensure ease of electric vehicle use and access, including community-wide access to electric on-demand car-sharing systems.
3.2.2.g	**Navigable waterways.** Ensure that the health of the riverine ecosystem is not compromised by shipping, recreational or other uses.
3.2.2.h	**Emergency and public works vehicles.** Prepare zero-emission emergency and public works vehicles to be deployed when a hazard strikes.
3.2.2.i	**Broadband and telecommunications.** Subsidize high-speed internet access and/or provide it as a publicly-managed service so that it is affordable and accessible to everyone, both for residents and to enhance the viability and competitiveness of local economic enterprises.
3.2.2.j	**Industrial.** Establish tight regulations to ensure that the environment and citizen health are not affected, and use mitigation measures such as carbon capture methodologies, pollution monitoring, and pollution control devices that focus on sustainable methodologies such as capture and re-use.
3.2.3	**Waste Management.** Establish user end separation of waste (compostable, recyclable, and landfill) with infrastructure in place for collection and proper disposal of waste. To properly dispose of hard to recycle items, set up a non-profit establishment that has the capability to collect, sort, and reuse materials which includes: electronics, mattresses, certain plastics, paints, chemicals, and styrofoam. Consider capturing the methane release from land-fills.

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3.2.3.a   **Food scrap collection and processing.** Incentivize a market for the product of finished compost. Establish circular connections between local compost infrastructure and local farms.

3.2.3.b   **Plastic bag tax.** Reduce the amount of plastics used, and encourage reusable grocery bags via a plastic bag tax.

3.2.3.c   **Establish construction and demolition debris recycling policies and processing facilities.** Require recycling and reuse of building debris as well as regulation and inspection of landfills, transfer stations, recycling facilities. Provide for sufficient public access to landfills, recycling facilities, and hazardous waste disposal facilities. Ensure that information on how to access these resources is easily and widely available, and enact programs such as neighborhood drop-off areas and curbside pickup programs that reduce the need for long motor vehicle trips to responsibly and legally dispose of waste of any type.

3.2.3.d   **Proper placement of processing facilities.** It is crucial to ensure equitable placement of processing facilities such as recyclers, composters, and collection centers. There is a huge risk that these facilities get located in low-income neighborhoods and the environmental burden of circularity is placed inequitably in those areas. This is an essential component of environmental justice that must be at the heart of equitable infrastructure development.

3.2.4   **Wastewater.** Set up a separate sewer system from the stormwater pipes, and consider extraction of nutrients from human waste for use as fertilizer in natural and working lands.

3.2.5   **Stormwater.** Make stormwater management part of the landscape to provide multipurpose uses that go beyond single-use bio-swales. Incorporate stormwater capture, storage, and slow removal into pipes via flood parks of all sizes, creating multipurpose use spaces for recreation and stormwater management.

3.2.6   **Drinking water.** Ensure lead pipes have been replaced and drinking water is free from toxic and unhealthy substances.

3.2.7   **Soil.** Offer regular soil testing of urban parks, farms, and backyards to ensure lead and other toxic heavy metals are not present in food and recreation areas.

3.2.8   **Public Space.** Create parks and green spaces throughout urban areas to facilitate healthy living. Establish continuous urban tree canopies along sidewalks.

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C.3	Resilient Infrastructure Systems

3.2.9 **Energy.** Due to the imminent decarbonization of the energy grid and electrification of appliances, cars, and other systems. It is crucial to transition to renewable energy sources to power the energy grid, such as solar, wind, and geothermal. Reduce wiring overhead by burying them underground, which will reduce power outages during storm events. Designs must be creative and innovative; for example, solar farms uninvasively built on top of natural or working lands to provide multiple uses for the space.

3.2.9.a **Microgrids.** Establish microgrids within neighborhoods, campuses, and districts. This can ensures resiliency with power outages. Microgrids can be based entirely on renewable energy sources when coupled with battery back-ups and other energy storage systems.

3.2.10 **Agriculture.** Encourage small-scale local urban farms and food forests with Community Supported Agriculture (CSA), with food available for local purchase.

3.2.11 **Public Health.** Ensure hospitals and clinics are well stocked, insulated, and have backup power sources to ensure resilience through a potential storm.

3.2.12 **Digital.** Build and utilize citizen engagement applications for hazards (e.g. SeeClickFix).

3.3 GOVERNANCE OF INFRASTRUCTURE SYSTEMS

To ensure the creation of effective systems that are resilient, governance structures must be modified. The current vertical, divisional bureaucratic organization in institutions does not foster collaboration, nor productive and appropriate solutions. A horizontal approach to governance would not only foster innovation and creativity but would also increase the understanding of the system itself. The adaptive capacity of the system would increase with this approach and management would be more effective.

3.4 NEW SOLUTIONS WHEN LISTENING TO THE COMMUNITY

Both mitigation and adaptation strategies are needed at different scales for different places. It is crucial to focus on place-based research that places communities and ecological benefits at its core. These methods allow for the most vulnerable communities to be considered, both human and natural.

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C.3 Resilient Infrastructure Systems

3.5 INTERDISCIPLINARY

It is crucial to bring together multiple disciplines and stakeholders at the table in the process of infrastructure development to integrate climate change early on. This includes ecologists, local community members, and Indigenous People that know the land well. Understanding the site and context of where an infrastructure system will be placed will lead to informed decisions. It is necessary to include these informed decisions in the planning, scoping and preliminary design phases for infrastructure systems, as it is in these stages that the maximum influence can be made to ensure resiliency.

3.6 MITIGATION

It is crucial to design with mitigation in mind. This will allow us to decrease how much resources we use and shift to mainly using renewable sources. This will decrease our dependence on exhaustive resources, and live within our planetary bounds.

3.7 SMART TECHNOLOGIES

Smart technologies can be introduced to better measure infrastructure systems in real-time. This level of understanding can be facilitated by a data center that collaborates across sectors to bring together various asset managers. Informatics is key in not only predicting future hazards but real-time mitigation and recovery efforts. Infrastructure systems will need to shift to include smart technologies to better interact with these applications and sensors.

3.7.1 **Data collection.** Collection of data from all systems to ensure proper functioning but also to glean information on how to make the system better, this includes emissions data, travel data, etc.

3.7.2 **Network.** Connect to each other to inform innovative planning and design solutions. An aspect of increasingly complex infrastructure systems is that they are interconnected. The decisions made in terms of design, construction, and/or management within one asset affect the function of another asset.

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C.3   Resilient Infrastructure Systems

3.7.3   **Accretion, interactions, edge cases, and common rarities.** Accretion is the layering of newer technologies on older components, resulting in increased uncertainty of systemic compatability. Interactions refer to the interface between technologies across systems. Edge cases refer to the exceptions. Some systems require special design elements due to unforeseen rare situations. Common rarities refer to the common exceptions in the design of system parts. An infrastructure system must be designed with complexity and governed with priorities of efficiency, effective design, and effective management.

3.7.4   **EV Charging, Smart Grid, and Digital Infrastructure.** For infrastructure systems, it is essential for sustainable development goals to incorporate open access protocols in the software on which these systems run.

3.7.5   **Cybersecurity.** With the increasing use of technology in systems, it becomes crucial to incorporate cybersecurity to protect systems from hacks.

3.8   REUSE AND FIX

Foster entrepreneurship around practices and industries of re-use and fixing within the community. This will not only teach others how to be more self-reliant but also reduce the burden of waste in landfills by either fixing or repurposing used items.

3.9   DEGROWTH

It is crucial to normalize slower speed and lower-power infrastructure systems. This can balance well with increased and democratized control, where less or no growth strategies can help equitably distribute resources and reduce environmental impacts.

3.10   INDIGENOUS LITERACY

As we urbanize further, let us rebuild familiarity and general knowledge of the Indigenous Peoples and innovations that we inherited in this place.

3.11   LAW ENFORCEMENT

Law enforcement is an inevitable part of urban infrastructure that plays a huge role in the power distribution and actions of the urban space. At a very minimum, as we face climate migration, cultural sensitivity, and infrastructure training are required for our law enforcement, emergency response, and mental health outreach personnel.

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C.4   Good Governance

Introduction

We believe that democracy is essential to good governance. However, most of the mechanisms of governance are out of sight or are poorly understood. The aspects of good governance outlined below do not include the precise mechanisms for choosing leaders or for citizen initiatives. Those rarely change, and they are often more a matter of tradition than of rational design. Neither does the below prescribe optimal bureaucratic flows of forms, stamps, and reports. It addresses the policy-crafting stratum between the public's well-publicized choices for political representation and the anonymous workers in offices and in the field who carry out policies and enforce laws. That is the stratum in which corruption is easy and hard to find. It is also the stratum into which difficult issues are thrown, as when a politician creates a committee to study an issue rather than address it properly.

Governments facing climate change need to reduce their exposure to climate risks, coordinate with each other effectively, work more quickly than has been usual, experiment while doing (the "agile" approach), and operate in the public interest with the public's informed consent. As they face climate change, governments must also share their data and support extensive research. This last is a new requirement or a newly important one. Governments not only need to work with each other, but they share information so that best practices spread, and flawed ones can be weeded out.

List of Subpoints

This principle can be broken down into the more detailed subpoints below. These will be explored in greater depth in this section of the guide, beginning on the next page.

4.1   Fiscal exposure to climate risk
4.2   Multi-scale coordination
4.3   Timely Process
4.4   Agile Governance
4.5   Equitable and informed public engagement
4.6   Open data
4.7   Research and development

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4.1   FISCAL EXPOSURE TO CLIMATE RISK

4.1.1   **Rainy day fund.** Create and maintain a substantial "rainy day" fund.

4.1.2   **Land bank.** Create a land bank for foreclosed and condemned properties.

4.1.3   **Infrastructure bank.** Prepare an infrastructure bank to rescue infrastructure assets from bankruptcy. If an electric utility goes bankrupt, have an infrastructure bank prepared to take its poles and wires.

4.1.4   **Tax base.** Shift the tax base away from residential taxes and taxes based on brittle systems like international banking. Prefer value-added (re)manufacturing and agriculture.

4.1.5   **Coordinate infrastructure with risk.** Build hardened, redundant, detachable, and networked infrastructure when the cost of doing so is comparable to not doing so. For example, the cost of microgrids of renewable energy production plus storage may well be offset by reduced risk and lower long-term costs.

4.1.6   **Emergency procedures.** Prepare emergency plans and procedures in advance of trouble: not just for natural disasters and hazardous spills, but for events like food or housing shortages.

4.1.7   **Public auditors.** Devote a percentage of every project to periodic audits feeding into a quasi-judicial steering process.

4.1.7.a   **Automatic brakes.** Put the brakes on bad decisions before they get out of control. Be sure to cut losses.

4.1.7.b   **Safety corners.** Ensure prudence is correctly valued, and that corners are not being cut.

4.1.7.c   **Skepticism.** Look at low cost and "free" benefits like a street a developer gives to a city carefully. Ensure they don't create a financial obligation that can't be paid.

4.1.8   **Givings.** Support legal cases for "givings" as well as "takings." A "taking" takes value from property owners; a "giving" enhances it. For example, "giving" improved access and increased density could partly offset "taking" strips of land to cut networked streets through cul-de-sacs

4.1.9   **Socialize, don't financialize.** Focus on public good directly, rather than on a financial return on structured investments.

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4.1.10 **Time value of money.** The value of money today is never worth the same now as it will be tomorrow. In a world of climate change, communities should account for a potential decline in the future value of money and in the value of a wide range of investments as stresses increase and systems fail around the world. Conversely, certain actions that build and invest in climate resilience may increase the value of invested capital. Therefore, communities should consider the time value of money in new and innovative ways as a part of accounting and limiting their fiscal exposures to climate risk.

4.1.11 **Three limits of investment.** Communities should consider three main limits and components to and of their investments. These are fiscal capacity, socioeconomic equity, and ecological limits.

4.2 MULTI-SCALE COORDINATION

4.2.1 **Empower lower authorities.**

4.2.1.a **Subsidiarity.** Push regulatory authority to the lowest level that is *competent* to handle it *equitably.*

4.2.1.b **Platform.** Build a platform to support smaller jurisdictions–e.g., "Support agencies" below. (Caution: see also "sabotaged regulations," below.)

4.2.2 **Taskforces and boards.** Create agencies, authorities, and public utilities to manage entities between localities. E.g., apply experience from regional planning agencies to adaptation-related needs.

4.2.3 **Regulatory sandboxes.** A regulatory sandbox tries out new regulations in a limited setting (e.g., just one neighborhood). This gives the city a chance to work out the kinks, and then rewrite and streamline them for widespread use across jurisdictions.

4.2.4 **Test projects.** Test projects are a regulatory sandbox in which a given project is tested or piloted. Pilot projects can be misused by treating them as one-offs with no follow-up. Rather, test projects require follow-up evaluations and reports made public.

4.2.5 **Support agencies.** Create agencies or offices to support localities that cannot support their own offices–e.g., if one inspector is needed for every 100,000 people, a 20,000-citizen locality would otherwise go uninspected.

4.2.6 **Retrospective reviews.** Perform regular retrospective reviews of regulations, using support agencies as required.

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4.2.7   **Shared constructs.** Coordinate and standardize constructs: definitions, methods, and procedures; and localize numerical standards and choices within those constructs.

4.2.8   **Sentinels.** Hire people to look for potential pitfalls while there is time to fix them. For example, hire people to stay abreast of legal challenges to policies like the ones the city has.

4.3   TIMELY PROCESSES

4.3.1   **Debug regulatory software.** Scan regulations for bugs like outdated references and cumbersome procedures; apply lessons learned laterally between localities. Make updates and patches easy to apply to existing regulations.

4.3.2   **Human judgment.**

4.3.2.a   **Clarity and sortition.** Write regulations for laypeople to understand, so that applicants can opt for a sortition (jury) process to decide edge cases.

4.3.2.b   **Empowered administrators.** In addition to quasi-judicial boards for appeals, create a quasi-judicial procedure analogous to a hearing before a judge. Allow the relevant offices and applicants to opt for the full quasi-judicial appeal. Allow challenges per "Bribery, blackmail . . ." below.

4.3.3   **Police regulatory capture.** Rewrite regulations that plausibly could favor large, incumbent, and influential players in markets.

4.3.3.a   **Regulatory economies of scale.** E.g., a developer that builds 2,000 houses may only need to submit one drawing or pay one application fee.

4.3.3.b   **Regulatory barriers to entry.** E.g., using economies of scale or grandfathering existing players in.

4.3.3.c   **Tailored regulations.** Regulations tailored to only one or a few players–say "pharmacies over 9,000 square feet in area, but less than 11,000 square feet."

4.3.3.d   **Bribery, blackmail, extortion, fraud: illegal and legal.** Require that policies be free of even the appearance of bribery (including campaign contributions), blackmail, extortion, fraud, or analogous transgressions, even if they are technically legal. Halt or roll back affected regulations pending investigations.

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4.3.4 **Sabotaged regulations.** Regulations that are meant to look like they will address an issue, but are crafted to work in an unexpected way. E.g., an affordable housing program might make a single developer richer while doing little to provide housing at a moderate price.

4.3.4.a **Maps of the problem.** While bad-faith arguments are difficult to preclude, legislators and administrators should have to undergo regular training sessions on the ins and outs of common and pernicious problems. For example, a director of development should be able to read a proforma.

4.3.4.b **Bad faith adoption.** Regulations can be sabotaged by requiring that they undergo onerous, unfunded reviews, by requiring beneficiaries to undergo onerous screening–such as proving narrow income thresholds, or by regulating something adjacent to the actual target (For example, addressing unaffordable housing with subsidies that favor high-priced housing is a form of sabotage).

4.3.4.c **Dishonestly crafted regulations.** These are regulations that leave loopholes open deliberately, force the user into unintended decisions (e.g. having to accept a deal before being allowed to read the fine print), or otherwise do something different from what the regulation is intended to do.

4.3.4.d **Regulatory capture.** A regulator is captured when those in charge (e.g. board members or heads of departments) act on behalf of an industry, company, individual, etc. rather than in the public interest.

4.4 AGILE GOVERNANCE

Governing in a literally and figuratively variable environment requires agility, so it should use "agile" methods originally devised for software development.

4.4.1 **Early and continuous roll-out of tools and services.** Roll out tools and services (as opposed to new requirements and standards) early. These may be sandboxed, pilot projects, "tactical" tentative physical changes, or services that start small and get bigger.

4.4.2 **Update standards.** Continuously correct prohibitions, requirements, and standards.

4.4.3 **Update requirements.** Welcome changing requirements, update both of the above when they change and/or at regular intervals, and set aside money to do so.

4.4.4 **Transparency of changes.** Explain any changes before they take effect and the reasons behind them.

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4.4.5   **Reward prowess.** Reward prowess with support and authority–both in individuals and in teams.

4.4.6   **Embrace incremental change.** Embrace incremental changes and tentative changes that are strengthened later.

4.4.7   **Do not rush changes.** Avoid rushing changes, since pressure prevents careful consideration.

4.4.8   **Embrace simplicity.** If something can be done more simply, then that opportunity can be reason enough to change requirements. If the public believes that things work differently from the way they do, its simplified or wishful misapprehension can be a guide.

4.4.9   **Embrace self-organization.** Assign tasks to self-organizing teams.

4.4.10   **Perform regular retrospective reviews.** Provide them to peer governments who would learn from them, and in turn, incorporate lessons they have learned.

4.4.11   **Accessible language.** Upon reporting to the outside world–citizens, policymakers, and so on, provide accessible, easy-to-understand documents and resources like public reports, zoning, and codes. Use plain language, pictures, quick summaries, and simple, brief explanations.

4.4.12   **Give credit where it is deserved.** Consider it a grave hazard to allow credit to flow only upward and blame to flow only downward.

4.4.13   **Hyper-local decision making.** Cosider creating subsidiary self-governing levels of decision making. For example, consider allowing a block, street, or neighborhood to override burdensome regulations such as parking minimums, separated uses, or building setbacks in zoning. This may not necessarily work well with all types of regulations or other situations, so implement and enable carefully. If done right, this can make governments more agile by delegating decisions to more appropriate scales.

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4.5	**EQUITABLE AND INFORMED PUBLIC ENGAGEMENT**

4.5.1   **Use best practices for public engagement.** Give the public many opportunities and the support needed, such as childcare at the meeting site, to take part. Ensure that the public attending hearings can understand what is happening. For example, when a chart is presented to a board, don't turn it away from the public so that only the board members can see it.

4.5.2   **Passionately dispassionate staff.** A paid and ethically bound staff should help the public make decisions. Staff should avoid improperly taking positions except as necessary to advocate for actions that will support achieving adopted policy goals; staff should also inform, offer expertise, and find relevant information to support public decision-making. This includes explaining the regulatory process to citizens, how things are done, who does what, who wins, and who loses.

4.5.3   **Informed consent.** Ensure that big decisions require informed consent from a representative sample of the public or from the public at large; also, when consent is given to big decisions, do the work and make smaller, subsidiary, and related decisions as necessary at the staff level in order to deliver on the vision that is articulated when the public is asked to and does make the big decisions.

4.5.3.a   **Sortition (jury).** Ensure that a jury of laypeople is empowered to decide edge cases in order to implement policies equitably.

4.5.3.b   **Liquid democracy.** Make sure that there is one vote per person, but the vote can be delegated to one's chosen expert-advocate.

4.5.3.c   **Participatory and deliberative democracy.** Citizens are given the power to make decisions, including citizens' assemblies, official debates with votes taken, participatory budgeting, game-like sessions to simulate unanticipated responses, etc. These are distinguished from representative democracy.

4.5.4   **Popular debate.** Hold debates and engage the public on key issues.

4.5.5   **Journalism.** As a check on dark regulations, publicly fund at least one journalist per ten thousand citizens to report on governmental issues at the local level and one per one hundred thousand or at least twenty at the state level. (Journalists are usually stretched thin at the state level.) At least 1/10th must excel at satire and comedy.

4.5.6   **Human approach.** Bring a human element to governance and public engagement in addition to and before a technical approach. For example, ask people how they feel before just asking what they need or what you should do.

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4.5.7   **Accountability.** Put systems in place that ensure accountability for decision making.

4.6   OPEN DATA

Following the principles of the OECD Open Government Data project, make government data available, while maintaining a balance between citizens' privacy and citizens' rights to see publicly-maintained data records to ensure transparency.

4.6.1   **Financial transparency.** Provide all financial data transparently, including not just inflows and outflows, but, for instance, whether a payment was made from the general fund or from a specific appropriation.

4.6.2   **Portals and APIs.** Where applicable, make data discoverable via portals and APIs, and allow citizens to contribute data without polluting or corrupting the existing data sets. (E.g., report a pothole without spamming the city with spurious reports.) Make such recording and reporting continuous and as close to real-time as possible.

4.6.3   **Searchable data.** Make all data searchable and discoverable via bots, so that citizens can report on the data. It is not enough to post pdfs of handwritten notes, for example.

4.6.4   **Scenarios and models.** Model and run scenarios both internally and externally. For example, model whether spending more capital improvement money would save maintenance money eventually. Make the methodology open so it can be replicated.

4.7   RESEARCH AND DEVELOPMENT

4.7.1   **Office of innovation.** Maintain an office to find existing innovations and encourage their adoption, while bearing in mind that they may not transplant well. The office should be either in-house or funded through a support agency.

4.7.2   **Academic relationships.** Maintain formal and informal relationships with local academic institutions to encourage an atmosphere of pragmatic innovation.

4.7.3   **Failure rate and budget.** Assume a reasonable failure rate for innovations. Refrain from vengeance for failed experiments. Allow room in budgets for an inevitable percentage of failures.

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C.5   High-Quality Built Form

Introduction

Built form in the age of climate change and climate migration must foster places that are vibrant and conducive to healthy communities while also being able to withstand the challenges of a changing climate. The approach to this issue should create resilient, people-centered places through policies that are in tune with the needs of a changing community and climate, addressing both place-scale and building-scale issues. At the scale of the place, this occurs within street grid interconnectivity, the elimination of barriers, public space, walkability, multi-modal accessibility, efficient use of land resources, and incremental fine-grainedness. At the scale of the building, this policy is focused on permitting, zoning, codes, and conservation. The natural systems that sustain human health, welfare, and our economic system must be protected, enhanced, and expanded in the process of building a livable human habitat that fosters the social interaction, safety, trust, and useability that create a cohesive community. Resilience involves planning at multiple scales, as the natural and built systems are rarely limited to just one discrete boundary. Beyond the intrinsic benefit of quality built form for a community, this principle has a large and positive impact on environmental sustainability. The form of our built environment determines much of the human impact in natural environments, especially through energy consumption, waste and water management, and carbon footprint.

List of Subpoints

This principle can be broken down into the more detailed subpoints below. These will be explored in greater depth in this section of the guide, beginning on the next page.

5.1	Interconnected street networks
5.2	Elimination of barriers
5.3	Public space
5.4	Walkability and multi-modal accessibility
5.5	Efficient use of land resources
5.6	Incremental, fine-grained approach
5.7	Permitting process
5.8	Zoning
5.9	Building code
5.10	Conservation, adaptation, reuse, and historical reference

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5.1   INTERCONNECTED STREET NETWORKS

5.1.1   **Interconnectedness.** There should be few or no culdesacs and fairly direct connections from point to point. Thru traffic should be enabled, but not to the point where it detracts from pedestrian-oriented space.

5.1.2   **Access.** Street grids should prioritize access to places, connecting all starting points and destinations effectively and conveniently.

5.1.3   **Quicker trips.** Interconnected street grids can provide quicker trips for pedestrians, micromobility, and transit, but also other modes of transportation. This applies to commercial vehicles and city services as well.

5.1.4   **More route options.** There should be more than one way to get from point A to point B, building resiliency, adaptability, and variety into systems.

5.1.5   **More street frontage.** Street frontage should be maximized for a more lively pedestrian experience, better use of real estate, and more destinations along the same area. Small blocks can enable this condition.

5.1.6   **Desire lines.** Paths of travel can follow natural paths that most people would take for effective and shortened trips, were there not obstacles or lack of infrastructure in the way. The most traveled desire lines can become main corridors of more intensely developed mixed-use activity.

5.1.7   **Intersection density and block sizes.** A good street network can partially be measured based on how many thoroughfare intersections you can find in a short distance and how large or small blocks are. Smaller blocks create more intersections, more paths, more desire lines, more street frontage, and greater vibrancy.

5.2   ELIMINATION OF BARRIERS

5.2.1   **Physical and psychological.** Both physical and psychological barriers are detrimental to quality built form that fosters interconnectivity, so both types of barriers should be significantly reduced.

5.2.2   **Highways.** Urban highways divide communities, and pollute places, while wasting space and money. Compact communities should not be oriented towards the automobile, so there should be no urban highways.

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5.2.3   Empty space. Empty space creates a barrier between places and reduces the critical mass of compact activity in a community. Therefore, empty, underutilized space should be avoided, and re-purposed either for restoration to a natural state or for some other higher and better use appropriate to the place and its position on the urban-rural transect.

5.2.4   Neighborhood boundaries. Abrupt changes in neighborhood character can create psychological and cultural barriers. While distinct neighborhoods with varying cultures should exist, they can do so in a way that has more inviting boundaries that feature more gateways and fewer barriers, focusing on creating less stark differences.

5.2.5   Transportation. The lack of versatile, effective, and convenient availability of pedestrian, micromobility, and transit infrastructure beyond a certain point or between certain areas of a place can create a barrier to the car-free.

5.2.6   Lack of physical accessibility. Some physical barriers cut off access between places and create long and inconvenient routes. This is hostile to pedestrians, transit, micromobility users, city service vehicles, and commercial vehicles while increasing traffic unnecessarily. This can also worsen socioeconomic and psychological barriers between neighborhoods, dividing a receiver place.

5.3   PUBLIC SPACE

5.3.1   Quality of space

5.3.1.a   Vibrant. Public spaces should be vibrant to build connected communities, stronger economies, and better individual experiences and opportunities.

5.3.1.b   Resilient. Resilient spaces lead to the longevity and continued success of the communities around them.

5.3.1.c   Variety. Variety can come in the form of both uses and users, within and surrounding the spaces.

5.3.1.d   Social. Public spaces should support informal and formal gatherings, spontaneous and programmed, for all users and varied uses.

5.3.1.e   Safety. Public spaces should be safe for multimodal users and those of all backgrounds, circumstances, and experiences, both physically and sociologically.

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5.3.1.f   **Comfortable.** Public spaces should be physically, emotionally, and sociologically comfortable for all users. This includes designing for grief, healing, and mental health, both in terms of design approach and specific purpose-driven spaces.

5.3.1.g   **Healthy.** Public spaces should be healthy, including pollution and noise levels, microclimate, and other factors.

5.3.1.h   **Hierarchical.** Public space can radiate and taper off in intensity regarding usage and development levels from key corridors and nodes.

5.3.1.i   **Equitable.** Access to spaces should exist and remain open for all, that serve and welcome all, and exist in all neighborhoods, with equally high levels of quality, and without traits of exclusivity.

5.3.1.j   **Maintenance.** Public space should be maintained well and equitably across an entire climate receiver place.

5.3.1.k   **Environmentally responsible.** Successful green spaces factor in smart use of water and native and climate-appropriate plants.

5.3.2   **Well-defined relationship between buildings and public space.** A well-defined relationship should be maintained between buildings and public space, creating a compact, social environment with the usage of rarely broken street walls. These street walls act as comfortable defining walls for human-scale spaces.

5.3.3   **Hazard risk reduction of climate risk factors.** A climate receiver place should focus on ensuring that the place's built form reduces the impact of climate-induced or worsened disasters.

5.3.4   **Types of spaces**

5.3.4.a   **Built objects.** Objects such as reference points, public art, cultural features, parklets, and items of interest and gathering can activate space and strengthen vibrant communities.

5.3.4.b   **Plantings.** Plantings such as trees provide a connection to nature, shade, and aesthetic value, among other benefits.

5.3.4.c   **Streets.** Streets act as connecting fibers between places and people, both stationary and in motion. Different streets may be of varying scales and types, while all at scales relating to and remaining comfortable for the pedestrian and other multimodal transportation users.

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5.3.4.d   **Squares.** Squares are outdoor rooms designed for high levels of activity and gathering, with high relation to their surroundings.

5.3.4.e   **Urban parks.** Urban parks are a greener and sometimes slightly larger version of squares, providing a slight but conveniently located oasis in the built environment.

5.3.4.f   **Exurban parks.** Exurban parks are usually reserved for the occasional, destination-focused escape from a city or town, beyond the edge of population centers. Despite their exurban locations, at least some of these should have decent equitable transit access for the car-free and car-lite.

5.3.4.g   **Special-use spaces.** Special-use spaces are built with specific purposes in mind, whereas other spaces may be designed to be flexible and nonspecific. Both special-use and flexible public spaces should exist in a reasonable ratio to expand the variety and versatility of a place's public space.

5.3.4.h   **Interior public spaces.** Public spaces may also be indoors as well, such as public institutions including city hall, libraries, schools, and athletic facilities. Places of commerce such as public market halls and places of recreation such as conservatory gardens are beneficial to communities, too. Utilitarian spaces such as public restrooms and cooling centers benefit everyone, but especially for purposes of equity.

5.3.4.i   **Private institutions.** Receiver places should work with universities and other private institutions to ensure open campuses with publicly accessible resources and welcoming public spaces.

5.3.4.j   **Semi-public spaces.** Semi-public spaces such as street-facing balconies, porches, patios, parklets, outdoor dining, and small front gardens can liven streets when implemented at the right scales.

5.4	WALKABILITY AND MULTI-MODAL ACCESSIBILITY

5.4.1   **Human scales of walkability.** A resilient community should be walkable at all scales. This is important at the scale of the public space object, building, block, street, and neighborhood. Additionally, walkability should be developed between neighborhoods, both adjacent and through multimodal transportation. The regional scale feasibility for car-free and car-lite living is crucial as well.

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5.4.2   **Incorporation of large vehicles.** Places should be designed for people, with space incorporated for vehicles afterward. Communities should not be designed for the turning radii or width of large vehicles such as firetrucks. The speed of vehicles in the street should not be at dangerously high levels. Instead, these vehicles should be accommodated and sized to fit within the desired human-scaled and pedestrian-centric streets, as a lesser priority.

5.4.3   **Urban form for multi-modal transportation and car-optional places**

5.4.3.a   **The effect of multi-modal transportation on urban form.** Multi-modal transportation can positively impact urban form, encouraging compact nodes around transit stops, making car-free or car-lite living more feasible, and reducing the burdens of alternate or sprawling infrastructure. Quality urban form can often be built and intensified along transit corridors and nodes.

5.4.3.b   **The effect of urban form on multi-modal transportation.** Quality urban form can improve the feasibility of multi-modal transportation while increasing ridership and usage of various transportation options. Transit should often be built and intensified along extant mixed-use, higher-density corridors and nodes.

5.4.3.c   **Types of transportation**

   i.   **Public transit.** Public transit is essential to properly connect neighborhoods within one community, or multiple nearby communities to each other for everyday activities. This must be sufficient enough to meet the needs of car-free households of all backgrounds, circumstances, and experiences.

   ii.   **Micromobility.** Micromobility includes modes such as bikes and scooters, both shared and personally owned. Transit does not always meet all needs, and micromobility can extend the impact of transit systems where certain places and trips fall through the cracks. Micromobility can be beneficial both as its own method of transportation from start to finish. It can also connect to the beginning or end of trips, linking transit stops with slightly out-of-reach starting points or destinations.

   iii.   **Regional transit.** Transit should also connect communities across the region of a climate receiver place and beyond, rather than just within communities.

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5.4.3.d   **Interconnective and multi-purpose.** Transit systems should not only be structured for commuting, but for other times, activities, and destinations from anywhere within a community.

5.4.3.e   **Quality of transportation.** High-quality transportation systems lead to greater ease of building car-lite and car-optional places. In order for this to happen, transportation must be quick, link together 15-minute neighborhoods, provide minimal transfers, and offer direct connections, while prioritizing safety, convenience, frequency, and reliability. When this occurs, underutilized space dedicated to parking can be repurposed to further improve high-quality transit and built form, while reducing transportation costs for under-resourced households.

5.4.4   **Access to all destinations**.

5.4.4.a   **Method of access.** All destinations of daily and non-daily use should be accessible by a useful, interesting, safe, convenient walk. If a walk is not possible, transit or micromobility should provide convenient access.

5.4.4.b   **Destination types.** Essential destinations include places to live, eat, shop, work, play, learn, and gather, as well as places to access services, healthcare, arts and culture, government participation and services, amenities, entrepreneurial opportunities, and public spaces of both urban and rural varieties.

5.4.5   **Car-lite city.** The car-lite city is the first step towards transitioning to a car-optional place. Where cars exist, and often there is no complete alternative, they should not negatively disrupt the place, pedestrian, public space, safety, health, maintenance burden, stormwater management, or critical mass of users and uses in a community.

5.5   EFFICIENT USE OF LAND RESOURCES

5.5.1   **Uses.** In order to effectively use land across a climate receiver place, each land use type should be structured in the way that naturally works most effectively, sustainably, and least wastefully for that type. Without minimization of built land area, the four uses below cannot sustainably coexist.

5.5.1.a   **Population centers and commercial activity.** These are most effective when compact and minimized in land area. Other configurations waste precious land while requiring more infrastructure and carbon emissions per capita.

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5.5.1.b   **Farmlands and Working Lands.** Farmlands and working lands should be planned in a sustainable manner that minimizes land area usage and balances supporting compact population centers while avoiding infringement on natural lands.

5.5.1.c   **Infrastructure and transportation.** Infrastructure is the connective tissue that connects and supports places and people. This should be minimized in land area, balancing efficiency with effectiveness and versatility. Minimizing the land area of infrastructure is tied to the compactness and walkability of population centers and commercial activity, all of which save money.

5.5.1.d   **Natural lands.** These should be as maximized and untouched as possible, which is realized through the optimization and compactness of population centers, farmland, and infrastructure uses.

5.5.2   **Qualities**

5.5.2.a   **No sprawl.** A climate receiver place should avoid suburban sprawl. It combines the resource inefficiencies of rural lands with a lack of additional wealth generation to offset those inefficiencies. In a community without sprawl, population centers, farmland, and infrastructure are compact, and natural lands are expansive, with clearly defined boundaries and minimal blending between these four land uses. Conversely, within each of these uses, more specific use types can and should be compatibly mixed. This includes the mixing of residential, office, and retail uses within population centers. As communities grow inwards in a compact manner, they can also contract from areas of sprawl with rewilding efforts.

5.5.2.b   **Minimize negative externalities between uses.** Population centers, farmland, infrastructure, and natural lands should not cause hazards or difficulties for each other in a well-structured community.

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5.6   INCREMENTAL, FINE-GRAINED APPROACH

5.6.1   **Fine-grained at various scales.** Fine-grained urbanism is when a place is made up of many more and smaller units than in a coarse-grained place. The fine-grained place has smaller and many more buildings, spaces within buildings, smaller city blocks where possible, and mid-block passages to create pedestrian connections and public space within larger blocks. This allows for a wider variety of smaller uses, demographics, target users, price ranges, and other factors, all sharing space in close proximity. This is preferable to one large, single-use, single-demographic building occupying an entire city block, with only massive storefronts that require large resources to rent. Fine-grainedness allows for an incremental approach since the subdivided pieces of real estate are smaller and more plentiful.

5.6.2   **Incremental resilience.** An incremental approach is more resilient, as it allows many things to be tested quickly on a small scale, with adjustments before full implementation. Additionally, incremental places are made up of many more and smaller pieces with greater diversification in the built environment. This makes incremental places more flexible and adaptable to change and crises.

5.6.3   **More walkable destinations.** An incremental, fine-grained place has more destinations per distance of street frontage. This increases vibrancy, versatility, and usefulness of a climate receiver place.

5.6.4   **Lower barrier to entry.** There is a lower barrier to entry for ownership or renting in a more fine-grained place, since there are more local and small stakeholders. There are also more and smaller spaces. This is true for both commercial and residential uses.

5.6.5   **Variety.** An incremental, fine-grained approach to built form should prioritize variety in neighborhoods, at sub-neighborhood scales, and between neighborhoods. This can take the form of users, densities, visual character, cultures, block structures, building typologies, and other qualities.

5.6.6   **Creativity in economies of agglomeration.** With more fine-grainedness and incrementalism comes more diversity and variety. This both fosters and attracts creativity and creatives, making fine-grained, incremental places well-suited for creative and innovative economies of the future. When ideas are exchanged within diverse settings, beyond typical socioeconomic, cultural, and profession-based boundaries, new ideas are born.

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5.6.7   **Subdivisions.** If a climate receiver place has the opportunity to subdivide land, it should be subdivided into small parcels in a walkable street network, to facilitate fine-grained, incremental urbanism. If private sector individuals or groups would like to subdivide land to make smaller lots, the process should be made seamless and quick, to likewise facilitate fine-grained, incremental urbanism that facilitates walkability without requiring automobile access..

5.6.8   **Facilitating grassroots placemaking.** A community should maximize and legalize the bottom-up, small user-generated place, with strategic top-down implementations as occasional anchor points.

5.7   PERMITTING PROCESS

The permitting process should be streamlined, predictable, affordable, and easily navigable. This levels the playing field for less-resourced people who want to contribute to a place's built form, which is an important step towards equity.

5.8   ZONING

5.8.1   **Form-based.** Zoning should be form-based, not use-based. Places with mixed uses are more than the sum of their parts, as various uses positively build off of each other and foster vibrant, resilient walkability. Segregating uses, such as in use-based zoning, artificially constrains the potential of communities. Form-based zoning instead focuses on the shape, size, position, and character of buildings, rather than on usage, creating visually and spatially cohesive but mixed-use communities. This creates a more vibrant experience while better addressing issues of neighborhood character. Form-based zoning is analogous to baking a cake, while use-based zoning is analogous to serving individual unaltered ingredients, such as baking soda or butter, in separate bowls for consumption.

5.8.2   **Mixed-use.** Mixed-use buildings should be enabled, with varied types, sizes, and structures of nonresidential or partially residential uses made possible.

5.8.3   **Multifamily.** Multifamily should be able to take on many forms, types, sizes, and family structures. This ranges from missing middle housing up to large urban core apartment buildings. Single-family zoning, conversely, is counterproductive to quality built form.

5.8.4   **Streamlining.** Zoning should be streamlined so that it is brief, clear, consistent, and easily understandable to the layman.

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5.8.5   **Remove constraints.** Site and building constraints to creating compact, walkable communities should be removed from zoning.

5.8.6   **15-minute neighborhoods.** Zoning should facilitate the strengthening, adaptation, and creation of 15-minute neighborhoods. These types of neighborhoods make car-free access to daily needs possible within a 15-minute walk or bicycle trip.

5.8.7   **Transit-oriented.** Zoning should support and be supported by resilient, equitable transit networks, nested within complete and connected pedestrian and bicycle/micro-mobility networks.

5.8.8   **Climate risk factor hazard risk reduction.** Zoning should support greater development in less disaster-prone areas of a place.

5.8.9   **The transect.** Use a locally-relevant adaptation of the rural-to-urban transect for categorizing zones in a climate receiver place's zoning.

5.8.10   **Bonuses.** Zoning can include bonuses of extra development rights for developers that create positive externalities and public good within their building projects.

5.8.11   **Social groupings of buildings.** Buildings should be street-facing, clustered in social configurations around public space.

5.8.12   **Human-scale.** Buildings should relate to the human scale and provide a welcoming atmosphere to avoid alienating people of all backgrounds, circumstances, and experiences.

5.8.13   **Contextual.** Buildings should be contextual and culturally respectful, while also respectful of the ideals of compact, complete, complex, walkable communities.

5.8.14   **Balance.** Zoning can encourage a balanced mix of social front-facing outdoor spaces and secure, private, rear-facing outdoor spaces. Social front-facing spaces include stoops, porches, balconies, and patios. Rear-facing private spaces include shared backyards, small back gardens, porches, balconies, and patios. These lists are by no means comprehensive.

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5.9   BUILDING CODE

5.9.1   **Local climate risks.** Communities should incorporate local climate change risks into building codes to decrease risk at the individual building level.

5.9.2   **Efficiency of legalized building forms.** Building code should eliminate unnecessary inefficiencies to allow for more effective, affordable, and fine-grained buildings while maintaining safety.

5.9.3   **Structure.** Building codes should reinforce structural practices that are resilient, safe, and adaptive to new, more sustainable technologies.

5.9.4   **Health and safety.** Equitable health and safety should be prioritized in building codes. This includes protecting people from changes in weather, storms, flooding, and air quality due to climate change.

5.9.5   **Sustainable construction.** Sustainable construction can be required by building codes, rather than just existing as a suggestion. This includes aiming for net-zero buildings, which can potentially receive development bonuses.

5.9.6   **Renewable energy.** Renewable energy can be incorporated into how building codes operate.

5.9.7   **Accessibility.** Building codes should incorporate accessibility for all, while also leaving room for affordable, space-saving, and adaptive creative solutions.

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5.10   CONSERVATION, ADAPTATION, REUSE, AND HISTORICAL REFERENCE

5.10.1   **Cultural significance and identity.** While places should move forward and not remain stuck in the past, culture is a central component of what it means to be human. Climate receiver places should engage with and build off of positive elements of their culture from the past while evolving forwards. This should extend to the look, feel, and construction of local buildings.

5.10.2   **Resource-efficient.** Reusing and adapting buildings of the past saves resources, especially when those buildings are of sturdy construction and are well-suited to human-scale walkable urbanism.

5.10.3   **Diversified across time.** When a neighborhood contains buildings from many time periods, the place is more resilient due to the diversification of physical structures and their qualities. Additionally, this helps build in natural relative affordability to a place.

5.10.4   **Conservation of both physical and nonphysical.** When physical buildings and infrastructure of the past are conserved, nonphysical culture, community, and other positive externalities are more easily retained. Change is necessary, but incrementalism is crucial.

5.10.5   **Incremental adaptation.** A climate receiver place can look forward and incrementally adapt while referencing the best elements of the past in new creations.

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C.6   Connected Communities

Introduction

Climate Receiver places will, by definition, have a changing population from many backgrounds. To handle these changes, a place must be inclusive and create an environment for existing residents and new residents to thrive. The existing local identity of a place is important, and the full past of the land of the community should be recognized. The place must also evolve to meet the demands of being a climate receiver place. To welcome people into the new place, there must be plenty of opportunities for people to gather and cross paths in public spaces. Services also must be provided to proactively include people of different backgrounds into the community, and the place must have plenty of opportunities for migrants to fully participate in the new society. On balance, climate receiver places should consist of well-connected, diverse communities that add up to more than the sums of their parts.

List of Subpoints

This principle can be broken down into the more detailed subpoints below. These will be explored in greater depth in this section of the guide, beginning on the next page.

6.1   Communication and celebration
6.2   Education and opportunity
6.3   Public spaces
6.4   Public services
6.5   Accessibility
6.6   Inclusivity
6.7   Culture: past and present

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6.1   COMMUNICATION AND CELEBRATION

6.1.1   **Communication.** Engage in communications and messaging that is positive and supportive on subjects of immigration, inclusion, and for receiver place residents of varying circumstances, backgrounds, and situations.

6.1.2   **Celebration.** Acknowledge and celebrate the varying cultures and ways of life that exist within their communities.

6.2   EDUCATION AND OPPORTUNITY

6.2.1   **Public education.** Reflect the diversity of the community and the world in school curriculums. Teach about climate change, climate migration, and the places, geographies, and cultures people are migrating from. Public education across all subjects is also crucial for building social capital and prosperity.

6.2.2   **Education through art.** Art, movies, and other forms of media are important for educating the public in receiver communities.

6.2.3   **Training/retraining.** Welcome immigrants into the local economy of receiver places through partnerships with universities or skill-based training to contribute and thrive in the community.

6.2.4   **Economic inclusivity**

6.2.4.a   **Employment.** Provide well-paying jobs to allow migrants to find stability while adapting to their new place.

6.2.4.b   **Networking.** Provide networking opportunities for people to get to know their community more quickly and find job opportunities suitable for their skills.

6.2.4.c   **Entrepreneurship.** Ensure equitable access to entrepreneurship opportunities for those of all backgrounds, experiences, and circumstances.

6.2.4.d   **Public employment.** Public infrastructure employment can provide opportunities to both climate migrants and those already living in the community.

6.2.4.e   **Barriers to participation.** A community can enable migrants and refugees to use existing skills legally in their new communities and to learn new skills while offering similar resources to those from the receiver place.

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6.2.4.f   **Diverse economies of agglomeration.** Communities can strengthen creative idea generation and foster collaboration in the local economy by facilitating formal and informal interaction between those of varying industries, backgrounds, and job titles.

6.2.4.g   **Cultural and social exports.** The culture and its resultant activity, generated by connected communities, can be harnessed as an economic export.

6.3   PUBLIC SPACES

6.3.1   **Public outdoor spaces.** Ensure that residents have access to safe public park spaces within reasonable walking distances. These should include spaces to participate in and democratically create social capital and culture.

6.3.2   **Community centers and religious institutions.** Provide public indoor spaces for residents to interact through public events, classes, and other accessible activities. This includes places of worship, non-profit organizations, neighborhood community centers, and others.

6.3.3   **Public event spaces and local meeting spaces.** Provide and foster welcoming event spaces and meeting spaces within communities, including businesses such as coffee shops and free public meeting rooms, for existing and new community members.

6.3.4   **Connected neighborhoods and neighborhood groups.** It is important to have community support or other resources to connect a person to their neighborhood.

6.3.5   **Cultural and social assets.** Cultural and social assets should be equitably placed in and around transit hubs and densely populated areas, while not leaving out under-resourced neighborhoods.

6.3.6   **Walkability.** Enable compact, walkable, mixed-use communities as places for people to cross paths and build community during daily routine errands. These include walkable access to places to live, eat, shop, work, play, learn, and gather, as well as places to access services, healthcare, arts and culture, government participation and services, amenities, entrepreneurial opportunities, and public spaces. Automobile access is a financial obstacle to many recent immigrants and under-resourced people, and shouldn't become a barrier to economic opportunity or the ability to meet daily needs.

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6.3.7   **Community events.** Climate receiver places can facilitate, both directly and indirectly, cultural and community events, including longstanding traditions like big festivals, and smaller events that highlight a local sense of community. This includes events that celebrate both extant and incoming cultures and communities while bringing people together across social boundaries to experience each others' cultures and communities.

6.4   PUBLIC SERVICES

6.4.1   **Public safety.** Ensure that there are services for all people to be and feel safe in their community, including mental health resources. Ensure Restorative justice with interventions and support for residents that have broken the law, through a process directed from the community rather than imposed from a top-down, centralized court. Engagement with the community is important for everyone to understand and implement actions that will increase safety and justice.

6.4.2   **Public transportation.** It is important to have convenient and safe access to all aspects and all communities, cultures, and resources of the climate receiver place without the need of a car, for both the disabled and able-bodied, and those of all other circumstances, from all communities and cultures.

6.4.3   **Cooling centers, safe areas, and emergency services.** Climate change exacerbates extreme weather in a location. While Receiver places are better suited for this new reality, they will still experience extreme weather. A climate receiver place provides adequate and accessible spaces for people in all neighborhoods to find shelter in extreme heat, humidity, flooding, winds, and cold.

6.4.4   **Democratic processes.** Include residents who move to a climate receiver place and intend to stay in democratic processes as soon as possible so their voices are heard. The same should be true for those who have already been living in the receiver place.

6.4.5   **Conflict Resolution.** As groups that would not have previously closely coexisted are pushed into the same spaces and neighborhoods in a changing community, places can help resolve conflict to foster more harmonious coexistence.

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6.5 ACCESSIBILITY

6.5.1   **Affordability.** Provide affordable business spaces and incubators to help facilitate local businesses to become integral parts of a community's culture, building upon strengths of the past and guiding the place into the future.

6.5.2   **Equity.** Places can create, fund, and support cultural spaces for marginalized and minority cultures and communities. It is important that communities and people of all backgrounds, experiences, and circumstances have the opportunity, resources, and, in certain cases, public authority to build upon and add to a place's culture and cultural artifacts.

6.5.3   **Language.** Communities can create access to connectivity by helping people bridge language barriers and learn new languages. This includes providing multilingual resources and public meetings.

6.5.4   **Digital divide.** Receiver place governments should be understanding of residents that have access to technology and those that don't. It is important to provide public engagement online but also through physical materials such as in public, through mail, or door to door.

6.5.5   **Distance.** Communities should be compact, with short distances between people and destinations. This can bring communities and people closer together when organized successfully.

6.6 INCLUSIVITY

6.6.1   **Diverse and cohesive communities.** There should be Integrated and varied resources and infrastructure for all cultural, social, economic, age, ability, lifestyle, etc. groups and individuals.

6.6.2   **Welcoming people from diverse backgrounds.** Welcome and include climate change migrants and refugees, as well as those from diverse cultures, into their new communities, both as participants and authors of social structure and culture.

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6.6.3   **Relocation.** Places that may not fare as well in a world of climate change can transplant their culture, architecture, and community to the receiver places to which their people migrate, in specific neighborhoods similar to cultural enclaves that exist in many cities today. Climate receiver places can be accommodating and assist in transplanting endangered cultures and places into complete, compact, complex, walkable cultural enclaves as communities in their own rights, ones that avoid exclusivity and segregation by embracing a diversity of residents and building stock.

6.7   CULTURE: PAST AND PRESENT

6.7.1   **Community foundations and other organizations.** Communities can collaborate with private institutions such as universities to inclusively build upon culture.

6.7.2   **Strong local identity.** Climate receiver places can share the place's culture with existing and new residents to have a stronger sense of place through entertainment, arts, local culture, and events.

6.7.3   **Access to the arts.** Build community public/private financial and cultural support for arts, culture, and community-building institutions. Ensure that there is access for all people to view the arts and participate creatively in the arts within their community. Represent diverse cultures and backgrounds in institutions for art. Ensure access to affordable spaces for artists to create, display, and sell. This includes affordable and publicly supported studios, galleries, markets, art in public spaces, and more. Provide access to creating art in both institutional and less formal settings to local community members of all backgrounds, experiences, and circumstances.

6.7.4   **Public art.** Create public art that honors the past of the receiver place but is also innovative and forward-looking.

6.7.5   **Monuments and institutions.** Equitably and democratically create and operate public monuments and public cultural institutions.

6.7.6   **Architecture and urbanism.** A community can build off of their strengths and cultural heritage of architecture, while sensitively and incrementally evolving, as a way to strengthen and protect the positives of the receiver place's culture.

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C.7   Resilient Economies

Introduction

Climate receiver places can look to build prosperous futures by welcoming new residents and lowering barriers to business and innovation. They must set the stage for resilient economic growth with direct liaisons regionally and in city hall, incubation programs for local entrepreneurs, and innovative policy to foster the establishment of new businesses that will support resilience. Over time, local economies can focus on diversifying and growing with resilience, environmental sustainability, and self-sufficiency in mind. Places can build upon existing economic strengths, expanding those strengths and building new ones.

Communities should ensure that the changing economy works equitably for all. This equity includes those already living in a climate receiver place, as well as providing new opportunities for the under-resourced from and trapped in other communities experiencing harsher climate impacts and worsening risks to be able to migrate towards a better life.

Climate receiver places that embed the principles of this document in everyday strategy and operations can attract established businesses and new entrepreneurial founders. Businesses will see opportunities to reduce risk, grow where the future will take place, and employ in places that will continue to offer quality of life benefits to employees in an era of climate change. Climate receiver places can incorporate this situation into local economic strategy.

List of Subpoints

This principle can be broken down into the more detailed subpoints below. These will be explored in greater depth in this section of the guide, beginning on the next page.

7.1   Lowering barriers
7.2   Creating supportive ecosystems
7.3   Pursuing import replacement
7.4   Economic resilience
7.5   Environmentally sustainable economies
7.6   Hazard risk reduction of future climate disasters
7.7   Promoting the climate receiver place
7.8   Equity

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C.7   Resilient Economies

7.1   LOWERING BARRIERS

7.1.1   **Licensing and new businesses.** Communities can lower barriers to new businesses by making licensing accessible, streamlined, and affordable.

7.1.2   **Cottage industry standards.** Receiver places can lower barriers to small business ventures by making it easier to run and operate a business from a residential property, with streamlined and objective standards. Legalizing live/work spaces can further make this easier and more accessible.

7.1.3   **Reusing existing buildings.** Communities can support and initiate renovation, reuse, adaptation, and development of dilapidated and vacant properties.

7.1.4   **Entrepreneurship programs.** Places can facilitate entrepreneurship or local community businesses via incubation programs and establishments.

7.1.5   **Public commercial space.** Communities can provide a place for small business creation and development through spaces such as public markets, business incubators, and other types of spaces and shared resources.

7.1.6   **Commercial space affordability.** Many communities focus mostly on affordable housing when addressing the topic of affordability. However, affordable commercial space is important, too, in order to foster a diverse mix of businesses with accessibility for under-resourced entrepreneurs.

7.1.7   **Regulation**

7.1.7.a   **Simplify and streamline.** Communities can simplify and streamline regulations and associated processes to expedite and increase accessibility of entrepreneurship and other participatory actions in the economy. This especially helps small entities without the resources to deal with convoluted systems. Without simplifying and streamlining regulations, big businesses and the wealthy have an unfair edge.

7.1.7.b   **Tilt the scales towards:**

    i.   **Fine-grainedness.** Fine-grained urbanism is when a place is made up of many more and smaller units than in a course-grained place. This creates more resilient, diverse, innovative economies while leveling the playing field for smaller and under-resourced individuals and businesses. Places can tilt the scales of regulation to favor this economic pattern.

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ii.   **The under-resourced.** Communities can tip the scales of regulation towards giving the under-resourced a fair chance of participating in the economy from all angles.

iii.   **Positive externalities.** Climate receiver places can ensure that regulations favor economic activity with positive externalities, resilience, and regarding industries essential for self-reliance.

iv.   **Sustainability and resilience.** Communities can use regulations to favor economic activity that supports both environmental and economic sustainability and resilience.

v.   **Competition and local business.** Regulation can be structured to level the playing field, rather than supporting monopolies and big out-of-town businesses.

7.1.8   Land use

7.1.8.a   **Mixed-use.** Neighborhoods should be mixed-use and compact, with a critical mass of people for walkability to support resilient economic activity.

7.1.8.b   **Reduce barriers in zoning.** Places can reduce barriers in zoning that make it more difficult to create economically resilient, walkable, and equitable communities.

7.1.8.c   **Highest and best use.** Land use regulations can ensure that a climate receiver place is making the best socioeconomic use of its land, to create compact, walkable communities while preserving farmlands and natural lands. This should be implemented in balance with equity and affordability as priorities.

7.1.8.d   **Affordability.** Affordable housing near affordable commercial spaces should be implemented in balance with the highest and best use as a priority.

7.1.8.e   **Variety.** Spaces of all kinds, including commercial spaces, should contain variety in size, location, affordability, and other qualities. Fine-grainedness, which creates a larger number of entities per capita, is one piece of addressing this issue.

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| 7.1.8.f | **Infrastructure and transportation.** Transportation and other infrastructure can lower barriers to economic activity. This goes for both employment-related concerns regarding public transit, and industrial-related concerns regarding industrial transportation and shipping. Shipping should remain a dynamic focus, as climate change and migration are likely to shift important shipping corridors over time. |

| 7.1.8.g | **Migrant resources.** Communities should provide climate migrants and refugees, in addition to extant residents, with resources to lower barriers to a variety of modes of economic participation. |

7.2   CREATING SUPPORTIVE ECOSYSTEMS

7.2.1   **Local value capture and reinvestment.** Communities can capture the value created by local economic growth, reinvesting this into further economic growth, equity, and resilience.

7.2.2   **Education and training.** Publicly supported education and training can facilitate local economic opportunity and growth.

7.2.3   **Retaining public goods.** Communities shouldn't privatize public services and infrastructure or give control over federal entities.

7.2.4   **Positive business externalities.** Places can facilitate ways for businesses to give back to their local communities so that economic growth creates a further-reaching economic good.

7.2.5   **Supporting local non-profits.** Communities can work with local non-profit organizations as part of a strategy to support local economic initiatives and businesses.

7.2.6   **Work with local institutions.** Climate receiver places can collaborate with local institutions such as universities, hospital systems, research centers, and museums, to strengthen the local economy for all.

7.2.7   **Cooperatives.** Communities can support and enable cooperatives, such as for businesses, housing, and shared facilities. These, in the right places, can help prepare for potential socioeconomic shocks and inequalities that may accompany climate change, especially for essential economic activities.

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C.7   Resilient Economies

7.3   PURSUING IMPORT REPLACEMENT

7.3.1   **Supply chains.** Climate receiver places can address supply chain distances and fragility to ensure that they can continue to rely on access to goods, especially essential items.

7.3.2   **Business recruitment.** Communities can focus on recruiting businesses as a way to diversify the local economy and reduce reliance on imported goods with fragile supply chains.

7.3.3   **Training.** Places can train local residents to perform work that will allow the community to diversify local production, reducing reliance on imported goods.

7.3.4   **Business incubation.** Business incubation can, along with business recruitment, build up a diversified local economy that is less reliant on imported goods.

7.3.5   **Sustainability.** Pursuing import replacement can increase local economic resilience. It can also reduce greenhouse gas emissions by cutting back on the carbon footprint of shipping goods.

7.3.6   **Regional trade associations.** Regional trade associations can link together receiver places that are located in the same or adjacent regions, strengthening semi-local economies and supply chains, while avoiding a completely insular import replacement strategy.

7.4   ECONOMIC RESILIENCE

7.4.1   **Fine-grained urbanism.** Fine-grained urbanism makes for a greater number of entities per capita, increasing resilience through diversification. This same diversification leads to greater innovation, due to a wider range of ideas mixing as part of knowledge spillovers in everyday social interactions. It can also provide access to economic participation for people of a wider range of backgrounds, experiences, and circumstances.

7.4.2   **Diversification.** Economic diversification can make a climate receiver place more resilient while building upon extant local strengths and local employment needs.

7.4.3   **Land as a finite resource.** Land is a finite economic resource, so compact, walkable communities are a way to conserve land so that enough remains for farming, working lands, future growth, nature, clean water, and flood management.

7.4.4   **Self-reliance.** By becoming more self-reliant, climate receiver places can become more resilient, especially towards climate-related supply chain issues.

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7.5 ENVIRONMENTALLY SUSTAINABLE ECONOMIES

7.5.1 **Import replacement.** Import replacement by way of local production can reduce greenhouse gas emissions due to transporting goods.

7.5.2 **Quality urban infrastructure.** Quality urbanism, in the form of compact, walkable, transit-oriented communities, can reduce transportation emissions, infrastructure per capita and its associated embodied energy, and land usage per capita and its associated destruction of natural lands.

7.5.3 **Land as a finite resource.** Land is a finite environmental resource, so compact, walkable communities are important to reduce the amount of land used for development per capita while preserving a greater area of natural lands.

7.5.4 **Sustainable businesses.** Communities can increase local environmental sustainability by supporting businesses in sustainable industries and with sustainable practices.

7.5.5 **Economic benefit.** Supporting sustainable industries can increase local innovation while preparing a community to become a leader in the future economy.

7.6 HAZARD RISK REDUCTION OF FUTURE CLIMATE DISASTERS.

7.6.1 **Localize business.** Localize the power of businesses, retaining interest in long-term climate sustainability.

7.6.2 **Regional business collectives.** Establish regional collectives of smaller businesses and non-profits to exert influence on hazard risk reduction.

7.6.3 **Code and zoning.** Use building code and zoning to facilitate business growth in locations safer from climate issues such as flooding within climate receiver places.

7.7 PROMOTING THE CLIMATE RECEIVER PLACE

7.7.1 **Attracting people and businesses.** Climate receiver places can grow by attracting people and businesses towards greater safety from climate risks. This benefits both the place and the people who come there in advance of the greatest threats ahead**.**

7.7.2 **Marketing.** Climate receiver places can market themselves as safer from climate risks, as well as being communities that are open to growth, innovation, and residents and businesses of all backgrounds. This marketing can target companies and prospective residents, and investments.

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7.7.3   **Equitable opportunity.** The climate receiver place can provide economic opportunity for residents left out of the conventional small business ecosystem, creating a reason for the under-resourced to want to relocate while being able to contribute to growing an economically productive, resilient community.

7.7.4   **Impact on climate sending places.** By promoting and growing climate receiver place economies, under-resourced individuals otherwise trapped in places with high and growing climate change risk factors, those individuals can have somewhere to relocate where they can find both security and opportunity.

7.8   EQUITY

7.8.1   **Entrepreneurial.** Entrepreneurial opportunity should be equitably made accessible to those of all backgrounds, experiences, and circumstances.

7.8.2   **Employment.** Job creation in climate receiver places should serve all, with access to jobs and training for all skill levels.

7.8.3   **Mitigate gentrification.** Climate receiver places should equitably mitigate gentrification caused by the community's marketing and growth.

7.8.4   **Physical access to jobs.** Equitable access to jobs should exist within a reasonable car-optional commute.

7.8.5   **Resources.** Economic resources should be equitably available such as libraries and business advice, which can help the under-resourced participate in the local economy, such as in entrepreneurial roles.

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C.8   Environmental Sustainability

Introduction

Environmental sustainability counteracts climate change and other negative externalities of modern society. Climate receiver places have unique opportunities to implement this principle early on during planning and growth, and continuously afterward. Thus, while this has been recognized as important and increasingly familiar in personal, business, and governmental settings for many years, in a time of accelerating climate disruption and systemic challenges, environmental sustainability is increasingly a central priority for communities. Sustainability is focused on securing the ability to continue current activities and functions indefinitely by adapting to the constraints of the operating environment. In the case of environmental sustainability, it is the natural world's ability to persevere as a high-functioning, self-perpetuating system, enabled by conscious efforts of communities to not damage that system. Climate receiver places can be environmentally sustainable by creating compact communities, efficiently using land and resources, generating sustainable energy, and protecting ecosystems, all while constructing and operating economies and places in more ethical ways. Eco-design can lead to gentrification so it is crucial to incorporate existing communities in the planning, development, and implementation of environmentally sustainable design. Lastly, communities can embed sustainability within culture and lifestyles, perpetuating better ways of doing things long into the future.

List of Subpoints

This principle can be broken down into the more detailed subpoints below. These will be explored in greater depth in this section of the guide, beginning on the next page.

8.1   Creating compact communities
8.2   Efficient land and resource use
8.3   Sustainable energy
8.4   Protect, maintain, and restore ecosystems
8.5   Encourage community and stakeholder collaboration
8.6   Sustainable economies
8.7   Sustainable and regenerative agriculture
8.8   Sustainable construction and operations
8.9   Culture

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8.1   CREATING COMPACT COMMUNITIES.

Compact communities use less resources per capita for land, infrastructure construction and operation, maintenance, and transportation, which reduces carbon emissions. Simultaneously, by using less land per capita, compact communities preserve natural lands.

8.1.1   **Scale.** Match building scale to street and human scales using zoning and permit approval processes that allow appropriate scale by right.

8.1.2   **Mobility.** Create walkable, transit-oriented, micromobility-oriented communities with the transportation infrastructure to serve them.

8.1.3   **Green Infrastructure.** Encourage green infrastructure approaches at the site, community, and regional scales to increase resilience to natural hazards.

8.1.4   **Encourage compactness.** Implement systems and offer incentives that encourage local communities and individual stakeholders to increase density.

8.1.5   **Mixed uses.** Build mixed-use, complete, walkable neighborhoods.

8.2   EFFICIENT LAND AND RESOURCE USE

8.2.1   **Promote compact and transit-oriented development.** Match transit to development and vice versa, with a view to lightening the amount of infrastructure needed and the carbon released per capita, and reducing the amount of natural lands altered.

8.2.2   **Preserve natural lands.** Protect ecological services as a complement to conventional services. Avoid fragmenting habitats, sometimes using topography to maintain continuity for both natural and human environments.

8.2.3   **Locate public facilities strategically.** Organize the urban fabric so that most daily necessities are within a range from a 5-minute walk (≈1/4 mile or 400 meters) to a 15-minute bicycle ride (≈3 miles or 4.8 kilometers), depending on each use's catchment area. Avoid splitting catchment areas across wide roads, and avoid building dead-end or backwater urban fabric.

8.2.4   **Educate.** Educate the community on the benefits of density, a mix of uses, and mix of lifestyles. Outdated assumptions of property value can keep us from building in more convivial ways, and they can also obscure real issues. For instance, poor maintenance of a building housing immigrants could trigger a mistaken backlash against the immigrants themselves–rather than their bad landlord.

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8.2.5   **Evaluate transportation systems to reduce personal vehicular movements.** Transportation system evaluation requires a two-pronged approach. First, leverage the 15-minute community to reduce the need for personal vehicular transport. Second, minimize both the number of empty seats for people and the number of lightly-loaded logistics vehicles.

8.2.6   **Implement fiscal policies, incentives, and zoning policies.** Adopt policies that locate the right things in the right places, but do so with flexibility in mind. Avoid overly-tailored building types that obsolesce early. Build housing so that it can be reconfigured. Favor form-based codes with strict performance standards for external noise, odors, etc. over minutely regulated use-based codes. Give each street a strong gestalt that depends only loosely on interior uses.

8.2.7   **Efficient energy use.** Set and use standards that conserve energy used in buildings. Balance the energy saved against the cost to save it, however. Expensive high efficiency that never gets used is no better than low efficiency. Favor building materials that lose less greenhouse gas in their manufacture (e.g., some geopolymer cements) over ones that use more (e.g. conventional cement).

8.2.8   **Natural resource extraction.** Avoid extracting water faster than it can be replenished in the water table. Preserve natural resources in the ground as much as possible, and anticipate/encourage technological developments that might make landfills the richest sources of some resources in the future. Reduce pollution in the process of resource extraction.

8.3   SUSTAINABLE ENERGY

8.3.1   **Types.** Consider a diversified system of various types of sustainable energy sources, such as wind, solar, geothermal, and others.

8.3.2   **Carbon footprint.** Sustainable energy reduces a community's carbon footprint, which helps in the fight against climate change.

8.3.3   **Pollution.** Sustainable energy reduces pollution of air, water, and elsewhere, conserving natural ecosystems while improving human health.

8.3.4   **Saving energy.** Improve energy efficiency and other means of energy savings before pursuing further energy generation, as it is cheaper and more sustainable to save energy than produce more energy.

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8.3.5   **Peak power generation.** Time power uses such as desalination or sewage processing to peak power generation periods.

8.3.6   **Storage.** Sustainable energy sources need to consider storage. Where wind, solar, and other similar sustainable power sources are used, consider energy storage alongside energy generation.

8.3.7   **Patents.** Lobby for the compulsory public purchase and freeing of critical patents, and for fair, reasonable, and non-discriminatory licensing of patents that are broadly useful.

8.4   PROTECT, MAINTAIN, AND RESTORE ECOSYSTEMS

8.4.1   **Green infrastructure planning.** Use green infrastructure planning to identify and strengthen community and regional environmental assets.

8.4.2   **Defining appropriate indicators.** Define appropriate indicators to measure and monitor ecosystem function and health over time.

8.4.3   **Report cards and mapping.** Use report cards and illustrative maps, based on goals and community vision, to align science with management priorities and to convey results of ecosystem protection to the public.

8.4.4   **Pollution mitigation and cleanup.** Mitigate and clean up pollution of all sorts, with a focus on maximizing the positive impact on ecosystems.

8.4.5   **Waste management.** Properly manage waste so that it does not end up polluting natural ecosystems and watersheds.

8.4.6   **Stormwater management.** Use a strategic combination of both hard and soft infrastructure to manage stormwater in an environmentally sensitive manner, especially as the amount of stormwater increases in many places due to climate change.

8.4.7   **Invasive species.** Deal with invasive species prevention and management to preserve the integrity and balance of native ecosystems.

8.4.8   **Biodiversity.** Support the biodiversity of natural lands to increase the resilience of ecosystems to threats and disasters.

8.4.9   **Connected areas of wildlife.** Remove and prevent barriers to local and regional wildlife connectivity and migration.

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8.4.10   **Landscape urbanism and trees.** Use urban plantings as a strategy to manage ecosystems within the built environment, and to maintain the integrity of the natural ecosystems elsewhere that they may impact.

8.4.11   **Species adaptation.** Help natural systems and species adapt faster to an artificially rapidly changing climate.

8.5   ENCOURAGE COMMUNITY AND STAKEHOLDER COLLABORATION

8.5.1   **Fair decision-making.** Make predictable, fair, and cost-effective development decisions.

8.5.2   **Community involvement.** Use stakeholder involvement processes, such as community meetings and other methods, to engage the local community in decision-making.

8.5.3   **Environmental partnerships.** Partner with community stakeholders for more well-rounded decisions around issues of environmental sustainability.

8.6   SUSTAINABLE ECONOMIES

8.6.1   **Carbon footprint and pollution.** Ensure sustainable economic practices that reduce both carbon footprints and pollution.

8.6.2   **Sustainable business.** Support sustainable industries, businesses, and business practices.

8.6.3   **Local production.** Encourage local production, especially to reduce the carbon footprint of industrial transportation and shipping.

8.6.4   **Sustainable commercial transportation.** In addition to decreasing the amount of shipping, also improve the sustainability of the commercial transportation that remains necessary.

8.6.5   **Research and development.** Research and development into sustainable economic advancements and technology can be privately, publicly, and university-supported on all fronts, with high levels of funding and activity.

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8.7 SUSTAINABLE AND REGENERATIVE AGRICULTURE

8.7.1 **Environmentally sensitive agriculture.** Engage in agricultural practices that are environmentally sensitive, compact, pollute minimally, avoid the introduction of invasive species or monocultures, and limit the destruction of natural lands and habitats.

8.7.2 **Open-source data.** Open-source data for agriculture can aid in sustainability goals.

8.7.3 **Reuse.** Reuse waste streams as fertilizer for agriculture.

8.7.4 **Local food sources.** Prioritize local food sources to reduce transportation emissions.

8.7.5 **Diversification.** Diversify local agriculture and implement polycultures, to increase crop and soil resilience and health.

8.7.6 **Food forests.** Create food forests that incorporate the best resilient properties of natural ecosystems, reducing monocultures, increasing resilience, and conserving resources.

8.7.7 **Community-supported agriculture programs.** Use community-supported agriculture programs to foster a system of local agriculture, as well as direct supply chains between local farms and consumers.

8.7.8 **Public markets.** Use public markets as tools to distribute locally produced agricultural goods throughout climate receiver places.

8.8 SUSTAINABLE CONSTRUCTION AND OPERATIONS

8.8.1 **Carbon footprint of construction.** Consider preservation of existing structures where possible, utilizing resources that embody low-impact development (following certification guidelines). Consider the embodied energy of products used. Source materials locally, including the salvage and reuse of local materials and other items. Create energy-efficient structures.

8.8.2 **Pollution.** Design and construct in ways that reduce pollution both from the construction process itself and from future operations.

8.8.3 **Subsidize.** Subsidization can help projects construct sustainably. This can include energy-efficient retrofits of affordable housing, for example.

8.8.4 **Public and private.** Both public infrastructure and private properties should be prioritized when making construction and operations more sustainable.

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8.8.5   **Training.** Train more people to design, construct, and operate a wide variety of structures in environmentally sustainable ways.

8.8.6   **Sustainable operations.** Beyond sustainable construction, operating sustainably is important, too. Management of assets and systems, both public and private, should optimize energy savings and minimize pollution.

8.9   CULTURE

A comprehensive cultural shift towards environmental sustainability needs to become more than just a key building here or there. Rather, it can be infiltrated throughout society, not only for the wealthy but also for typically disinvested communities.

8.9.1   **Cultural support.** Cultural and institutional support for continued sustainability is crucial for sustained momentum on this principle.

8.9.2   **Sustainability education.** Education is key for creating the next generation of local sustainable thinkers, as well as a well-informed and supportive general public.

8.9.3   **Changing cultural lifestyle norms.** The western lifestyle is particularly resource-intensive. Many steps, small and large, can be taken to shift lifestyles and reduce a community's negative impact on the planet.

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C.9   Hazard Risk Reduction: Climate Change

Introduction

Climate receiver places are selected based on their low composite scores of various climate-driven hazards such as heat, wildfire, flooding, and drought. While their scores indicated they are at lower risk for current and future disasters associated with climate change, they too must prepare for potential hazardous events. Despite an overall low composite score, every place on earth can be affected and must assess potential threats and prepare. With substantial population influxes likely in receiver places, it will be important for larger populations and an extended built environment to be factored into the disaster mitigation planning for these places poised to grow.

List of Subpoints

This principle can be broken down into the more detailed subpoints below. These will be explored in greater depth in this section of the guide, beginning on the next page.

9.1   Hazards that are climate-enhanced or created
9.2   Other risk factors
9.3   Types of impacts of hazards
9.4   Hazard risk reduction planning
9.5   Hazard mitigation planning
9.6   Implementation
9.7   Hazard risk reduction and mitigation strategies
9.8   Systemic Stress

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9.1   HAZARDS THAT ARE CLIMATE-ENHANCED OR CREATED

The following are hazards projected to worsen due to climate change. Although the risk is low for Receiver Places there is still a possibility of a hazard from this occurring depenent on the region.

9.1.1   **Extreme heat.** This can cause heat-related illness as well as infrastructure failure and/or malfunction.

9.1.2   **Wet bulb temperatures**. This indicates heat and humidity, wherein a high wet bulb temperature can cause heat-related illness.

9.1.3   **Farm crop yields.** Farm yields are at risk from climate change, and are essential for communities' self-sufficiency and health.

9.1.4   **Sea level rise.** Coastal communities can be impacted by sea level rise wherein property and public infrastructure may be inundated.

9.1.5   **Wildfires.** These cause direct impact to property and public infrastructure as well as an indirect impact from smoke to ones health. Additionally, it causes damage to natural lands and farmland.

9.1.6   **Water stress.** This can result in limited reservoirs, polluted water, and algae blooms. Additionally, legal limitations on water usage levels may be required wherein rural and urban areas may experience different stressors. Drought may be seasonal or year-round.

9.1.7   **Extreme rainfall and localized flooding.** There are various types of flooding: flash flooding, groundwater flooding, creek/stream flooding, riverine flooding, lake level fluctuation, coastal flooding, and seiches. FEMA mapping for property located in floodplains does not incorporate actual flood frequencies, based on historic data.

9.1.8   **Hurricanes.** Hurricanes are largely accompanied with flooding and high winds that cause destruction.

9.1.9   **Economic damages.** Economic damages caused by various climate change factors, such as those above and others, can reduce a community's ability to financially support risk reduction and mitigation strategies against climate change.

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9.2   OTHER RISK FACTORS

These and other unlisted risks have not factored into the risk scores for places in the Receiving Geography Guide but are still important to note. Be sure to assess all of your community's climate risks. Also, don't rely only on data. Be sure to ask people locally what extreme weather and disasters they're experiencing.

9.2.1   **Wind and derechos.** High winds from storm events can cause power outages due to fallen trees and overground wiring damage.

9.2.2   **Tornadoes.** Areas prone to tornadoes must take care to implement warning systems and proper shelter.

9.2.3   **Winter storms and extreme cold.** Ensure weatherization of the energy grid to reduce chances of power otages. Ensure weatherization of buildings to ensure temperatures do not exceed livable conditions.

9.2.4   **Disease.** Prepare for future pandemics by ensuring structural inequities are addressed, chronic disease is being attended to and mitigated, and public health resources are well stocked. Consider green infrastructure to clean urban run off to remove viral pathogens.

9.2.5   **Toxic Algae Blooms.** Toxic algae blooms may increase in frequency and severity due to climate change, polluting critical water sources and habitats. Work wth the community, its ecosystems, and agricultural lands across the at-risk watershed.

9.3   TYPES OF IMPACTS OF HAZARDS

Hazard impacts come in multiple forms: economic and cultural damage, closing of storefront businesses, damage to public spaces, landslides and loss of natural habitat, ecosystem degradation, pollution, impoverishment, and high insurance costs, as well as reductions to long-term community viability. Short-term and long-term situations can be worsened through acute flooding impacts and farm crop yields. Limited self-reliance and over-development into resource-producing lands can also pose hazards to a climate receiver place.

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C.9   Hazard Risk Reduction: Climate Change

9.4   HAZARD RISK REDUCTION PLANNING

9.4.1   **Temporal: pre-, during-, post-disaster planning**. Hazard Risk Reduction Planning involves preparation for three key time periods. (1) Pre-Disaster Resilience Measures include making places less likely to be impacted in the event of a disaster. (2) Disaster Response Measures require organizing ahead for responding to a disaster. This involves things such ensuring communication channels will exist, evacuation plans, staffing and protocols for disaster response personnel, and more. (3) Post-Disaster Recovery requires planning ahead for the rebuilding process.

9.4.2   **Scale of planning**. Planning for disaster risk reduction should take place at multiple scales. The larger scale levels such as federal and international, are generally more geared towards assistance with on the ground assistance in the event of a disaster and funding. In contrast, the focus at the smallest scale, at the site level, tends to involve built and landscape measures to make the site less vulnerable in the event of a disaster. It is crucial to ensure that the larger national and state scale planning does not interfere with more sensitive hazard risk planning.

9.4.2.a   **Site planning.** There are various components of the built infrastructure that can be integrated to reduce the hazard risk of an area. These include green roofs and fire resistant building materials. Site specific hazards should be reduced with relevant components as best as possible. This will require an intimate knowledge of the site specific hazards.

9.4.2.b   **Local planning** Grassroots organizing and local or regional groups preparing for local disasters should be part of the local planning process. This includes examples such as Community Emergency Response Teams (CERT), Transition Town Movement, American Red Cross Disaster Action Team, and prepper/survivalist groups.

9.4.2.c   **State.** The state should be involved in certain planning actions such as some types of infrastructure, evacuation plans, and disaster response.

9.4.2.d   **Regional planning.** Watershed and other other ecological catchments can be planned at the regional scale. Examples include hardening infrastructure, evacuation plans, and shelters.

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C.9	Hazard Risk Reduction: Climate Change

9.4.2.e   **Federal aid and planning.** At the municipal level, the Federal Emergency Maangement Agency (FEMA) can work with communities on local hazard mitigtion plans. At the federal level, funding assistance for hazard planning, infrastructure improvement, and disaster response can help with hazard risk reduction at all scales.

9.4.2.f   **International.** International agreements for disaster response assistance and transnational NGOs such as Red Cross can coordinate hazard risk reduction across national borders.

9.4.3   **Reevaluation.** At five-year or more frequent increments, reevaluate and update hazard risk reduction plans.

9.5   **HAZARD MITIGATION PLANNING**

9.5.1   **Hazard identification.**

9.5.1.a   **Data collection.** Local and regional data needs to be collected and rexamined with models on future weather patterns to make informed decisions.

9.5.1.b   **Identify.** Assess local vulnerability to every type of potential hazard, using historical trends as well as future projections. Map to assess areas of high and low vulnerability. Create an inventory of critical facilities, including emergency operations centers, city or town offices, water and wastewater treatment plants, sewage pumping stations, police or fire stations, schools, hospitals, day-care facilities, public works garages, nursing homes/elderly housing, emergency shelters, land use maps that depict the location of developed land uses delineated by categories based on use (e.g. residential, commercial, industrial, institutional, other public use, etc.), and anticipated future land uses.

9.5.2   **Consider mitigation benefits and concerns.**

9.5.2.a   **One-to-many vs. one-to-one measures.** Many hazard risk reduction measures are applicable to multiple hazards. For instance, establishment of shelters with back-up energy system can address multiple hazards such as heat wave, flood, ice storm, etc. Burying power lines makes them less vulnerable to wind events, blizzards, ice storms, heat waves, etc.

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9.5.2.b   **Co-benefits.** Many measures can improve conditions whether or not a hazard manifests. Examples include increasing the tree canopy which makes places more resilient to high heat and heavy rain events, and also in non-disaster times, provides shade for pedestrians, beautifies streetscapes, and increases property values.

9.5.2.c   **Types of built environments.** Different types of built and unbuilt environments can have different climate risks and can be treated differently for the same climate risks. Additionally, varying uses and conditions of land, associated structures, and socioeconomic conditions can be fostered or avoided depending on hyperlocal climate risk factors such as flooding, fire, and landslides.

9.5.2.d   **Climate justice and environmental justice.** The way in which measures are developed and deployed needs to address unequal risk exposure, resource gaps, and equitable representation.

9.5.3   **Creation or update of existing mitigation measures.** Identify any new or amended hazard protection measures adopted by the town, including protection measures under the National Flood Insurance Program (NFIP); the geographic area and types of structures/facilities covered by each new or amended measure; the agency, department, or individual(s) and position(s) responsible for implementation of each new or amended measure; the effectiveness of new and existing mitigation measures, and a description of improvements or changes needed.

9.5.3.a   **Designate implementation group.** Designate a local implementation group, such as local Hazard Mitigation Planning Team, for monitoring, evaluating, and updating the local hazard mitigation plan in the future.

9.5.3.b   **Implementation schedule.** The updated Hazard Mitigation Plan will include an implementation schedule with procedures for ensuring the plans' implementation, updating, and revision every 5 years, with adjustments more frequently if necessary.

9.5.3.c   **Coordination with other plans.** The local implementation group will oversee the implementation and incorporation of the updated plan's goals into other local planning processes, such as Comprehensive Plans, Capital Improvement Plans, and other local by-laws and ordinances.

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9.5.3.d   **Maintenance burdens.** Plan for hazard mitigation strategies that a community will reasonably be able to maintain and/or replace in the future. This is especially important for mitigation infrastructure that becomes a critical prerequisite to a community's continued existence.

9.6   **IMPLEMENTATION**

Incorporate effective mitigation strategies, such as organizational models, planning processes and outputs, project mangement, financial modeling, and public relations.

9.7   **HAZARD RISK REDUCTION AND MITIGATION STRATEGIES**

9.7.1   **Physical infrastructure**

9.7.1.a   **Hard infrastructure and infrastructure hardening.** Where applicable and appropriate integrate the grey (or "hard") infrastructure with green infrastructure. This not only provides ecosystem health benefits but also acts a a more symbiotic natural barrier. Secondly, it is important to think about what and where hard infrastructure is. How and where matters for fire and also for flooding, heat, and other risk factors.

9.7.1.b   **Green and porous infrastructure.** Using nature-based and porous solutions allows for a more holistic and resilient approach. If flooding is imminent along a road network, incorporating bioswales, for example, can aid in flood reduction to allow for traffic patterns to be unaffected. The holistic nature of using green infrastructure is especially true for strategies that provide multiple benefits, such as publicly-accessible green space and traffic calming. Integration of green and porous infrastructure in grey infrastructure will aid if used properly and thoughtfully.

9.7.2   **Systems.** Create adaptable and resilient systems that can reconfigure to stay functional. This is especially true for essential systems such as healthcare.

9.7.3   **Safe building practices.** Ensure that safe building practices are incorporated into reduction and mitigation strategies so that buildings are not only safe on a daily basis but also in the face of climate threats.

9.7.4   **Resilience of structures.** Buildings and infrastructure should be constructed to withstand disasters. Different types of structures should be considered for different risk levels and risk factors.

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9.7.5   **Community cohesion.** Establish programs for neighbors helping neighbors, especially vulnerable populations such as the elderly, disabled, etc.

9.7.6   **Disaster response planning.** Prepare ahead of a disaster event for what the community needs during a disaster, such as supplies, shelters, evacuation plans, and personnel. Plans should also be in place for rebuilding a community after disasters in a more resilient way, physically, socially, economically, and environmentally.

9.7.7   **Community design.** All climate risk factors can be managed if the community at large is designed to mitigate and reduce risk. Design with a holistic mindset, understanding that the urban area is part of a region that has its particular hydrology. Introduce firebreaks in urban areas to protect the peri-urban natural spaces. Work to mitigate the urban heat island effect by incorporating more trees and less concrete in urban spaces. Create a defensible space around buildings and neighborhoods in case of fire risk, without compromising quality urbanism. Maximize permeable surfaces to reduce urban flooding. Zoning maps can be set up in a way that reduces risk exposure to localized risk such as flash flooding in future developments.

9.7.8   **Reduce government's fiscal exposure to climate risk.** Reduce fiscal risk of a community in the face of climate risks through both the way that the community is built and operates, while preparing reserves for disaster recovery.

9.7.9   **Protecting natural lands.** Protect wildlife, assist the rapid evolution of endangered species, engage in proper forest and watershed management, engage in responsible resource extraction, minimize pollution, facilitate compact development rather than sprawl, and more, in order to protect natural lands from climate risks.

9.7.10   **Protecting farmlands and working lands.** Protect farmlands and working lands in order to ensure community self-sufficiency, with adequate levels of food and resources for prosperity and resilience well into a future of climate change risks and uncertainty. Protection of these lands is even more critical in growth-oriented climate receiver places, to feed and provide resources for an influx of climate migrants and refugees.

9.7.11   **Mitigate risks by affecting local climate.** Certain actions such as reforestation and reintroduction of native species can alter habitat and climate, which can reduce climate risks locally.

9.7.12   **Infrastructure maintenance.** Build infrastructure that the climate receiver place can reasonably maintain into the future, and continue to maintain critical infrastructure. This is especially true for infrastructure that serves the purpose of reducing climate risks.

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9.7.13   **Equity.** Ensuring food security, adequate housing for all, healthcare, cooling centers, and other basics for all can reduce hazard risk of climate risk factors for the most vulnerable members of a community.

9.8   SYSTEMIC STRESS

Climate change may cause stress to supply chains, technology, local carrying capacity, systems, societal stability, and access to food and water. Communities can prepare for these existential risks by creating systems that carefully balance resilience, flexibility, resource efficiency, and equitable wellness outcomes.

9.8.1   **Types of Stresses**

9.8.1.a   **Disaster.** This is a sudden event that requires a swift recovery response. For example, a disaster may include a bridge collapse or a violent storm. Sometimes, a disaster or its worst impacts can be avoided with careful planning and resilient, flexible systems. The public should be educated on a community's disaster response plans before disaster strikes.

9.8.1.b   **Involuntary Systemic Shift.** This is a gradual change in the way that things function, on a long-term basis. For example, this type of systemic shift may include a gradual increase in the frequency of urban flooding events or the gradual decline in the reliability of critical supply chains. A systemic shift requires long-term careful planning and resilient, flexible systems. A systemic shift may also increase the frequency of disasters.

9.8.1.c   **Internal.** Disasters and systemic shifts may be caused by factors internal to a system. For example, if a city's sprawling development pattern contains too many miles of infrastructure per capita, the place may generate more expenses than revenues. In this case, internal systemic weaknesses may result in maintenance deferrals, reduced investment in improvements, and high levels of public debt. These factors, in turn, can lead to both disasters and systemic shifts.

9.8.1.d   **External.** Disasters and systemic shifts may be caused by factors external to a system. For example, every community should do its part to help reduce carbon emissions, but no one place alone can halt climate change. Therefore, when looking at a system at the level of an individual community or region, altered environmental factors caused by climate change can be thought of as external stresses to the place.

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9.8.2   **Resilient versus fragile systems.** Systems designed for resilience can survive the stresses of climate change and thrive with more success than can fragile systems.

9.8.2.a   **Financial Productivity.** Resilient systems have financial productivity. They maximize resources and minimize maintenance costs. Communities can be resilient systems when they are compact, and therefore contain fewer miles of infrastructure per capita. Maintenance costs are lower, so the community can afford maintenance, while having funds left over to spend on both a contingency fund for unexpected stresses and additional community investments beyond just maintenance, all while minimizing public debt.

9.8.2.b   **Complex Versus Complicated Systems.** Resilient communities are complex, not complicated. Complex systems include natural systems such as the human body, and complicated systems include mechanical systems such as a rube goldberg machine. If one thing breaks or is underperforming in the human body, the body has methods to heal itself and to make up for failures with other systems and processes. If one thing breaks or is underperforming in a rube goldberg machine, the machine will likely fail entirely. The mixed-use, walkable, transit-oriented, compact city is complex, while the separated-use, car-dependent, highly regulated landscape of urban sprawl is like a complicated machine. The complex transportation, social, and economic web of compact, complex, complete communities allows for reorganization and self-repair, while broken sprawl may stay broken until it is fixed, assuming there are available resources for repair.

9.8.2.c   **Nested Layers.** Nested layers improve the resilience of systems. If self-sufficient small systems exist within larger self-sufficient systems that exist within even larger self-sufficient systems, and so on, the system is more resilient to stress. For example, if a city block is self-sufficient, it can remain functional if something about the larger neighborhood fails. If the neighborhood or a piece of the neighborhood is self-sufficient, it can remain functional if something about the larger quarter of the city fails. The same goes for the city, the county, the region, the state, the country, and for other potential nested layers that we've not listed. This sort of system is decentralized.

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9.8.2.d   **Fine-Grainedness.** Resilient communities are fine-grained. This means that the pieces that make up the community are smaller, and that there are more pieces in total. For example, a city of 100 blocks with two buildings per block and a city of 100 blocks with 20 buildings per block will respond to stress very differently. If one building fails in each city, this will have a greater proportional impact on the city with fewer buildings that are large, instead of more buildings that are small. This same pattern applies to the number of businesses and the size of a place's businesses. If a community's five largest employers each employ 10% of total employees, and another community's five largest employers each employ 5% of total employees, and one employer in each community fails or leaves, the place made up of smaller employers has a smaller negative impact. This same concept can be applied to many other types of systems as well.

9.8.3   **Supply Chains.** Many supply chains may be at risk of unreliability or failure due to climate change. Communities should understand their risk exposure here, proactively creating voluntary systemic shifts and disaster recovery plans. Crucial supply chains include food, water, medical, technological, construction materials, and supplies for maintenance of systems.

9.8.3.a   **Backups.** Build backup supply chains that allow local goods to be used locally when external goods aren't available, especially for essential goods.

9.8.3.b   **Emergency Planning.** Create disaster plans for emergency supply chains of raw materials, goods, and power collaborating with nearby communities and regions

9.8.3.c   **Diversify.** Diversify the local economy in critical items like food, medicine, tool manufacturing, sustainable resource extraction, etc.

9.8.4   **Technology.** Many technologies that places and their people rely on may be at risk of unreliability or failure due to climate change. Communities should understand their risk exposure here, proactively creating voluntary systemic shifts and disaster recovery plans.

9.8.4.a   **Lateral Technology Advances.** Many technologies are complicated systems, but some are complex. Look towards complex technological systems instead of looking towards higher or lower tech solutions. Lateral technology changes, not high-tech changes, can help maintain carrying capacity, systems, and quality of life.

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9.8.4.b   **Scaling Back.** Prepare for a potential involuntary scaling back of technology towards simpler systems due to the climate crisis by building resilience and flexibility into systems.

     i.   **Passive Heating & Cooling.** Build passive heating and cooling systems such as thermal mass and windcatchers for functionality without electricity.

     ii.   **Microgrids.** Have microgrids and distributed energy resources for fine-grained, local energy production.

     iii.   **Energy Efficiency.** Focus on maximizing energy efficiency to minimize the amount of power needed for operations.

     iv.   **Backups.** Create backups to everyday systems that don't rely on high technology, such as physical records of critical digital information, and transportation methods not relying on unreliable energy sources.

9.8.4.c   **Opportunity Cost.** Weigh options and put resources towards developing and implementing technologies that have the greatest positive impacts per dollar.

9.8.5   **Local carrying capacity.** With threats to systems, supply chains, and technology, as well as expected growth due to climate migrants and refugees, receiver places may see a reduction in the number of people that their lands can support, while witnessing an increase in the number of people that it needs to support. Understanding limits to local carrying capacity is crucial for building a resilient future as a receiver place.

     i.   **Limits to Growth.** Reference resources such as the 1972 MIT system dynamics study, Limits to Growth, but apply its logic to the local and regional scale.

     ii.   **Indigenous Leadership.** Listen to Indigenous leaders on how to steward the local ecosystem.

9.8.6   **Systems Innovations.** With threats to local carrying capacity caused by climate change in mind, communities can employ a variety of strategies to sustainably and equitably stretch carrying capacity in resilient ways.

9.8.6.a   **Scaling Back.** Prepare for a potential involuntary scaling back of systems due to climate crisis, building resilience and flexibility into systems. Infrastructure, money and banking, social systems, environmental, farming, supply chains and/or other systems may be at risk.

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9.8.6.b   **Walkability.** Have cities be more walkable so people can move around during fuel crisies.

9.8.6.c   **Collaboration.** Ensure that communities collaborate with each other in a decentralized and decolonial manner. Collaborate at regional scales, pool resources, goods, and ideas, but also with local self sufficiency as a focus, too. Collaborate on technology, R&D, systems, and more, without giving up decentralization. Neighboring communities can also collaborate to protect shared land, water, and air.

9.8.7   **Social Unrest.** Receiver places can work together with their communities to prepare for, prevent, and manage social unrest that may occur directly or indirectly due to climate change. Places can prepare for this possibility by building more collaborative rather than divisive societies.

9.8.7.a   **Inequality.** Limiting economic and social inequality can reduce social unrest.

9.8.7.b   **Redistribute.** Redistribute wealth towards social programs in order to reduce the suffering that can lead to social unrest. Do this in a way that doesn't stretch resources thin, though, so the government continues to function in a long-term resilient manner, as an unreliable government system can also lead to social unrest.

9.8.7.c   **Disaster Planning.** Engage in careful disaster planning around food, water, medicine, shelter, and other necessities, in terms of production and equitable distribution.

9.8.7.d   **Educate.** Educate leaders on how civil conflicts start and what to do to prevent them.

9.8.7.e   **Reorient Employment.** Reorient local economy around green jobs and employment in resilient industries to ensure people have something productive to do in the new climate paradigm.

9.8.7.f   **Housing.** Have strong tenant protections and housing abundance so people won't be forced out of homes and more refugees can be accommodated.

9.8.7.g   **Community Partnerships.** Create strong relationships with neighboring communities for mutual support.

9.8.8   **Food & Water Resources.** Food and water are the most critical resources for any community. Receiver places should manage these resources to avoid scarcity, degradation of water sources, and degradation of agricultural inputs such as soil.

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9.8.8.a   **Increased Space.** Increase space that can support agriculture and potable water sources. This means reducing sprawl and pollution in order to maximize productive non-urbanized lands.

9.8.8.b   **Innovative Agriculture.** Innovate on agricultural production methods such as using aquaculture to expand capacity.

9.8.8.c   **Water.** Limit how much water is drawn in from sources outside of the locality's control. Be proactive in monitoring groundwater management. Enforce water-conservation techniques on the locality. Manage stormwater and wastewater properly, including reducing sprawl and nonpermeable surfaces. Enforce strict standards to avoid algae blooms and pollution.

9.8.8.d   **Local Species.** Prevent the introduction of non-native species.

9.8.8.e   **Indigenous Stewardship.** Let Indigenous Communities become stewards of the land again.

9.8.8.f   **Code & Land Use.** Set code, land use standards, and environmental protections for farming and water, as well as other nearby uses that have an impact on farming and water.

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D. Next Steps

Overview

Now that the goals and principles of receiver places have been presented, this proceeding section of the Community Principles Guide is meant to provide a workflow of next steps for communities. When reading the principles, consider these in light of the higher level and more overarching goals. Look at every principle with each of the individual goals in mind. The steps below are one possible path of action for local governments and officials. Each place is different, and each group will make use of this project in varying ways, so it's significant for receiver places to uniquely craft their own set of next steps depending on differing circumstances.

Before you begin this process, please take a look at the documents of the Climate Receiver Places Project. You can also connect with PLACE Initiative so we're aware of your local group and can loop you into our conversations. Visit us at: placeinitiative.org/projects/receiver-places/

D.1 CONNECT & PREPARE

D.1.1. Team Building. Establish a core, dedicated local team. This team will expand through capacity building but success relies upon strong core advocates.

D.1.2. Information Gathering. Build an internal picture of your place physically, socially, and culturally; identify data sources; organizational and municipal programs, goals, and capacity.

D.1.3. Assessment. Score your community on the goals and principles from the Community Principles Guide, using the Community Assessment Guide. Use this to create your place's Community Assessment Report. Identify strengths, weaknesses, and areas of focus for targeted next steps in this report as well.

D.2 PLAN & ADVOCATE

D.2.1. Capacity Building. Identify local and regional partners and community advocates; craft project materials focused on their areas of concern; build a coalition to implement the community principles.

D.2.2. Planning. Create a plan of action that responds to the conclusions of assessment report. Make meaningful resource commitments to implement changes that touch upon all principles and goals of the Community Principles Guide as a part of this plan.

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D.2.3. Education. Educate the public and officials on the Community Assessment Report and the changes that you've planned and committed to making in order to address the strengths and weaknesses in this report.

D.3 IMPLEMENT & ADJUST

D.3.1. Make Change. Create change that touches upon all principles & goals of the Community Principles Guide, both at local and regional scales.

D.3.2. Measure Outcomes. Reengage the information gathering and assessment steps, to create a post-assessment of the changes you've made and other changes in your community. The post-assessment will become the foundation for repeating this process, beginning again with step "D.2: Plan & Advocate".

D.3.3. Share and Adjust. Share the results of your post-assessment with the community. Regularly return to step "D.2: Plan & Advocate" to begin the next iteration of implementation towards becoming a stronger receiving community.

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E. Acknowledgments

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F. Endorsements

The Climate Receiver Places Project provides the list of groups and resources below, which may be useful alongside the Community Principles Guide. This list is by no means comprehensive.

350.org

American Society of Adaptation Professionals

America Walks

Better Cities Film Festival

Black Towns Municipal Management

BlackSpace Urbanist Collective

C40 Knowledge Hub

Center for Applied Transect Studies

Center for Court Innovation

Center for Neighborhood Technology

Climate Mapping for Resilience & Adaptation

Climate Mayors

Communities First Fund

Congress for the New Urbanism

Consortium for Sustainable Urbanization

Desegregate CT

Force of Nature Solutions

Form-Based Codes Institute

Freeway Fighters

Gehl

GreeningUSA

Greenlining Institute

ICLEI

Incremental Development Alliance

Institute for Local Self-Reliance

Lincoln Institute of Land Policy

Main Street America

Mothers Out Front

Now City

NRDC

Open New York

Patronicity

Pedestrian Dignity

Pedestrian Space

PlaceMakers

PlacemakingX

Project for Public Spaces

Resilience21

Resilient Cities Network

Segregation By Design

Solutionary Rail

Strong Towns

Sunrise Movement

The Climate Reality Project

The Empty Square

The Future of Small Cities Institute

The Limits to Growth

The Project for Lean Urbanism

Transition Network

Urban3

Urbanism for a Difficult Future

Van Alen Institute

We ACT For Environmental Justice

Welcoming America

World Urban Campaign

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