Chapter 2
Framing 'Resilient Cities': System Versus Community Focused Interpretations of Urban Climate Resilience

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Abstract Building urban resilience to climate change and other challenges will be essential for maintaining thriving cities into the future. Resilience has become very popular in both research on and practice of climate adaptation. However, people have different interpretations of what it means: what resilience-building contributes to, what the problems, causes and solutions are, and what trade-offs, side-effects and other normative choices are acceptable. These different ways of 'framing' climate resilience are hidden in the positive, but sometimes fairly vague, language used to promote it.

Analysis of the framing of 'urban resilience' can distinguish important contrasting preferences regarding the 'most appropriate' way to build urban resilience. This chapter explores two important frames of urban resilience: the 'system resilience' frame, focusing on maintaining urban functions and processes, and the 'community resilience' frame, emphasising urban life, community bonds and self-sufficiency.

The frames used by scientists, policymakers, and stakeholders reflect social uncertainties in climate adaptation, related to values, preferences, and goals. They entail different visions on the urban future, leading to different potential realisations of climate change adaptation. Leaving them implicit can result in a 'dialogue of the deaf', potentially leading to adaptation failure.

Urban decision-makers and stakeholders will need to investigate and develop a clear vision on what they mean by urban resilience: what are the goals, and who's or what's resilience are we talking about? Explicit exploration of the current and potential frames will help to cultivate meaningful discussion on the choices and trade-offs to be made in developing climate-resilient urban futures.

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2.1 Introduction

The majority of the world's population is currently living in cities and the urban population is expected to increase from 3.9 billion in 2014 to 6.4 billion in 2050, rising from 54% to 66% of the total population (UN, 2014). In developed countries, the percentages will be even higher. For example, in Europe, the percentage of the population living in urban areas will rise from 73% to 80% (UN, 2014). The world is – and its future will be – increasingly urban.

At the same time, cities face numerous challenges. While we've come a long way from the days of the Industrial Revolution, with its polluted air and water, poor living and working conditions, and disease, cities are now increasingly faced by more pervasive issues that play over long periods of time and cannot easily be solved at the local level. Examples include the aging population, refugees, (socio-) economic challenges, transboundary pollution, security risks, emerging technologies, and climate change. Such issues are inherently complex and uncertain, and decision-makers will need to find ways to deal with ignorance and surprise. Less complex threats could in the past often be solved using a 'predict & prevent' approach (cf. Dessai & Van der Sluijs, 2007; Capela Lourenço et al., 2014): one simply studies the risk, figures out the magnitude and chances, and designs and dimensions the correct responses through policy, legislation or engineering accordingly. That approach is not always suitable for dealing with today's complex grand challenges, where simply calculation the risk and selecting the 'best' option is often not possible. In these situations of high uncertainty and potential surprise, one may however still have enough knowledge to find ways to strengthen the resilience of the impacted system (e.g. a city, region, or society in general) (Barnett, 2001; Dessai & Hulme, 2004; Dessai & Van der Sluijs, 2007; Wardekker, 2011; Capela Lourenço et al., 2014; Thissen et al., 2017). In recent years, resilience has indeed become a prominent topic in urban research and policy.

Resilience is a concept that emerged in ecology in the 1960s. It was an explanatory concept, highlighting the various processes in dynamic complex systems that produce the high degree of stability and adaptability that we observe in natural ecosystems in the face of a wide range of external perturbations and abiotic conditions (e.g. Walker et al., 2004; Folke, 2006). It has since been applied by numerous disciplines, ranging from engineering to psychology to disaster risk management. Similarly, the concept has gained much popularity in various policy fields. For example, the OECD (2014) recently indicated resilience as an important aspect of coping with critical risks, and the UN's (2015) Sustainable Development Goals (UN, 2015) and Habitat III New Urban Agenda (UN, 2016) use the term in relation to various specific threats and goals as well.

Walker et al. (2004) define resilience of 'social-ecological systems', which includes cities, as: "the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks". Examples of definitions for urban resilience specifically include: "the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience." (Rockefeller Foundation, 2016), or "the ability of an urban system - and all its constituent socio-ecological and socio-technical networks across temporal and spatial scales - to maintain or rapidly return to desired functions in the face of a disturbance, to adapt to change, and to quickly transform systems that limit current or future adaptive capacity" (Meerow et al., 2016).

2.2 Urban Resilience to Climate Change

Climate change is one of these serious, but complex urban challenges, particularly in low-lying deltas. It is expected to impact cities in a diversity of ways: multiply types of impacts on multiple scales and time-frames, effecting multiple groups of people. Examples of sectors that can be impacted include: water management (e.g. flooding, drought, freshwater supply, sea level rise), critical infrastructures (energy, ICT, transportation), health (heat, air quality, diseases, etc.), tourism (in positive or negative ways, depending on the location), housing and communities (through impacts of various potential disasters and long-term changes), food supply, and urban nature and biodiversity (e.g. IPCC, 2014). These in turn have secondary effects on the urban economy, urban resource dynamics and the population. For urban water management, these could include a rising sea level, changes in precipitation (e.g. intense rain showers in the summer, increased river flood risks in wet periods), and heat & drought (more water needed, but less available for water supply, food production, energy production, etc.).

The effects of climate change are both highly uncertain and interact in complex ways with the systems they impact and numerous other issues and trends, such as increasing populations, shift of populations towards urban areas, and other environmental, economic, technological, and societal trends. Climate change provides a complex and highly interdisciplinary issue that cities and regions will need to adapt to. Enhancing the resilience of cities is needed to make the rapidly urbanizing world less vulnerable to climate change related disturbances and surprises, to enable quick and flexible responses to crises and long term issues, and to maintain a thriving city into the future (e.g. Wardekker et al., 2010).

Resilience has recently gained popularity in the fields of (urban) sustainability and climate change adaptation as well, particularly in relation to flood risk management and urban planning. Key disciplinary subfields involved in urban climate resilience include: urban ecology, urban & regional economics, hazards & disaster risk reduction, and governance & institutions (Leichenko, 2011). Resilient development

has become a central concept in IPCC's Fifth Assessment Report (IPCC, 2014). At the local level, the ICLEI Local Governments for Sustainability network has been promoting resilience and organising 'Resilient Cities' congresses since 2010 (ICLEI, 2016), and the 100 Resilient Cities network has been "Helping cities around the world become more resilient to the physical, social, and economic challenges that are a growing part of the 21st century" (Rockefeller Foundation, 2016), for instance by stimulating the appointment of Chief Resilience Officers in cities and by providing tools and support. These organisations often cite weather and climate related disturbances as one of the key threats to cities. Weather-related disasters and disaster recovery efforts in urbanised regions, such as hurricane Katrina in New Orleans and Sandy in New York, or the 2003 European Heat Wave, further highlights the importance of improving urban climate resilience.

However, both the impacts and the measures taken to make cities more resilient to these changes or otherwise cope with them, can strongly influence e.g. the aesthetical, spatial and structural setup of cities, neighbourhoods and buildings, urban economics and business models and interests of various companies and other stakeholders, and the daily lives of citizens. Most would agree that it is important to build resilience to climate change. However, considering the above, it should not be surprising that different stakeholders and citizens will have a different take on how cities should go about building urban climate resilience.

2.3 Framing Climate Change Adaptation and Urban Climate Resilience: Resilient Future of Who or What, Exactly?

The notion of 'strengthening urban resilience' provides a distinctly positive way to discuss urban climate adaptation and other urban policy agenda's (McEvoy et al., 2013). It is also relatively open to interpretation and tailoring; in itself it does not prescribe any specific way to measure or evaluate resilience or specific type of policy options that would enhance resilience. This has both advantages and disadvantages. On the one hand, it helps to bring together and inspire a wide variety of stakeholders with diverse interests and goals, and allows decision-makers to tailor the implementation of urban resilience to specific local problems and requirements. In that respect, the vagueness of the term 'resilience' helps it to function as a 'boundary object', connecting the many fields, sectors and stakeholders involved in the urban system (Brand & Jax, 2007; Meerow et al., 2016). This can trigger bottom-up innovation. On the other hand, stakeholders run a serious risk of 'talking past each other,' as they may have very different ideas on what urban resilience really means in practical terms, and how their respective interests fit into that picture. These differences can remain hidden in the discussions, until the moment arrives to make the matter more concrete: when actual interventions or evaluation criteria need to be designed.

The conceptual malleability of urban resilience means that different people will paint different pictures of what a 'resilient urban future' will look like. In other words, people will have different ways of *framing* urban resilience. Framing means that people "select some aspects of a perceived reality and make them more salient… in such a way as to promote a particular *problem definition*, *causal interpretation*, *moral evaluation*, and/or *treatment recommendation* for the item described" (Entman, 1993). Often, this happens subconsciously, in a taken-for-granted way. People can differ in their framing of, for instance:

- What is the problem, really?
- Who's problem is it? (e.g. who's responsible for causing, exacerbating and solving it; who should have a say, and in which way, in making decisions about it?)
- What are the most important causes of this problem?
- What important values are being threatened?
- What should be done about it, and by whom?

This is not simply a matter of semantics. Diverging interpretations of what urban resilience means, also imply differences in preferences regarding how resilience can best be achieved (what is appropriate, effective, efficient, etc.), with which options and interventions, and how it can be evaluated using what metrics and tools. They highlight specific problem aspects and can strongly colour what people perceive as 'valid', 'sensible' policy options and (spatial, structural, social, or other) interventions, fair distributions of burdens, appropriate governance arrangements,

Table 2.1 Example of different frames of climate change adaptation in general, grouped into four strategic perceptual contrasts

	Goal orientation and focus	
Perceptual distance	Promotion orientation	Prevention orientation
Distal view (long-term, broad perspective)	*Social progress frame* Defines the issue as improving quality of life or harmony with nature *Middle way frame* Puts the emphasis on finding a possible compromise position between polarized views Example: Plan to reconcile adaptation and mitigation	*Morality/ethics frame* Defines the issue in terms of right or wrong; respecting or crossing limits *Pandora's box frame* Defines the issue as a call for precaution in face of possible impacts or catastrophe Example: Al Gore's movie, An inconvenient truth
Proximal view (short-term, narrow perspective)	*Economic development frame* Defines the issue as investment that improves competitiveness *Conflict/strategy frame* Defines the issue as a game among elites, a battle of personalities or groups Example: Climate Proof City	*Scientific uncertainty frame* Defines the issue as a matter of what is known versus unknown *Public accountability frame* Defines the issue as responsible use or abuse of science in decision-making Example: Sea level discussion

Source: Wardekker et al. (2009), De Boer et al. (2010); adapted from Nisbet (2009)

and relevant scientific and policy information and tools for decision-making, while obscuring others (De Boer et al., 2010; Wardekker et al., 2009). See Table 2.1 for an example of different frames of climate change adaptation in general. De Boer et al. distinguish between frames that are either focused on prevention or promotion, and distal (broad) or proximal (narrow). An 'economic development frame' of adaptation, for example, would make different impacts, options, actors, information, values and choices relevant than a 'morality/ethics' frame would. Similarly, Fünfgeld & McEvoy (2010) and McEvoy et al. (2013) distinguish framings that are focused on either broader notions of hazards, climate impacts specifically, risk management, or vulnerability.

Different frames entail different goals, boundary conditions, and trade-offs. In that respect, frames can be considered as a form of uncertainty, specifically social uncertainty, in climate change adaptation. They involve different assumptions underlying specific paths that resilient urban adaptation could (when viewed 'from the outside') our should (from the perspective of a specific urban actor) take. Depending on what actors are more powerful or persuasive and what frames become most dominant, actual adaptation pathways can go in different directions. As such, it can be seen as a type of scenario uncertainty (cf. Walker et al. 2003; Mathijssen et al., 2008), particularly related to value-ladenness, although there will be considerable (recognized and unrecognized) ignorance as well regarding how varied local actors frame and interpret resilience for the local situation more specifically.

Considering the above, we will need to be explicit (or at least explore our differences) in designing and building resilient urban futures: The resilient futures of who or what, exactly? What are our goals in building resilience, and who can contribute in what way?

2.4 Frames of Urban Resilience in the Scientific Literature

Before exploring the framing of urban resilience within the resilience literature, it is good to note that the move that cities are making towards urban climate resilience, is in itself a way of reframing the debate on climate change adaptation (McEvoy et al., 2013). Rather than placing the focus on preventing climate change impacts and keeping out the threat, it shifts the narrative to one describing how to develop a 'good' city. In the terms of De Boer et al. (2010) (see Table 2.1), it reframes urban adaptation from prevention to promotion. Whether urban resilience is, in those terms, proximal or distal, will vary from case to case, and from time to time. E.g., the work in Rotterdam on urban resilience first focused fairly narrowly on specific neighbourhoods in the city that are not protected by dikes and on the economic competitiveness of the city (Wardekker et al., 2010), but in the recent release of its Resilience Strategy (Municipality of Rotterdam, 2016), the focus has broadened towards one of urban future proofing on multiple topics and goals. Cities also differ in whether they focus more on short- or long-term aspects of urban resilience building and of climate change itself.

While there are presently only a handful of papers that explore the framing of (urban) resilience, that aspect of short-term versus long-term resilience is one that received particular attention (e.g. Davoudi & Porter, 2012; Davoudi, et al., 2013; Sakai & Dessai, 2015; Meerow et al., 2016). Short-term resilience is mainly focused on absorbing shocks and a quick return to equilibrium: maintaining the status quo. This relates to the classic notion of 'engineering' resilience (Folke, 2006), which lends itself well to relatively narrow (proximal) interpretations of the problems, causes, and solutions related to climate change adaptation (cf. De Boer et al., 2010). Long-term resilience deals with the inevitability of change in complex, dynamic systems, with transformation, adaptability & flexibility and co-evolving with trends. It relates to the classic notion of 'socio-ecological' resilience (Folke, 2006), which lends itself to relatively broad (distal) interpretations of problems, causes, and solutions (cf. De Boer et al., 2010). Davoudi et al. (2013) coin the term 'evolutionary' resilience, and 'dynamic' resilience might also be a good description.

In exploring other potential frames of urban resilience, it is useful to reflect on the key choices that need to be made, or are implicitly made, in resilience thinking. Meerow et al. (2016) argue that in developing urban resilience, decision-makers will need to explicitly reflect on five questions: resilience of who, what, when, where, and why, exactly? These lead to different choices, priorities, and trade-offs. Similarly, Chelleri et al. (2015) observe that there are key trade-offs to be made in urban resilience thinking regarding temporal scales and spatial scales. The when/temporal scale dimension is reflected in the literature discussed above on the short versus long term frames. The other dimensions have so far not received much attention.

Below, I will explore another potential set of frames that relate to Meerow's who, what and why, and several of Chelleri's spatial trade-offs: whether the focus of urban resilience building is on urban systems or urban communities. Both seem to relate to different disciplinary origins and interpretations of resilience. The System Resilience frame perceives resilience from the city level and how urban systems functions. This notion relates to the origins of resilience in the system dynamics and ecological literatures. The Community Resilience frame perceives resilience from the level of communities and individuals, and how their relations and abilities help them cope with adversity. This notion relates much more to the strands of resilience thinking that developed in the psychological literature. Both seem 'natural' ways of thinking about resilience, but they result in different priorities and perceptions regarding the problems, causes, values, and solutions. They may have different notions of what mechanism lead to resilience ('resilience principles'), what information is particularly relevant, and who should be 'in the driver's seat' when building urban resilience to climate change. A summary is displayed in Table 2.2. In the following two paragraphs, I will further explore the System Resilience and Community Resilience frames.

Table 2.2 Comparing the System Resilience and Community Resilience frames for urban resilience: framing problems, causes, morals, and remedies

	Framing:	
What's the:	System resilience	Community resilience
Problem	Threat to functioning of urban system	Threat to urban life and social cohesion
Causes	Disruption of resource flows and activities	Societal disruption, hampering of daily life
Moral judgements	Some subsystems and infrastructures may be prioritised (e.g. labelled as 'critical' or seen as politically more important), according to the city decision makers' goals	Moral weighing and relative importance of issues such as social equity, public participation, and impacts on and taking care of vulnerable groups
Remedies	Engineer ways into the urban systems to deal with disturbances and/or enhance the various buffers	Improve social support networks, strengthen urban identity, improve people's skills and education

2.5 A System Resilience Frame: Climate Change as a Challenge to Urban Functioning

Resilience thinking developed in a literature that was oriented on systems analysis, particularly ecology and system dynamics. Many approaches to urban resilience are consequently also rooted in this literature. Urban resilience is, e.g. "the ability of the city to maintain the functions that support the well-being of its citizens" (Da Silva et al., 2012), conceptualizing cities as systems with components, functions, and flows of e.g. resources, materials, and people (e.g. Wardekker et al., 2010; Meerow et al., 2016). Typical 'resilience principles' are derived from system dynamics, such as: homeostasis, buffer capacity, system redundancy, interconnectivity and system openness and dynamism (e.g. Watt & Craig, 1986; Wardekker et al., 2010; Shutters et al., 2015; Martin & Sunley, 2015). See e.g. Eraydin & Taşan-Kok (2013), Biggs et al. (2015), Sharifi & Yamagata (2016), and Wilk (2016) for explorations of resilience principles related to System Resilience. This framing of urban resilience is analytically focused and primarily outcome-oriented. Larger stakeholders and authorities are often natural/key players, particularly when the analysis is performed at the city level.

The Problem(s) System resilience is a framing that seems common in discussions on urban resources, infrastructure and services. Climate-related disturbances, such as extreme weather events (short-term shocks) or sea level rise (long-term stresses), threaten the flow of goods or traffic, continued delivery of urban services, and fulfilling urban functions and needs. For example, flooding may close roads, prolonged heat and drought may threaten the cooling water supply of a power plant, and rising water tables may result in areas becoming unsuitable for housing. Salient problems include particularly those that hamper the smooth functioning of the urban system. A potential blind spot is that relatively short or (at city level) minor disturbances

could be overlooked, while they may have disproportionate impacts on specific subsystems or (vulnerable) subpopulations.

The Causes Climate change will have large impacts on urban systems that lack the ability to plan/prepare for, absorb, recover, and/or adapt to climate change-related disturbances (and their combined effects with other trends that also influence urban vulnerability or resilience). Such weaknesses may lie in, for instance, the governance structure, for instance if it is inflexible or lacks the ability to look and plan ahead or adapt, spatial planning, physical infrastructure, the specific sources of resources and routes to obtain these, and/or the actors involved. For instance, if electricity is brought into the system via a single power line, that system cannot absorb the impact of a section of this line going down.

Moral Judgements While this framing rarely focuses explicitly on moral and value aspects, these are certainly present. A particularly prominent one is in setting priorities. In assessing the level of impact that disturbances have on specific urban functions, processes, and actors, one will need to establish whether or not that level of impact is acceptable or not. Implementing measures to reduce the impacts will cost money and effort (which could be spent elsewhere), and any option to increase the resilience for one subsystem, sector, neighbourhood or population would decrease the resources available for –and may even physically reduce resilience of– others. Actions have pros and cons, and sometimes unintended consequences. A similar evaluation is whether resilience-improvement should focus on the current population or on future populations/generations.

Suggested Remedies Key adaptation strategies and options could focus on enhancing the capacity of (sub)systems, sectors and actors to absorb and recover from disturbances, e.g. by enhancing redundancy, omnivory, or buffer capacity. Reaction to disturbances could be improved by fast mobilization of resources ('high flux'), feedback mechanisms ('homeostasis'), or by avoiding overly hierarchical or bureaucratic decision-making ('flatness'). Similarly, disaster preparedness can be improved by investing in monitoring, foresight, and local practical knowledge development. Adaptability can be enhanced by increasing flexibility, resourcefulness, and learning capacity. For discussion of such 'resilience principles', see e.g. (Wardekker et al., 2010; Da Silva et al., 2012).

2.6 A Community Resilience Frame: Climate Change as a Challenge to Social Cohesion

Community resilience is "a process linking a network of adaptive capacities (resources with dynamic attributes) to adaptation after a disturbance or adversity" (Norris et al., 2008). It entails "ongoing and developing capacity of the community

to account for its vulnerabilities and develop capabilities that aid the community in… (1) preventing, withstanding, and mitigating… (2) recovering… (3) using knowledge from a past response" (Chandra et al., 2010). This framing of urban resilience is fairly process-oriented; the outcomes are important, but the quality and fairness of the process matter much as well. Typical 'resilience principles' are derived from social science literatures, such as: social networks, leadership, engagement, information flow, encouraging skills & learning, societal partnerships, societal equity (e.g. Norris et al., 2008; Chandra et al., 2010; Berkes & Ross, 2013). See e.g. Ronan & Johnston (2005), Norris & Stevens (2007), Norris et al.(2008), Twigg (2009), IFRC (2011), Berkes & Ross (2013), and Brown (2016) for explorations of resilience principles related to Community Resilience. The Community Resilience frame focuses on the way communities are impacted by disturbances, but also places the ball for dealing with these in their court. Citizens and small stakeholders are natural/key players.

The Problem(s) Community resilience seems to be discussed particularly in the context of disaster preparedness and psychology, discussing how disturbances impact a community, the relations in that community, and the ways in which communities deal with and learn from disturbances. Climate change would in this frame lead to disasters and other disturbances that cause societal disruption, e.g. break up social networks or hamper daily urban life, and decrease physical, financial, and mental wellness. Salient problems include particularly those that directly impact communities, such as flooding and health impacts. A potential blind spot is that it may focus primarily on shock-resilience (i.e. disasters; short-term events), and neglect slower, creeping stresses.

The Causes Climate change may have the severest impacts on communities that have weak community ties, that have low adaptive capacities, including low economic development, social capital, information & communication, and community competence (cf. Norris et al., 2008). These can be low if the social bonds are weak, the community has little access to resources (e.g. financial, informational) which are essential for self-sufficiency and adaptability, low education, and/or its adaptive capacity is already hollowed out by other problems.

Moral Judgements A key moral issue in community resilience is the matter of social and resource equity. Often, those populations that are already less well-off or have significant gaps in terms of wealth, education, and/or health, are also the ones that are most vulnerable to disasters and disturbances in general. Another key value in community resilience relates to a perceived right to public access to information & resources, and public involvement in decision-making (and perhaps also in adaptation research and adaptation implementation). If the community is to be the problem owner, it will want a say in how it is analysed and adapted.

Suggested Remedies Key adaptation strategies and options would focus on enhancing communities' capacity to cope with disturbances in a self-sufficient way.

Community refers to citizens, as well as local businesses, NGO's, and policy actors. As a basis, improving basic living conditions, education, health, wellbeing, social support networks, and social participation in general would be helpful. More advanced strategies would focus engaging communities in research, decision-making, and implementation, by providing or helping them develop the tools and resources to do so. Recent trends such as citizen science, city labs, open data, and bottom-up citizen-led adaptation & sustainability initiatives are a key example of this. An important condition, is that some decision power will need to be distributed to the community –at the very least, their efforts will need to have a clear influence in the decision-making process.

2.7 Conclusions

Building urban resilience to climate change and other urban challenges will be essential for maintaining thriving cities into the future. People have different interpretations of what that means, however, and they can frame the challenge of building urban climate resilience in different ways.

Two important frames of urban resilience include the 'System Resilience' frame, which focuses on maintaining functions and processes, and the 'Community Resilience' frame, which emphasises urban life and community capacity & self-sufficiency. Both seem 'natural' ways of thinking about resilience, but they result in different priorities and perceptions regarding the problems, causes, values, and solutions. They have different notions of what mechanism lead to resilience ('resilience principles'), what information is particularly relevant, and who should be 'in the driver's seat' when building urban resilience to climate change. Such frames do not necessarily exclude each other, but they do highlight – and obscure – other important aspects of urban resilience. Since this framing is often done in a subconscious, taken-for-granted way, people may simply ignore other frames: important aspects may be overlooked and key stakeholders may fail to connect and collaborate.

The different frames can lead to different practical realisations of climate change adaptation in cities. The System Resilience favours adaptation options and strategies that can be expressed system-analytically and top-down. This could lead to a focus on resources (water, energy, information, etc.) and similar flows (financial, traffic, etc.), and resilient infrastructure to support these. This links to broader urban policies on infrastructure, economy, ICT, and public utilities. A Community Resilience frame favours options and strategies that are people-centric and bottom-up. This lends itself well to a focus on education, citizen participation, quality of life, enhancing resilience of vulnerable groups, and local/neighbourhood initiatives. This links to broader urban policies on education, welfare, health, and housing. Each has its advantages and pitfalls and each may benefit different groups within the city.

In practice, there will likely be a wider variety of frames among stakeholders, citizens, and decision-makers in different cities, focusing on different details and topics in relation to what the relevant problems, causes, moral judgements, and remedies are for urban climate resilience. To prevent 'dialogues of the deaf', urban decision-makers and stakeholders will need to investigate and develop a clear vision on what they mean by resilient urban futures: what are the goals, and who's or what's resilience are we talking about? That way, stakeholders can learn from each other's framing and explore (and hopefully reduce) the pitfalls within their own. Explicit exploration of the current and potential frames will help to cultivate meaningful discussion on the choices and trade-offs to be made in developing resilient urban futures.

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