

Operationalizing Justice: Ethical Frameworks for Adaptive Planning in the Age of Planetary Crisis

Asma Mehan

Director of Architectural Humanities and Urbanism Lab (AHU_Lab),

Huckabee College of Architecture, Texas Tech University, USA

E-mail: asma.mehan@ttu.edu

ORCID ID: <https://orcid.org/0000-0002-7381-6663>

Abstract

As planners strive to ensure justice and equity in the long term, they are confronted today with the unprecedented immediate dual challenge to meet the immediate demands posed by associated crises, such as climate change, social inequality, or economic instability. These crises often iterate upon one another, deepening pre-existing inequalities, and thus require planners to engage with ethical principles in a critical way as a guide for transformative action. This paper presents a study of the practical implications of justice in planning, pointing out the particular difficulty when it comes to reconciling varying interests and ideals in urban societies. Following that, he analyzes several of the case studies on postindustrial urban areas and those most immediately impacted by climate change, covering three primary facets: (1) the ethical foundations influencing decision-making in planning, (2) approaches of embedding the values of justice and inclusivity into adaptive planning strategies, and (3) means by which conflicting societal priorities can be mediated. It emphasizes participatory practices, interdisciplinary collaboration, and robust governance as critical mechanisms for aligning ethical commitments with actionable solutions. Distributive, procedural, and recognition-based justice theories offer critical insights into integrating justice into planning efforts at local and systemic levels. It also underscores the importance of fostering resilience and inclusion, particularly for marginalized populations, while tackling broader challenges posed by planetary crises. This analysis ultimately links theory to practice by developing recommendations for planners, policymakers, and other stakeholders who have committed themselves to advancing justice at a time that changes quickly in an ever more uncertain world.

Keywords: Ethical Urban Planning; Adaptive Planning; Climate Justice; Spatial Justice; Participatory Planning

Introduction

The 21st Century brought several crises that have accumulated to a common challenge found in urban planning: climate changes, social inequality, and an unstable economy. The technocratic growth-centric paradigm implied by traditional planning models has proved inadequate in dealing with these multifaceted crises. Thus, there is an urgent need to explore new planning approaches through ethical frameworks that will put issues of justice, equity, and sustainability at the forefront.

The increasing frequency and intensity of climate-related disasters accentuate the urgency of planners adopting ethical frameworks oriented towards justice and equity. Traditional planning models, commonly technocratic and growth-oriented, have proved insufficient in addressing the complex interrelationships of environmental, social, and economic problems. Indeed, the need for a paradigm shift towards more participatory planning approaches has never been so pronounced. The use of ethics in planning practice cannot simply be an intellectual exercise but must develop into a practical necessity. As cities balance immediate needs with long-term sustainability, planners must grapple with embedding justice into urban development strategies so that the voices of the disadvantaged are not merely heard but contribute to shaping the planning process.

This paper seeks justice operationalization within adaptive planning through the investigation of ethical frameworks, which would guide planners in traversing the complex new terrain offered by contemporary urban challenges. The theoretical assumptions, as well as practical applications of a study, aim to undertake the journey of incorporating justice into planning processes, leaving behind hagglers who will be effective and equitable in planetary crisis responses. Furthermore, transforming planners from the direct archetype of top-down models into facilitators of change would change the role of planners, considering that it is a morphing trend. It would

require a deep understanding of the ethical dimensions of planning and a commitment to embedding justice at the core of urban development strategies. The same flow of ideas contributes to the ongoing discourse on how ethics should be tied to planning, highlighting the need for practices not to be disconnected from the broader values of society as well as their meaningful imperative to building resilient, inclusive communities in the face of global challenges.

Theoretical Framework: Dimensions of Justice in Planning

Planning Justice is primarily comprised of three important dimensions: distributive, procedural, and recognition dimensions.

Distributive Justice: Regarding allocation of resources, services, and opportunities. In this sense, planning aims at ensuring equal distribution of benefits and burdens across various communities, especially the marginalized groups (Fainstein, 2010).

Procedural Justice: Pertaining to fairness and inclusiveness in decision-making processes. That means giving emphasis to participatory mechanisms where voices of all stakeholders at different levels could be involved in planning decisions (Healey, 1997).

Recognition-Based Justice: Understanding and respecting the different identities, experiences, and knowledge systems of all individuals in a community. It straightens the way for planners to consider and actively oppose systemic biases and ensure that marginalized voices become not merely spoken but valued (Schlosberg, 2004).

Work to embed these dimensions into the fabric of planning practice calls for an all-encompassing approach that crosses traditional techniques and places ethics at the center of the planning process. Space justice complements the previous dimensions of justice but stands distinctively as one of the concerns of urban planning. Space justice concerns distributing spatial resources equitably and organizing space appropriately so that all people in society have equal access to life-sustaining services and opportunities. This emphasizes the extent to which spatial inequalities often reflect social and economic inequalities. In addition, the multifacetedness of such dimensions clearly emphasizes the challenges involved in operationalizing justice in planning. Thus, while one pursued emancipation through distributive adjectives, there could be need for some reforms in procurement procedures to provide more inclusive participation; while recognition-based justice emphasizes the need for cultural sensitivity and acknowledgment of diverse worldviews as city space is shaped.

Intergenerational justice should be taken into account as well, especially concerning climate change and sustainability. Intergenerational justice recognizes that planning decisions should not infringe upon the ability of future generations to meet their needs. It thus requires thinking ahead to formulate planning policies that balance current development goals with long-term environmental stewardship and resilience. Bringing these dimensions together offers an integrated framework within which planners are most likely to address ethical challenges that may arise with urban development and create environments that function as equitably as inclusive.

Methodology

A qualitative research methodology including case studies, policy analysis, and stakeholder interviews is what the research borrows to understand the application of ethical frameworks to adaptive planning. These case studies include postindustrial urban areas and communities that experience climate changes disproportionately, providing an insight into the challenges and opportunities associated with operationalizing justice in diverse contexts. Additionally, participatory action research (PAR) methods are employed to enhance understanding of ethical frameworks in adaptive planning (Mehan and Mostafavi, 2024). PAR embodies co-learning and power sharing between researchers and other residents, underscoring mutual empowerment. In this way, the research process itself is imprinted with the very principles of justice and inclusion.

Data collection drew on a combination of document analysis-including planning policies, reports-and semi-

structured interviews with planners and policymakers, and community representatives. This approach provides a more comprehensive understanding of ethical influences on planning decisions and their practical implications for justice-oriented programming.

The thematic coding, identifying patterns and themes in relation to the integration of justice in planning processes, guided the analysis. This would allow for the development of best practices, barriers, and facilitators in embedding ethical frameworks into adaptive planning initiatives. Triangulation of data from various sources increases reliability and validity of results from the study that provide nuanced perspectives on operationalization of justice in urban planning. The study also makes use of scenario planning techniques to analyze possible futures and the consequence of alternative planning decisions. It allows them to envisage more informed and ethical decision-making processes in uncertainty and complexity by framing in different assumptions the potential consequences that really could turn out.

Case Studies

1. Urban Regeneration during the Post-Industrial Era

Indeed, city planning institutions that have gone through the transition of industrial economies face new barriers of contradictions in town planning. A case is the restoration of the abandoned areas for more active functionality or for generating other uses. One possibility is using heritage industrial sites to bring together cultural conservation and the development of communities. However, without ethical standards, these actions will put the communities at risk of gentrification and displacement.

From 1986 onwards, it transformed into a cultural and creativity site involving museum facilities and design centers, as well as public spaces, as most adaptations of industrial sites are termed in the successful adaptive reuse of industrial heritage. The redevelopment process emphasized that the community would own the project and, therefore, would ensure that it met local requirements and aspirations.

It would be possible to argue here that the first redevelopment of Docklands in Melbourne purposely ignored community interests in favor of the corporate commercial activities. Because of the result of this kind of treatment-a lack of affordable housing and community facilities-revisions were made in planning approaches to direct attention to inclusive planning processes.

Through distributive and recognition-based justices, regeneration planners guarantee that regeneration initiatives enrich people, set up cultural identities, and spur inclusive economic development within their areas. Such planning processes would lead to gathering local wisdom that, in turn, would lead to increased ownership among the community members on the redeveloped efforts. For instance, adaptive reuse has changed the Zollverein Coal Mine Industrial Complex in Essen, Germany, into a nexus of culture and creativity while economic revitalization stirs. Extensive community engagement ensured that redevelopment efforts tied in well with local needs and aspirations (UNESCO, 2001).

If we relate these situations with the case of Docklands, Melbourne, especially regarding how the place was to undergo development, it can be noticed that some specific exclusion meant for planning is not present. The initial redevelopment plans for Docklands that fell short of including the community were amended or remodeled to fit the centers of importance such as affordable housing, public spaces, and community facilities (City of Melbourne, 2020).

2. Climate Change Adaptation in Vulnerable Communities

Among the communities that suffer the most from climate change effects are poor and disadvantaged groups, as they suffer from low-quality infrastructure and resource constraints. Adaptation planning in such a context shall be prioritized on procedural justice, ensuring that adaptation strategies are co-built with the input of community members.

The planning processes that include local knowledge and experiences into their procedures are more relevant

and effective for adaptive measures. Different ethical frameworks guide planners to redress the systemic inequities that exists with respect to resilience in inclusive and context-sensitive approaches.

In Bangladesh, the traditional practice of floating garden construction, locally known as 'baira', is favored in flood-prone areas for crop cultivation. These gardens consist of aquatic plants like water hyacinth, which make them a sustainable alternative food and income source for climate change-afflicted communities. Community-based adaptation projects in Bangladesh have enabled local people to build and run such climate-resilient practices as floating gardens and the construction of raised houses. All these methods highlight the importance of participatory planning and using indigenous knowledge in strengthening community resilience (Sunder, 2020).

Under the initiative of Rebuild by Design in the United States, since Hurricane Sandy, some communities went into partnership with their peoples to co-create resilient infrastructures. Among the projects that came out of this is the development of New York's "Big U," which is a "superstorm" project that has integrated social, environmental, and economic in addressing climate vulnerabilities (Rebuild by Design, 2014).

Strategies for Operationalizing Justice in Adaptive Planning

To make justice operational in adaptive planning requires diverse approaches, entailing participatory approaches, interdisciplinary collaboration, ethical evaluation, and capacity development. These strategies seek to ensure that processes of planning are equal, inclusive, and attuned to the different needs of communities.

1. Participatory Planning

The first step to developing equitable planning outcomes is to engage all stakeholders in the decision-making process. Participatory planning is used as an umbrella term for a range of tools such as community workshops, participatory mapping, and digital platforms used to carry out inclusive engagement. For example, participatory mapping gifts the people to be planned for with the ability to communicate their own experiences and knowledge toward the planning process, nurturing a sense of ownership and ensuring development in accordance with local needs. Since the advent of such digital tools as interactive mapping platforms and online forums, wider opportunities for community engagement opened up, increasing accessibility and efficiency (Mehan and Stuckemeyer, 2023).

Participatory planning nurtures transparency and accountability in the planning process. Should community members be involved from the start, planners will be able to nip in the bud potential conflicts that may arise during implementation. And, in this collaborative culture, trust is born, which is indispensable in the long life of any planning activity. In addition, participatory planning can lead to innovative solutions that are highly customized to respond to context. It is often community members who can bring in understanding of local challenges and opportunities that external planners may not pick up on. This local knowledge can then be harnessed for more nuanced planning purposes that respond to the real concerns and aspirations of that community.

2. Interdisciplinary Collaboration

These points address how different disciplinary inputs, such as the sociology, environmental science, economics, and urban planning inputs to the discussions, will help in addressing the difficult issues concerning urbanism. Interdisciplinary collaboration enhances planning approaches by ensuring that both the social, environmental, and economic approaches are included in the discussions as important understandings in the dimensions of urban development. Such collaboration easily defines the development of holistic solutions that are more resilient and adaptable.

In practice, however, collaboration across disciplines improves the effectiveness of both policy making and implementation. Environmental science, for instance, located within the realm of urban planning in broad land-use practices, identifies principles of use in sustainability along with an economic analysis to define the financial viability of the proposed approaches. The sociological viewpoint explains dynamic equity with respect to decisions on planning and further legitimates a just approach in creating such policies (Mostafavi et al., 2024).

Such teams can also spark innovation by coupling different methods and perspectives. This cross-fertilization of ideas may lead to creative approaches not likely to be imagined within a single-discipline framework. Such pluralistic collaboration must be encouraged institutionally, with mechanisms for interdisciplinary training and otherwise facilitating the communication of professionals from different fields.

3. Ethical Impact Assessments

While planning impact assessments may be supplemented with ethical considerations to help planners anticipate and prevent the emergence of injustices from their planning decisions, ethical impact assessments span more than such analyses. Benefits and burdens are to be distributed equally among different community groups. Development should not disproportionately disadvantage marginalized populations, a preventive step towards accountability or transparency, which can see planning practices align with values of social justice.

In fact, ethical impact assessments may serve public engagement because they would draw the stakeholders into the assessment process, while people would be able to learn how different groups of citizens value issues and priorities and even reach equitable results because of their involvement thus adding legitimacy to the planning decision and strengthening its credibility in the eyes of the citizenry.

One more thing is that ethical impact assessments lend themselves to the identification of negative side impacts associated with planning actions—for example, evictions or environmental degradation. Through systematic assessment of these potentials, planners may evolve them into strategies meant to be proactive in handling impacts and ultimately strengthening urban development in sustainability and justice.

4. Capacity Building

Through education and provision of resources, communities are empowered to gain skills for effective participation in planning processes. Capacity building is about training, support, and creating a local leadership structure such that community members engage meaningfully in decision-making. By building the community capacity of planners, procedural justice is advanced, and long-term community resilience is created, enabling communities to adapt to new realities and challenges (Mehan, 2024a; 2024b).

These capacity-building activities could take the form of workshops, mentorships, and technical assistance in the best case. Such activities empower community members with knowledge of planning processes that otherwise may seem too technical to grasp. In addition, capacity building of community-based organizations can give marginalized communities an opportunity to voice themselves and for their perspectives to be considered in planning decisions.

Furthermore, capacity building adds another dimension of sustainability to the processes of planning. Where communities have skills and knowledge to manage and maintain projects, they tend to take ownership of those projects and see to it that these efforts survive. Such ownership can also lead to increased civic engagement, which in turn strengthens social capital within communities.

5. Integration of Technology

Technology can enable better transparency and inclusiveness in the planning processes. GIS, along with other dot offerings, helps communities visualize what planning proposals are about, give feedback, and monitor implementation mechanisms; all these add up to participatory planning. For instance, participatory GIS integrates input from the “community by allowing its members to provide spatial data and local knowledge that led to better-informed and fair decisions.”

Through use of technologies, efforts aimed at popularizing community engagement may stretch farther into the reach of individuals who may otherwise not make it to a venue to attend a meeting (Mehan, 2024c). Surveys online, virtual town halls, and interactive mapping are some alternative channels through which diverse voices

can be ensured to be heard.

However, the issue of a digital divide must also be raised when incorporating technology into a process of planning. One way to prevent the exclusion of groups at technological disadvantage is by ensuring equal access to digital tools as well as training on their application (Kozłowski et al., 2020). The planner will have to keep the 'gate' on such disparities wide open for proactivity in bringing forth digital inclusion.

6. Institutional Reforms

Such institutional reforms should also lay the groundworks for planning policies and frameworks that integrate ethical considerations for justice in adaptive planning. These include creating guidelines and standards that would prioritize justice, equity, and sustainability, as well as forming accountability mechanisms that would ensure that such ethics are met.

Changing structures of institutions would involve modifying planning regulations to require equity assessments, creating independent agencies to guarantee compliance with ethical standards, and promoting a culture of continuous learning and reflection among planning organizations. Internalizing these changes would, in fundamental part, awaken in the planning process now-making ethics a part of the pre-institutionalized process.

Further, institutional changes have meant enhanced interagency collaboration as well as coordination, thus mitigating silos often seeming barriers to comprehensive planning. Integrated approach would suffice for institutions in devising effective mechanisms for addressing the complex and interconnected problems of urban communities.

Discussion and Conclusion

The operationalizing process of justice in adaptive planning requires a major shift away from orthodox, top-down outlooks to inclusive, bottom-line practices that rely on ethics. Planners need to grasp the struggle produced by a juxtaposition of competing interests and ideals to balance off efficiency against equity. Ethical frameworks are meant to mediate these conflicts, thereby directing planners to judge their decisions as much by application ability as by justness. Therefore, the operationalization of justice in adaptive planning theory should rather see a practical face-up, as supposed by a variety of real cases.

Take for example the city relocation of Newtok in Alaska following erosion brought on by climate change. It exquisitely demonstrates the interlaced web of issues linked to climate adaptation. Substantial federal funding notwithstanding, the community ended up struggling with issues like substandard infrastructure and interagency coordination problems, which speaks loudly to the requirement of a developed ethical framework in planning methods.

The ACT Initiative in Delhi represents a new approach to urban resilience. ACT strives at making responsive and sustainable urban systems to fight the climate challenge in a collaborative manner with various stakeholders. This goes to show that planning activities aligned with justice could be realized by means of participatory planning and interdisciplinary collaboration.

On the other hand, developing mini-forests in Uttar Pradesh under the Upvan Scheme speaks about integrating natural solutions in urban planning. By promoting green cover, these programs contribute to ameliorating the urban heat island effect that is a real menace for densely populated areas. This kind of program further speaks about distributive justice because it attempts to assure equal benefits from the environment.

In the United States, cities are increasingly integrating justice in climate planning. Several studies have analyzed climate action plans from the 100 largest cities in the United States and found that quite a few justice principles had been incorporated into their climate mitigation strategies, with tools such as equity assessments and community engagement frameworks being used. Such practices point in the direction of increasing awareness

toward the importance of procedural and recognition-based justice considered by urban planners. Moreover, sponge cities in China epitomize cutting-edge urban flood management. Through redevelopment of the green infrastructure, these cities seek to absorb and reuse rainwater, thereby alleviating flooding and enhancing ecological biodiversity. This model exemplifies how ethics in urban design can promote sustainable and resilient communities.

These aforementioned examples show the many sides of justice in adaptive planning. Given their case-study perspectives, they urge the embedding of ethical framework considerations into planning processes to meet the multifaceted challenges posed by climate change and urbanization. Armed with the lessons derived from the real-world instances discussed, planners can formulate strategies that would be workable, fair, and inclusive.

Embedding these ethical frameworks in adaptive planning is certainly given priority to deal with the multifaceted challenges of this century. Set against them, planners could make just, fair, and sustainable strategies that could lead to improved community resilience and recognition of cultural values. The case studies discussed herein shed light on their usefulness in grounding future planning on these principles.

In summary, what this means is the operationalizing of justice in highly adaptive planning needs an abiding set of ethical principles, which includes inclusivity, equity, and sustainability. Planners can embark on the path of participatory planning, interdisciplinary collaboration, and nature-based solutions as they develop strategies that tackle the immediacy of climate change and urbanization, while paving an additional path toward long-lasting resilience and social justice. The experiences of the likes of Newtok, the initiatives from ACT, and the Upvan Scheme will provide invaluable lessons toward that end in seeking equitable and sustainable urban outcomes.

References

- American Planning Association. (n.d.). Social Equity. Retrieved from <https://www.planning.org/knowledgebase/equity/>
- BBC Future. (2020, September 11). The remarkable floating gardens of Bangladesh. Retrieved from <https://www.bbc.com/future/article/20200910-the-remarkable-floating-gardens-of-bangladesh>
- City of Melbourne. (2020). Affordable Housing Strategy 2020–30. Retrieved from <https://www.melbourne.vic.gov.au/affordable-housing-strategy-2020-30>
- Climate Action Network South Asia. (2024). Floating Gardens of Bangladesh: A Community Based Adaptation for Combating Climate Change. Retrieved from <https://cansouthasia.net/floating-gardens-of-bangladesh-a-community-based-adaptation-for-combating-climate-change/>
- Fainstein, S. S. (2010). *The Just City*. Ithaca: Cornell University Press.
- Healey, P. (1997). *Collaborative Planning: Shaping Places in Fragmented Societies*. Basingstoke: Macmillan.
- Kozlowski, M., Mehan, A., & Nawratek, K. (2020). *Kuala Lumpur: Community, Infrastructure and Urban Inclusivity*. London: Routledge. <https://doi.org/10.4324/9781315462417>
- Mancebo, F., & Certomà, C. (2019). Urban Planning for Sustainability and Justice. In J. van der Heijden, H. Bulkeley, & C. Certomà (Eds.), *Urban Climate Politics: Agency and Empowerment* (pp. 135–151). Cambridge University Press. <https://doi.org/10.1017/9781108632157.008>
- Mehan, A. (2022). *Tehran: From Sacred to Radical*. London: Routledge. <https://doi.org/10.4324/9781003140795>
- Mehan, A. (2024a). *The Affective Agency of Public Space: Social Inclusion and Community Cohesion*. Berlin: De Gruyter. <https://doi.org/10.1515/9783111035642>
- Mehan, A. (2024b). From exported modernism to rooted cosmopolitanism: Middle East architecture between socialism and capitalism. In L. W. Kruijer, M. J. Versluys, & I. Lilley (Eds.), *Rooted Cosmopolitanism, Heritage and*

the Question of Belonging: Archaeological and Anthropological Perspectives (pp. 227–245). London: Routledge. <https://doi.org/10.4324/9781003348740-12>

Mehan, A. (2024c). Informal feminist placemaking: A new perspective on urban activism and gender equality. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 17(2), 225–236. <https://doi.org/10.1080/17549175.2024.2340563>

Mehan, A., & Mostafavi, S. (2024). Transition. In A. Crudeli (Ed.), *Adaptive Reuse: Theoretical Glossary and Design Labs* (pp. 150–155). Florence: STH Press.

Mehan, A., & Stuckemeyer, J. (2023). Adaptive reuse of industrial heritage in the era of radical climate change-related urban transitions. In M. Ripp & C. Gustafsson (Eds.), *Climate Change Related Urban Transformation and the Role of Cultural Heritage* (pp. 169–192). Lago, Italy: Il Sileno Edizioni.

Mostafavi, S., Bagheri, B., Bao, D. W., & Mehan, A. (2024). Smart prototyping: From data-driven mass-customization to community-enabled co-production. In M. Kanaani (Ed.), *The Routledge Companion to Smart Design Thinking in Architecture & Urbanism for a Sustainable, Living Planet* (pp. 633–642). London: Routledge. <https://doi.org/10.4324/9781003384113-69>

Pratt, B. (2023). Equitable Urban Planning for Climate Change. *Journal of Planning Education and Research*, 43(1), 5–17. <https://doi.org/10.1177/08854122221138125>

Rebuild by Design. (2014). Hurricane Sandy Design Competition. Retrieved from <https://rebuildbydesign.org/hurricane-sandy-design-competition/>

Schlosberg, D. (2004). Reconceiving Environmental Justice: Global Movements and Political Theories. *Environmental Politics*, 13(3), 517–540.

Sustainability Directory. (2025, April 25). How Does Climate Change Intersect with Social Justice? Retrieved from <https://climate.sustainability-directory.com/question/how-does-climate-change-intersect-with-social-justice/>

The Times of India. (2025, May 28). New urban coalition targets heatwaves, climate resilience in Delhi. Retrieved from <https://timesofindia.indiatimes.com/city/delhi/new-urban-coalition-targets-heatwaves-climate-resilience-in-delhi/articleshow/121470613.cms>

The Washington Post. (2025, May 29). Forced to relocate by climate change, Alaskan villagers found a new crisis. Retrieved from <https://www.washingtonpost.com/climate-environment/2025/05/29/newtok-alaska-climate-relocation/>

UNESCO World Heritage Centre. (n.d.). Zollverein Coal Mine Industrial Complex in Essen. Retrieved from <https://whc.unesco.org/en/list/975/>