

CLIMATE CHANGE, ENERGY AND ENVIRONMENT

# JUST URBAN TRANSITION AND LABOR

Transformative Visions  
for a Low-Carbon Future

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As part of international commitment toward low-carbon development, increasing attention is being paid to cities as critical sites for change. However, there is currently a limited understanding of the justice implications of these shifts.



Examples from cities around the world, with a focus on the Global South, have highlighted several key themes which are relevant for transition. These include density, public transportation, decentralized energy, and the implications of informal systems.



A conceptual framework for just urban transition is offered which spans three dimensions: social and gender equity, low-carbon development, and decent work. A just urban transition requires synergy between all three dimensions.



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## COLLABORATION

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## LIST OF ABBREVIATIONS

<b>APEC</b>	Asia-Pacific Economic Cooperation
<b>BRF</b>	Bangkok Rooftop Farming
<b>BDG</b>	Bio-Circular-Green Economy
<b>CSR</b>	Corporate social responsibility
<b>CSV</b>	Creating shared values
<b>EV</b>	Electric vehicle
<b>EU</b>	European Union
<b>EPR</b>	Extended producer responsibility
<b>GPP</b>	Green public procurement
<b>GHG</b>	Greenhouse gas emissions
<b>ILO</b>	International Labour Organization
<b>JT</b>	Just transitions
<b>JUT</b>	Just urban transitions
<b>MENA</b>	Middle East and North Africa
<b>NDCs</b>	Nationally determined contributions
<b>NAP</b>	National adaptation plan
<b>RAMCC</b>	Argentine network of municipalities facing climate change
<b>PV</b>	Photovoltaic
<b>RTTC</b>	Rights to the city
<b>TMNs</b>	Transnational municipal networks
<b>WASH</b>	Water, sanitation, and hygiene

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## 1

# INTRODUCTION

## 1.1 CITIES AS CRITICAL SITES FOR TRANSITION

Just transition (JT) has been defined by the International Labour Organization (ILO) as »greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind« (ILO n. d. -b). While JT has been primarily focused on decarbonization of energy and transportation systems, increasing attention is now being paid to cities as critical sites for change. Cities and their surrounding peri-urban areas are characterized by concentrations of resources, capital, and people, which offer potential for rapid social, economic, and technological progress. However, these same forces can also drive unsustainable resource consumption and environmental degradation. Globally, cities are responsible for around 75 per cent of the world's energy consumption and over 70 per cent of global greenhouse gas emissions (GHGs) (UN 2021).

Cities will also be profoundly affected by the impacts of climate change, for instance with increased incidence of extreme weather events like floods posing threats to human lives, basic infrastructure, and housing. These risks are not equally distributed: countries of the Global South will bear a disproportionate burden of climate impacts due to weaker capacity to adapt and respond (UCCRN 2018). Cities can also exacerbate social and spatial injustices and disparities, driven by multiple intersecting factors such as race, class, gender, and ethnicity. This inequality is reflected in unequal access to key urban services, adequate housing, education, and other basic needs, which undermines human health and well-being. Social and gender vulnerabilities intersect with climate vulnerabilities, with, for instance, the poorest urban dwellers most likely to live in hazardous areas, such as along steep slopes or riverbanks prone to flooding and landslides (Satterthwaite et al. 2020). From a gendered lens, systematic barriers and constraints, such as care burdens and imbalances in decision-making, compound climate impacts from the household to the national scale and impair women's access to decent work (ILO 2022; Sultana 2021).

Despite these issues, there is a limited understanding of the justice implications of low-carbon transition in the ur-

ban realm, also known as just urban transition (JUT), with literature on equitable urban development only just beginning to incorporate climate change, and vice versa for urban climate action and social justice (Hughes & Hoffmann 2020). The world's population is currently 55 per cent urban – a number that is projected to grow to 68 per cent by 2050 (UN DESA 2018). This means that patterns of urban development will have far-reaching ramifications, both in terms of reducing emissions (mitigation) and adjusting to current and projected impacts of climate change (adaptation). So far, the main focus when it comes to transition in the Global North has been on mitigation, yet attention to adaptation will be vital in cities of the Global South which have diminished capacity to respond.

## 1.2 LABOR, THE ECONOMY, AND THE CLIMATE CRISIS

Historically, the just transition movement was driven by the efforts of trade unions and labor movements in as early as the 1970s. At that time, the emerging movement called for support for workers facing job losses and the need to retrain due to environmental legislation which sought to regulate polluting industries such as oil, gas, and heavy industry. Over time, JT began to synergize with the global climate agenda, with advocates emphasizing that moves to reduce GHG emissions must consider the impacts on those employed in carbon-intensive sectors (see, e.g., Muñoz Cabré & Vega-Araújo 2022). Expanding the critique, extensive literature indicates that the unsustainable and extractive neoliberal economic systems which have dominated since the 1970s have been the main driver of the climate crisis as well as the exploitation of the workers who make up these economic systems (see, e.g., Chomsky & Pollin 2020; Huber 2022; Parr 2014).

As the urgency for increased climate action mounts, JT continues to grow as a priority in the global sphere. In 2015, ILO guidelines underscored the connection between climate policies and human and labor rights, emphasizing the potential for sustainable transition to drive social equity, inclusion, and poverty eradication (ILO 2015). The Sharm el-Sheikh Implementation Plan proposed by the 2022 United Nations Climate Change Conference (COP27) advanced key principles of JT which include social dialogue and stakeholder participation (UNFCCC 2022). During COP27,

the General Secretary of the International Trade Union Confederation Sharan Burrow stated:

*»Workers must have a place at the table for a transition that stabilises the planet, economies and our societies. Transition plans need to include both climate and employment plans« (ITUC 2022).*

These goals are also articulated in »Green New Deal« proposals emerging around the world, which attempt to tackle climate change and inequality simultaneously, while improving people’s material standards of living, expanding public services, and creating decent work opportunities. Decent work has been defined by the ILO as productive work in »conditions of freedom, equity, security and human dignity,« which includes a fair income, secure and safe working conditions, equal opportunities and treatment for all, social protection and freedom of expression and organization (European Commission, n.d.-b). Legislation was proposed in United States, Canada and the United Kingdom, and launched in New Zealand in 2019 and by the EU in 2020. However, there are still numerous roadblocks in implementation and insufficient focus on these topics in the Global South.

### 1.3 AIM AND METHODOLOGY OF THE STUDY

One area that has so far not been fully explored lies at the intersection between these strands of investigation. In particular, for both policy and practice, deeper and clearer insights are needed into the relationship between the transition to low-carbon cities, economic systems, and shifting labor patterns. To respond to this need, this study examines tangible examples from different cities around the world to draw out modalities of development which create synergies between social equity and poverty reduction, drastic reduction of GHG emissions, and decent work. The study is exploratory in nature and aims to provide initial insights as a basis for future investigation. Moreover, we aim to support key partners and stakeholders involved in the process by providing overarching pathways toward and key principles of JUT which can be adapted to local contexts.

The research was undertaken in two iterative phases. First, relevant factors for JUT were analyzed by means of an exploratory scoping of urban sustainability frameworks and indices. These were drawn from development and research organizations including the EU, UN, and transnational municipal networks (TMNs) and covered various subthemes including green cities, resilient cities, and livable cities. Twenty frameworks and indices were selected for in-depth analysis based on whether social, environmental, or economic factors were considered (see Annex 1). This scoping helped map the different aspects and principles prioritized in the existing literature.

Using the scoping results as a basis, interviews were conducted between October 2022 and February 2023 with

FES offices and key partners in selected cities in Asia, Africa, the Middle East and North Africa (MENA) region, Latin America, and Europe. Interviews were used to draw out examples and key themes, allowing validation and further refinement. In total, there were 14 respondents from Viet Nam, Thailand, the Philippines, Kenya, Jordan, Tunisia, Argentina, and Croatia, which included urban and energy specialists, government officials, trade unionists, urban planners, and architects. Respondents were solicited based on their prior relationships with FES offices and ongoing work on issues related to JUT. Themes were then coded inductively to identify commonalities and context-based specificities.

### THE SPECIFIC RESEARCH QUESTIONS FOR THIS STUDY WERE:

- What sectors and types of work will be affected by transitions to low-carbon cities, and how?
- How will these changes affect people of different genders and socioeconomic groups?
- What synergies can be observed which connect social, climate, and economic goals in cities?
- What are the enabling and disabling factors for JUT?
- What mechanisms and principles are needed for mainstreaming JUT moving forward?

## 2

# BACKGROUND: UNTANGLING THE PRINCIPLES OF JUST URBAN TRANSITION

## 2.1 DEFINING JUSTICE

To understand JUT, it is important to first define what we mean by justice. Looking to the environmental justice movement, Hughes and Hoffmann (2020) outline several foundational types of justice: distributional (concerned with the distribution of environmental costs and benefits), procedural (relating to engagement and participation in decision-making processes), and recognitional (recognizing the social, cultural, and institutional processes that caused the inequalities in the first place). The authors argue that all three types, as well as an analytical focus on change processes, are necessary for transition.

A foundational theory which has been instrumental in guiding just urban scholarship comes from Henri Lefebvre, whose theory of rights to the city (RTTC) is grounded in the production of urban space and the need to restructure the power relations underlying it. Specifically, Lefebvre argued that RTTC entail the right to participation (in any decision that contributes to the production of urban space) and the right to appropriation (the right to physically access, occupy, and use urban space) (Purcell 2002). Rights to the city has since been adopted by the New Urban Agenda, which argues that «migrants, refugees and internally displaced persons have a right to the city, which must be reinforced through explicit welcoming, inclusion and integration efforts» (UN-Habitat 2020). While this is an important step in operationalizing RTTC, arguably the original principles went much further, focusing on «resisting the disenfranchisement associated with urban neoliberalism» (Purcell 2002), rather than specific directives for the inclusion of marginalized populations.

A related concept is that of *Eigenart* – German for «characteristic features» – according to which conditions should be created in which urban dwellers can develop self-efficacy in spatial structures. In other words, people should have agency to use their rights and design cities in different and distinct ways, enabling them to achieve quality of life, identity, and a sense of belonging (Brandt 2021; WBGU 2016). According to the German Advisory Council on Global Change (WBGU), two essential principles must be guaranteed to enable the development of *Eigenart*: (1) the recognition of creative autonomy, i.e., that residents themselves should shape and appropriate urban spaces, and (2) the

recognition of difference, i.e., the recognition of and ability to express a «diversity of cultural expressions» (WBGU 2016).

Another fundamental framing comes from rights-based approaches. The Universal Declaration of Human Rights includes the intrinsic rights of all to housing, water, and sanitation, among others. There may, however, be a fundamental misalignment between the enjoyment of these rights and the neoliberal paradigm, as exemplified by, for instance, speculative housing markets which favor private investors, leading to spiralling rent costs in the absence of adequate government intervention and privatization of access to basic services such as water. In light of these deficiencies, there have been moves to integrate human rights agendas into urban climate action plans, for instance, by incorporating housing justice to counter processes of gentrification (UN-Habitat 2021).

More recently, in 2022, the UN General Assembly declared access to a clean, healthy, and sustainable environment a universal human right. On an international stage, this ruling makes the link between environmental damage and the enjoyment of human rights explicit. Going beyond this, rights can also be afforded not just to people, but also to nature – an approach also known as multispecies justice (UN-Habitat 2021). Several countries have developed legislation or seen court rulings recognizing the rights of nature, including Ecuador, Bolivia, New Zealand, Colombia, and India. Climate change and the environment are also linked to gender rights. Pross et al. (2020) argue that existing gender inequalities caused by power imbalances in both the private and public spheres, discriminatory laws and practices, and unequal access to and control of resources exacerbate the impacts of climate change on women and girls – in particular vulnerable groups of women and girls, such as informal workers, indigenous groups, and people with disabilities.

Labor relations are also connected to gender relations, with, for instance, feminist political economy theory showing how political economic structures reproduce gender norms. For example, scholars argue that the expansion of multinational companies since the 1980s increased opportunities for women to get paid jobs outside the home, yet, most of the jobs women could access were low paid, infor-

malized and often left them with a double burden stemming from the unpaid care work they still had to do (Elson 1998). Our study also identified this lower quality of labor, for instance with women making up a greater proportion of the informal waste sector in Thailand and Viet Nam and, on average, being paid less than men for doing the same work (see Section 3.2.1).

Classic Marxist theory refers to the alienation of workers from the means of production under capitalist systems, where value is produced by workers but controlled by owners. Connecting Marxist theory with environmental justice and climate change discourse, it can be argued that both the environment and workers are profoundly affected by the expansionary tendencies of capitalism which result in production being driven by the objective of maximizing profits and the »structural imperative to perpetually create new needs as soon as the means to satisfy them have been developed« (Wissen & Brand 2017). These dynamics are replicated on an international scale, where countries of the Global North benefit from an unjust international order which grants preferential access to natural resources and labor at cheaper prices, a situation shaped in large part by colonial histories (ibid.).

To conclude, this section has explored several approaches to justice which are all useful in different ways. Human rights and multispecies justice can be effective tools to em-

power people to demand their rights through legal mechanisms and can advance states' commitments to social and environmental goals. The principles of RTTC and Eigenart provide justice frameworks grounded specifically in the urban context, which make them particularly useful for the purposes of JUT. The three pillars of environmental justice as defined by Hughes and Hoffmann (2020) offer a critical analytical focus on structures of injustice, what led to injustices in the first place, and how to redress them. While this study does not seek to prioritize one framing, the concept of JUT may offer opportunities for various social and environmental movements to find commonalities, build solidarity, and consolidate efforts.

## 2.2 SCOPING URBAN FRAMEWORKS

Several urban frameworks and indexes have been developed to support urban transformations under the auspices of, for example, green, sustainable, resilient, liveable, and just cities. While many have taken interlinked social, environmental, and economic aspects into account, there is a broad diversity of principles, dimensions, and entry points underpinning the frameworks. Based on in-depth analysis of 20 frameworks, Table 1 describes key commonalities in terms of the thematic areas, governance and policy considerations, and overarching goals and principles which emerged (Annex 1). The geographic scope of the frameworks included 13 global, 4 from the EU, and 3 from the

Table 1

**Prioritized dimensions of sustainable urban transition**

Thematic areas	Governance and policy dimensions	Overarching goals/ principles	No. of frameworks which included the aspect
<ul style="list-style-type: none"> <li>– Productivity</li> <li>– Innovation</li> <li>– Technology</li> <li>– Industry</li> <li>– Land use</li> <li>– Public space</li> <li>– Built environment</li> <li>– Food security</li> <li>– Decent work</li> <li>– Waste management</li> <li>– Circularity</li> <li>– Buildings</li> </ul>	<ul style="list-style-type: none"> <li>– Leadership and strategy</li> <li>– Cocreation</li> <li>– Participation</li> <li>– Urban planning</li> <li>– Rights and responsibilities</li> <li>– Social protection</li> <li>– NDC-SDG alignment</li> <li>– Local government capacity</li> <li>– Municipal finance</li> </ul>	<ul style="list-style-type: none"> <li>– Multispecies justice</li> <li>– Intergenerational justice</li> <li>– Rights to the city</li> <li>– Citizen satisfaction</li> <li>– Gender equity</li> </ul>	1
<ul style="list-style-type: none"> <li>– Green jobs</li> <li>– Health/healthcare</li> </ul>	<ul style="list-style-type: none"> <li>– Democracy/democratic transition</li> <li>– Climate ambition/mitigation and adaptation policy action</li> </ul>	<ul style="list-style-type: none"> <li>– Compactness</li> <li>– Diversity</li> <li>– Human rights</li> <li>– Quality of life/well-being</li> </ul>	2
<ul style="list-style-type: none"> <li>– Housing</li> <li>– Infrastructure</li> <li>– Sanitation</li> </ul>		<ul style="list-style-type: none"> <li>– Adherence to planetary/ ecosystem limits</li> </ul>	3
<ul style="list-style-type: none"> <li>– Green spaces and tree cover</li> <li>– Air quality</li> <li>– Mobility and transportation</li> <li>– Energy and material efficiency</li> </ul>		<ul style="list-style-type: none"> <li>– Equity and inclusion</li> </ul>	4
<ul style="list-style-type: none"> <li>– Water (quality and availability)</li> <li>– Human capital/education</li> </ul>			5+



Global South. Table 1 also notes the prevalence of these aspects, i. e., how many of the frameworks referred to the aspect.<sup>1</sup>

While this scoping does not represent a systematic review, as most of the frameworks were taken from »grey« literature and the dimensions differ according to the specific purpose of the framework, it does give a broad overview of the types of issues being prioritized in development practice. A range of social, environmental, economic, governance, and justice aspects are included, with a notable emphasis on tangible, measurable features such as green spaces, transportation, and water resources. Despite many frameworks having similar overarching goals, their entry points varied. For instance, the framework on Just Green Transition developed by the C40 Cities network takes climate mitigation as the entry point, arguing that »by investing in climate solutions, cities can mitigate climate breakdown, deliver health benefits, create jobs and tackle systemic inequality« (C40 Cities 2023). Following from this, the network argues that investments in key areas, such as mass transit, clean energy, and the walking and cycling infrastructure, would have profound economic and health benefits. The EU reference framework for sustainable cities takes economic productivity as the entry point, stating that »productivity depends on healthy, happy citizens who have access to basic needs and services« (European Union 2018). UrbanA's framework focuses on green skills and labor market and economic empowerment, through which people can benefit from a low-carbon future (Urban Innovative Actions 2022).

A key finding of the review with respect to informing JUT is the importance of transformative approaches. For JUT, simply developing indicators within social, economic, and environmental parameters is insufficient. What is needed is a break with business-as-usual models and for more attention to be paid to the (often interconnected) root causes of inequities and inequalities, how they inform trajectories of urban development, and how they can be reshaped. For example, the EU Horizon 2020 UrbanA initiative (Urban Arenas for sustainable and just cities) identifies ten drivers of injustice that need to be tackled through JUT: unquestioned neoliberal growth; uneven environmental health and pollution patterns; access to the benefits of infrastructure such as energy and transport poverty; material and livelihood inequalities; uneven and exclusionary urban intensification and regeneration; racialized or ethnically exclusionary urbanization; limited citizen participation in urban planning; lack of effective knowledge brokerage and stewardship opportunities; unfit institutional structures; and weakened civil society (Urban Innovative Actions 2022).

That said, certain discourses of urbanization can be counter-productive to the goals of JUT. For example, some conceptions of »world cities« and »smart cities« are premised on eco-

nomics competition, aesthetics, and international standing, which may not align with goals of social equity and inclusion. One urban sustainability framework focused on industrial restructuring as a tool for increasing urban energy and resource efficiency, freeing valuable downtown land for redevelopment and promoting the growth of the service sector. Taking the city of Shenyang, China as an example, moves were taken to convert and revitalize a formerly industrial area, which »enhanced the city's urban image and helped drive economic development through real estate investment« (McKinsey et al. 2010). This modality of development has potential negative implications for justice, including gentrification and the transferral of ownership of space in the city from the public to the private realms. Other frameworks had a heavy focus on technological transition, which may obscure the needs of local communities and the capacity of the labor market and governments to implement such shifts. For example, technological solutions such as electric vehicles (EV) may reduce air pollution and GHG emissions but they fail to address congestion and perpetuate mobility inequality as wealthy urban residents are more likely to own private vehicles. In some frameworks, the selection of priority areas also seemed arbitrary or they neglected complex causalities and lacked transparency in relation to data collection.

From this review, we find there to be a diversity of approaches to sustainable urbanization, featuring an even broader range of thematic areas and overarching principles. In terms of relevance to JUT, despite a heavy emphasis on equity and inclusion, not all frameworks offered an analysis of the drivers of inequity and exclusion and ways of tackling these. Most frameworks considered interlinked social, economic, and environmental aspects, but fewer considered the complex interrelation between these aspects. Further exploration of the experience of cities and communities on the ground could help inform and refine this emerging body of knowledge and practice.

<sup>1</sup> The aspect had to be included as one of the key overarching features rather than a subtheme or indicator.

## 3

## FINDINGS

This section presents the results of interviews with FES country offices and local partners that explored JUT and shifting labor patterns in different urban contexts.

## 3.1 URBAN FORM

The first key theme which emerged was centered on the ways in which urban form, i. e., built space and layout in the city, can enable or disenable JUT. Urban form is of fundamental importance to sustainable urbanization as it is the basis of connectivity of inhabitants to labour markets, accessibility of goods and services, patterns of housing, and the distribution of environmental amenities and burdens. Improving urban amenities through, for instance, the greening of public space and better connections to public transport, can also have significant implications for justice, such as via the impacts of gentrification, with rising land and house prices creating »elite enclaves of environmental privilege« (Anguelovski et al. 2019). This section examines some of the ways in which built space can shape, and be shaped by, the forces of transition.

## 3.1.1 DENSITY

One of the main ways urban form can influence JUT is through the density of a city. Some degree of density is necessary for sustainability. The more spread out a city is, the more transportation will be needed, which means more emissions, and more difficulty to establish effective public transportation. This will also impact the inclusion of those without access to private transportation. Higher density also means that less capital is required, as fewer roads and pipes need to be built, thus reducing the carbon footprint of development. Finally, increased density enables assets and buildings themselves to be share heat and cool air from the surrounding buildings via district heating and cooling systems, which are much more efficient and can be cheaper for consumers.

*»You can't have sustainable suburbia«*  
(interviews, MENA region, February 2023)

A recent movement called the 15-Minute City has developed a novel approach to density, according to which all essential services should be accessible within a short (15-minute) walk, bicycle ride, or public transport trip from

one's home. Various cities, including Barcelona, Botoga, Buenos Aires, Melbourne, Milan, Paris, and Portland, have recently introduced policies supporting 15-minute city urban planning. As well as accessibility, such modalities of urban living offer potential for creating neighborhood ties, developing a stronger sense of community and place identity, enhancing social mixing and public safety by having more »eyes on the street« – an idea advanced by urbanist Jane Jacobs to articulate the importance of vibrant mixed-use areas (Wekerle 2000).

Following a similar line of argument, well-managed urban greening, including trees and parks, can serve multifunctional environmental and social purposes, including carbon sequestration, natural infiltration to prevent flooding, reduce urban heat, and encourage more people to spend time outdoors which, in turn, builds social cohesion through increased encounters and improves mental and physical health (Cinderby et al. 2021; Kuo & Sullivan 2001). An important caveat to this is the critical importance of ensuring equitable access to environmental amenities such as green spaces. A concerning trend in several cities around the world has been the privatization of public green space. For example, in Metro Manila, which has one of the lowest rates of green public spaces in Southeast Asia, green spaces are for the most part privately owned and access to them is controlled. These spaces include the numerous golf courses and parks in gated communities catering only to the wealthy (FES 2022). Similarly, in Nakuru, Kenya, most green spaces are either privatized (e.g., golf courses or sports clubs) or are used for agriculture, which prevents them from being used by other urban citizens (Tuhkanen et al. 2022).

The relationship between density and sustainability is also not linear. Extremely high-density areas, which are more prevalent in some cities of the Global South, present their own challenges, including inability to deliver services such as waste and sanitation, as well as pollution, congestion, and safety issues. In Viet Nam, informal housing construction is a common phenomenon to which officials often turn a blind eye. This auto-construction can have negative implications, as the density obstructs traffic and construction may ignore building standards and permits, which could pose safety concerns (Le & Hung 2021). Low-income households are more likely to face such conditions.

These challenges are often highly gendered. For instance, in Tunis, Tunisia, the central Medina area is characterized by very dense intertwined residential and commercial units, with residents and owners sometimes annexing alleyways as extensions to their dwellings, thus reducing pedestrian mobility (Cities Alliance 2021). This density means that most activities in the area are undertaken on foot. This presents challenges to women who report that the (often poorly lit) streets and public areas are unsafe in the evenings (ibid.). The project also found that women did not find the Medina's public spaces inviting as they were dominated by men. Women therefore felt more comfortable meeting in private spaces. In response to these issues, the Femmedina project led by Cities Alliance (2021) codesigned seven public spaces for women, including market spaces for selling artisanal products and handicrafts to provide women with access to economic markets, as well as recreational spaces within the Medina. This provided women with more opportunities to appropriate public space and consequently also improved their safety outcomes.

## KEY TAKEAWAYS

- While a degree of density is important for sustainability, it is not a prerequisite for JUT – rather, urban planners should work to understand and respond to the needs of urban dwellers of diverse genders and social groups and the different ways they access and use urban space.
- Applying the 15-minute city model to density can offer a mode of development which is in synergy with decarbonization due to the reduced needs for private vehicle use and positive social outcomes, including a sense of community, place identity, and improved public safety
- Urban greening can serve multifunctional environmental and social functions, yet ensuring public access and limiting the privatization of environmental amenities are key considerations for JUT.
- Key drivers of injustice which have emerged are the privatization and commodification of urban space and gendered exclusion.

### 3.1.2 URBAN FORM AND TRANSPORTATION PATTERNS

Urban form can be a product of both top-down decision-making and bottom-up urban norms, shaped by context-specific historical and sociological factors, which can serve to »lock in« sustainable or unsustainable systems – for instance transportation patterns. In the US, for example, where many cities are characterized by sprawl and dominance of private vehicle usage, much of this urban development can be attributed to post-World War II top-down modernist planning, which saw entire neighborhoods razed to make way for new highways and parking lots throughout city centers – one famous example being the Cross Bronx Expressway, which cut a swathe from the community and saw the forced eviction of 500,000 people (Ross 2014).

Meanwhile, in cycling-dominant countries such as the Netherlands, Denmark, and Germany, public policy moved in the other direction. Over the past few decades, city governments have made concerted moves to incentivize cycling, by providing separate lanes and bicycle parking, as well as through disincentives such as taxes and restrictions on car ownership (Pucher & Buehler 2008). Land use policies have also largely favored compact and mixed-use development that creates an enabling environment for bikeable distances.

In Viet Nam, where motorbike usage is ubiquitous, transport development took yet another path. Following the Doi Moi economic reforms of 1986, which saw the shift from a centrally planned to a socially oriented market economy, there was a period of rapid economic growth, during which motorbikes (as compared to the previously dominant bicycle) were seen as status symbols indicating rising household incomes (Truitt 2008). Two-wheeled modes of transportation are well suited to the urban form of Viet Namese cities, which are characterized by high density, narrow streets, mixed-use areas, and sidewalk activities. Now, however, private cars are seen as a status symbol, or as part of the »identity of a new middle class«, with rising rates of ownership leading to increased congestion and pollution (Le & Hung 2021; interviews, Viet Nam, November 2022). These transformations are also emblematic of a growing income gap, with the city's poorest still relying on bicycles, despite safety issues due to a lack of separate lanes. Walking is also difficult as footpaths are often used for parking, driving, or commercial activities, which limits the possibilities for expanding nonmotorized transportation.

In many other cities, walking is the dominant mode of transport. Kenya has been described as a »walking nation« with 40 per cent of trips in Nairobi made on foot (FES 2020). Yet, this does not necessarily equate to a compact, pedestrian-friendly urban form. Rather, critics argue that urban planners and policymakers plan for wealthy car-owning residents, not for pedestrians who tend to be the poorest (interviews, Kenya, November 2022). Moreover, streets do not cater for pedestrians and many of the existing pavements are dilapidated. Building more pavements with adequate street lighting would not only make walking safe for Nairobi's low-income earners but would also encourage those who are likely to use motorized transport to walk (FES 2020).

Ultimately, strengthening public transportation networks and improving walkability and cyclability will require both robust policy and planning action, and a mental shift among urban inhabitants to demand investment in nonmotorized transport. Designing public transportation systems with the diverse needs of users in mind will also be key. For instance, women face more barriers to public transport access due to higher rates of sexual harassment. Studies found that in Buenos Aires, Argentina, 72 per cent of female respondents and 58 per cent of male respondents felt insecure due to sexual harassment (Hsu et al. 2018). This lack of safe public transportation restricts access to jobs, learning opportunities, and participation in social activities. A study in Jordan showed that almost 47 per cent of women turn

down job opportunities due to a lack of proper transportation (Aloul et al. 2018).

## KEY TAKEAWAYS

- Avoiding or retrofitting transportation »lock-ins« characterized by a dominance of private vehicle usage will be key for JUT.
- Improved walkability and cyclability in particular can provide synergies between low-carbon development and social benefits, including public health and recreation.
- Public transportation design needs to take the diverse needs of users into account and ensure safety for all groups, in particular women who face increased rates of sexual harassment.

### 3.1.3 URBAN FORM AND LABOR

Drilling down further into the relationship between urban form and labor, several findings emerged from the study. First, there is a need to ask how and where people are working. Homes are often not just spaces where people live, but also places where people engage in small business activities. For example, »shophouses«, which are mixed-use spaces combining residential and commercial purposes, are common across cities in Southeast Asia. In Kenya in the last few years, the country's large population of young people have been leveraging strong ICT skills to found online startup businesses which are often operated from home (interviews, Kenya).

COVID-19 has also had an impact on the spatial dynamics of urban form, with, for instance, many more people working from home and offices being broken down into smaller units. Thanks to the smaller number of journeys needed, this »decentralization of work« offers opportunities to reduce GHG emissions, although there are trade-offs in the form of the reduced efficiency of heating and cooling in individual homes compared to centralized office spaces. More flexible working arrangements can also promote diversity and representation in the workplace, with, for instance, the World Economic Forum (2022) finding that after tech company Spotify decided to enact remote working policies, the share of women in leadership positions rose from 25 per cent in 2019 to 42 per cent in 2021.

Looking at land use planning, an example from Dakar, Senegal shows how certain top-down visions of urban planning can undermine environmental sustainability, social equity, and access to decent jobs. In the peri-urban area of Jeef Jeel, agribusiness activities used to flourish (Cissé 2022). These businesses were an important source of income for young people, women, and seasonal migrants, in particular, as well as a source of fresh, local produce for the city (ibid.). However, a recent government decision to build a new urban center, featuring large investments in the hotel industry and ICT industries without prior consultation with existing residents and workers, saw the project appropriate plots that had been farmed for decades. Although the de-

sign for the area had a »green plan«, this plan did not include the agricultural activities which had been there before (ibid.).

## KEY TAKEAWAYS

- Urban planners should work to understand and respond to the needs of urban dwellers of diverse genders and social groups and the variety of ways they access and use urban space, including through consultation and co-design.

## 3.2 INFORMALITY

An important theme of this study which has key implications for JUT is informality. Informality here refers to »all economic activities that are – in law or practice – not covered or insufficiently covered by formal arrangements« (ILO n.d.). Many spheres of urban life can be informal, including employment, housing, and services such as water, electricity, and waste management. Informal services such as markets can offer convenient, localized services which can provide spaces for interactions and neighborhood cohesion and reduce the need to commute (Le & Hung 2021). These jobs depend on access to and use of public space – which, due to the informal nature of their operation, can be precarious.

However, informality also poses many challenges. In Jordan, due to skills mismatches among workers and the labor market, job informality among young people is currently above 50 per cent which can mean precarious situations (Ministry of Environment 2017). In Lebanon, experts in the MENA region (February 2023) explained that inadequate provision of energy by national firms led to the establishment of informal generators and rapid expansion of decentralized solar systems. In principle, this could support the goals of JUT, and as many locations in Lebanon are a long way from the (limited) grid, diversification and decentralization have meant more people could be reached. However, informal operators are generally powered by the cheapest source of fuel, which is (highly polluting) diesel. A similar informal system exists for water, which can be low quality, posing potential safety risks.

Another implication of informality is that governments need revenue to be able to provide services, infrastructure, and social protection. In some countries, a significant portion of the economy is run on an informal basis – approximately 85 per cent in Kenya, for instance (interviews, Kenya, November 2022). While this does not rule out the possibility of private or decentralized systems filling these gaps, the literature suggests that while taxation of small informal firms may not generate much revenue in the short term, it helps build a culture of tax compliance, offers greater access to credit, and increases equity by providing predictability as opposed to »arbitrary state and related racketeering action« (Joshi et al. 2014).

### 3.2.1 INFORMAL WASTE MANAGEMENT

An interesting sector to investigate regarding the implications of informal labor for JUT is waste management. Informal waste collectors are critical to plugging the gap in many countries of the Global South and play a significant – and often under-recognised – role in recycling. However, these jobs are often extremely poorly paid and hazardous due to a lack of proper safety equipment. Informality usually means wage insecurity and a lack of access to social protection, such as benefits in the event of injury and sickness, disability, maternity, unemployment, and old age. Exclusion from these systems was particularly damaging during COVID-19 when lockdowns affected the ability of workers to conduct their regular activities.

There are also important implications for gender equity. In Thailand, where there are around 1.5 million informal waste workers who may be responsible for up to 75 per cent of recycling in the country (Atichartakarn 2022), socio-economic inequities mean that women are more likely to pick through waste on foot, while men are more likely to own a cart or pickup truck which they use to collect recyclables. Women are also reluctant to work outside of daylight hours due to safety considerations. These limitations diminish the earning capacity of women waste workers, with one study finding that women earned an average of 6,090 THB per month (approximately 177 USD) compared to 8,067 THB (234 USD) for men (Archer & Adelina 2021). In Viet Nam, women informal workers earn as much as 50 per cent less than men (Le & Hung 2021).

Within the waste sector, the question remains as to whether formalization is optimal, both in terms of supporting workers and increasing the efficiency of recycling. Several countries around the world have been experimenting with models of formalization or semi-formalization, which include direct employment, enhanced collectivization through unions and associations, and partnerships between public, private, and informal bodies.

The city of Pune in India has established a hybrid system driven by informal workers which has managed to divert around 52 per cent of plastic waste from landfills (Moora & Barde 2019). In 1993, the city's informal waste workers formed a union called the Kach Patra Kashtakari Panchayat (KPKP) and advocated for their rights to dignity, safe working conditions, and livelihood security. As a result, Pune municipality authorized the KPKP to carry out primary waste collection services and became one of the first local governments in India to provide waste pickers with identity cards and health insurance (*ibid.*).

Informal waste workers in Thailand and Viet Nam, in contrast, have reservations about formalization due to the potential restrictions on the flexibility of their work and loss of earnings from taxation. Associative models have been used to support workers, for instance in the city of Quy Nhon, Viet Nam, a UNDP-GEF pilot project led by the Viet Nam Women's Union facilitated access to equipment

(bicycles and carts) and 0 per cent interest loans (UNDP 2022). In Thailand, the Saleng and Recycle Trader Association (SRTA) has been active in advocating for waste workers' interests, for example by organizing protests against the import of foreign waste which drives down local prices. However, informal workers in Thailand are not legally allowed to form a union, which restricts their collective bargaining power.

Despite the ability of the informal waste sector to maximize recycling outcomes with minimal resources, there are also barriers due to the fact that recycling still takes place in a market-based system. This means that less valuable materials are left behind in the mixed waste, which generally ends up in landfills. For example, colored plastic bottles cannot be melted down and reused in the same way clear bottles can and most UHT cartons cannot be recycled as they are made of composite materials. This puts the onus on governments to implement incentives, taxes, and fines to galvanize the recycling industry and limit production of single-use and difficult-to-recycle materials.

### KEY TAKEAWAYS

- Informal labor is prevalent across the Global South and has many implications for JUT. For example, despite informal waste workers playing a critical role in recycling, they often face difficult working conditions and lack access to social protection.
- There is no »one-size-fits-all« solution to labor formalization. Important steps to support workers within transition would be to recognize their contribution, implement measures to ensure coverage under social protection schemes and support collective bargaining efforts.
- The informal provision of basic services such as water and electricity in cases of inadequate state provision highlight safety and equity issues.

### 3.2.2 INFORMAL TRANSPORTATION

A strong example of labor formalization that is synergistic with low-carbon development is the Jeepney modernization program of the Philippines, which was driven by worker collectivization. Jeepneys – the ubiquitous form of public transport crafted from abandoned US army jeeps after World War II – are responsible for almost half of all trips in Metro Manila, with most drivers being independent operators. Jeepneys are efficient in terms of their carrying capacity, but as aged and diesel-powered vehicles, also highly polluting (Dobrusin 2022). In 2016, the Jeepney modernization program led by the government of the Philippines aimed to phase out 240,000 traditional Jeepneys and replace them with electric or cleaner engines, putting almost 500,000 jobs at risk (*ibid.*). In response, Jeepney operators from different unions called a national strike, demanding a just transition. Specific demands included a moratorium before phase-out to allow time for preparation and the provision of government financial assistance to enable operators to modernize (Dobrusin 2022; interviews, Philippines, Novem-

ber 2022). After the government made concessions to the unions' demands, Jeepney drivers formed a worker-run, collectively owned transportation model with a socialized profit system which has improved working conditions, provided higher incomes for workers, and lowered emissions (ibid.).

In response to the COVID-19 pandemic in which almost all Jeepney drivers lost their livelihoods and thousands of urban dwellers lost their primary mode of transport due to lockdowns, a coalition called »Move as One« was formed to invest in contracting services for Jeepneys as well as rolling out the creation of pedestrian walkways and separate bike lanes (WeSolve Foundation 2021; interviews, Philippines, November 2022). Move as One gained public support from over 140 civil society organizations, including healthcare workers, labor unionists, cycling groups, youth groups, and urban planners who all had an interest in improving transportation systems (ibid.). This broad coalition enabled the advancement of a more holistic, ambitious, and inclusive vision for transportation which has lowered emissions and improved mobility in the Philippines. Since 2020, the coalition has lobbied for more than 12.8 billion Philippine pesos (approximately 231 million US dollars) in public transport investments, including over 500 kilometers of bike lane networks in Metro Manila, Cebu, and Davao, and a service contracting system which consolidates secure working conditions and better wages for public transport workers (ibid.). Some of the remaining challenges in the Philippine transport system identified by members of the National Confederation of Transport Unions are the need to develop the domestic manufacturing industry to support EV production and lower costs for cooperatives (interviews, Philippines, November 2022).

Several other cities have made moves to accelerate EV transition for public transportation. For example, Nairobi is piloting EV-only bus corridors and Jakarta has announced the goal of introducing 14,000 electric busses into service by 2022 (Dobrusin 2022), both of which have gone hand-in-hand with promises of job creation. Similar schemes were introduced in Bogota, Colombia, but with less success than in the Philippines. Here, commentators report that the municipal government failed to engage with transport unions, communities, and traditional operators and ignored the demands of unions, instead placing responsibility for transition in the hands of private operators (ibid.). This has led to delays in implementation as private operators were unable to recruit the number of electric bus drivers needed, as well as the loss of around 6,000 jobs among traditional operators (ibid.). The International Transportation Workers Federation states that previous »transitions« have threatened livelihoods while prioritizing profit, with labor »inherently in conflict with reorganization plans because of pressure to subordinate worker interests to those of capital« (ibid.).

## KEY TAKEAWAYS

- Examples of EV transition underscore the importance of dialogue and mutual understanding between governments, workers, and communities in order

to develop inclusive and effective solutions.

- Coalitions which unite multiple stakeholder groups around common goals have vast potential to affect transformational change, as seen from the Move as One coalition in the Philippines.
- Undue focus on technological transition can obscure the needs of users and operators. This should serve as an important lesson for cities around the world aiming to bring in similar transitions in public transportation.

## 3.3. TRANSFORMING FORMAL SECTORS

The previous section examined the impact of transition on transportation workers and waste workers from the perspective of the formalization and modernization of informal systems. This section turns to the impact of transition on formal sectors. While the transformation of certain sectors will be inevitable for transition, the challenge will be how to ensure workers are not left behind.

*»Job losses are not an automatic consequence of climate policies, but the consequence of a lack of investment, social policies and anticipation«* (Rosemberg 2010).

### 3.3.1 DRIVING AN ELECTRIC FUTURE: THAILAND'S AUTOMOTIVE PARTS INDUSTRY

An example of a sector which is currently undergoing transition is Thailand's automotive parts industry, which accounts for around 5.8 per cent of the country's GDP and employs around 890,000 workers across 2,500 companies (Kulkolkarn 2019). While not directly in the urban realm, it still warrants attention due to the implications for urban transport. At a national level, Thailand has embraced the transition to EVs. Not only do EVs curb emissions from combustion engines, EV production is more efficient, requiring fewer parts, only 30 per cent of the manufacturing time needed for traditional vehicles, and less frequent servicing (Kulkolkarn 2019). This shift has important implications for combustion engine manufacturing companies and the workers they employ. It is estimated that around 37 per cent of workers in the supply chain will be affected by obsolescence, with the majority of these being young (under 39), low-wage, and low-skilled (ibid.). The most vulnerable are sub-contract or short-term workers (including foreign workers), as these will be laid off before permanent workers, and this group can constitute up to 60 per cent of a company's workforce, (ibid.). Small and medium-sized enterprises (SMEs) are more at risk than larger companies which can invest more in research and development and have greater capacity for product diversification (ibid.).

The Automobile Labour Congress of Thailand, which represents 94 labor unions, has fought for workers to be retained in the industry. However, the majority of firms are trying to reduce the number of workers they employ. In response, some large manufacturers are beginning to offer early retirement for older workers. For younger workers,



funds to support re-skilling or up-skilling are needed (either to work in the EV industry or for other types of employment), as are social protection plans for employment gaps (ibid.). It is critical that temporary workers are included in such schemes as they are currently falling through the cracks in the system.

EV transition does offer potential for new jobs, particularly highly skilled jobs such as electrical researchers, IT and software researchers, data analysts, engineers, jobs in advanced methods of production, including robotics, 3D printing, and automation, as well as jobs in associated services such as charging stations and electronic navigation systems (ibid.). The challenge will be how to integrate such skills into Thailand's education and vocational training curricula (Bank of Thailand 2021). A key step forward was taken with the establishment of the Automatic Human Resource Development Academy by Thailand's Ministry of Labor, in coordination with the private and university sectors, which offers courses in modern manufacturing.

*»The net effect is still unclear in terms of whether the transition towards electric vehicles will have more positive or more negative impacts on the labour market« (ibid.).*

Other types of technological transition are already well underway in Thailand, such as the introduction of ICT-supported ride-hailing services such as Grab. While these offer opportunities for urban employment, there have been conflicts with existing systems. One such conflict has been between Thailand's motorbike taxi drivers, who have to pay for permits to operate in certain areas, and drivers working for Grab, who have been able to circumvent these rules due to a lack of regulation of the service's operations. Therefore, there remains a need for policy regulations to catch up to the advances offered by technological transitions to ensure that they are fair.

As of February 2023, there were approximately 332,000 EVs registered in Thailand (Pattaya Mail 2023). While this is a small number compared to approximately 40 million traditional vehicles, it represents a sharp increase from the 1,933 EVs that were registered in 2019 (Kulkolkarn 2019), indicating that momentum is building. However, there will need to be careful and holistic planning around EV transition. For instance, if a lot of people charge their vehicles at the same time (overnight, for example), it will cause a spike in the grid. Additionally, EVs will not significantly counter GHG emissions if charging is still predominantly drawn from fossil-fuel based sources.

In Jordan, a similar shift has been underway, spurred by government tax incentives and lower operating costs for EVs due to high fuel prices (FES 2019). The growing EV sector has also enabled a new maintenance sector to flourish in the country (interviews, MENA region, May 2023). Deficiencies remain in terms of appropriate infrastructure, such as adequate rollout of charging stations – a challenge which is to be tackled as part of the Jordan National Vision to 2025.

## KEY TAKEAWAYS

- Certain workers are more vulnerable to negative impacts from transition than others. In the case of Thailand's automotive parts industry, these are young workers, low-skilled workers, and short-term workers. This is also a pattern which is likely to hold in other manufacturing industries.
- At the same time, a growing EV sector can open up many new employment opportunities – particularly highly skilled jobs in technology and engineering, as well as in the EV maintenance sector.
- Sectoral transition planning needs to be reflected in national-level planning, for instance with anticipated skill requirements being integrated into educational and vocational training curricula to cater to future labor market demands.
- EV transition requires careful and holistic planning with regard to grid connectivity and must be carried out alongside broader decarbonization of energy sources.

### 3.3.2 PROMISES AND PITFALLS OF DECENTRALIZED SOLAR ENERGY

Within the JUT discourse, there has been growing interest and investment in decentralized energy initiatives. Decentralized solar energy offers many benefits, including lowering carbon emissions, diversification of energy supply, cost savings for households and businesses, and job creation along the value chain through engineering, installation, and maintenance. At an urban level, decentralized solar energy has particular potential as photo-voltaic (PV) panels can be installed on the roofs of homes, businesses, and public buildings – capitalizing on disused urban space. From a justice angle, the call for decentralized energy, i.e. small-scale production, is also part of a deeper argument for redistributing the massive power held by large fossil fuel industries which is a major roadblock to transition. A 2019 study found that decentralized solar energy systems in Germany led to significant income redistribution in the energy sector as various stakeholders including municipalities, SMEs, and cooperatives could invest in clean energy (Almasri et al. 2019). Two examples of decentralized solar initiatives emerged from this study. The first was in Jordan, where policy and regulatory conditions have meant a bumpy road for rollout. The second is in Croatia, where an innovative energy cooperative is making inroads toward establishing an innovative model of citizen energy co-ownership which can support a locally driven JUT.

In Jordan, solar PV technologies have been rapidly expanding in recent years due to improved technology, decreasing costs, and legislative reforms, including a 2012 Renewable Energy and Efficiency Law which allowed individuals to sell output back to the grid. This has meant that Jordan now has an 11 per cent share of renewables in its energy mix and is among the top emerging markets for clean energy investment (Almasri et al. 2019). With many highly qualified engineers and environmental scientists, the Jordanian

labor market is well equipped to handle this transition (interviews, MENA region, February 2023). Interviews with Jordanian stakeholders (ibid.), however, revealed some major obstacles to the roll-out of decentralized solar energy. After an initial wave of uptake of PV thanks to a government incentive program and the high prices of oil and gas, the government later backtracked and updated the tariff for electricity, which made renewables much more expensive and led households to abandon the solar panels. Jordan has also encountered obstacles in incentivizing green building construction. At the municipal level, the city of Amman pointed out in a local review document that the city has limited control over the building sector, with codes and incentive structures being set at the national level. Despite the issuance of green building guidelines in 2014, these are voluntary and have a lack of penetration in Amman due to inadequate enforcement, meaning that growth of the market for green building has been slow (Greater Amman Municipality 2022).

Moving on to Croatia, around 70 per cent of electricity in the country is generated by hydroelectric, wind, and biomass, yet it remains one of the EU's worst performers when it comes to investment in solar energy, which accounted for less than one per cent of the energy mix in 2021 (Meyer 2023). This is due in part to a historical lack of government subsidies and disabling policy including the end of feed-in tariffs (designed to support the development of renewables by providing guaranteed above-market prices for producers) in 2014 which left the cost of renewable energy uncompetitive (ibid.; interviews, Croatia, February 2022). Despite this unfavorable policy environment, an initiative called Green Energy Cooperative (ZEZ) has been working at the grassroots level, engaging with local communities to create affordable, renewable energy systems.

A successful example is the town of Križevci, where in 2018, ZEZ supported 53 residents to invest just 500 euros each in a solar PV system on the roof of the local government building to be operated in partnership with the municipal government (ibid.). Two years later, the initiative developed into an official energy cooperative with a permanent staff of 11 citizens. The cooperative offers support for installing PV panels, contact with project engineers, options for co-financing, and contributes to the development of broader activities related to the town's transition, including electric cars, LED lighting, and green infrastructure (interviews, Croatia, February 2022). The initiative has also led to the creation of four new solar-related businesses with 15 employees (ibid.). A key lever in Križevci's transition was a progressive and proactive mayor who drove the initial engagement (ibid.). ZEZ also emphasizes the importance of building popular support and transforming attitudes, which can take time. With this in mind and in order to address the information gap, ZEZ has been running a campaign called »on the sunny side« providing free advice to households interested in installing solar PV panels and help getting in touch with certified solar technology companies.

In 2019, Croatia introduced a new renewable energy law which included new subsidies for solar energy and a system whereby the national power company pays consumers for up to 80 per cent of the surplus energy generated by solar initiatives (Meyer 2023). Sparked by the energy insecurity caused by the war in Ukraine and rising energy prices on one hand, and the new supportive policy environment on the other, decentralized solar is now rapidly growing in popularity meaning that the energy cooperative model has strong potential to scale (ibid.). Barriers to achieving this which emerged from interviews (February 2023) include a lack of collaboration between cities, which is partly influenced by where the city governments lie on the political spectrum and the classification of cooperatives in Croatia as limited liability companies, which means that if workers lose their jobs, they cannot access social security benefits.

## KEY TAKEAWAYS

- Decentralized solar systems offer a clean energy source that can make use of disused urban space. They also offer many co-benefits including diversification of energy supply, cost savings for households and businesses, job creation along the value chain, and redistribution of power held by large fossil fuel companies.
- Examples of rollout of solar systems in Jordan and Croatia show the existence (or lack of) favorable policy environments, including provision of incentives and subsidies are a major factor in broad adoption. However, voluntary guidelines such as those developed for green buildings in Jordan may not be sufficient.
- Progressive local leadership and information campaigns have had a positive impact on uptake of solar systems in Croatia, while lack of collaboration between cities remains a barrier to broader scaling.

## 3.4 EMERGING GREEN JOBS

In addition to the public transportation sector and decentralized solar energy systems addressed in the previous sections, examples of new green sectors in cities include post-consumer recycling and upcycling industries, waste-to-energy, green buildings, nature-based urban design, urban agriculture, and other forms of decentralized renewable energy such as geothermal building energy. This section will discuss some examples of green economy policies at the national level as well as some grassroots examples.

### 3.4.1 POLICY STRATEGIES FOR GREEN JOBS

The European Commission estimates that transition could create around one million new green jobs in the EU by 2030 and two million additional jobs by 2050, particularly »middle skilled, middle paying jobs in construction and manufacturing« (European Commission 2021). An initiative of the EU's European Regional Development Fund called Urban Innovative Actions has been supporting 86 city projects to test innovative solutions for JUT with a focus on the



»green renewal of the job market«. Examples of initiatives include a project called MARES implemented in Madrid, Spain, which focuses on four strategic sectors: mobility, food, recycling and energy, and the social and care economy with activities including recovery of abandoned or disused common areas for new productive activities, awareness raising and training for citizen groups, and support for the unemployed and those at risk of social exclusion.

Jordan's Green Growth Action Plan (2017) sets out the country's commitment to transition to a green economy, identifying six priority growth sectors: energy, water, agriculture, tourism, and transport, which are linked to job creation. In the urban realm, the plan proposes a »smart urban cluster« accompanied by flagship initiatives including electric vehicles (to be powered by rooftop solar PV and biogas from landfills and wastewater), alongside bus rapid transit, public parks, and sanitary landfill. Barriers that have been identified include lack of adequate financing mechanisms, »short-termism« in planning, and a lack of enforcement of legislation (Ministry of Environment 2017).

In Thailand, a model called Bio-Circular Green Economy (BCG) is being promoted as a national agenda for 2021–2026, focusing on four key industries: agriculture and food, medical and wellness, bioenergy (such as fuel from farm products), biomaterial (such as bioplastics) and biochemical, and tourism and creative economies, with a total investment of 23 billion US dollars. Despite the emphasis on sustainable use of natural resources, upskilling the workforce, develop-

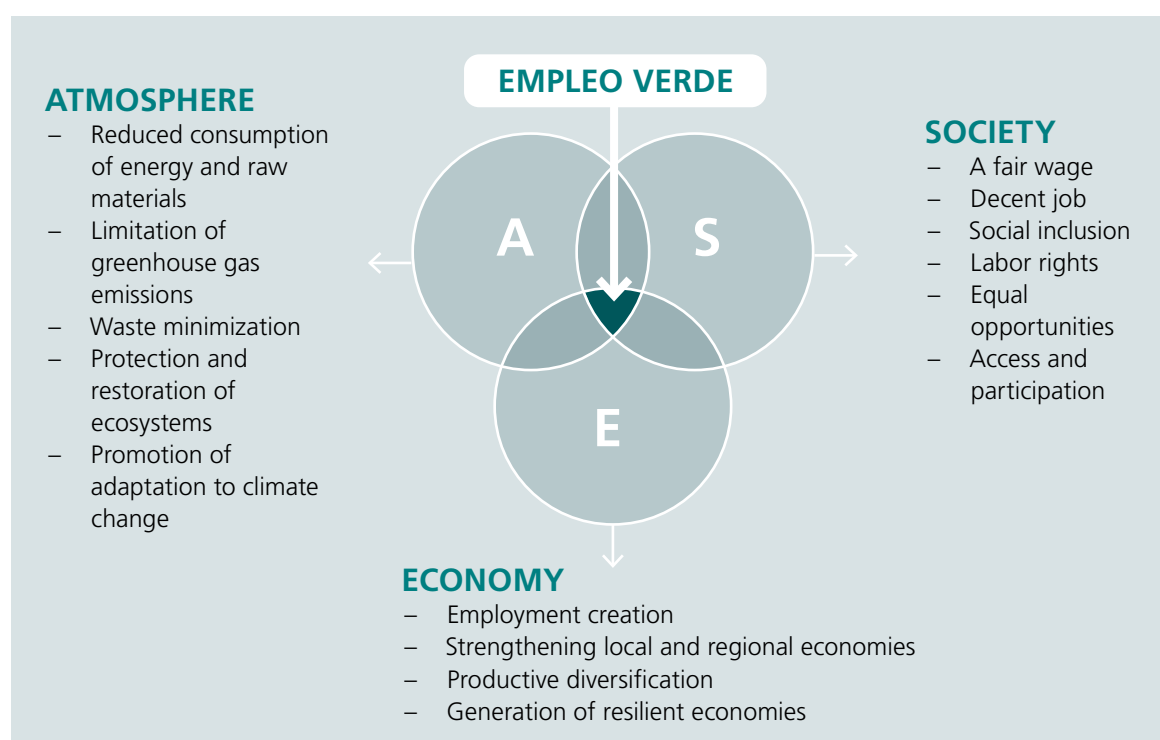
ing new green job opportunities, and supporting local startups, there has been criticism of the model. First, it has been linked to the interests of large corporations with adverse impacts on local communities, for instance plantations for carbon credit trading or large-scale farming might create conflict with smallholder farmers (Thai PBS World 2022). Second, it has been argued that the model's overemphasis on technological solutions such as bioplastics neglects the root causes of unsustainable consumption and inadequate waste management which leads to pollution in the first place. For instance, many bioplastics require industrial facilities to break them down and they cannot be sold to recycling companies for profit and are therefore not collected by informal workers. These criticisms should serve as important an important lesson for the region, as the BCG model gains traction, being formally endorsed by the Asia-Pacific Economic Cooperation (APEC) member countries in November 2022. When the model was endorsed, there were protests by young people and farmers in Bangkok, concerned that the model would lead to requisitioning of land (Banerjee 2022).

### 3.4.2 LOCAL GREEN JOBS

In Argentina, the organization Red Argentina de Municipios frente al Cambio Climático (RAMCC) (Argentine network of municipalities facing climate change) has been supporting a very different model of green job creation, under the »local green jobs« initiative. As shown in Figure 1, the model, now rolled out in 62 municipalities, and among 473 »green entrepreneurs« is supported by the three pillars of

Figure 1

#### Three pillars of green jobs



Source: RAMCC

climate, society, and economy. According to the organization's vision, local green jobs are defined as those that preserve the environment through sustainable production models while strengthening local and regional economies and generating decent work and social inclusion. Businesses can earn a »green job badge« if they comply in a substantive way with each of the three pillars (interviews, Argentina, January 2023). Enterprises cover a range of sectors, including sustainable food systems that do not use chemical inputs for production and that implement circular production techniques, and eco-design businesses that utilize waste products for a variety of products, including textiles and homeware. An interesting finding from this initiative is that smaller cities have been the ones leading the way in defining and supporting green jobs as these have potential to drive the local economy (ibid.). Unlike Thailand's BCG strategy, RAMCC's local green jobs model offers a bottom-up pathway which places social concerns and local economic contexts at the forefront to ensure that transition benefits people and the environment.

### 3.4.3 BANGKOK ROOFTOP FARMING

A strong example of a nascent green industry is provided by a social enterprise in Thailand called Bangkok Rooftop Farming (BRF). While urban agriculture initiatives are not new, with allotment gardens common in cities across Europe, for instance, it is less common for these to be revenue generating. Constraints include a lack of space, zoning regulations, and health and safety requirements for food production. BRF's model attempts to connect actors across the value chain and make use of »empty« space on disused rooftop areas (interviews, Thailand, February 2022). The enterprise collects food waste from the food court of the shopping mall in the lower floors of the building they occupy and uses this to create compost which is then used for

growing vegetables for local distribution (ibid.). The initiative needed an investment of just 50,000 Thai baht per year (approximately 1,440 US dollars), growing to 100,000 Thai baht (2,880 US dollars) in subsequent years and taking just three years to recover the initial capital costs (ibid.).

Although BRF only employs four full-time staff, it has a further 19 farms planned and is in talks with larger businesses, such as cafes, restaurants, and supermarkets, as both suppliers of food waste and buyers of vegetables (ibid.). This model, which combines the concept of the circular economy and social enterprise, helps to cut food and, at scale, could create a range of jobs, including in agriculture, operations, logistics, and delivery. It also has the potential to improve food security, social equity, carbon emissions, and climate resilience by increasing consumption of locally produced and seasonal food and shortening supply chains. When asked about the most important factor for scaling the model, BRF emphasized the need to change attitudes in Thailand so that people no longer »feel scared of soil and insects« (ibid.). Urban agriculture not only represents a transformative approach to food systems under JUT, but also offers the potential to restore people's connection to food production, which has been eroded by industrialized production and urban living. It is these changes in attitude which will be key to creating and sustaining the societal shift toward circular approaches.

To conclude this section, despite revealing some successful examples, this study has found a lack of systematic definition of what green jobs could be at the urban level, particularly in cities of the Global South. This is reflected in significant gaps in the literature, with, for instance, a new 268-page publication on Decent Work in Nature-Based Solutions (ILO et al. 2022) only making passing reference to potential urban jobs and providing very few tangible examples – and notably all of them were supported by international development programs.

### KEY MESSAGES

- There is a lack of systematic definition of green jobs or sectors at the urban level. Further attention should be paid to this gap as well as the integration of strategies for green job creation into municipal and local planning.
- Examples of green jobs at the urban level which could be further promoted include urban agriculture, rooftop solar PV, EV maintenance, green buildings, bioenergy, eco-design, and the recycling and upcycling value chain.
- Strategies for green job creation need to place social equity at the forefront to ensure that transition benefits both people and the environment and does not exacerbate existing injustice.

Figure 2

#### »Wastevegetable« – a Bangkok Rooftop Farming initiative



## 4

## GOVERNING TRANSITION

»Transition« is a dynamic process, and each city context and thematic area explored in this study has exemplified different modalities of making that change happen – with varying degrees of success. These have included top-down policy levers for renewable energy initiatives in Jordan and Croatia which proved to be critical in enabling (or preventing) uptake; far-reaching success from the worker-led Jeepney cooperative and Move as One coalition in the Philippines; and the gradual development of community-level engagement as part of the Green Energy Cooperatives in Croatia.

Combining insights from the interviews with examples from the broader literature, this section examines some mechanisms and levers for change from multiple entry points: policy levers, market-based approaches, decentralization, and civil society movements – in each case highlighting some potential opportunities and drawbacks for JUT. A key barrier, particularly at the municipal and local level remains financing gaps, meaning that creating innovative mechanisms and expanding partnerships will be key to affording transition – particularly in developing city contexts.

### 4.1 TRANSNATIONAL AND SUPRANATIONAL COOPERATION

Transnational municipal networks (TMNs) such as C40 Cities, ICLEI – Local Governments for Sustainability, and 100 Resilient Cities have been important players in the provision of funding for urban initiatives and as knowledge brokers facilitating cross-city learning. At the same time, there has been criticism of the organizations' piecemeal approach to addressing social inequality and justice, as well as the strategic agendas behind such organizations (Fitzgibbons & Mitchell 2019; Nielsen & Papin 2021). For example, in the Rockefeller Foundation's 100 Resilient Cities initiative, corporate practices and public-private partnerships play a significant role and there appear to be few strategies offering marginalized residents an opportunity to identify their own needs and priorities (Nielsen & Papin 2021). Accordingly, while TMNs can be an important resource for municipalities, and moves toward more multilevel or hybrid governance structures may be able to support JUT through the incorporation of a broader range of actors, this must be done within a frame of equity, inclusion, and democratic process, which can be threatened by undue transfer of power from the public to the private realm.

There are also regional or »supranational« initiatives, such as the numerous EU-focused policies and financing mechanisms for transition. The European Green Deal, launched in 2020, aims to reduce carbon emissions by 55 per cent by 2030 compared to 1990 levels and decouple economic growth from resource use, while leaving no-one and no place behind (European Commission n. d.). Within the European Green Deal, a notable subcomponent is the recently established EU Social Climate Fund, which, from 2026, will provide funding to member states to support vulnerable European citizens through investments in energy efficiency and renovation of buildings, clean heating and cooling, and the integration of renewable energy, provision of direct income support for vulnerable households and financing for zero and low-emission mobility. The fund also includes EU-wide support for a fair distribution of efforts between member countries, for instance a modernization fund to support 12 lower-income EU member states in their clean energy transition (European Commission 2021). There can be issues with the reach of such initiatives, however. Interviews with the Green Energy Cooperative in Križevci, Croatia (February 2023) showed that »small cities are forgotten in big investments« like those granted by the EU. The Social Climate Fund constitutes a strong opportunity to address these concerns by focusing on a just transition on a broad scale and ensuring that investments target the states and households that need it the most.

### 4.2 POLICY MECHANISMS AND PRIVATE SECTOR ENGAGEMENT

#### 4.2.1 GREEN BUILDING INCENTIVES

In the previous section, it was found that Jordan's voluntary green building guidelines were insufficient in fueling broad uptake. Examples of schemes which have had greater success include Singapore's Green Mark Incentive Scheme which was launched in 2005 to increase the adoption of green building technologies and design practices, in recognition of the fact that Singapore's buildings are responsible for more than 30 per cent of the total energy consumed by the city-state (Open to Export n. d.). Under the scheme, existing building owners and developers can access grants, financing support, and other incentives to improve energy efficiency. The scheme has worked well with 25 per cent of Singapore's buildings having been greened since the start

of the scheme (Building and Construction Authority, Singapore n.d.).

A similar scheme was launched in Bangkok. The city's Comprehensive Plan (2013) includes restrictions on floor area ratios (FAR) for developments, with the maximum FAR being 10:1, but bonuses of up to 20 per cent are available if certain features are included in the building design, including green space and stormwater storage. Developers can also participate in the Thai Green Building Institute certification program. Compared to Singapore's Green Mark, Bangkok's scheme extends the focus from energy to more comprehensive green design, and also includes incentives for developers who provide low-income housing. Making sure that green design is also applied to low-income housing will be key in ensuring that the scheme results in better urban living and reduced costs for all, not just aesthetic features for the wealthy.

#### 4.2.2 EXTENDED PRODUCER RESPONSIBILITY

In the last two decades, several countries have introduced extended producer responsibility (EPR) – a mechanism premised on »polluter pays« principles, whereby manufacturers are held responsible for the environmental impacts of products throughout their life cycle. This covers a range of steps from resource extraction to recycling, reuse, and disposal. In a review of EPR implementation in 27 cases across the world, Gupt and Sahay (2015) find it to be an efficient policy tool, yet for effective implementation, a country requires strong regulation and regulation of the informal sector. Thailand is in the process of drafting EPR legislation which aims to provide informal workers with livelihood opportunities, although the modalities of doing so are as yet undefined (Vassanadumrongdee & Manomaivibool 2022). In Malaysia, Petaling Jaya City Council has partnered with Nestlé to introduce a door-to-door waste collection and recycling programme as a voluntary EPR scheme which serves as a funding mechanism. While the scheme has enjoyed success, it is worth noting that so far, it has only targeted upper- and middle-class gated communities which are not currently served by the city's extensive network of informal collectors as the latter are barred from entering (UNEP & COBSEA 2021). Therefore, any scaling must include informal collectors so as to protect their livelihoods, which may also be a »win-win« solution as the social infrastructure for waste collection already exists.

#### 4.2.3 GREEN PUBLIC PROCUREMENT

Looking to the public sector, Green Public Procurement (GPP) is another modality of scaling low-carbon technologies which has been receiving increased attention. Since governments are often the largest purchasers of products and services in their countries, their procurement decisions can have significant market impact. For some time already, public procurement has been used to promote socio-economic objectives, for instance to redress gender inequities through the active engagement of women-owned businesses. In the United States, an act was passed in 2000 authorizing fed-

eral procuring entities to reserve procurement for competition among women-owned small businesses in industries in which women are underrepresented, such as hardware manufacturing (Chin 2017).

This can be a powerful tool for the achievement of cities' JUT goals. For example, with its 2010 Berlin Public Procurement Act, Germany's capital has established minimum environmental criteria for the acquisition of certain products. This has allowed municipal bodies to become a driving force behind sustainable practices across various product types, including office materials, vehicles, large events, and the recycling of commercial waste. A 2016 study found that across the 15 product groups considered, Berlin managed to cut its emissions by 47 per cent compared to conventional products, and also cut costs by 3.8 per cent, equating to 38 million euros per year (Ecolinstitut 2017). Despite Berlin's success, a recent report which examined GPP in the EU found that even with a »flourishing list of tools, criteria and good examples«, GPP is not deployed in a focused and consistent manner, and with the scale required to fully harness decarbonization potential (Nilsson Lewis et al. 2023).

#### 4.2.4 CARBON OFFSETTING AND CORPORATE SOCIAL RESPONSIBILITY

Lastly, another modality for shifting operational practices toward sustainability stems from market regulator and private companies. Sustainable business practices can take various forms, such as mandatory or voluntary reporting on environmental (e.g. GHG accounting and reporting), social (e.g. equal remuneration policy), and governance (issues across a company's value chain (widely known as ESG reporting)). Companies can also engage in project-based social or philanthropic activities typically known as corporate social responsibility (CSR). However, a more recent business strategy dubbed »creating shared values« (CSV) may hold more opportunities for JUT as it promotes synergy between profitability and societal needs (shared value).

One example of this comes from Argentina, where the Argentine network RAMCC has been working with over 50 companies to measure, reduce, and offset their carbon emissions. Once the assessment is complete, the companies will receive a carbon footprint »seal« in recognition of the steps they are taking and this can be leveraged as part of their marketing strategy. The network works with a range of companies, including clothing companies, hotels, restaurants, press and print media organizations, energy providers, banks, and post-consumer recycling organizations, among others. Part of the money paid for the services is then reinvested into »triple impact« projects, i.e. projects which focus on environmental sustainability, social equity, and decent jobs. For example, the initiative has supported the provision of community biodigesters in the municipality of Carmen de Patagones, the development of a multifunctional green space and afforestation in Roque Saenz Peña, and a decentralized solar scheme for a community center in San Martín de los Andes.

The triple impact, or CSV model, is promising, particularly as it offers an innovative financing model for JUT and provides opportunities for strengthened collaboration between the private and public sectors. Nevertheless, there is serious criticism of carbon offsetting and CSR approaches, largely due to the premise that businesses can continue with their poor environmental and social practices as they are absolved by compensating in other ways. There is also pertinent criticism of carbon footprint approaches, for instance from Huber (2022), who argues the model interprets emissions as the result of billions of individual decisions, such as to drive a car, and assigns personal responsibility for climate change with a focus on consumer choices. Huber argues that this argument is flawed due to an assumption that producers are »captive to the demands of consumers« rather than production actively shaping and profiting from consumption. Huber makes the important point that the origins of the carbon footprint concept came from multinational oil and gas company BP as part of a 100 million »beyond petroleum« campaign which served to shift responsibility away from the fossil fuel industry and onto consumers (ibid.: 14).

### 4.3 LEVERS FOR CHANGE

As emphasized throughout this document, JUT should not be viewed as an incremental approach, but rather one which is urgent and transformational in its ambition. The previous section examined mechanisms of transition, but under the assumption that governments and societies actually want to change. However, this study has found that municipal governments and communities can in fact be reluctant or opposed to low-carbon development, either due to vested interests (in the case of energy utilities or right-leaning governments) or due to communities not seeing the relevance of the movement in terms of how low-carbon futures can actually benefit them (interviews, Croatia, February 2023). The following section examines some specific entry points for changemaking that emerged from the study.

#### 4.3.1 POLITICAL LEADERSHIP

One of the main challenges for JUT will be how transition can take place against a backdrop of institutional and societal inertia. In Križevci, the foresight and leadership of the mayor was a key factor in persuading the community to support and work with ZEZ to establish the energy cooperative. On a larger scale, in Zagreb, Croatia, there is an excellent opportunity for transformative change thanks to the election of a left-wing green coalition *Možemo! (We Can!)* in the mayoral and city assembly elections in 2021, with environmental activist Tomislav Tomašević being appointed mayor. The coalition has focused on social investment in over 300 public institutions, including schools, kindergartens, nursing institutions and hospitals, public housing, new tram and bus routes, a rooftop solar scheme for public buildings and a restructuring of the city's utility and service company – returning operations, some of which, such as waste management, had previously been outsourced to private companies – to the public sphere (Medak 2022).

This green-left coalition remains relatively unique, providing an opportunity to demonstrate how low-carbon development can synergize with socialist policies. Despite strong progress, the movement faces inevitable struggles including limited financial resources, a lack of trust in government due to historical corruption problems, inadequate public sector capacity, and political conflict, including at the national level where the center-right Croatian Democratic Union holds the majority. The Croatian Democratic Union has been criticized for its involvement in gas speculation through the former national oil company in which the Croatian government still owns a 45 per cent stake (Medak 2022). This presents a significant barrier to transition.

From a gendered perspective, boosting women's leadership at every step of transition policymaking, from formulation to implementation to monitoring and evaluation, as well as clear and systematic integration into existing policy mechanisms, such as nationally determined contributions (NDCs) and national adaptation plans (NAPs), will be critical in addressing existing systemic barriers to justice (ILO 2022).

#### 4.3.2 DECENTRALIZATION

Another entry point for change is decentralized systems. On the one hand, this involves the redistribution of power away from large corporations and into the hands of small businesses and communities, such as in the cases of decentralized renewables and local food production. Another key theme which emerged in this study is the importance of decentralized governance at the municipal scale. There is broad consensus that in order to enact effective change, national governments need to grant municipal governments enough autonomy, both in terms of budgets and decision-making power (UN-Habitat 2021). Many are under-resourced, lacking financial resources and capacity. More specifically, city leadership is crucial in transition processes. In Croatia, despite the fact that over 60 per cent of the measures in the European Green Deal should be implemented at the local level, the local authorities were not consulted in the process (interviews, Croatia, February 2023). This has resulted in a lack of buy-in and capacity, and consequently, sporadic and ineffective implementation. This lack of municipal empowerment is a challenge which was echoed in interviews with stakeholders from the MENA region as a obstacle to translating policy into action at the local level.

In Argentina, RAMCC observed that nationally determined contributions (NDCs) can help countries define their policies and targets for lowering emissions at a national level, but these do not effectively filter down to municipalities at the local level. This led RAMCC to start working directly with municipalities to support their climate planning. They did this by means of carbon emission inventories and analysis to devise targeted strategies. The network found two things: first, that the program had a snowball effect whereby the climate actions of leaders in certain municipalities led other municipalities to follow suit. Second, the program generated a wealth of concrete ground-level data, which



could then be fed back to the national level to enable smarter decision-making which is more responsive to local needs, aspirations, and capacity – as opposed to municipal actors simply complying with top-down policies, leading to piecemeal outcomes and potential maladaptation, or »mal-mitigation«. A similar approach was taken in Jordan with municipalities at different scales preparing Local Climate Action Plans as part of a community-driven initiative to carry out cross-sectoral emissions inventories and set contextually appropriate mitigation and adaptation goals (Ministry of Local Administration 2020).

### 4.3.3 COLLECTIVE BARGAINING, PARTICIPATION, AND COPRODUCTION

The Move as One coalition in the Philippines clearly exemplifies the power of collective bargaining and bottom-up change through building partnerships between workers and a range of other stakeholder groups to demand a more effective, fairer, and greener public transport system. In terms of the broader replicability of such an approach, it is worth noting that self-organization does not take place in a vacuum (Visser et al. 2021). On the one hand, governments may actively stimulate citizen engagement by creating »inviting spaces« which encourage participation in urban planning and service delivery. Participation can vary from token representation, which may not actually entail real power sharing, to coproduction approaches, which enable stakeholders to set their own agenda and implement it (see Table 2). Citizen/worker-led action can also arise through resistance, i. e., via protest movements, strikes, and disruptive action, as seen in the initial Jeepney drivers’ protests.

The concept of coproduction, which was developed by urban researchers (Ostrom 1996; Warren et al. 1984) to help understand the inequities of the centralized top-down approach to urban service delivery, can serve as a transformative approach to deliver JUT, as it can help eliminate drivers of injustice by engaging many different groups to deliver a shared outcome. In a review of coproduction practices in six cities, Castán Broto et al. (2022) found that the approach can support progress toward equitable distribution of resources and services, the reciprocal recognition of communities and institutions, access to political and decision-making processes, and the recognition of multiple forms of knowledge and perspectives. However, they also found that the outcomes of the process varied greatly meaning that coproduction is not easy to predict and may require an iterative change process. In many contexts, structures for co-creation are not sufficiently developed, especially in cases where top-down approaches are dominant. One example of a difficult path to inclusion can be found in the MENA region, where interviews (February 2023) highlighted that because civil society organizations are usually excluded from decision-making, they are also unaware of certain key details which are necessary for negotiation. Therefore, even when civil society actors are allowed to take part, they are uninformed which makes it easier to dismiss their opinions. The challenge is thus not just who gets a seat at the table, but also whether they can genuinely participate.

Table 2

#### Spectrum of participation in urban planning and service delivery

Form	What »participation« means to the implementing agency	What »participation« means for those involved
Nominal	Legitimization to show it is doing something, pre-empt opposition	Inclusion, in the hope of gaining access to potential collective or individual benefits
Consultative	Better informed decision making with no loss of control	Policies and plans that are more appropriate, but with no guarantee of the outcomes of consultations are taken into account
Instrumental	Efficiency, to draw on beneficiaries’ resources, increase cost effectiveness, and improve the prospects for successful operation and maintenance	Access to facilities and services that are normally provided only to those that can afford to pay
Representative	Sustainability, established systems are used for the expression of voice, improving responsiveness and ensuring accountability, provides a means of organizing and aggregating different views	Leverage, direct or indirect influence
Transformative	Partnership with non-governmental actors; collaborative decision-making and implementation	Joint analysis and development of plans; empowerment to enable people to define objectives, make their own decisions, control resources and take action

Source: UN-Habitat 2009

## 5

## A CONCEPTUAL FRAMEWORK FOR JUST URBAN TRANSITION AND LABOR

Drawing the findings from the previous sections together, this section proposes some key principles and recommendations for modalities of urban development that create synergies between social equity, decarbonization, and decent work.

The most important and overarching consideration for JUT is that the movement is a deeply political one. Proponents of JUT must ensure that it is not co-opted by actors seeking to perpetuate or optimize the status quo. For instance, certain »smart city« and »global city« narratives delink the concept of transition from workers, instead placing focus on the role of the technological shift and private influence. The »just city« can encompass the smart city – provided that smart city agendas are premised on principles of justice. The principles of justice outlined in Section 2.2 can help to create a deeper engagement with the political, institutional, social, and economic forces that shape urban trajectories, to understand who are the winners and losers in transitions, and identify the policies and processes best placed to create and support new urban visions (Dobrusin 2022; Hughes & Hoffmann 2020). Ultimately, JUT is about the transformation of power relations: both the power of

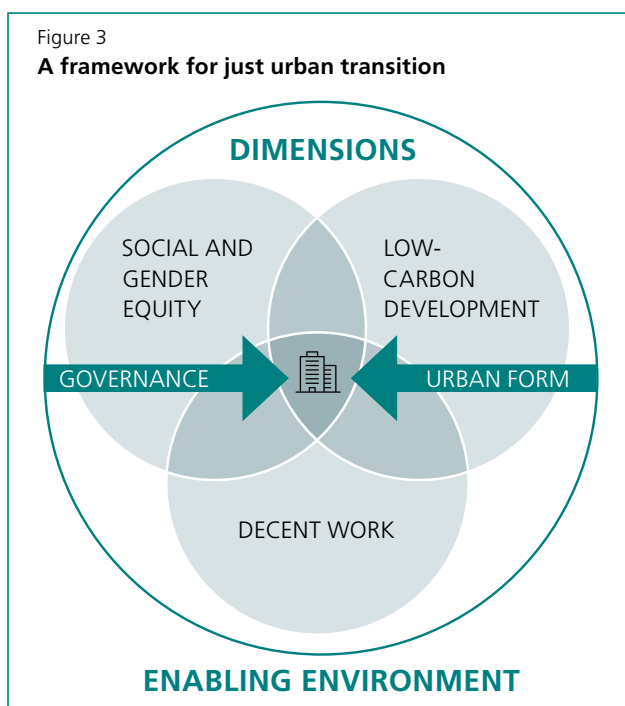
workers over the means of production and the power of urban residents over the production of space. These two processes can and should work in tandem.

Finally, drawing on the arguments of Huber (2022), certain narratives of transition which are centered on reducing individual consumption and which place responsibility for the climate crisis on individual lifestyle choices may in fact undermine JUT, as what has been dubbed the »politics of less« has little resonance for the majority of people already living in precarious and insecure conditions. Rather, JUT need to assert a »politics of more« that shows how much we have to gain from transition in terms of improving quality of life and economic security. These benefits include, for example, reduced energy costs, improved mobility, increased quality and quantity of green jobs, strengthened public services and social security, and increased gender and social equity.

Figure 3 graphically represents the dimensions of JUT and the processes which shape it. A just urban transition requires synergy between all three dimensions – one goal should not undermine the other. While these three aspects do not significantly deviate from the urban sustainability frameworks examined in Section 2.1, the typically used term of »economy« has been replaced by »decent work« to place the emphasis on workers as the individuals who make up economic systems and who stand to gain or lose most from economic systems. Principles of decent work also need to take into account different types of work, such as in formal labor and unpaid care burdens which are disproportionately borne by women.

In terms of the processes, governance and urban form have been framed as the enabling environment for JUT. Urban form anchors the just transition discourse in processes of built space and placemaking. Conceptualizing urban form as a process rather than a pillar points to its dynamic nature, which both shapes and is shaped by top-down planning as well as socioeconomic and historical shifts. Governance as a process is the mechanism through which transition takes place, which includes operationalization of rights, responsibilities, and the ability to participate in decision-making – for people of all genders and social groups.

As mentioned in Section 2.1, there are many framings of justice which can usefully contribute to articulating the JUT concept, including RTTC, Eigenart, principles of environmen-



tal justice, and rights-based approaches. In our analysis, we also find many interconnections between the different approaches. The following is a brief summary of these framings:

1. Urban dwellers should be able to use their rights to create and utilize urban space according to diverse needs and identities.
2. Urban dwellers should be able to participate in decision-making and planning processes on an equal basis.
3. Ensuring these principles will require recognizing and redressing social, cultural, and institutional processes and structures which cause inequality.

## 5.1 RECOMMENDATIONS

Following from this overarching framework, this section sets out high-level recommendations to guide the development of JUT agendas along three overarching goals: creating inclusive spaces, holistic urban planning, and advancing systems change. These recommendations are targeted primarily at local, national and municipal governments, civil society organizations, trade unions, and development organizations.

### CREATING INCLUSIVE SPACES

- A just urban transition needs to begin with an analysis of power relations, including who has the power to access and appropriate space in the city. Moves toward a deeper democratization of urban governance through processes of coproduction can ensure that development plans create inclusive urban spaces that reflect the diverse needs and aspirations of urban dwellers, aligning with the principles of Eigenart and RTTC. This process is likely to be iterative and involve the gradual development of bottom-up power.
- Informal systems of labor are widespread across cities of the Global South. Recognition needs to be given to the services these workers provide and the contribution they make – such as in the case of informal waste workers in Thailand and Viet Nam. To ensure that informal labour is decent work, there need to be provisions for safety and social security.
- Including specific gender and social equity policies into transition plans will be critical. Without this, drivers of inequity, such as occupational gender stereotypes, are likely to persist, preventing women and other groups facing discrimination along racial, ethnic, socioeconomic, and other lines, from benefitting from the emerging green economy.

### HOLISTIC URBAN PLANNING

- Urban planning which promotes compact and mixed-use urban areas following »15-minute city«

models could increase equitable access to jobs, services, and amenities while reducing carbon-intensive development, increasing resource and energy efficiency, reducing dependency on private vehicle usage, and enhancing social cohesion.

- Urban challenges need to be considered and planned for holistically. For instance, while EV transitions hold promise for decarbonization, they will not reduce private car ownership. Increased rates of EV car ownership will not reduce congestion or net emissions if charging continues to draw on fossil-based energy sources.
- Empowering civil society actors and municipalities can create locally appropriate solutions which can in turn inform higher-quality decision-making at the national scale.

### ADVANCING SYSTEMS CHANGE

- The study underscored the fundamental relationship between neoliberal capitalism, the climate crisis, and social injustice. Articulating and advancing more equitable and environmentally sustainable economic models will be needed. Several examples emerged from the study, including social business and cooperative approaches which capitalize on social and environmental synergies and channel profits back into communities.
- Transformation is a process which will require action across all segments of society. It requires policy leadership, bottom-up societal shifts, civil society movements, and critically, coalitions and collective bargaining from these segments. Building unity around common concerns vertically (from the national, municipal, and local level), horizontally (across sectors and stakeholder groups), and geographically (between cities, regions, and countries) should be a priority.
- Policy mechanisms such as GPP, green building incentives, CSV, and EPR could be explored at the municipality level, but it will be essential to maintain a critical perspective on flimsy CSR and offsetting approaches which can perpetuate poor practices including carbon-intensive and socially unjust modes of production.
- All of these actions will require focusing on the narrative of JUT and what it has to offer. Specifically, a »politics of more« should be advanced, which includes fairer systems and a material improvement in people's lives. Clearer definition urban green jobs as well as ways of ensuring the labor force has the skills to do them could be a key entry point to demonstrate the synergistic potential of JUT.



# 6

## CONCLUSION

This study has offered insights into the implications of just urban transition and shifting labor patterns, drawing on examples and knowledge from FES country offices and key partners in Asia, Africa, the MENA region, Latin America, and Europe. Key principles and recommendations to guide urban stakeholders in advancing JUT agendas have been defined with an emphasis on transforming power relations and economic structures which perpetuate the climate crisis and social inequity at a foundational level. Specific pathways to JUT, including goals and indicators, will be highly context dependent and should be driven and defined by local actors. These principles provide an initial starting point to guide implementation and a basis for further conversation among diverse urban stakeholders.

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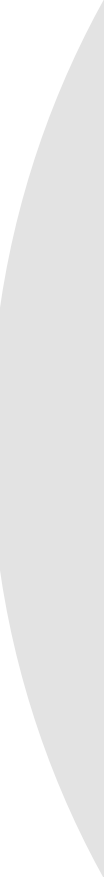
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# JUST URBAN TRANSITION AND LABOR

## Transformative Visions for a Low-Carbon Future



This study investigates enabling and disabling factors for low-carbon transition in cities and the implications of these shifts on social equity and inclusion. It does so by examining tangible examples from different cities around the world and drawing out modalities of development which create synergies between social equity and poverty reduction, drastic reduction of GHG emissions, and decent work. Themes explored in this study include built space and urban form, public transportation, decentralized energy, and the implications of the informal systems which are prevalent in cities of the Global South.

A key finding of the study is the importance of density. For example, »15-minute city« models of urbanism could increase equitable access to jobs, services, and amenities and sup-



port vibrant, community-centric spaces while reducing emissions due to a decreased need for private vehicles.

We also find a lack of systematic identification of »green jobs« and sectors at the urban level.

Addressing this gap could help cities to simultaneously improve urban livability, reduce emissions and improve people's material standards of living, as long as green jobs are also decent jobs.

Lastly, we find an undue focus on technological transition which can obscure local needs and undermine the goals of just transition. For example, while electric vehicle rollout holds promise for decarbonization, it will not reduce private vehicle ownership, congestion, or net emissions if charging contin-



ues to draw on fossil-based energy sources.

In line with this critique, there is a risk that certain dominant narratives of urban development such as the »smart city« might depoliticize the concept of transition. We argue that the »just city« can encompass the smart city – provided that these agendas are premised on principles of justice.

In terms of guiding principles for cities to enact just transition, we argue urban dwellers should have the right to create and utilize urban space according to diverse needs and to participate in decision-making and planning processes in a meaningful way. Ensuring these principles will require recognizing and redressing social, cultural, and institutional processes and structures which cause inequality in the first place.

Further information on the topic can be found here:

[www.fes.de/en/shaping-a-just-world/climate-change-energy-and-environment](http://www.fes.de/en/shaping-a-just-world/climate-change-energy-and-environment)