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Introduction

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In its 2022 report, the Intergovernmental Panel on Climate Change (IPCC) spelled out the scale of the impact of human activity on the climate - and the dire consequences of climate change. The report underlined the need to implement immediate effective solutions (IPCC, 2022). For European policymakers, making Europe the first climate-neutral bloc in the world by 2050 is now an explicit policy ambition in line with Europe's commitments under: <u>the Paris Agreement on Climate</u>, the European Green Deal, the United Nations (UN) Sustainable Development Goals, and <u>the Glasgow Climate Pact</u> at the 26th Conference of the Parties.



1.1 Just transitions and cities

According to the European Environment Agency, "despite efforts to adapt to climate change in Europe, the most vulnerable groups in society are still the most affected." (. Indeed, as further illustrated by the <u>Just Transitions</u> Inception report (2021)[1], transitioning to a low-carbon economy implies systemic change which affects all citizens and especially those who are already at risk of exclusion. At-risk groups are the most exposed to both the effects of climate change and to the negative social consequences of the transitional processes themselves.In line with the Sustainable Development Goals (SDGs), the <u>European Green Deal</u> acknowledges the need to leave no one behind in what needs to be a society-wide transition. All citizens should benefit from both 'accessibility' and 'affordability' to the amenities and positive consequences of the transitions and receive protection from any potential negative effects.

EU policy frameworks relevant for cities and Just Transitions

The EU's 2014-2020 programming round deployed various types of European Structural and Investment Fund (ESIF) at city level to pursue Just Transitions through local strategies. It pursued a variety of thematic objectives (TO), including:

TO4- Shift towards a low-carbon economy.

TO5-Climate change adaptation, risk prevention and management.

TO6- Environment and resource efficiency.

TO7-Sustainable transport and network infrastructure.

TO9-Social inclusion, poverty, and discrimination.

Many local strategies focused on ageing, diversity, gender equality, migrants, or social inclusion. Further details can be found on the JRC's <u>STRAT-Board</u>.

The new <u>Cohesion Policy for 2021-2027</u> continues to invest heavily in sustainable urban development with 8% of the European Regional Development Fund (ERDF) earmarked for this purpose. Policy Objective 5 'A Europe closer to citizens' and Policy Objective 4 'More social Europe' can support urban transformation challenges in a just and fair way by enabling marginalised communities, low-income households, and disadvantaged groups to participate in social and economic life. Through Policy Objective 2, "Greener Europe", cohesion policy can cover a wide range of topics, such as transitioning to renewable energies, mitigating and adapting to climate change, preserving nature and biodiversity or developing green infrastructure and sustainable urban mobility, etc. Moreover, the European's 'Article 7 cities' (2014-2020 round) and 'Article 11 cities' (2021-2027 round) focus on integrated Sustainable Urban Development, which provides cities with a framework for including all social groups in the green transition.

The <u>European Green Deal</u> (EGD) provides a framework to support Europe's transition to a more carbon neutral society, which decouples economic growth from resource use and leaves no person or place behind (see the Inception Report on <u>Cities</u>, Jobs and Transitions).

Indeed, a vast European policy effort is underway on climate change. This will partially address Just Transitions. The recently selected <u>100 climate-neutral and smart cities by 2030</u> will implement the <u>EU Mission on Climate-neutral and Smart Cities</u>, giving a local dimension to the European Green Deal, through a bottom up approach. These<u>cities</u> will act as test beds and will provide blueprints for all European cities to follow. T<u>b EU Strategy on</u> adaptation to climate change along with the related<u>European Climate Law</u>, sets out how the European Union can adapt to the unavoidable impacts of climate change and become climate resilient by 2050. This legislation accords cities a specific role: *"Local authorities, in particular, [will be in charge of] making this process inclusive, giving to urban communities - and in particular to the most vulnerable groups - the chance to take part in and influence the changes required to make their city resilient."*

Ensuring that no one is left behind will contribute directly to the EU's ambitious target to lift 15 million European citizens out of poverty by 2030, as set out in the <u>European Pillar of Social Rights</u>. In parallel, the <u>European Social Fund Plus</u> aims to protect the most vulnerable in terms of employment, education, and training, through social inclusion and social innovation. Support to those most likely to face the greatest transition challenges is also provided by the <u>Just Transition Fund</u> (JTF) (focusing on energy poverty and housing conditions) and the <u>Recovery and Resilience Facility</u> (RRF). In addition, the <u>Climate Action Social Fund</u> (CASF), will play a vital role by supporting vulnerable households and will provide enabling measures and investment to reduce emissions in the road transport and buildings sectors, thus addressing some of the social and distributional challenges of the EU's transition to carbon neutrality.

The EU aims to reduce emissions by at least 55% by 2030 by renovating 35 million energy inefficient buildings, including making this renovation accessible to all. Integrating sustainability and affordability is therefore one of European social housing providers' main areas of research and intervention today. This effort is being supported by a range of policies: the 100 Lighthouse Districts projects under the 'Renovation Wave Strategy' promoted in 2021 to support the Affordable Housing Initiative, for example. by its scale, Next Generation EU shows that energy renovation has become a linchpin of the EU's green recovery strategy. In addition, since 2012, the EU Energy. Performance of Buildings Directive has been supporting cities with delivering energy renovations and new buildings that meet a nearly zero energy standard. Also supporting this effort, the Electricity Directive and the Energy Efficiency Directive have been updated and require Member States to address energy poverty. Lastly, on energy renovation for socially deprived groups, the Shape EU Initiative brings together national social housing providers, construction sector associations, and academic and research institutions to work together to address these challenges.

Turning to mobility, the EU also supports initiatives to make cities accessible for all residents and commuters, including individuals with disabilities and senior citizens. Certain initiatives aimed at specific sections of the population may also have a sustainable mobility dimension. For example, the <u>European Disability Strategy 2021–</u> 2030 and the <u>Directive on the accessibility requirements for products and services</u>seek to promote full and equal participation in society for everyone, whatever their disability, by harmonising accessibility standards across

several product groups and by including a right to non-discrimination and a right to mobility. The <u>Gender equality</u> <u>Strategy 2020-2025</u> was designed to enable the EC to integrate a gender perspective in all its major initiatives and it is pursuing several policy objectives under this strategy, including on mobility. Finally, various activities registered under <u>European Mobility week</u> - the flagship awareness-raising campaign on sustainable urban mobility - also focus on vulnerable groups, such as the disabled, women, children, and senior citizens, etc.

These diverse frameworks offer opportunities to capitalise on synergies across funding streams. Cities may seize these funding opportunities and play a major role in ensuring that resources are used effectively to ensure that the green transition is accessible and affordable to all, yet many may lack the ability to do so[2].

Green, fair, and accessible cities

The consequences of climate change affect societies unequally. On the one hand, the uneven distribution of air pollution, noise, and extreme temperatures closely mirrors the socio-demographic differences within Europe regions and at city-scale level (European Environment Agency, 2018). On the other, not all residents are equally impacted by climate change, nor do they benefit from climate policies in the same way. Transition policies can also lead to negative effects for vulnerable groups. In fact, when designed without equity in mind, *"sustainability interventions often fail to benefit all residents, while some economic measures even increase the burden for vulnerable populations"* (For example, greening as a form of revitalisation, increases resilience and improves health. However, increased housing values and cost are uneven and therefore non-distributive and could lead to a loss of belonging (BCNUEJ, 2018) or even "ecological gentrification" when applied in disadvantaged neighbourhoods (Beretta and Cucca, 2019).

In this regard, the United Nations Foundation has stressed the need to reduce inequalities between people and between groups, leaving "no one behind" and offers the following recommendation: "A concerted effort to identify and help those who are furthest behind is needed first. This means targeting the most vulnerable people who societies so often miss: from youth, and especially girls; to refugees and migrants; to rural farmers and indigenous populations – and so many others living on the margins of society" (United Nations Foundation, 2016).

Vulnerable populations

Understanding the causes of vulnerability and how they are interconnected is the key to adapting transition policies to those with the highest risk of exclusion. It is important, therefore, to define vulnerability. This report defines it as:

"The conditions determined by physical, social, economic, and environmental factors or processes that increase the exposure of individuals to multiple risks" (UNDRR, 2020).

The UN Development Programme identifies 5 risk factors that contribute to individual or group vulnerability:

- they are the target of **discrimination** due to their identity (ethnicity, gender, age, economic and social status, disability, etc.).
- they have a precarious economic and social status.
- they are affected by **socio-spatial exclusion processes** limiting their access to rights, institutions, services, spaces, and socio-economic opportunities.
- they are **exposed to shocks and risks** (violence, conflicts, epidemic outbreaks, environmental degradation).
- they are excluded from **governance** processes.

These risk factors vary according to the local context and are highly relevant to the accessibility and affordability challenges facing transition policies. Table 1 below explores them in more detail.

Table 1: Types of vulnerability

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Some people can be excluded due to factors such as gender and age, but also due to physical and cognitive Di abilities or language capacity, which directly affect individuals access to services and infrastructures (UrbanA, sc 2020a). For example, administrative services are usually only available in central locations and in the official ri language and are not, therefore, accessible to everyone. By default, urban environments and mobility systems mi are planned to suit the dominant majority; meaning men traveling to and from work (ICLEI, 2022). nа

ti Sustainable urban mobility may also be unequally accessible to racial or ethnic groups due to a lack of

o infrastructure, high cost, or poor access to information. In the same vein, alternative and more sustainable

п mobility solutions, such as cycling, are white and male dominated and the planning of cycle lines tends not to consider the constraints that women of colour often face (UrbanA, 2020b).

Due to their life situations, some populations might lack the knowledge of public schemes open to them to be ci

able to access them (ICLEI, 2022; UrbanA, 2020a). Residents of disadvantaged neighbourhoods can be

excluded from sustainability city infrastructures (e.g., parks, food cooperatives, green roofs, regenerated river

fronts, sustainable mobility initiatives, etc.) because of the underlying conditions of inequality and distributive, 0

social-identity-related, procedural injustice (UrbanA, 2020c). Densely populated housing estates, often n

inhabited by the poorest residents, can be difficult to improve through climate-friendly urban planning 0 mi (UrbanA, 2020d).

С Income inequalities can also limit the efficacy of urban sustainability initiatives by reducing access to

st sustainable amenities such as redeveloped, retrofitted, and/or more energy efficient housing. In the case of at energy retrofitting, increasing property prices can even displace low-income residents. (UrbanA, 2020d).

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G The residents of deprived, isolated, or peri-urban areas, can be trapped in unhealthy and unsafe natural eo environments (contaminated or degraded natural resources preventing them from sustaining livelihoods or gr the aftereffects of natural disasters), more exposed to pollution sources or to the effects of climatic warming ap (e.g., heat waves). They may also lack adequate infrastructure, transportation, and public services, limiting hy their socio-economic opportunities.

People with fewer assets and resources and/or less information, who are marginalised or disadvantaged, are more likely to be affected by climatic events such as floods, droughts, or heat waves. They are also more likely Ex to be affected by crop failures or price spikes and to suffer from the illnesses generated from such events ^P (UNDP, 2018). Moreover, green services and technologies may not exist in neighbourhoods in which the ^{os} vulnerable live due to the vulnerability factors discussed above, but especially due to inadequate ^{ur} representation in local governance. Urban planning and economic priorities tend also to neglect marginalised ^e neighbourhoods. Moreover, as privileged groups tend to move to neighbourhoods characterised by ^{to} healthier, greener, and safer environments, other areas become 'social dumps' characterised by pollution, ^{sh} crime, unwelcoming public space, and disease, to where marginalised residents are displaced. These ^{oc} neighbourhoods and their inhabitants can become stigmatised, 'ghetto-ised', systematically unrecognised ks and excluded from conversations about urban sustainability (UrbanA, 2020e). an

^d Lastly, policies can have negative consequences. For example, technological approaches to the green

^{ris} transition, such as an increased use of information technologies, might prevent some non-IT literate people ^{ks} from accessing the available services (UNDP, 2018). The digital divide is therefore also a key aspect of a green, fair, and accessible city.

ov Poor, disadvantaged and marginalised communities can be excluded from local policies because they are not er included in processes, from data collection to decision making (UNDP, 2018). As a result, many local policies na suffer from elite capture, as vulnerable groups' specific needs are not considered in the design and nc governance of green solutions and policies.

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Accessibility and affordability

To achieve a Just Transition that leaves no one behind, it is vital to address the needs of vulnerable people and their vulnerabilities. Accessibility implies linking the concepts of 'fair' and 'green', and in practical terms this implies enabling people's "access not only to places but also to jobs, opportunities and services and thereby increasing overall wellbeing" (Simon, 2016). Therefore, although the most recognised definitions ofaccessibility focus on spatial and digital accessibility, meaning mobility and access to places and services through physical proximity and eliminating the digital divide, accessibility should also encompass social and equity concerns, thus linking it to affordability issues.

The scope of this report

This report highlights Promising Practices based on the experiences of 10 UIA projects and 1 URBACT city that support the Just Transition through the improvement or creation of policy tools, services, or technologies that take the accessibility and affordability into account.

It was therefore guided by 3 research questions:

- How do cities finance, design, and develop policies that give access to green and innovative solutions to vulnerable groups?
- How do cities ensure that everyone/vulnerable groups can afford green and innovative solutions?
- How do cities ensure that everyone/vulnerable groups can access green and innovative solutions?

An expert review of all 86 UIA projects and some pre-identified non UIA projects, and a series of key witness interviews with other organisations working in this field led to the identification of 11 case studies comprising 10 UIA projects and 1 URBACT city-led project that were deemed to have tested and implemented solutions —'Promising Practices'—that make green solutions accessible and affordable to all.

The research found four policy areas -**climate-friendly urban planning, sustainable energy, sustainable housing, and sustainable mobility**—where the projects studied had sought to address accessibility and affordability.

Their experimental features of the projects can inspire other cities and can be mainstreamed (implemented at a wider scale) or transferred, i.e., implemented in other Member States and cities.

The present report presents the:

- main issues at stake and the role of cities in the EU policy context.
- main barriers cities face in implementing green policies and solutions.
- Promising Practices implemented by 11 cities.
- A concise summary of the lessons and recommendations for city policymakers.

1.2 The four policy areas

The review of the 86 UIA funded projects identified four main areas in which UIA cities had been the most active in ensuring that green solutions are accessible and affordable to all groups of society. These areas were: climate-friendly urban planning, sustainable energy, sustainable housing, and sustainable mobility.

As background to Chapter 2 on the Promising Practices, this section (1.2) will describe the main issues at stake (scope) for each of the four areas as well as the existing approaches to addressing them.

Scope of the issue

Adapting cities and towns to climate change is vital because the population is concentrated—including vulnerable groups—along with assets and economic activities, in urban areas (EEA, 2021a). Yet cities are generally underprepared for climate change and they lack resilience facing its future impacts (UAP on Climate Adaptation, 2018). In particular, women, children, the elderly, ethnic minorities, and the homeless are more likely to be impacted and less likely to benefit from adaptive services and technologies (EEA, 2021a; UAP on Climate Adaptation, 2018). It is therefore vital to strive for "an equitable distribution of the benefits and burdens of adaptation measures" (EEA, 2022a).

In relation to vulnerability, heatwaves affect those on low incomes in cities, as well as the elderly (Kaltsatou et al., 2018; Vandentorren et al., 2006)—who lack the resources to leave the city during summer months and/or have no access to 'cool islands' during peaks of temperature. In particular, the lack of central green spaces and/or lack of access to cars or adequate public transport can prevent some residents from accessing green areas. Parks in low-income neighbourhoods may also be of lower quality and less safe due to vandalism and anti-social behaviour (EEA, 2022b). Women in particular may feel unsafe when seeking to benefit from cooler green spaces (Polko and Kimic, 2022).

Flooding is another urban challenge that costs European residents approximately 3 billion EUR annually. However, the scale of damage is higher for low-income households than for high-income ones (Osberghaus, 2021). This can have an impact on the financial security of vulnerable groups living in flood risk areas. Some insurers may even refuse insurance or charge prohibitively high premiums based on the location of the insured's home[3].

Current policy approaches

Cities have been designing mitigation policies with equity in mind as part of a 'green city for all vision'. They have been investing through integrated greening policies and physical greening projects. They have also sought to minimise the monetary distributional inequality of the transition to carbon-neutral economies through compensation and relief measures as well as through support for low-income households. Finally, they have aimed to maximise the nonmonetary benefits of greening, such as health benefits (the healthy city), by strategically prioritising support, incentives, and compensation measures to specific sectors and social groups, and with the participation of residents in policy processes (BCNUEJ, 2018; Eurofound and EEA, 2021).

1.2.2 Sustainable energy

Scope of the issue

Society's production and consumption of energy accounts for<u>72% of total greenhouse gas emissions</u>worldwide (Center for Climate and Energy Solutions, 2021). Electricity, for example, accounts for a quarter of all EU greenhouse gas emissions (EEA, 2020). Increasing electricity from renewable sources could enable a net 55% reduction in greenhouse gas emissions by 2050 (EEA, 2021b). Despite this potential, in 2019, the EU-wide share of renewable energy is close to the EU's binding target of 20% for 2020 (short by just 0.5%) (EEA, 2021b). Currently therefore, sustainable production systems for electricity remain limited in terms of accessibility (available offer) and affordability (prohibiting price for many) but also in terms of potential.

6.9% of the EU population is unable to afford to heat their homes (Eurostat, 2021) so "alleviating energy povert[4] is a key precondition for achieving just transitions towards sustainability" (EU Energy Poverty Observatory, 2020). Energy poverty has been described as "the inability to keep homes warm in the winter or the lack of access to sustainable modern energy services and products" (MajdandŽiĆ et al., 2021). This inability is because of limited incomes, low building energy poverty may suffer disproportionately from cold in winter and extreme heat in summer. Low-quality housing and energy poverty also lead to negative socio-cultural effects (Eurofound and EEA, 2021).

The people who are most at risk of energy poverty are low-income people, women, people with disabilities, single parents, families with low educational attainment, elderly people, children, migrants, and persons with a minority ethnic background (Energy Cities, 2021; EEA, 2018; Janikowska and Kulczycka, 2021). As around 82 million Europeans spend more than 40% of their income on housing and over 161 million face disproportionate housing expenditure (Housing 2030, 2021), many tenants cannot invest in sustainable energy production or consumption. Furthermore, changing current consumption patterns and habits at individual and industrial level is difficult both for individuals and companies, with obvious implications for the climate.

The cost hurdle is high, yet sustainable solutions could, to some degree, help mitigate the effects of energy poverty. They can do so in various ways. "First, individual self-consumption based on renewable energy production installations can help to reduce energy bills. Second, an increase in decentralised (off-grid, local) renewable energy production and self-consumption might lead to the sharing of network costs making decentralised costs more accessible to vulnerable categories of consumers who havelimited financial means, or no owner access rights to renewable energy production and associated benefits. Third, decentralised renewable energy sources are much less subject to geopolitical tensions, the fluctuations of imports and of prices, and even more so in self-consumption" (Energy Cities, 2021). Demonstrating this last point, the <u>ongoing war on Ukraine</u> is a current threat to energy security and has increased energy prices.

Current policy approaches

A raft of policy instruments exists to support renewable energy, energy efficiency improvements, low-carbon technologies, and behavioural change. These include:

- carbon and energy taxes to discourage fossil fuel use and encourage energy efficiency
- financial incentives (grants, tax relief, etc.).
- instruments such as energy efficiency standards (e.g., on cars, buildings, cooking appliances, etc.), regulations (e.g., energy labelling).
- education, awareness raising, training.
- technology transfer, R&D.
- public investment in low-carbon and active mobility infrastructure (Eurofound and EEA, 2021).

Unintended regressive effects

Regulatory instruments and industry standards (e.g., energy efficiency labelling, standards for cars, building standards) can have regressive effects. Many measures which are meant to support the shift to sustainable energy sources can lead to increased energy prices (e.g., carbon and energy taxes), which disproportionately affect lower-income households. Vicious circles can be created with some households, who are vulnerable to climate change mitigation policies, accumulating disadvantages. The most advantaged tend to benefit from climate mitigation policies, which also exacerbates existing inequalities. In addition, the redistributive effects of energy and carbon taxes show that these tools alone cannot simultaneously achieve climate mitigation targets while avoiding potential negative monetary distributional outcomes: higher energy prices put more pressure on lower-income households due to the larger share of their budget that they spend on energy bills (Eurofound and European Environment Agency, 2021)

Many Member States have sought to reduce the regressive effects of climate policies such as carbon taxes by addressing the issue of energy poverty with support for the most vulnerable groups. This has included grants and subsidies to help reduce the energy burden on households by making housing more energy efficient and/or installing renewable energy sources [5] (MajdandŽić et al., 2021).

Cities can also benefit from the <u>Covenant of Mayors for Climate and Energy</u>'s specific <u>activities</u> on energy poverty and the EU<u>Energy poverty advisory Hub</u>.

1.2.3 Sustainable housing

Scope of the issue

In the EU, buildings account for 40% of energy consumption and<u>86% of CO2 emissions</u>. The EU is aiming for climate neutrality by 2050. Yet, <u>80%</u> of today's buildings will still be standing, with new ones built over the same period. There is, therefore, a need to increase the energy performance of buildings (Eurocities, 2021). Furthermore, worldwide, 11% of building emissions come from embodied carbon in construction, i.e. the emissions created in construction and demolition (Eurocities, 2021), and the wider supply chain CO2 emissions from buildings have increased to their highest level ever at around 10 GtCO2, or 28% of total global energy-related CO2 emissions worldwide. Including emissions from the construction industry, this share increases to 38% of total global energy-related CO2 emissions (Housing 2030, 2021).

In developed countries, buildings consume over 70% of the electrical power generated and 40% of primary energy and are responsible for 40% of CO2 emissions from combustion (Housing 2030, 2021). Therefore, buildings have the largest potential for improving energy efficiency (EE) and mitigating greenhouse gas (GHG) emissions. Renewable energy technology alone cannot meet EE and GHG emission requirements, despite recent improvements (Housing 2030, 2021); housing energy renovations are therefore essential.

In the 220 million households in the EU, 87 million people live in poor-quality dwellings (Housing 2030, 2021). These are <u>mostly</u> people facing homelessness, living in overcrowded housing, or risking eviction, victims of domestic violence, women and gender-diverse people disproportionally impacted by loss of income during covid, and refugees and asylum seekers facing discrimination in access to housing. Captive owners or low-income homeowners who may have inherited their home or purchased it with a loan, are also vulnerable as they lack the financial resources to afford energy retrofitting of their homes.

Current policy approaches

There are a number of tools for implementing energy and climate policy in the social and affordable housing sector (Housing 2030, 2021). Cities have implemented national building renovation targets, energy Performance Certificates, revolving funds and auctioning, social impact bonds, tax relief, household appliance contracting, large-scale roll-out of photovoltaic installations in the social housing sector, allowances for low-income people/households, tenant engagement, renovation coaches, etc. (Housing 2030, 2021).

However, there is an unintended consequence that is a cause for concern: 'renoviction' (Grossmann, 2019). This is where ecologically motivated renovation processes end up in rising housing costs and neighbourhood gentrification and, ultimately, to the displacement of lower-income tenants. Instead, renovation processes should aim at preserving affordability while reducing 'energy poverty'. The challenge is therefore twofold:

- ensuring that renovation does not mean displacement in areas where the housing market potential could encourage speculative investment interest in renovations.
- ensuring that a sustained flow of investment reaches the sections of the housing stock located in less marketable locations and where low-income residents are located.

1.2.4 Sustainable mobility

Scope of the issue

Over 70% of EU residents live in cities that generate<u>23%</u> of all transport related greenhouse gas emissions and urban sprawl is increasing this effect (OECD, 2018). The EU is aiming to reduce greenhouse gas emissions from the transport sector by at least 55% by 2030 and by 90% by 2050. To achieve this goal, the EU is promoting sustainable urban mobility, such as integrated public transport systems and better transit connectivity throughout Member States. It is also striving to improve quality of life in cities by promoting active mobility solutions, such as walking and cycling. Cohesion Policy also supports sustainable and green mobility through its Policy Objective 3 "a more connected Europe by enhancing mobility".

According to the European Platform on Sustainable Mobility Plan (2020), sustainable mobility means: *Easy and equal access to convenient, safe, affordable and environmentally friendly means of transport*" and is "a basic requirement for the comfort of all inhabitants of urban environments and to ensure the balanced functionality of the cities with a high standard of living for all their users." However, not everyone has easy and equal access. In relation to mobility, vulnerable groups can be defined as those with temporarily or permanently reduced mobility, children and young people, older people, migrants and ethnic minorities, low income and unemployed, people living in rural and deprived areas, people with no or little IT skills, and people with no access to internet (European Platform on Sustainable Mobility Plans, 2020).

Other vulnerable residents include those in peri-urban and rural areas, where public transport and shared mobility options are lacking. Indeed, "the reality for many rural areas is few buses, even fewer train stations and an almost total dependence on cars. This obliges people to spend more on travel, and to use private transport at the expense of more sustainable alternatives" (European Network for Rural Development, 2019).

Current policy approaches

In its <u>Global Sustainable Report, 2019</u>, the United Nations encourages local authorities to support sustainable mobility through 4 enabling policy fields - governance, economy, finance and technology- and by adopting an Avoid-Shift-Improve approach (UN, 2021):

- *Avoid.* Reducing transport demand through changes in behaviour, using technology to support new practices (working from home, e-services, etc.) exploring more dense and compact cities and focussing on dense urban forms and patterns.
- *Shift.* Changing the nature of transport demand and supplies by switching away from fossil fuel–intensive modes in favour of active, non-motorised mobility (walking or cycling), public transport, carpooling, or other shared-modes.
- *Improve*. refers to changes in how transport systems and services are provided or managed, through, for example, sustainably charged electric vehicles, safer vehicles with improved technology, safer road design, improved accessibility for under-served populations and geographic areas, and low-carbon transport technologies.

Cities are implementing a wide range of solutions, such as collecting data on gender-based mobility differences,

developing elderly people's ICT skills through intergenerational workshops, bicycle training for girls, ensuring safe walking and cycling at all times of the year, etc. (European Platform on Sustainable Mobility Plans, 2020).

Other solutions for isolated areas could be:

- shared mobility solutions, including demand-responsive public transport and carpooling offered by a single coordination unit managing the transport services of small municipalities.
- conventional public transport routes with stops and frequencies based on the needs of the local population operating mostly during periods of high demand.
- minihub/interchange points close to railway stations or main bus stops offering cycling/car sharing services and where multimodal travel information and payment systems are available.
- local volunteers as drivers or in other supporting roles providing additional community mobility at minimal cost (European Network for Rural Development, 2019).

[1] With Just Transitions we mean the diverse and complementary approaches needed to achieve a fair, inclusive climate neutral and resilient economy, addressing at the same time environmental, social and economic issues. For a more complete definition see the Just transitions inception report here: <u>Inception Report | UIA - Urban Innovative Actions (uia-initiative.eu)</u>

[2] https://cor.europa.eu/en/our-work/Pages/OpinionTimeline.aspx?opId=CDR-136-2022

[3] Insurance rules vary by Member State but in those countries where building insurance is not mandatory many householders do not have flood options. Between 1980 and 2020 EEA estimates that 450-520Billion EUR of economic damage was caused by flooding. Between a quarter and a third of these losses were insured (European Environment Agency, 2022c)

[4] Energy poverty is usually defined as "the inability to adequately heat the home or use the energy needed because the cost is unaffordable" (EU Energy Poverty Observatory, 2020; MajdandŽiĆ et al., 2021).

[5] Even these can be subject to debate as when someone struggles paying for their basic bills, they will be unable to invest in energy efficiency solutions.

