

TRANS-URBAN-EU-CHINA

Transition towards urban sustainability through socially integrative cities in the EU and in China

Deliverable

D4.4 Web-based storylines illustrating the integrated transition pathways towards sustainable urban planning and governance (M36)

WP 4 Integrated transition pathways towards sustainable urban planning and governance

Task 4.1 Scope, frame and illustration of integrated transition pathways towards sustainable urban futures



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WHY THE TRANS-EU WEB STORYLINES?

The TRANS-EU web-storylines have a normative stance: they aim to support urban policies and practices through sharing understanding of available knowledge on urban challenges, visions of the future. To do so, we craft plausible and persuasive stories illustrating some of the main findings of the TRANS-EU-CHINA Project.

The socio-technological complexity of world challenges increasingly demands that researchers work with multi-disciplinary settings and engage a wide range of actors in the search for potential solutions. (Moser, 2010; Owen, Macnaghten, & Stilgoe, 2012). It is increasingly recognised that a variety of multi-level leaders – from policy makers to activists and social entrepreneurs – are needed to make a difference and create urban experiments (Hambleton, 2014). However, research outcomes are often communicated with an information structure and on channels that are difficult for other stakeholders to access, understand and use. We aim to provide project results in a non-scientific language to improve the accessibility of the research and promote evidence-based actions and policies.

On carrying out this activity, we have explored the works in communicating research done, among others, by JRC and the World Bank and we have structured the storytelling around the following four sections:

- (i) "Global challenges urban impact": this section identifies six major global challenges that influence urban sustainability in the EU and China. Each challenge is linked with an indicator and its evolution over the past several decades is visualized with the creation of short videos to show the dynamic over time. We have then consulted database of major European and international institutions (OECD, UN, World Bank, EUROSTAT) in search of the availability of time-series of indicators that could represent the change over time of the variables for the two regions. In some cases, we had to use a proxy indicator (e.g urban sprawl we had adopted the indicator of "% of population living in urban areas" instead of "% of land take") due to the lack of availability of similar data and time series for EU-China. As regard the this section, it is important to contexualise the different time oft he urbanisation process in China and EU. China is still amid a rapid process of urbanization and urbanization policies have also been changing in the past ten years, while most of the EU member countries already see the stability of urbanization. This justifies the different countermeasures, and the shared solutions as well, for the future vision.
- (ii) "Six words for promote socially integrative cities": This section compares visions and targets put forward by the European Union and by the Chinese government in 2020/2021 for the next five-ten years to tackle the six above-mentioned challenges. On the basis of the SDG 11, we have worked to imagine six words for the future of cities that could be shared for EU/CHINA and respond to the above-mentioned challenges. In choosing the words, we took into account the different territorial level (neighborhoods/city/urban-rural) of the research carried out in TRANS-EU China WPs. In order to build this section, we have cross-read the analysis conducted by CAUPD of 14th Years Plan with the EU vision "A clean Planet for All", the Green New Deal and its follow-up documents.
- (iii) 'Urban experiments' The section –developed by EUROCITIES under WP5 presents urban best practices and technical advice to promote collaboration and learning between Chinese and European cities.

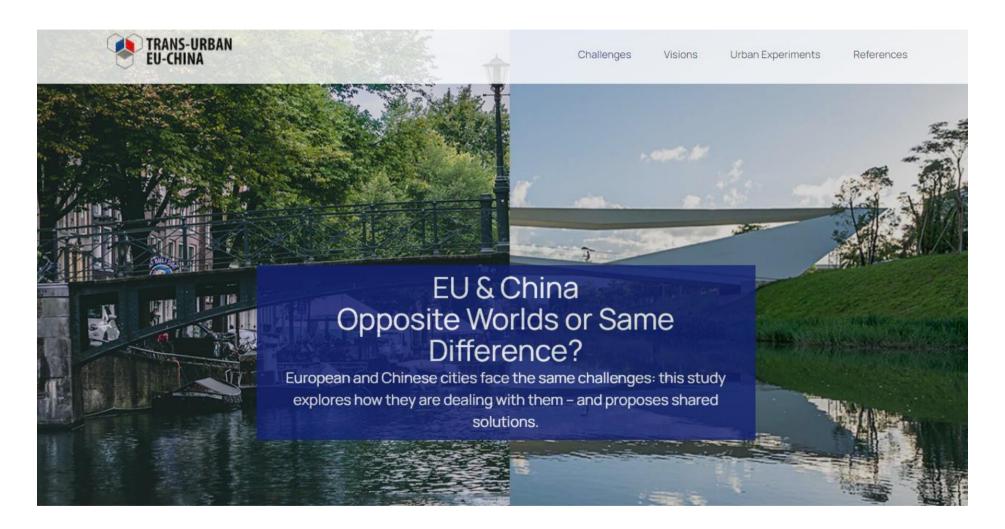
(iv) References. This section contains contact and references

Three notes on the storylines:

- The storylines look at challenges and opportunities to create socially integrative/inclusive cities. Inclusive cities are defined as a "place where everyone, regardless of ... economic means, gender, race, ethnicity or religion, is enabled and empowered to fully participate in the social, economic and political opportunities that cities have to offer" (UN-Habitat, 2002). In line with this, TRANS-EU-China specifies that socially integrative cities are "socially mixed, cohesive, liveable and vibrant communities. Compactness, functional mix, and intra-urban connectivity as well as equal rights regarding access to municipal services play an important role. Environmental quality, the quality of public spaces and the quality of life contribute to the wellbeing of the population. Strengthening a sense of community and fostering a sense of place as well as preserving cultural heritage shape the city's in- and outward-bound image. Investments into neighbourhood improvement, service delivery, infrastructure and the quality of housing are important supportive measures. Empowerment and participation of the population, as well as social capital, are indispensable" (TRANS-EU 6.6). This definition has framed the overall work structure. Generally, we have considered social integration and urban equity as key factors for urban sustainability.
- Secondly, the storylines adopt a transition perspective, and build upon the URBAN-CHINA foresight exercise carried out by ICS and ISINNOVA in 2015. "Transition", from the Latin transition, is defined as "the process or a period of changing from one state or condition to another". The transition concept relates to the structural changes, societal process and mechanisms through which novelty in niches matures and becomes mainstream, heavily influencing dominant practices. Sustainable transitions ensure cities include long-term goals in their short-term actions and require urban governance which takes into account (Loorbach 2010) the following:
 - Long-term thinking
 - Thinking in terms of multiple approaches (multi-domain), different actors (multi-actors), different levels (multi-level)
 - Social learning as an important aim for policy
 - o Keeping options open, exploring multiple pathways
- This work is for on-line communication:— it adopts a non-scientific language, paragraphs are
 extremely concise and pictures and graphs complement the text. Thus, the best way is to navigate in the web-site: https://www.urbantransition-euchina.com/

The overarching scope of the storylines is to support awareness-raising of existing lock-ins and promote the exchange and scaling-up of practices that can create pathways towards the set long-term goals (SDG11). Hope you enjoy them!

GLOBAL CHALLENGES - URBAN IMPACT



1. UNEQUAL INCOME, UNEQUAL HOUSING

	CHINA		EUROPEAN UNIO	N	
Indicator	China's Gini coefficient increased from 32.20 in 1990 to 43.70 in		In the EU, the Gini coefficient increased from an average of 30.5 in		
	2010, and then decreased to 38.50 in 2016		2010 to 30.6 in 2016		
Gini coeffi-	2010	2016		2010	2016
cient	43.7	38.5		30.5	30.6
	Who can afford decent housing in China? improved, but the rich are speeding ahead ating trouble for low to middle earners str live.	Is there a good average income across the EU? It might have increased, but the divide is wide in places. And as house prices creep up, it's pushing lower earners towards accommodation that can be fraught with issues.			
	China's economy is racing ahead — it is on in the world. Over the last thirty years, more ple have pulled themselves out of extren paradoxically, wealth inequality has also grincomes have risen across society as a who and in urban areas have escalated faster the end of the wealth spectrum.	ore than 800 million peo- ne poverty in China. But rown substantially. While le, those for high earners	There are wide disparities in income levels across the EU, and the gaps have got even bigger since the global financial crisis of 2007. The top twenty per cent of earners take home 5.2 times as much as the bottom twenty per cent. As a result, social polarisation is increasing – not just between rich and poor, but between cultural and ethnic groups as well. Also on the rise is urban segregation, which sees different social groups unevenly distributed in urban spaces.		
Challenge	Housing affordability has emerged as a methic trend, which looks set to continue. It wealth divide and real estate speculations soared in major Chinese cities in the last housing practically unaffordable for low to	clusion, corresp lion, 47 million economic inequ	onding to 22% of the total people were living in cities	risk of poverty or social expopulation. Of this 112 mil. COVID19 has exacerbated, or at risk of, poverty in Eu-	
	Many people in this bracket, in particular to cities, turn to illegal private rentals on often provide only limited access to clean tion. Many of these urban villages fall out master plans, meaning local authorities hat tend infrastructure and public services to the services to the services to the services.	years, city house prices are growing faster than income in the majori of EU member states. People on low incomes or from marginalise groups often struggle to find decent, affordable housing.			

2. THE RISE OF LONELINESS

	CHINA				EUROPEAN U	NION
Indicator	The percentage of elderly population in China increased from 8.40% in 2010 to 10.12% in 2016			The percentage of elderly population in the EU rose from 17.5% in 2010		
				to 19.30% in 2	2017	
% of elderly	2000	2010	2016	2000	2010	2016
population	6.91%	8.40%	10.12%	15.71%	17.50%	19.30%
Challenge	Is a sense of When income idents, feeling A study of ol mately 16% f 30% - almost on the last five changed social of which had one-couple he in China accoolder adults, 2030. In addition to ing loneliness nections in uncially those of the income in the last five changed social of which had one-couple he in China accoolder adults, 2030.	community in Chinese to level is the only common of so of loneliness can quickly der adults in China show the lonely. Within eight y double. It decades, China has seen al attitudes, and uneven reave contributed to rapid in buseholds. Currently, the "unts for almost 25% of the lonely and this number is expectable this increase in solo living, as its dispersive nature than spaces. Most urban confice of commodity housing, are	bwns a thing of the past? denominator between reservant to rise. ed that in 1992, approximates, this number had hit drastic declines in fertility, area of economic mobility, creases in one-person and empty-nest elderly family" he households headed by the to increase to 90% by a rapid urbanisation is drivoten weakens social contemporary in China, esperande up of people with	Does an agein the nest could that people in Urban loneling ble groups, sure by multiple for share of single. There have been parent familied this, the population that the people those aged 65 decades, from Capital cities households—banisation to community be greater prevail.	g population equate to a red be a contributing factor, the EU are feeling increases ess is growing in the EU. The chas the unemployed and rees. Many people live alore e-person households "who een changes to the size and ess and childless couple houlation of the EU is ageing. I years or more — are project of 19.7 % of the total population tend to have the highes 50% in Paris, and 60% in Stablame? Researchers argue onds. This may help to explence of mental health p	ise in loneliness? Children flying but that's not the only reason
	similar incomes, but this is often the only common denominator. The roots of neighbourhood relations have weakened, making community building difficult.			study of the losses and the	Dutch population reveals pandemic, as well as a de	exacerbating the issue. A recent that concerns about personal ecline in trust in societal instituental health problems and lone-

3. MIGRATION AND THE FEAR OF STRANGERS

			CHINA				EUROPEAN	UNION	
Indicator	Internal migrar	nt worker mov	ements.			Internal and external migration to the EU			
	Total population (2018)	Migrant workers	Local mi- grant work- ers	Intra-pro- vincial	Inter- provin- cial	Total population (2018)	Residents of EU Member States born in another country	From other EU Member States	Born outside the EU
	1 415.05	286 million	115 million	96 million	75 mil- lion	513.18	57 million	20 million	37 million
	country's cities are fortresses of general wellbeing and services, ru-			cities promise w	e in migration mean vork, jobseekers will w potential for "the fo	follow, but with n	ew cultural mix-		
Challenge	China's Hukou system divides its population into two groups: urban citizens and rural citizens. But in 2013, rural migrant workers accounted for 44% of total employment in urban areas*. Urban citizens live in cities, and are granted access to essential social welfares, including education, employment, health care, pensions, and subsidised housing. Rural citizens live in smaller towns or villages, and whilst they are entitled to arable land, they cannot use			of their birth, ro State and appro- million are reco distributed, and with general per a much greater. A large percent opportunities an live in the world What challenges ple? Publicly fins	n people in the EU responding to million have a property and the EU responds of the EU re	e come from another from outside the I ese migrant ground evels vary. Howe ithin the EU itself on-EU migration to the to cities, drawn foday, nearly one es*. this increased movices face addition	ther EU Member EU. Of these, 1.8 ps are unevenly ever, in contrast has increased at the EU. In in by their job in five migrants Every even of peonal demands and		
	zhen, Wuhan, Chengdu and Chongqing are also deploying incentives to attract young graduates and talent. the public of the publi			people, includin thorities are sim against radicalis and social inclus	g a large number of unlitaneously required ation or xenophobic ion rates, non-EU citizens in most EU Mer	unaccompanied manaccompanied manacco	ninors. Public au- ness mechanisms s of employment		

4. THE URBAN SPRAWL

	CHINA		EUROPE	AN UNION	
Indicator	The percentage of China's popul 27% in 1990 to 60% in 2018	ation living in urban areas rose from	The percentage of the EU's population living in urban areas rose from 63% in 1990 to 75% in 2018		
% of popula-	1990	2018	1990	2018	
tion living in urban areas	27%	60%	63%	75%	
Challenge	When inner city areas are negle opments, the consequences go arable land. Urban sprawl is just million hectare, or 3.31%, decre 2000 and 2010. The cities of China have grown s government incentives, local at nues by auctioning off state-own most of the income. The flip side of this is the loss of of properties outweighing dem ghost towns; and existing urban in a degree of social disintegrati. What is being done to slow this the public finance system shoul auctioning as a revenue base for made to local governments, and tiple property ownership for in cent urban renewal regulations.	rapid urban expansion? Reforms to d help reduce dependency on land local authorities. Changes are being d new regulations that restrict muldividuals are being introduced. Reand activities show rising awareness rban areas in developing vibrant,	populations grow, cities extend Land take in the EU28 amounte and 2018, with urban sprawl on for more sustainable living is incomposed in the median density of European per square kilometre — almost of counterparts, but half that of Asia consumed per person has more of this rapid increase has brought and environmental consequence tem fragmentation, land erosion and emissions. Urban sprawl is a opment. With public transport so in suburban areas, dependence of increased as a result. Despite to there is no common policy between the EU is moving brighted the participation of the participation o	cities sits at around 3,000 residents twice that of their North American an cities. The amount of urban space than doubled over the past 50 years. about some serious socio-economics, including surface sealing, ecosysta, arable land loss, increased traffical major threat to sustainable developments costly and harder to provide an and usage of private transport has the EU's efforts to tackle this issue,	

5. EMISSIONS AND THE HOVERING CLOUD OF CLIMATE CHANGE

				EUROPEAN UNION
Indicator			In EU metric tonnes of (1990 to 6.47 in 2017	In EU metric tonnes of CO2 emissions per capita dropped from 8.46 in 1990 to 6.47 in 2017
CO2 emissions (metric tons per capita)	1990 2.15	7.18	1990 8.46	2017 6.47
Challenge	jor driver of economic grathan just financial gains CO2 emissions. Growing urban populations search has shown that use tion and CO2 emissions study estimates that CO2 grow by 1.8% per year being a solution, it is imposible for the consumption of the sectoral drivers, for a reas. Affluent cities are sions per unit of GDP. We less well-off, industrial coal or oil extraction centuring would drastically use consumption-based policy subsidised by those with One thing is clear - the coal sectoral coal or oil extraction centuring would drastically use the consumption-based policy subsidised by those with	continue unchecked, given it is a marowth? Chinese cities are generating more—they also produce 85% of the country's cons bring growing demand for energy—representation has caused energy consumpto increase in every Chinese province. A regressions from energy use in cities will between 2006 and 2030. But before devisorant to fully understand the challenge, we conducted energy and greenhouse gas at the country lacks data that factors in deviel mixes, and end-uses specific to urban shown to have systematically lower emisory. They are supported by imports from cities, which are in turn supported by local intres. Policies directly targeting manufactures might allow emission reductions to be a greater ability to pay.	doesn't present itself on is one common denomir Cities might only occupy for over 70% of its CO2 e become apparent that the ies — by, and for, their cities are producing also the best place to tack in cities, so there is greated in cities and know-how and can citied in cities.	or the EU? Buildings, transport, food and utilities greenhouse gas emissions, but the numbers vary the next. Factors including population size, eco- an infrastructures, legal frameworks, and vulner- limate change – flooding, heatwaves, forest fires

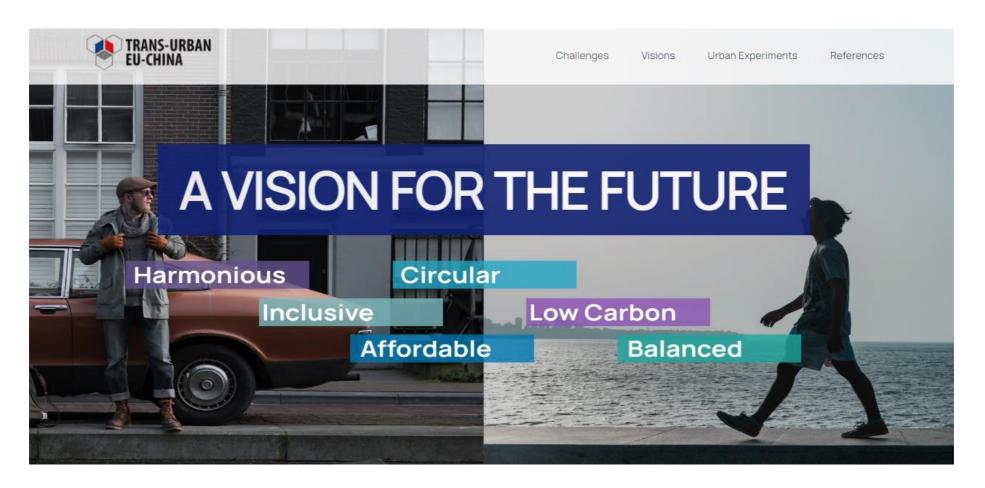
6. A CURRENCY IN NATURAL RESOURCES

	СН	INA	EUROPEAN UNION	
Indicator			Municipal waste management operations in the EU dropped from 221 million in 2010 to 219 million in 2017	
Waste and	2010	2017	2010	2017
waste man- agement oper- ation	158 million tonnes of waste	215 million tonnes of waste	221 million waste management operations	219 million waste management operations
Challenge	2010 2017 158 million tonnes of waste Are natural resources the currency that pays for urbanisation? The benefits of development have made themselves clear, but resulting issues surrounding air, water, and waste cannot be ignored. Urbanisation is happening at increasing speed in China. One of the results? A significant improvement in urban infrastructure and public services. The coverage and share rate of urban public facilities have both increased greatly: municipal water coverage rose from 53.7% in 1981 to 98.1% in 2015, and the urban wastewater treatment rate jumped from 14.9% in 1991 to 91.9% in 2015 and green coverage rate of built district increased from 16.9% in 1986 to 40.1% in 2015. However, there is a flip side – urbanisation consumes high levels of energy and natural resources. Not only does this mean it is costly, it is also inefficient and has led to a serious deterioration in urban ecology. Air, water, and waste pollution have all become very serious issues in urban China. In February 2012, two-thirds of China's cities failed to satisfy air quality standards*, and in 2015, more than half of its cities experienced acid rain. The groundwater quality monitoring results of 4110 stations in 182 cities across the country showed that the monitoring points of poor and extremely poor		good quality of life for its growing p fuel for the economy is detriment to The EU's cities are the engines firing ily on non-urban areas to meet their ergy, water and food; and to disposor The challenge is efficiently managing for a growing economy whilst redurnment. Because those impacts haple is that up to 15% of citizens living that exceed EU limit value regulation management from place to place wor composted in Slovenia, in Maltagage is 46% — demonstrating a disting filling*. The amount of municipal was Romania, it's 261kg opposed to 777 483kg. The quality of drinking water is general ter distribution is expensive. This is	g its economy. But they depend heav- r demand for resources – such as en-

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	quality accounted for 40.4% and 16.8%, respectively. China's cit-	In December 2015, the European Commission adopted a European Union
	ies disposed of 215 million of solid waste in 2017 –with an aver-	Action Plan for a circular economy, followed by the adoption of a set of
	age annual growth rate of 4.8%.	measures that support its implementation. This includes ways to inte-
		grate legislation on waste, consumer products, and chemicals.
L		

A VISION FOR THE FUTURE



1. HOUSING - AFFORDABLE FOR EVERYONE

	CHINA	EUROPEAN UNION
Actions	In 2008, China implemented an ambitious social housing programme for both rural and urban residents. By 2012, these programmes had addressed the housing needs of 12.5% of total urban households, and government grants for social housing increased from CNY 7 billion to CNY 235 billion. In 2021, China's 14th Five-Year Plan (2021-2025) started charting China's new journey towards building a fully modern socialist country. The Plan states that, "houses are not for speculation" and aims to "promote the balanced development of the financial and real estate sectors and the real economy". These measures should ensure that quality become a primary focus, with more real estate built to be lived in and an increase in the supply of affordable housing and rentals. As consequence, it is now reported that China is entering a new era. One of its key goals is for affordable housing, starting in tier1 cities. China has instructed the governments of Beijing, Shanghai, Guangzhou, Shenzhen, Fuzhou and Nanning to build more public housing rentals for low-income groups and young people, both of which have found it difficult to own a home in one of the world's largest housing markets. Ni Hong, the country's deputy housing minister, said, "Cities with large population inflows and soaring home prices have to strictly implement the policy of developing public rental housing, and adhere to supply targets. Housing for young people and new migrants is a top priority".	The EU has launched several specific initiatives to promote urban inclusion, including three Partnerships in the Urban Agenda for the EU that focus on urban poverty, housing and inclusion. The European Commission Communication, <i>Renovation Wave</i> , recognises that the COVID-19 crisis has highlighted the great significance of buildings, their importance in our lives, and their fragilities. In line with Green New Deal objectives, the document sets the targets of at least doubling the annual energy renovation rate of residential and non-residential buildings by 2030, and fostering deep energy renovations. One of key principles establised in the Renovation Wave is to ensure "affordability" by making sustainable buildings with good energy performance widely available, in particular for medium and lower-income households and areas, as well as vulnerable groups. In light of the COVID-19 housing crisis, the European Parliament Committee on Employment and Social Affairs (EMPL) report, <i>Access To Decent And Affordable Housing For All</i> , stresses the need to: Create an Integrated Strategy for affordable housing by making investment in affordable, social and energy-efficient housing a priority for the EU budget and economic recovery. Tackle the financialisation of the housing market by evaluating the impacts of EU rules on financialisation. This aims to ensure better transparency on real estate transactions and ownership. Enact mechanisms to ensure that renovation processes financed by the Renovation Wave do not lead to increased housing costs or gentrification. Set an EU goal to eradicate homelessness by 2030. Link https://audiovisual.ec.europa.eu/en/video/l-1958447≶=EN

2. NEIGHBOURHOODS – INCLUSIVE, NOT LONELY

	CHINA	EUROPEAN UNION
Actions	CHINA China's 14th Five-Year Plan (2021-2025) aims to optimise the country's overall economic structure while simultaneously improving people's living standards. To reach this objective, social governance structures should drive increased participation of citizens in local policies and measures. For example, urban resident committees could play a significant role in improving social cohesion and civil participation in neighbourhoods. Urban resident committees are bottom-level, autonomous organisations comprised of residents that provide assistance on public welfare, civil disputes and public order. These organisations also act as an intermediary with local authorities on matters that affect the local area, and provide a communication channel to those authorities for residents. During the COVID-19 crisis, these committees offered important public welfare assistance, and in the future, they could play an increasing role in enhancing social integration within the framework of urban planning and development of new neighbourhoods.	Social infrastructures are coming to the forefront as key in addressing and preventing some of the most pressing concerns of contemporary urban life in the EU: countering social isolation, negotiating differences, and creating places for all—regardless of age, race, gender, sexuality, or income. Sociologist Eric Klinenberg argues in his 2018 work, <i>Palaces for the People</i> , that a range of infrastructures, such as libraries, parks, sports facilities, schools, and community centres play a vital role in facilitating social connections. The Lonely Places project, run by the European Commission's Joint Research Centre, studies how loneliness, which is usually associated with individuals, can be applied to places. It looks at the distribution of amenities in cities and how this can contribute to the number of people in a given area at a given time of day or week, and how this affects the vibrancy and vitality of cities. States, cities and regions across the EU have recognised the importance of inclusive, people-centered urban design that promotes diversity and ensures that marginalised groups – be it economically, culturally or technologically – have access to urban opportunities. The New European Bauhaus initiative connects the European Green Deal to our living spaces and establishes a creative and interdisciplinary platform to design new ways of living together. Its overaching goal is to test new sustainable, beautiful and accessible living solutions by bridging the world of science and technology with the world of art and culture.
		Link: https://europa.eu/new-european-bauhaus/about/about-initia-tive en

3. MIGRATION FLOWS – BUILDING A HARMONIOUS NETWORK

	CHINA	EUROPEAN UNION
	China's 13th Five-Year Plan (2016-2020) includes targets that	A new balance needs to be struck with regards to migration in the EU. Alt-
	seek to shift the balance of rural and urban citizens. Its goal is	hough the cities of the EU continue to attract people in search of work, its
	to provide 100 million rural migrants with the right to urban	natural population is in decline. The EU is taking a fresh stance on migra-
	residency or urban Hukou status by 2020. China's Ministry of	tion, with the focus on solidarity and responsibility. Together with liveable,
	Public Security announced that it had issued 28.9 million new	sustainable cities that foster social integration, this may prove to be the
	urban residency permits in 2016 alone, however, the govern-	cornerstone to building a new, more inclusive sense of network between
	ment recognised the need to deliver a range of supporting pol-	the EU's inhabitants.
	icies to achieve its final goal.	In November 2020, the European Commission presented "The Action Plan on Integration and Inclusion for the Period 2021-2027". The action plan
	The 14th Five-Year Plan (2021-2025) continues and intensifies	promotes inclusion for all, and proposes four lines of action that address
	the previous reform of the household registration system (Hu-	barriers to participation and inclusion of people with a migrant back-
	kou) and aims to elevate the status and incomes of migrant	ground, from newcomers to citizens:
Actions	workers. Barriers within Hukou will aim to be lower, with ur-	Education – improved language programmes, educational participa-
	ban social services more accessible—above all social security,	tion and recognition of qualifications
	healthcare and education. Some of the measures that will pro-	Employment – increased labour market inclusion, promotion of mi-
	mote the citizenship of the rural population include:	grant entrepreneurship and facilitation of assessment and validation
	 Make the household registration system more liberal 	of skills
	(excluding some areas)Ensure access to basic urban services for long term	 Health – promote migrant access to health services and prevention programmes
	residents – instead of only household registered citi-	Housing – ensure access to adequate and affordable housing and in-
	zens	tegration services, fight discrimination in housing markets, reduce re-
	 Develop housing and empoloyment reforms to facili- tate integration of migrants into urban life 	sidential segregation and support autonomous housing schemes for asylum applicants

4. URBAN EXPANSION AND RENEWAL – A BALANCED EQUATION

	CHINA	EUROPEAN UNION
	The promotion of people-centred urbanisation is at the heart of China's 14 th Five-Year Plan (FYP). The 14 th FYP also calls for the elimination of major demolition and construction, which is a sig-	The EU is moving briskly forwards with its goals for urban renewal, inclusion of green infrastructures in cities and the improvement of urban- rural links.
Actions	older neighbourhoods, and previous approaches related to ur-	The European Commission's <i>Renovation Wave</i> aims to at least double the annual energy renovation rate of residential and non-residential buildings by 2030, with a target of 35 million building units renovated by 2030.
	City renewal programmes are being promoted on a nationwide scale in China. In 2017, the government chose 58 pilot cities to trial a transformed approach to urban renewal, with the goal of building enhanced quality — and sustainability. Renewal strategies could help to enhance historical and cultural preservation, and offer opportunities to revitalise old urban residential areas and neighbourhoods.	The recent COVID-19 pandemic has reiterated the importance of protecting and restoring urban ecosystems and promoting balanced urban-rural delevopments. The European Commission's Biodiversity strategy calls on cities with at least 20,000 inhabitants to develop an ambitious Urban Greening Plan by the end of 2021. The plans should include measures to create biodiverse and accessible urban forests, parks and gardens; urban farms; green roofs and walls; tree-lined streets; urban meadows; and urban hedges. To facilitate this work, the
	The 14 th FYP recognises the need to make cities more resilient to climate change, and it supports ecological restoration and the adoption of nature-based solutions, such as restoring the natural flow of rivers to reduce urban flood risk.	Commission will set up an EU Urban Greening Platform in 2021, under a new 'Green City Accord'with cities and mayors, working in synergy with the European Covenant of Mayors. Urban renewal and urban greening plans could mobilise policy, as well
	Reforms to the public finance system should help reduce dependency on land auctioning as a revenue base for local authorities.	as regulatory and financial tools. Communities, citizens and other external inputs are crucial to successful, socially integrated urban projects. However, there are still some challenges that need addressing, such as how to involve the broadest possible range of participants.

5. ENERGY - MAKE IT LOW CARBON

	CHINA	EUROPEAN UNION
	China has two carbon targets: to hit peak greenhouse gas (GHG) emis-	In the last decade, several programmes and initiatives in the EU
	sions by 2030 and achieve carbon neutrality by 2060. In line with	have demonstrated that it is possible to reduce greenhouse gas
	these, 14 th China's Five-Year Plan (FYP) sets out several important	(GHG) emissions whilst maintaining social and economic sustaina-
	commitments, which are also relevant for urban development:	bility at city level.
	 Mandating a national standard for energy efficiency that co- 	
	vers products and equipment. This should lead to a 40% re-	More than 10,000 cities have signed the European Covenant of
	duction in energy related GHG emissions over the next two	Mayors and implemented strategies to reduce GHG emissions by
	decades;	40% by 2030, and the EU Horizon2020 Programme, Join URBACT III
	 Setting national renewable energy at 20% of total use; 	programme, and the Joint Programming Initiative Urban Europe
	 Prioritising mitigation efforts to reduce non-CO2 GHG emis- 	have all financed smart city projects.
	sions, notably methane and hydrofluorocarbons (HFCs).	
	These targets will also impact the urban landscape. In the last decade,	The H2020 Lighthouse Programme, which asks cities to demon-
	there have been a total of 1,028 smart city and eco-city construction	strate clean mobility solutions, energy-efficient districts with a high
	pilot projects in China, distributed over 193 cities in 31 provinces. 527	share of renewables, and ICT-enabled, smart-integrated infrastruc-
	of these pilot programmes are closely related to Smart City develop-	tures, has deployed 17 projects backed by EUR 18-25 million in
Actions	ment, whereas the remainder relate to eco-city development, includ-	funding. To ensure subsequent replication and scaling-up, a small
	ing the National Garden City, the National Ecological Garden City, the	number of "lighthouse cities" are closely followed by three to five
	National Climate-Smart City, the National Sponge City and the Na-	fellow cities. Five years into the programme, there are now a total
	tional Low-Carbon City.	of 46 lighthouse cities and 70 fellow cities.
	Building on this, the 14 th FYP puts forward multiple actions to promote	
	green urbanisation, including electrification of public transport, ex-	The EU Mission Board on cities has raised the bar for the next dec-
	panding urban green spaces, building green corridors, and mandating	ade, setting the goal of creating 100 Climate-Neutral cities by 2030
	green building material. Technology and digitalisation will play a key	– by and for citizens. The aim is for these cities to be experimenta-
	role in the road towards urban carbon neutrality.	tion and innovation hubs setting examples for all cities, and leading
	City councils are also making significant investments in technology –	on the European Green Deal to become climate neutral by 2050.
	in 2017, pilot projects were launched in more than 500 cities, all of	In order to achieve the mission, a multi-level and co-creative pro-
	which leveraged digital innovation and intelligent design to help drive	cess will be formalised in a Climate City Contract. Citizen participa-
	sustainability and high quality living. And for cities, going digital is not	tion is recognised as crucial, and cities are invited to catalyse and
	just about collecting data. Enhancing the way existing urban data is	support bottom-up initiatives and new forms of governance.
	used can provide opportunities for new tools and services that will en-	
	hance the way cities are run.	

6. RESOURCES: A CIRCULAR ECONOMY

	CHINA	EUROPEAN UNION
	The approval of the Circular Economy Promotion Law by the National	The EU has seen the potential of the circular economy for its cities,
	People's Congress in 2008 marked China as a frontrunner in circular	and has made the Circular Economy Action Plan a key part of the Eu-
	economy legislation. The law was primarily focused on traditional 3R	ropean Green Deal. This scheme aims to promote circular economy
	solutions (reduce, reuse, and recycle), such as municipal waste man-	processes, foster sustainable consumption, ensure products that last
	agement, further use of industrial by-products (industrial symbiosis),	and reduce waste significantly.
	and reducing emissions from production processes. The 2017 Circular	
	Development Leading Action Plan builds on this, proposing important	According to a recent Eurobarometer survey, the growing amount of
	steps towards systematically tackling the root causes of environmen-	waste is a top three environmental concern for citizens. The plan fore-
	tal and societal externalities.	sees the introduction of measures for waste prevention and reduc-
		tion, increasing recycled content and minimising waste exports out-
	China's Five-Year Plan demonstrates its will to accelerate a transition	side the EU. In addition, a EU model for separate collection and label-
	from an export-led growth model towards a domestic, consumption-	ling of products will be launched. The plan has identified the sectors
	based model. The Plan aims to "boost the modernisation of industrial	and measures with the highest potential for circularity, which include
	chains and supply chains, and maintain a stable proportion of the	electronics and ICT, plastics, textiles, construction and buildings, wa-
Actions	manufacturing sector".	ter and nutrients, and food.
	China could become a manufacturing powerhouse, leveraging innova-	In 2020, major cities including Budapest, Copenhagen, Helsinki,
	tion, technologies, research and connectivity within the manufactur-	Ljubljana, Oslo, Prague and Tirana signed the European Circular Cities
	ing industry to promote high-quality economic development.	Declaration, which recognises the EU's need to accelerate the transi-
		tion from a linear to a circular economy. Cities and regions that sign
	The Ellen MacArthur Foundation report, "The circular economy op-	commit to act as ambassadors and champion a circular economy that
	portunity for urban and industrial innovation in China", identifies op-	will lead to a resource-efficient, low-carbon and socially responsible
	portunities across five focus areas: built environment, mobility, nutri-	society, in which resource consumption is decoupled from economic
	tion, textiles and electronics, showing that applying circular economy	growth.
	principles at scale could save businesses and households approxi-	
	mately CNY 70 trillion by 2040 – 6% of China's projected GDP. This	In 2021, the European Commission set the circular cities and regions
	would enable more of China's urban dwellers to enjoy a middle-class	initiative as part of its new circular economy Action Plan. It will fund
	lifestyle, while at the same time, by 2040, see China's cities reduce	demonstration projects and circular solutions at local and regional
	emissions of fine particulate matter by 50%, emissions of greenhouse	scale and help deliver on the European Green Deal and the EU bioe-
	gases by 23%, and traffic congestion by 47%.	conomy strategy.

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