1.1. Introduction:

The Research Objective:

A deeper rethinking of a people-oriented urbanity for future cities in China inevitably extends the scope of inquiry into territories which includes the countryside and mountain regions. The re-organization of regional spatial configurations is pertinent in times of social, political, economic and environmental transformations taking place. The shorter cycles, during which cities emerge and decline, reveals the brutality of the contemporary planetary urbanization (Brenner and Schmidt, 2015). The human and environmental costs of the shorter urban development cycles become more rapidly visible than in previous slower stages of urbanization. Changes in the location of population centres and shifts of the concentration of economic activities can be traced over longer durations of time. Transitions in the system of urbanization can be caused by revolutions by the citizen, climate change, environmental disasters, foreign policy & security considerations, technological innovations and migrations. In other words, changing priorities in urbanization processes can lead to the rediscovery of under -developed territories across space and time. This is not to say, that established urban centres loose their relevance or competitive advantages. It is rather, that overlooked regions can offer alternative spaces for settlement. Therefore, during periods of a regional or a national crisis, the necessity to reconstruct territories and its ecologies becomes pertinent (Cupers, 2016). Moreover, changes in the dynamics and relationships between dominant and peripheral territories become redefined. Consequently, the boundaries between what constitutes 'centre' and 'periphery' can be renegotiated.

Overtime, a slow integration of peripheral mountain areas into urban systems, in incremental steps, may establish a new order between cities in the future. The independence of mountain territories from metropolitan areas can catalyse new synergies for urbanization and alternative livelihood strategies in rural communities. The overdevelopment of the South-East coastal cities in Greater China has caused environmental degradation, unbalanced economic growth, and acute social disparities between the developed Pearl River Delta and the remote

mountain regions in Guangdong Province. The Upstream Dongjiang River Basin in the Hakka Mei County of Guangdong has been chosen as a testing ground for research on rural-urban habitats located in the hinterland of the coastal zone. Motivated by an interest to think through an urban transition by design the investigations try to unfold the possibility of an alternative form of urbanity in the mountain territories. Planning for a phase beyond the National New-Type Urbanization Plan 2014 – 2020, the next phase of urbanization in China targets a 70% urbanised population by 2030 (see Fig. 1.04). The ambition for the following urbanization stages is to take into consideration emerging new livelihood ecologies and sustainable development goals. China during the advanced 'New Normal' development stage (see Fig. 1.05), a stage of economic slowdown, is in the process of adapting communities for the needs and interest of an aspiring middle-class society (see Fig. 1.12).

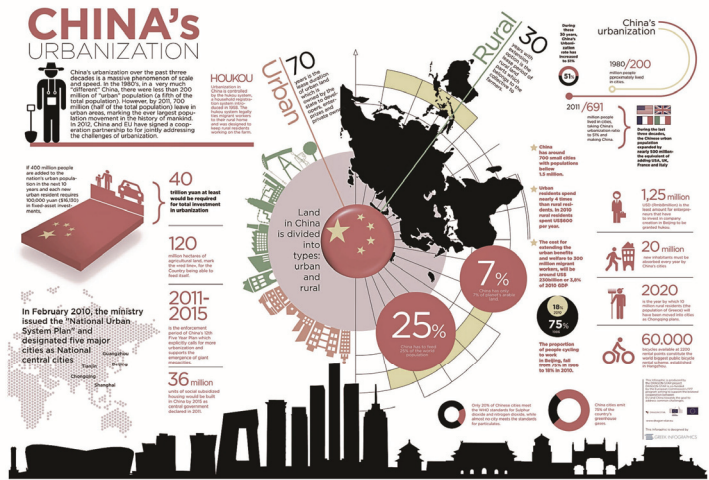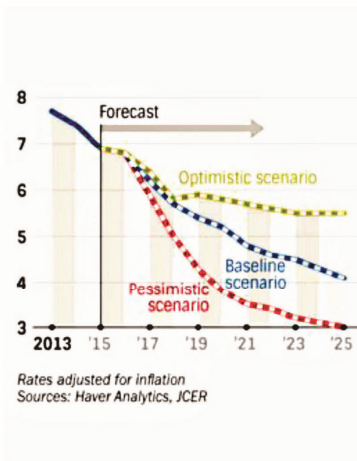Context: Urbanization targets for China by 2030+

Fig. 1.04: The diagram explains the urbanization process in China since the 1980s and future tendencies. An increase of the current urbanization rate of over 50% since 2011, to an urbanised

population of 70% may be the future path by 2030. It is expected that the approximately 200 to 300 million floating population in China will settle in new smaller and medium size cities. Source: China's Urbanization, produced by DRAGONSTAR: HUKU INFOGRAPHIC. Retrieved 06.08.2019, http://www.dragon-star.eu/wp-content/uploads/2013/03/HUKU-INFOGRAPHIC.pdf

New Normal: Economic projections for an urbanization led growth strategy.

The development of smaller cities is expected to sustain future economic growth.

Three GDP growth scenarios for China; in percent.

China's GDP growth; in percent.

Legend:
- World Bank
- International Monetary Fund
- World Bank, China's State Council
- Asian Development Bank
- JCER

Forecast

Optimistic scenario

Baseline scenario

Pessimistic scenario

Rates adjusted for inflation
Sources: Haver Analytics, JCER

Forecast

World Bank, China's State Council forecasts issued
in 2013 for average growth from 2016-2020, 2021-2025;
Asian Development Bank forecasts issued in 2011
for average growth from 2011-2020, 2021-2030; IMF,
World Bank forecasts issued in 2015
Sources: IMF, World Bank, ADB, JCER

Fig. 1.05: A slower GDP growth rate referred to as the 'New Normal' will likely be experienced not only in China. The above GDP growth rate scenarios show possible trajectories of the economy, with Optimistic, Baseline and Pessimistic Scenarios. The baseline scenario indicates a rate of +/4% by 2025. Source: Nikkei Asian Review, July 2015.

From the perspective of maintaining economic growth, the increasing of the numbers of medium and small sized cities, is still regarded as an economic strategy in China (see Fig. 2.08). Furthermore, the settling of China's 'floating population' is a yet to be resolved issue (see Fig. 1.06). Equally important is maintaining the inhabitability in cities, which involves reinstating a clean 'Blue-sky', better air quality in urban areas, and the urgency for environmental remediation. Shifting the attention from metropolitan cities to settlement structures in mountain territories may imply a de-concentration of the population in established cities. The settlement of people away from the coastal cities in the not yet developed habitats requires regional design strategies sensitive to local ecologies. Dispersed, low-density settlement structures in the valleys of 'sub-alpine' territories may cater for 'urban life-style' options and environmentally-friendly production ecologies, without living in congested metropolitan areas.

Compelled by trying to search for an alternative urbanity, this research studies mountain valley settlements in Guangdong located close to the border of Jiangxi and Fujian Province. The unbalanced economic relationship between the Pearl River Delta metropolis and its mountainous hinterland is studied in a series of Research by Design explorations.

Cartographic studies look at possibilities to support independence of mountain settlements in the region. Attention is paid to basic farm land preservation, protection of the hydrological network as a shared environmental capital, and the creation of habitable settlements outside of urban areas. The global challenges of food, water and migration trigger interrelated new urban questions. The design studies construct potential scenarios considering both bottom up and top down design interventions. Respecting exiting social and new transactional networks in the territory, the design scenarios look at how to blend-in new linkages, livelihood ecologies enhanced by novel technologies, efficient mobility systems, remediated environmental resources, and green infrastructure.

Ultimately, the scenarios outline an independent urban future for the Mei County, a Hakka ethnic territory, located at the upstream region of the Dongjiang River Basin. The rediscovery of mountain territories as a habitat and environmental

resource is put forward for a new phase of urbanization in China. Emerging, liveable cities responsive to climate change, scarcity of resources, widening social inequalities and the dominance of global city networks may not be found in densely populated urban areas. The underestimated potential of mountains with dispersed settlement structures become defined as an alternative people-oriented urbanity. The superimposition of old and new transactional networks as hybrid multi-functional spaces deliver modernity and resilience for new type mountain cities.

Mountains as a Resource:

In mountain research, as a field of knowledge, the relevance of mountains as a productive ecological resource, essential for the eco-system stability of larger regional configurations cannot be overlooked. The metropolis as a dominant urban category in the study of cities overshadows mountains as settlement spaces for evolved and contemporary communities. As the environmental carrying capacities in metropolitan agglomerations continue to be exhausted, paying more attention to mountain regions as part of urban systems becomes more relevant than ever. There are two important reasons for exploring the transformations in mountains communities taking place. The transformations are linked to behavioural changes of people. Firstly, the adoption of 'urbanised' behaviour of people living in the countryside and mountain areas is increasing. Partly, this phenomenon is occurring due to the migration of family members, and information exchanges between urban and rural communities. Secondly, given the behavioural changes of how people live, work and consume resources in rural areas, it raises questions about sustainable development strategies to avoid the negative impacts of a new generation consumerist society and shorter economic cycles. Given the environmental challenges in Chinese cities, questions about how more equitable settlements can be enabled is driving this research. An urgent reason for the search for urbanity in outside of densely populated areas is the injustice of spatially compromised, and socially underprivileged segments of the population in large cities in China.

The negative externalities of market-oriented real estate developments such as land-grabs, the diminishing of arable fertile land, and the widening gap between rich and poor people are serious issues undermining society and future generations. It is also critical to reflect on how the retrofitting of the Chinese cities may be undertaken by planners and architects in 50 years' time. Will it be possible to remediate destabilized eco-systems and socially fragmented communities in cities? Will people move away from overcrowded urban areas to low density settlements in the countryside? How could such a process be further supported through development policies? New profit-driven urban development continues to engulf traditional Chinese villages, and a mosaic of mixed farming and built-up urban-rural areas are the outcome of uncoordinated large-scale development projects. Over-population, issues of 'illegal' residents in cities and the environmental pollution are the unresolved challenges requiring changes of our development pattern for sustainable urban futures.

The settlement of China's Floating Population in cities and Hukou Reforms is one of the challenges yet to be addressed in future urbanization phases in the PRC.

Fig. 1.06: Image shows Chinese migrant workers from rural areas seeking employment opportunities in cities in Greater China and South East Asian countries. Source: Aris Chan, Feb 2011, China Labour Bulletin, TWC2.

Moving beyond the binaries of 'urban' and 'rural' territories:

Hybrid descriptions for territories as 'rurban' indicate the gradual transformations taking place in cities and the countryside. Increasingly, the simplifying categories of 'urban' and 'rural' territories no longer adequately describe current urbanization processes. In particular, in the Asian and Chinese context the transformations of urbanised and rural regions manifest the emergence of novel types of polarities between the city and the countryside. The growth of mega-city regions causes concern over the longevity and resilience of urban agglomerations. The countryside, on the other hand, is steadily catering for similar life-style choices as in cities.

The challenges for maintaining resilience in cities include climate change, flood risk, social inequality, food insecurity, economic stagnation and the migration of people. The development of Chinese mega-cities was partly supported by the supply of environmental resources, land and surplus labour from the peripheral and agricultural regions. If the growth of mega-cities in China has reached a point of unsustainable overdevelopment, then vulnerabilities of urban areas inducing a potential collapse of the mega-city (Shane, 2017) requires preparation for a crisis. In a possible decline of the mega-city, remote rural areas may develop into a 'back-up' resource for larger metropolitan areas.

For instance, the remoteness of mountain regions could be turned into a competitive advantage. Hence, increasing the independence of such regions as an alternative low-density city, while minimizing its dependence on the overpopulated urban agglomerations. Mountain regions, protected by environmental policies and fairly negotiated agreements, can offer environmental capital such as water, the capturing of pollution, land for food production, sites for recreation and accommodation of populations. Such benefits could lessen the burden imposed on metropolitan areas. The transformation of regional interdependencies including ecological, community and information based linkages binding together the mega-city and the hinterland will be critical for finding more reciprocal urban-to-rural relationships.

Challenging the idea of high-density cities as the only path towards sustainability, the objective is to further extend the idea of multifunctional uses of land in the mountains, to include new networks of livelihood ecologies. Examples are illustrated in Chapter 3.4 and 3.5. Particular emphasis is placed on securing the inhabitability of settlements, social welfare provisions, preservation of environmental capital, the potential of new economic opportunities and linkages between the urban settlements and the mountains communities. The aim is to evolve a novel form of urbanity, which accommodates both urban and rural ways of living.
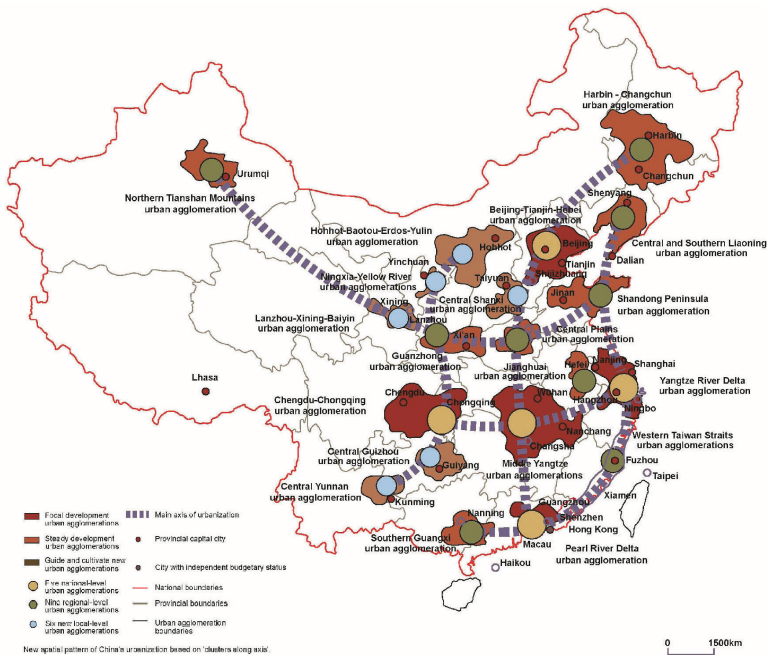
Mega-City Network

Fig. 1.07: The New Type of Urbanization phase has an underlying framework of 20 urban agglomerations. The mega-city urbanization system is organized in a spatial pattern of clusters along five main urbanization corridors or in other words 5+9+6 spatial structure. These are the coastal cities corridor axis, Yangtze River urbanization corridor, Eurasian land bridge urbanization corridor, Harbin-Beijing-Guangzhou urbanization corridor, and Baotou-Kunming urbanization corridor. As such they form a macro-pattern of urbanization for Greater China. Credits: Chuanglin Fang, Journal of Geographical Sciences, 2015, 25(8): pp.1003-1024.

1.2. The Conundrum:

The rise of Chinese mega-cities has been enabled by releasing environmental capital, land and labour from rural and mountainous regions. By providing the metropolitan regions with ecological resources from less affluent regions, peripheral territories have suffered environmental decay (see Fig. 1.08). Further, local communities have suffered a loss in social cohesion and disconnection from family farm land. Such social issues are the result of a remittance economy and the labour migration of peasants seeking employment opportunities in urban centres.

Escalating land and property prices associated with the ever growing metropolitan areas exacerbate the economic inequality between affluent and deprived communities. Due to exploitation of agriculture and industrialization in the rural hinterland, impoverished mountain territories in China fall into a state of crisis, struggling to prevail under the pressures of global urbanization.

While the exchanges of resources between mega-city regions and the countryside in China are principally benefitting the economies in urban areas, at the same time metropolitan agglomerations are confronted with acute environmental, social and public health issues, due to a consumption and growth oriented economy. Unsustainable development patterns in metropolitan areas have not adequately prepared for potential risks arising from global challenges, including food shortage, environmental disasters, and the urban population growth.

The lack of spare ecological capacities in cities, to cope with unanticipated, catastrophic events in the environment, and the catering for the welfare security for communities, calls for a restructuring of the relationships between the metropolis and the mountains. Instead of mountains as dependent, peripheral territories, the redefinition of mountains communities, as self-sufficient settlements is crucial for a sustainable development agenda. Ultimately, more emancipated mountain communities could reinforce better relationship with neighbouring cities at a regional scale, and strengthen synergies with mega-city clusters.

Fig. 1.08: Garbage covered in green protective nets shown as traditional Landscape Paintings reminds the viewer of nostalgia about the countryside and the issue of environmental degradation in rural areas in China. Credits: Artwork by Yao Lu.