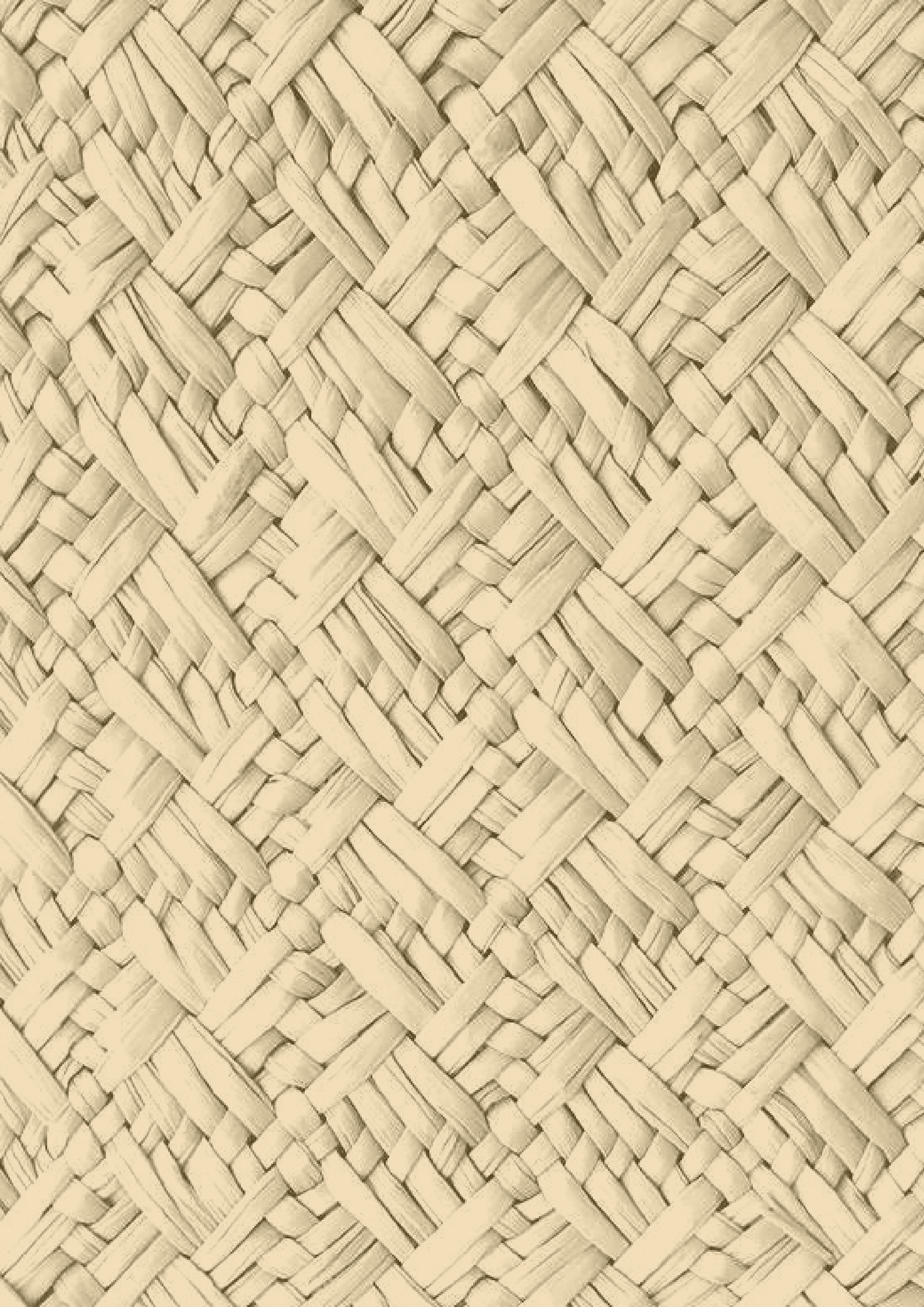




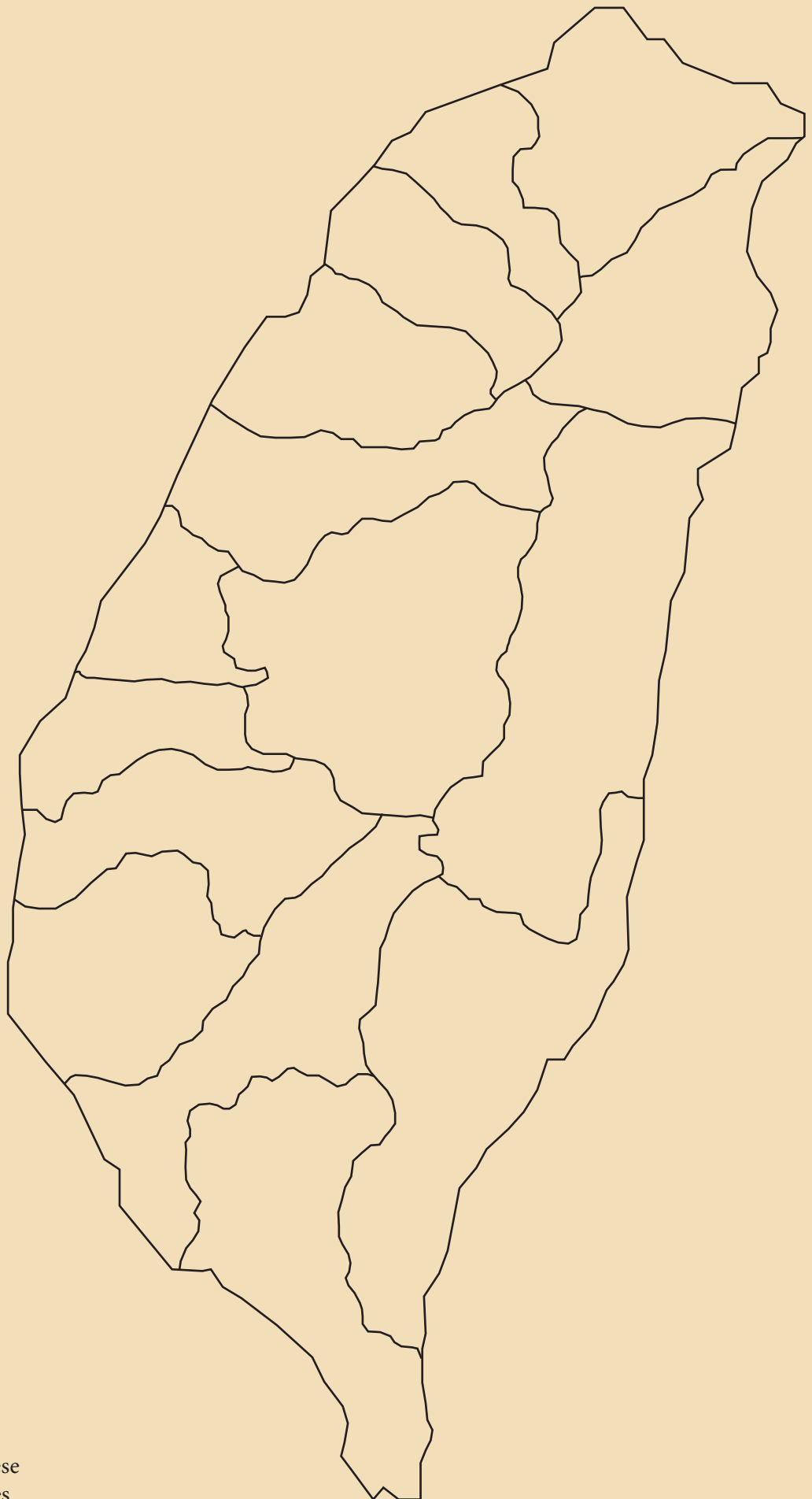
Future City, Future Village The Book

**URBANI[XX] Workshop II
Xinzhu City, Taiwan**



Taiwan

台灣



The pineapple pattern is said to be one of the most complex Taiwanese rush weaving structures.





URBANI[XX] Workshop II – Future City, Future Village, the Book
 Written by the participants
 Xinzhu, Taiwan – Berlin, Germany
 2019



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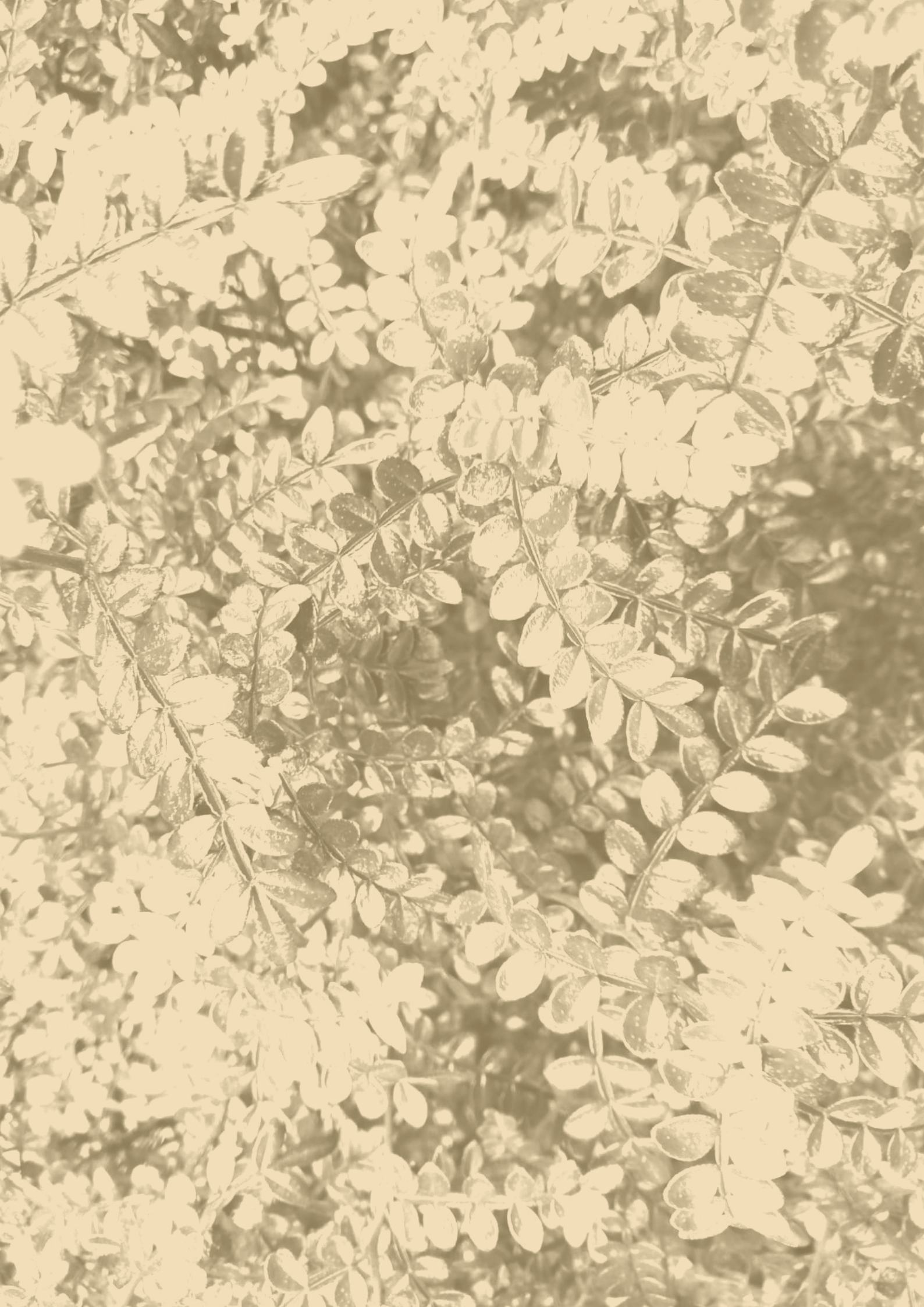
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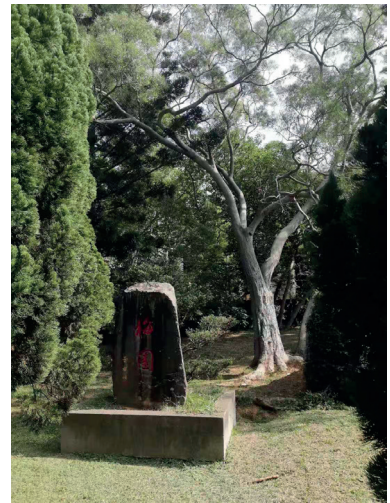




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National Tsing Hua University Xinzhu City, Taiwan



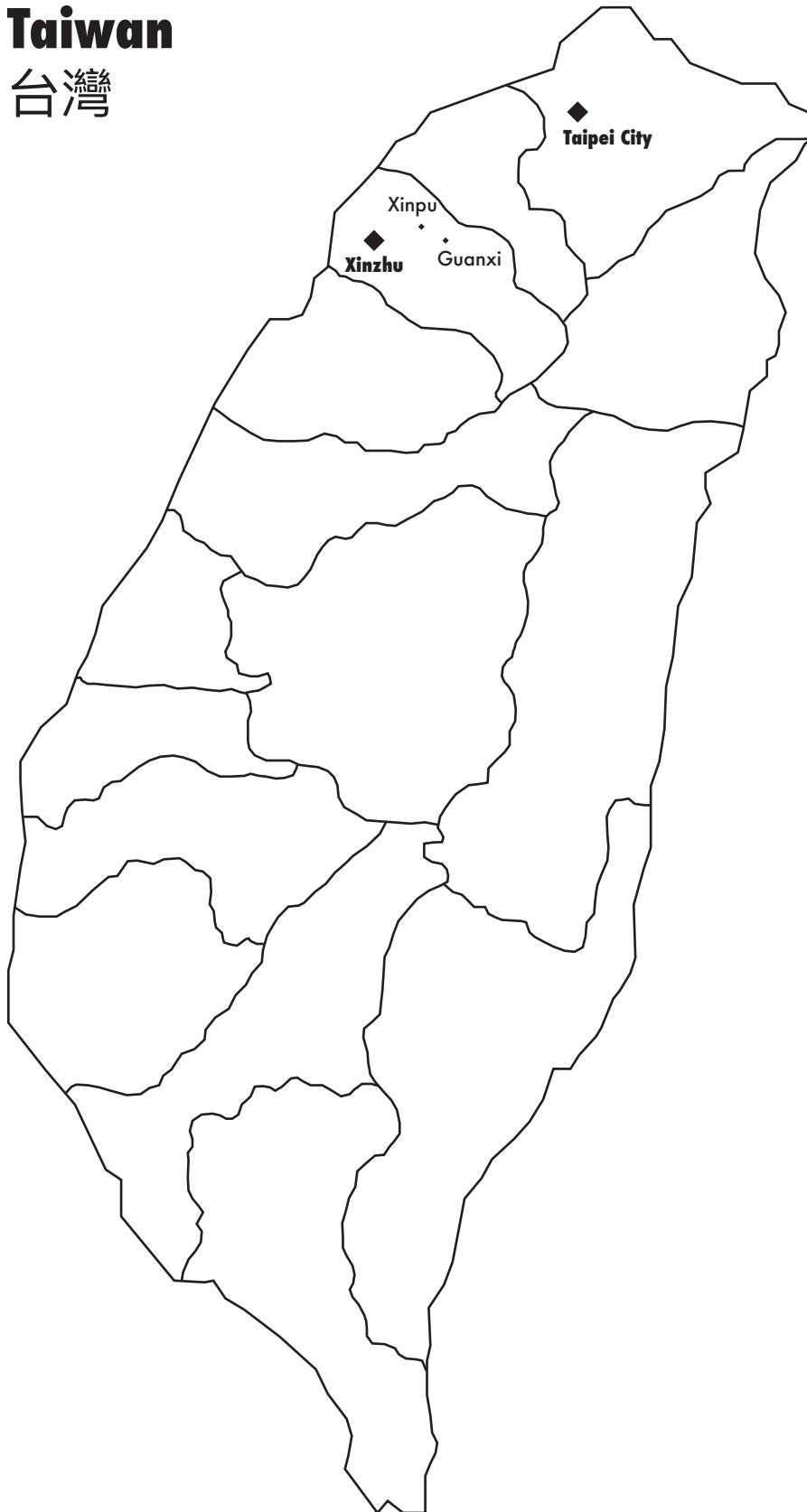
National Tsing Hua University

The China Center of TU Berlin is deeply grateful to the highly professional, scientifically outstanding and perfectly equipped host institution, National Tsing Hua University in Xinzhu City. It was a pleasure to work together with your brilliant scholars and engaged staff members who took perfect care of all organization, planning and communication tasks. The China Center of TU Berlin would like to highlight the commitment of Prof. Dr. Huang Shu-min and Prof. Dr. Barbara Meisterernst, Prof. Lii Ding-Tzann, Prof. Shen Hsiu-Hua and Wu Wan-Ching (Savi). Without their enduring engagement, the workshop would not have been successful.

URBANI[XX] Workshop II
Future City, Future Village

Taiwan

台灣



MONDAY

Trip to Hsinchu Science Park (Xinzhu) with detailed presentation and discussion

MONDAY

Trip to Hakka Market in Zubei (Xinzhu) with introduction and regional food tasting

TUESDAY

Guided tour Old City Xinzhu about the city's history, important places and current developments

TUESDAY

Dinner at Eastern Gate Market (Xinzhu) and showcasing its revitalization (NTHU cooperation)

THURSDAY

Xipu: Seeing the sensor-based AI-farming project and being invited for a traditional Hakka meal

THURSDAY

Guanxi: Visiting a rural gardening project, the old bridge and a street with traditional handicraft shops

THURSDAY

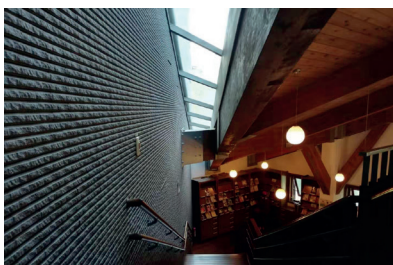
Guanxi: Walk through the village and along the surrounding fields; joint dinner and closing ceremony at an old yard house

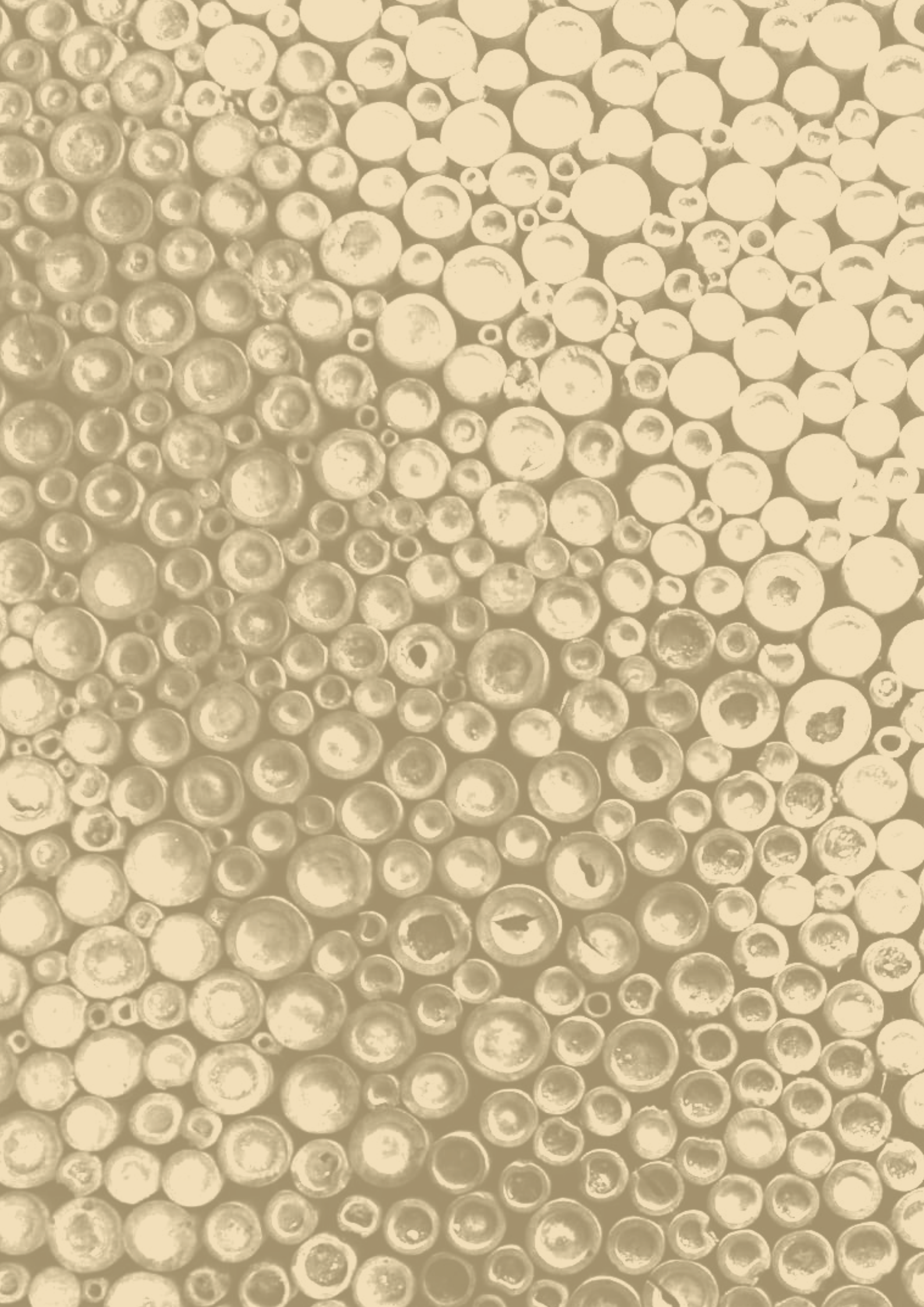
FRIDAY

Trip to National Palace Museum, the Thermal Valley and the Public Library in Beitou (Taipei City)

Excursions







On comparing different cities, the conventional approach like theoretical concepts, institutional arrangements, master plans, digital technology, or quantitative matrix at a large spatial scale, has been normally employed. In spite of its formal advantage, such broad-scale study seems often too elusive, abstract and fuzzy, and less tangible to touch the human essence of urban narrative on site. To make things worse, the acceleration of urbanization and its technological complexity poses more difficulties for the individual citizens who are involved to make sense for their personal unfoldment and daily life. K If our eventual goal of urban development is human oriented, then we must start our urban study at doorsteps and reclaim the street-level space. On contrary to the conventional approach mentioned above, the research, which focuses at micro-scale level related to the built environments and human behaviors, including the land use, the architectural landscape, the social space and the daily life, could be structured as observational descriptions. Based on personal experience, such bottom-up method on the urban narrative could also wake the spatial awareness of the individuals who are involved as well as the civil society. Nevertheless, both spatial scales are not excluded from each other, rather, it is a continuum reflecting the transformation from meta-agencies to personal activities.

The question to be addressed in this research is: How the urban spaces are perceived and consumed? How to integrate the personal daily life with the meta-narrative structure? To illuminate such integrated relationship and to understand the urban transformation more deeply, two urban observations, based on the approaches of Flaneur, personal geography and spatial consumption at street-level from Germany and China, which serve as a kind of micro-cosmos of the whole city, will be presented in this paper. K Gequn Feng is Associate Professor of Human Geography at Ningbo University. He has published various papers including economic geography, tourist behavior and regional development. His current research interests lie within the field of urban geography and spatial behavior. He is particularly interested in local everyday life in different places. Email: fenggequn@nbu.edu.cn

Community usage Pastor van Arskerk Eindhoven,
Photograph: Stefan Netsch



Bookshop Broerenkerk Zwolle, Photograph: Stefan Netsch

Housing St. Josephskerk Hilversum, Photograph: Stefan Netsch



Churches in Central Europe are facing substantial challenges: worshipping and church activities are decreasing due to society having become increasingly secularized; thus, the role and position of the church within society is transforming and impacting on the decline of regular worshippers and the number of members in general – a problem that two of the major religious groups, Catholics and Protestants, are confronted with. Though the number of worshippers and members is constantly decreasing, that of churches remains the same. Since 1990, both churches have lost about 13 million members, dropping from 58 to 45 million, while the number of churches with 44.000 has remained almost the same. Owing to less baptisms and constantly dropping membership numbers, it is expected that the latter will continue to shrink throughout Europe. One consequence will be that the imbalance between potential users and available church buildings will increase; consequently, the risk that even more buildings that require comparatively intensive and costly maintenance will become underused will increase, too, – resulting in turn in a shrinking membership and church tax. Especially in rural areas, local communities are experiencing considerable difficulties with those changes: while churches play an important role in a cultural landscape's built heritage and in local community life, they also cause those communities serious trouble. The situation generates a discussion about adapting, changing
--

or reusing church buildings. In Europe, countries like the United Kingdom and the Netherlands show a wide range of reused churches that are exemplary of other cases throughout Europe. Academic discourse addresses the main concepts of reusing buildings based on their cultural and substantive building value, referring to the conceptual work of Alfons Riegl. Churches play a significant role in building and supporting communities both in their sense of belonging and social capital The distinctive location, appearance and historic role turn churches into focal points in neighborhoods. The building serves as canvas for religious and social practices and is a physical manifestation of memories. Hence, closing or reusing churches might disrupt the established social and religious practices and consequently result in local conflicts. Reuse and adaptation might preserve the building as built memory or heritage, but religious practices and memories will be substituted by other uses. While practises of reuse and adaptation are still relatively modest in Germany, the Netherlands show a considerable amount of different types of reusing church buildings and have introduced an established practice of how to do it.
Results and discussion: From the 1970s, transforming and converting church buildings became part of the Dutch planning practise. The exact number of reused or demolished churches is unknown. Nevertheless, the

strategic plan reports 900 churches that have switched from ecclesiastical to civic use since 1975. In 2011, the Ministry of Heritage corrected the number to an estimated 1340 churches that have been converted since 1975.
K
Type I: Community-Based churches are characterized by the delivery of community services to the surrounding urban or rural communities. Different community services are bundled into and complemented with social and health services, offices etc. that are supplying the local community with goods and services. They are situated in central locations and therefore easily accessible and connected to public transport (PT) services. The building stock and the plots provide space for structural adaptations, e.g. extending the building by using outdoor spaces and by so doing creating (temporary) parking lots. Two main structural changes of the churches stand out: i) developing a flexible room layout and space options within the church; ii) extending the usable surface area. Structural changes range from freestanding structures to vertical partitions of the building. Those changes often require additional changes such as window openings, additional entrances or sanitary installations. The sacred character and former use of the church do not play a role anymore as far as the reuse design is concerned; instead, the focus is on providing community services and generating enough turnover in order

to maintain the building stock and operate the building. However, the focus is on maintaining the church and providing community services and not on making commercial profit.
K
Type II illustrates Mixed Uses , consisting of two or more permanent or temporary uses. Churches of this type are entirely repurposed into non-religious uses: the sacred purpose is entirely replaced by a mix of different (also commercial) activities. Most mixed-use churches are located in urban and peri-urban landscapes and are well connected to PT; however, there is no direct link between spatial conditions and implemented uses. Implementing those uses is linked to structural changes: horizontal and/or vertical partition and additional entrances are the most common structural changes. One significant structural change is the implementation of additional entrances. Those entrances are crucial for the accessibility of the building and its new internal utilisation to ensure a conflict-free operation. Also, for this type the sacred character of the building only plays a minor role in repurposing, compared to spatial and operational requirements, which leads to rather pragmatic structural solutions. Some uses such as cafés, theatres or museums still allow public access and experiencing the church at least temporarily.

Churches of the type Commercially-Utilized Churches (Type III) are repurposed into permanent utilisations such as retail, supermarkets, cafés, restaurants, hospitality, recreation and sports, or offices. Location-based factors (e.g. centrality or high population density) play an important role in decision-making regarding their reuse: while for some repurposes such as bookshops, cafés, retail or shops central locations endowed with high customer and pedestrian frequency are important, for destination activities such as sports or recreation they are less. The adaptation to commercial, sports and recreational activities leads to a full ‘clearing’ of the church’s furnishings and embellishments, which are then replaced with gym or sports equipment (e.g. skateboard ramps, trampolines), retail shelves, technical appliances such as refrigerating facilities, lightning, or labels and posters are put on the façade of the church.

Type IV illustrates repurposed churches for Residential Use . In contrast to the previous types, the ownership structure plays an important role here, because most churches belong to private owners or in some cases to housing. What both have in common is that due to the residential use, public access is mostly restricted or impossible. The type Residential Use is found evenly in rural and sub-urban landscapes. A common characteristic is the need for

enough space for possible expansions of the building and parking lots (on the property or street parking). For repurposing the building, significant structural changes are necessary: vertical partition, implementation of new or additional storeys, provision of technical infrastructure and significant alterations of the building envelope are necessary to ensure appropriate lightning and ventilation in the apartments. As a rule, the appropriation of churches for residential use leads to the utilisation of the entire building volume. This utilisation also includes static and structural changes since the building was designed for representation and church services and changes and structural inserts of such extent were not part of the initial design plan. The comprehensive utilisation of the building volume is due to high expenses and necessary investments that project developers try to compensate by significant floor space development. The major investments and significant structural changes of the building might query if conversions for residential purposes are reversed. The privatisation of the building also alters its public accessibility which in most cases is revoked. From a cultural perspective, structural alterations of the building composition, building envelope and façade are obliterating the sacred character and therefore considered significant.

Conclusions: Reuse and repurposing of churches pose a planning challenge for urban and rural communities. In the rural context, the debate seems more significant due to lower population and customer density, turning reuse types emphasizing commercial utilizations into contested re-development approaches. Consequently, there are no standard solutions for reusing sacred buildings in urban or rural contexts, since every repurposing type is strongly related to the quality of the church building, its location and the local church and civic community. However, the present research confirms that all types of reuse are either adding or replacing religious narratives and memories with secular ones. Those changes of narratives indeed result from the preservation of the building structure, although isolated from its initial religious meaning and practice. Though converted to secular uses, there is a potential role to serve and support local communities in building their social capital. Consequently, the development of planning and governance processes that take up these challenges appear to be urgent tasks for developing suitable and socially acceptable solutions for the reuse of (abandoned) churches.
K
This abstract is a summary based on an article, which was published in 2019 together with Katharina Gugerell in <i>Acta Horticulturae et Regiotecturae</i> : https://content.sciendo.com/view/journals/ahr/22/1/article-p48.xml

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There is an old Chinese saying: “民以食为天”. It means that people consider food as heaven. It shows the importance of food and indicates that hunger breeds discontentment. China has over 5000 years of agricultural history. On the one hand, by using 7% of the agricultural land resource, China has been able to feed 20% of the world's population (1). On the other hand, a number of food issues have been showing up in the last decades. This paper aims to discuss some of the current food issues under the microscopic definition of agriculture. By analyzing the phenomenon, some development strategies are given.
K
What is agriculture? Macroscopically, agriculture means the science and art of cultivating plants and livestock. It includes farming, horticulture, animal husbandry and forestry (2). In this article we use its microscopic definition. Agriculture equals arable farming. China is an agricultural country. According to the latest statistical year book (China Statistical Yearbook 2017), China had 1.39 billion people in 2017 and 41.48% of the whole population were farmers (3). Since the end of the last century, with the process of urbanization and globalization there have been increasing food challenges in China:

Natural resources: Urbanization means increasing need of construction land and thus less agricultural land resources. During the rapid development phase, although the government has tried to hold the red line for urban construction, there have been different real estate investors and a few of the local governments that haven't obeyed the central governmental regulations.
K
Food culture: Vegetables and fruits account for a large proportion of the Chinese diet. Chinese have the most vegetable consumption per capita worldwide [P4]. Since 1988, the Chinese government has proposed a shopping basket program (菜篮子工程) to alleviate the contradiction of tight non-staple food supply in China. However, the statistics about different crops production per capita per year like grain, wool, oil, etc. has only been provided till 2012. The productivity doesn't accord with the availability statistically.
K
Food security (4): Another issue is that there is a huge number of middle men between farmers and customers. The middle men earn most of the profit. With each additional layer the price of vegetables and fruits raises. The farmer can earn little profit through this, but the customers pay a lot.

Fresh produce logistic: Taking fresh produce (vegetables and fruits) as example, the wearout during transportation can account for up to 65% [P5].
This means that over half of the fresh vegetables has to be thrown away before it arrives the destination.
Food waste: Not only that causes a lot of food waste. Another reason is the short shelf life for fresh produce, especially after the long-distance transportation. Supermarkets and markets have to throw away much of the fresh produce before its expiration. Furthermore, for a long time, China had the bad tradition of providing more food than guests could possibly eat. It was considered guest unfriendly if guests would sit in front of an empty plate.
With the educational and cultural development, nowadays only few people keep this tradition.
Food safety (5): China was flood slowly by food safety problems in the last decades [P6]. Whilst there is an apparent overdose of pesticides, insecticides, herbicides, etc., the markets were not controlled strictly by the government.
Examples include chemical eggs, vegetables soaked in chemicals to let them appear fresh, added industrial chemicals in milk powder and fake food products. There have been diverse food safety issues on different levels and

from different perspectives. It has forced the government to control the market more strictly and extend the laws. Till today, there has been a clear decrease of food safety problems.
By showing this, we know that the food system as well as the agricultural system is still to be improved in China. Nowadays there are 6 billion people all over the world. Till 2050, the world population will increase to 9 billion. The question of how to feed all inhabitants of planet earth is an urgent problem to solve.
For our future cities and villages, not only in China but worldwide, we need both modern automated agriculture and urban agriculture, or even more high-tech supplements like urban agriculture (6) (e.g. vertical farming, rooftop greenhouses, underground farming, etc.). These possibilities have been developing very fast in the last decade, especially in metropolises such as New York City and Shanghai.
Yet, it's not about to improve the efficiency of agriculture alone. Actually, enough food is produced in the world nowadays, but there are still many people undernourished. Thus, the balance of the distribution of food

resources is another challenge. Till 2050, over 70% of the world population will live in urban areas. In those agriculture can still be flexibly applied and can provide multi-functions as well. Hence, urban agriculture will become a huge chance as well as a challenge for self-sufficiency. Additionally, researchers have shown that urban agriculture has a positive effect on mental health of urban dwellers. However, based on agriculture and urban agriculture, social and environmental consciousness is the key solution to the complex problematics.

Footnotes:
(1) http://www.stnn.cc/china/200811/t20081103_891568.html
(2) Safety and health in agriculture. International Labour Organization. 1999. p. 77. ISBN 978-92-2-111517-5. Archived from the original on 22 July 2011. Retrieved 13 September 2010. defined agriculture as ‘all forms of activities connected with growing, harvesting and primary processing of all types of crops, with the breeding, raising and caring for animals, and with tending gardens and nurseries’
(3) http://www.stats.gov.cn/tjsj/ndsj/2018/indexch.htm
(4) “Food security suggests the adequacy of food to society, the equitable distribution, confirmed supply, fair access, sustained sources, etc.” (https://

www.quora.com/What-is-the-difference-between-food-security-and-food-safety)
(5) “Food safety is concerned with safe sources of all foods, freedom from avoidable chemical and microbial contamination, continuing the appropriate ‘cold-chain’ where needed, protection from insects, rodents, cross-contamination, safe storage, transportation, labelling, preparation, processing, cooking, correct temperatures post-heating, food-handler safety, and services.” (https://www.quora.com/What-is-the-difference-between-food-security-and-food-safety)
(6) Agritecture: agriculture + architecture, means with building integrated agriculture.

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View from Xiamen University and on the beach of "Sponge City" Xiamen, Photograph: Berthold Kuhn

World Congress on Building Green, 2020 Berlin
found on: www.bugg-congress2020.com



Weltkongress Gebäudegrün
World Congress of Building Greening
www.bugg-congress2020.com

ANKÜNDIGUNG 2020

Broad interest: cooperation partners of the
World Congress on Building Green, 2020 Berlin,
found on: www.bugg-congress2020.com

Kooperation partners



Energy and Climate Protection Programme;
Berlin on its way to a carbon free city (symbolic picture)



The relevance of cities in the process of promoting sustainable development
has been highlighted by many international organisations and experts. “Our struggle for global sustainability will be lost or won in cities.” With these words Ban Ki-moon, Secretary-General of the United Nations, had opened the High-Level Delegation of Mayors and Regional Authorities in New York City on 23 April 2012.

Effective international partnerships and cooperative practices between local authorities, the private sector and nonprofits are considered to play a key role in promoting good urban governance and preparing the ground for sustainability transitions. Cities around the world are stepping up their contributions to meeting the Paris agreement targets and to come up with innovative practices in the field of climate change adaptation.
This paper/presentation aims to increase our understanding of sustainability transitions at the level of cities with a focus on climate policies. It distinguishes between push and pull factors for motivating cities to address climate change with various policy instruments.

Push factors comprise exposure to climate change, e.g. due to pollution, heat, water and health challenges that cities face in the context of climate change.

Berthold M. Kuhn

Pull factors relate to image factors and economic policy opportunities. Cities are considered hubs of growth, research and innovations. They attract visionary, educated and cosmopolitan oriented middle-class people and compete for talent attractiveness with other cities. Tourism could also an important pull factor to make cities more responsive to climate challenges.
This presentation looked at policymaking and governance of climate protection in the cities of Berlin and Xiamen with focus on Berlin's Energy and Climate Protection Programme (BEK) and Xiamen's Sponge City Programme.

The BEK was officially launched in January 2018. It has a time line to 2030 but the long-term objective is to make Berlin almost carbon neutral in 2050.
The programme addresses climate mitigation, climate adaptation and analyses the impact of climate change in Berlin. The building sector is responsible for close to 50 percent of the emissions. The BEK approach follows a partnership approach and involves many institutions and also affects and involves citizens in many ways. The city government passed a mobility act in 2018 which pays special attention to walking, biking and public transport. One could say that Berlin's participatory approach is guided by a vision of ecological civilisation with German characteristics, focusing on technology, multi-stakeholder

Governance for Sustainable Development in Cities. Berlin's Energy and Climate Protection (BEK) and Xiamen's Sponge City Programme

contributions and citizens participation. The Berlin city government has signed Memonranda of Understanding with energy producers, hospitals, Universities and public utilities that define ambitious emission reduction targets.
One of the most innovative features of the BEK is the Digital Monitoring and Information System of the Berlin Energy and Climate Protection Programme (BEK) which was launched in 2019 by the Berlin Senate Department for the Environment, Transport and Climate Protection (SenUVK) with the purpose of make monitoring of climate protection transparent and easily accessible to the public.
The city of Xiamen is known as a vibrant sea port and a beautiful tourist location. Its economy has significantly benefited from the status of Special Economic Zone and the improvement of cross-straits relations. The city's population has recently surpassed 4 million, exceeding Berlin's population by about 300 000 thousand. With regards to climate protection, Xiamen is considered a front-runner in China. It benefited from projects of the Clean Development Mechanism in the context of the Kyoto Protocol and has been awarded low-carbon city in 2010. More recently, it has started to implement

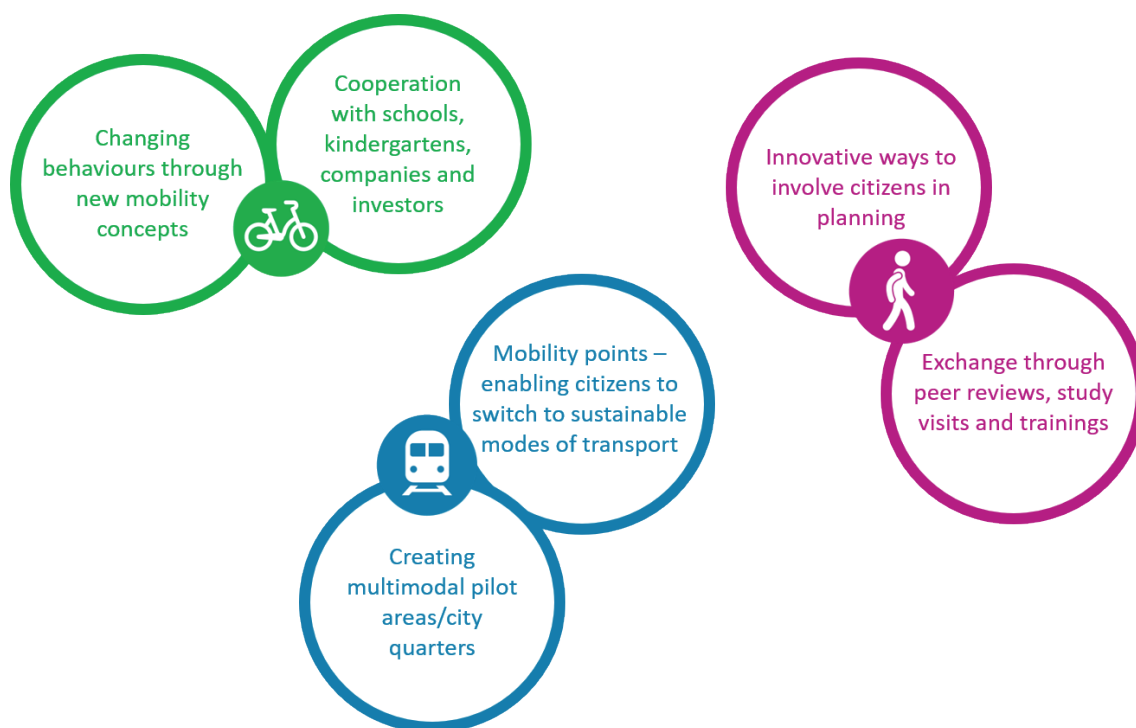
a Sponge City Programme in an effort to address climate change adaptation and to better deal with the heavy rainfalls plaguing the city, in particular in the summer months when precipitation exceeds 150mm per months. Xiamen Sponge Office was established in 2015. After three years of pilot phase implementation a comprehensive evaluation is underway. The city got substantial central funding in the context of this programme. Accumulated investments amounted to 1.2 billion RMB. The pilot construction in Xiamen extended to of 35.4 square kilometers in the three years since the sponge city programme was launched.
The presentation highlighted some difference in policy priorities between ther two cities and concluded with an analysis of driving factors and obstacles of climate protection. The city of Berlin is able to mobilise many stakeholders in the process of designing and implementing a comprehensvie climate policy. It adopts a decentralised, transparent and participatory approach. The building sector remains a key challenge as more than 85 percent of Berliners rent out apartments and political activism to cap rising rents is currently high in the city. Upgrading infrastrucstur for cycling is one of the priority areas of the city government.

The transparent digital monitoring system of the BEK (diBEK) could be considered a good practice. However, it has yet to be seen whether monitoring of key performance indicators in different sectors will actually take place as projected and meet the expectations of experts and an informed public.
The city of Xiamen adopts a more targeted approach, in particular in the field of climate adaptation. Investments are higher. Other than in Berlin, the public has no easy access to monitor progress but experts from different disciplines and institutions, such as the Institute of Urban Environment (IUE) and the Xiamen University, have been involved in dialogue with city authorities.
Xiamen, due to stronger economic and population growth and its maritime subtropical climate faces more severe challenges than Berlin, in particular with respect to heavy rainfalls and flooding. While Xiamen would use the term “sponge city” for its new and comprehensive approach to rainwater and land use management, the city authorities in Berlin would prefer to speak of decentralised rainwater management. Efforts are under way to advise construction projects that rainwater harvesting should be considered early on in the planning process. In both cities we witness efforts to educate the public on climate change challenges, targeting even school going children.

Berthold M. Kuhn

Governance for Sustainable Development in Cities. Berlin's Energy and Climate Protection (BEK) and Xiamen's Sponge City Programme

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Main activities carried out in cities.
multimodal, Image: Abraham / Lu



Location of Partner Cities and Insitutions of
cities.multimodal, Image: Abraham / Lu

The urbanization rate of China still keeps increasing and is expected to reach a percentage of more than 70% in 2030. By that year over 1 billion people will live in cities. This means the cities are under high pressure to physically grow and that there is a strong need to rapidly extend the corresponding infrastructures. This also strongly concerns the mobility sector. However, car traffic cannot be the solution to compensate the increased need for urban mobility. To ensure a mobility system that contributes to a better quality of life in cities, urban mobility systems should be smart and sustainable. With the goal of providing citizens a sustainable mobility alternative to private motorized vehicles, the future mobility should be multimodal and encourage the use of PT, walking, cycling, shared modes of mobility (bike and car-sharing) and by combining these modes. As an example of a project aiming at increasing multimodality, the proposed 15-minute presentation will introduce the project cities.multimodal (http://www.cities-multimodal.eu/). This project is funded by the European Commission (Interreg Baltic Sea Region). It aims at developing and applying a low-threshold approach for environmentally friendly urban mobility, attractive and easy to adopt for 10 partner Baltic cities with focus on multimodality, mobility management and capacity building. Mobility

Michael Abraham & Lu Lu

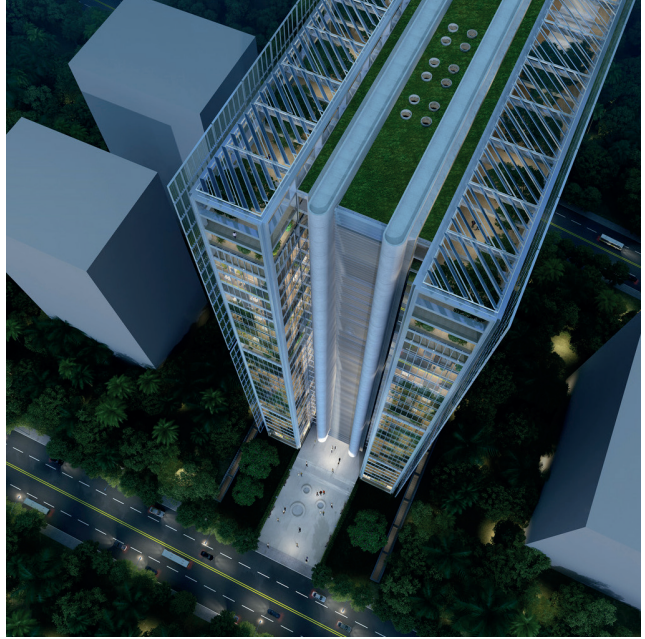
points will be introduced as a key element which is a new solution to support multimodality. It is defined as neighborhood transport hubs linking various forms of sustainable mobility options that are spatially concentrated and virtually integrated via diverse kinds of information platforms and ticketing options. Besides the presentation of this project, three additional innovative mobility solutions will be introduced and open for discussion. These solutions are an autonomous bus system, shared cargo-bikes and so called ‘parklet’ to increase awareness for sustainable usage of urban space. Michael Abraham studied City and Regional Planning at the Technical University in Berlin. Supported by a DAAD scholarship, he also spent one year studying architecture, geography and management at Montana State University, USA. Since 2007 he is working as a research fellow at Technische Universität Berlin. Ever since he worked in several European and international projects aiming at promoting sustainable urban mobility. Within this research field he is currently focusing on the process and impact evaluation of transportation measures. His general research interest is oriented towards the testing and assessment of sustainable urban transportation projects and complex strategies as well as towards the identification of transferability criteria of success factors and the

On our way to sustainable future cities: New approaches to increase multimodality of the transport sector in urban areas

corresponding knowledge exchange on an international level. Additionally,
he dedicates his activities to general and specific questions related to the
conception, implementation, analysis and evaluation of Smart City concepts.
Email: m.abraham@tu-berlin.de

Lu Lu was born in China in 1987. He received his master's degree in Geodesy
and Geoinformation Science at Technische Universität Berlin in 2015. From
2012 to 2015, Mr. Lu worked as a student assistant for the research unit
“Mobility and Space” at the Center for Technology and Society. He initially
worked in the project “Energyatlas Berlin” where he was responsible for
the GIS data analysis and model design. Afterwards, he worked in several
projects such as the “Pilot Project Sustainable Transportation in China - The
Example of the City of Qian’an”. After receiving his master's degree in 2015
he became a scientific assistant and began working in the projects “Smart
Sustainable District” (SSD) and “Traffic Emission Analysis Local Mobility
Concept in Mönchengladbach”. His research fields are transport emissions,
sustainable urban mobility planning, and geographic information systems for
transportation. Email: lu@ztg.tu-berlin.de .


[illegible]



Conceptual design for a future high-rise building,
thomas fritzsche architects | tfa

ENERGIEAUSWEIS

für Nichtwohngebäude
gemäß den §§ 16 ff. Energieeinsparverordnung (EnEV)

Gültig bis: 09.12.2022

1

Gebäude

Hauptnutzung/ Gebäudekategorie	Allgemeinbildende Schulen	
Adresse	Postdamer Allee 11, 18599 Michendorf	
Gebäudeteil	Hauptgebäude und Erweiterungsbau	
Baujahr Gebäude	1997	
Baujahr Wärmeerzeuger ¹⁾	1996/2008	
Baujahr Klimaanlage ¹⁾		
Nettogrundfläche ²⁾	1.402 m ²	
Erneuerbare Energien		
Lüftung		
Anlass der Ausstellung des Energieausweises	☐ Neubau ☐ Modernisierung ☒ Aushang bei öffentlichen Gebäuden ☐ Vermietung/Verkauf ☐ (Änderung/Erweiterung) ☒ Sonstiges (freiwillig)	

Hinweise zu den Angaben über die energetische Qualität des Gebäudes

Die energetische Qualität eines Gebäudes kann durch die Berechnung des Energiebedarfs unter standardisierten Randbedingungen oder durch die Auswertung des Energieverbrauchs ermittelt werden. Als Bezugsfläche dient die Nettogrundfläche.

☐ Der Energieausweis wurde auf der Grundlage von Berechnungen des Energiebedarfs erstellt. Die Ergebnisse sind auf Seite 2 dargestellt. Zusätzliche Informationen zum Verbrauch sind freiwillig. Diese Art der Ausstellung ist Pflicht bei Neubauten und bestimmten Modernisierungen. Die angegebenen Vergleichswerte sind die Anforderungen der EnEV zum Zeitpunkt der Erstellung des Energieausweises (Erläuterungen – siehe Seite 4).

☒ Der Energieausweis wurde auf der Grundlage von Auswertungen des Energieverbrauchs erstellt. Die Ergebnisse sind auf Seite 3 dargestellt. Die Vergleichswerte beruhen auf statistischen Auswertungen.

Datenerhebung Bedarf/Verbrauch durch: ☒ Eigentümer ☐ Aussteller

☐ Dem Energieausweis sind zusätzliche Informationen zur energetischen Qualität beigelegt (freiwillige Angabe).

Hinweise zur Verwendung des Energieausweises

Der Energieausweis dient lediglich der Information. Die Angaben im Energieausweis beziehen sich auf das gesamte Gebäude oder den oben bezeichneten Gebäudeteil. Der Energieausweis ist lediglich dafür gedacht, einen übersichtlichen Vergleich von Gebäuden zu ermöglichen.

Aussteller

Sandra Erlach
Umweltbüro
Feldweg 4
14552 Michendorf

10.12.2012

Datum

Unterschrift des Ausstellers

KPIs

Welcome

Dashboard Finance Transportation Environment

City Status

KPI	Prev Year	Current Year	Status	Trend	Diff. In %	Target	Additional Information
Water Consumption (l/day/inh)	129	125	■	▼	-3,1%	124	Updated Jan 2008
Energy Consumption (kwh/day/inh)	3	3	■	▼	-3,3%	3	xxxxxxxx
Administration cost (EUR/inh/year)	2.158	2.197	■	▲	+1,8%	1.900	xxxxxxxx
Investment cost (EUR/inh/year)	2.295	2.350	■	▲	+2,4%	2.400	xxxxxxxx
Waste (kg/inh/year)	660	688	■	▲	+4,3%	600	xxxxxxxx
Air Pollution (NO2 ppm)	100	105	■	▲	+5,0%	90	xxxxxxxx
Households (Mio)	2,000	2,050	■	▲	+2,5%	2,000	Updated Jan 2008
Functionality Public Traffic	90%	91%	■	▲	+1,1%	90%	Updated Aug 2008

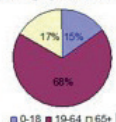
Adjust |

City Information

Inhabitants	3.420.786	▲
Rate of Unemployment	13,8 %	▼
Population Density (inh/qkm)	3836	■
Gross Domestic Product (Mrd €)	83,6	▼
Water Consumption (1000l)	4300,0	▲
Energy Consumption (MW)	3536,0	▼

Adjust |

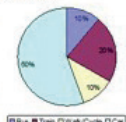
Demographic Structure



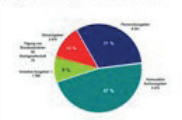
Economic Sectors

Pie Chart in %:
Agriculture, Industry,
Services, Information,

Modal Split



Adjusted Expenditures 2008



Level of Service



Air Pollution Situation



Adjust |

The scope:
Ensure citizen of metropolitan areas with consistent, meaningful information about the environmental qualities of their habit is the scope. The application should provide engaged people as well as institutions and governmental administration units with the relevant information in a structure which fits the requirements of an environmental monitoring systems and not only one peak-indicator. Everybody may have access to data of interest, but the data are more or less raw data: a huge amount and with less structure for decisions like the location to produce products and services, live, learn and work.
Those informations are necessarily:
– understandable and clear – this includes shortness
– contain all environmental mediums and aspects; generalization without spinning the facts.
Monitoring system should enable administrative units, institutions, citizen to:
– to carry out an assessment of environmental impact and features of metropolitan areas,
– to provide a standardized quality assessment and base for certification and identify deviation and gap to guiding values

Sandra Erlach

– provide data base to initiative movements as local projects for improve the local environmental qualities.
Therefore it is assigned as a contribution to the “Great Transformation” for a better, sustainable living (1).
The source of data and quality of information:
The most important points of data quality are:
– the continuity of measurement methods and instruments and framework conditions
– the availability of comparable data, measurements over a time line
– significant deviations in comparison to average data should be explained
– the data source and the kind of measurement and methods should be published
Beside the definition and selection of key performance indicators is the source of data, the kind of algorithm for derivation – the real virtual intelligence.
The kind of preprocessing, especially in order to compare time periods and change units and scale them appropriate should be also mentions as secondary information.

Design of a monitoring system of environmental KPIs for metropolitan regions with open access

Selection of the metropolitan area:
The metropolitan area is in scope, because:
– those areas are new in the planning processes and cross administrative units
– those areas are living space of more than 50% of inhabitants
– those areas give the most important input for developments and progress
In this project metropolitan areas are defined as a settlement area with tendency of concentration and compaction and enhancement by i elements for supply infrastructure and disposal infrastructure. They spend impact to the surrounding and present risk factors as well. This are the main guidelines for the selection of an area for a pilot system.
Methods of an environmental monitoring system:
Most common in Europe are the ecological footprint (https://www.footprintnetwork.org/our-work/ecological-footprint/) , the sustainability index and EMAS key performance indicators (https://www.emas.de). Beside this the CDP (https://www.cdp.net/en) is well known.
Traces of IT implementation:
The scrum methodology is base of the approach. The business cases leads to use cases and the description of features of the application. By creating

user stories we can figure out the worth of comprehensive environmental information. The data model is the baseline and structured as the following scheme. The components are:
– Presentation layer: for example the Internet Explorer because it is common
– Application should be implemented by an usual programming language as Java
– Access should be provide by open data , e.g. http://daten.berlin.de
– Indicators will be transformed by administrative units. The indicator will be transformed into the required time line, at least in 1 to 5 years; the unit will be transformed/ equalized
– Complex indicators will be derived by algorithm
– For each scheme, at first EMAS, a fix presentation scheme is assumed
Footnote:
(1) Uwe Schneidewind 2018: „Die Große Transformation Eine Einführung in die Kunst des gesellschaftlichen Wandels“
Sandra Erlach is projectmanager and senior consultant at ‘Umweltbüro Dr. Sandra Erlach’. She was born in Hamburg and studied environmental planning and graduated at TU Berlin. She worked for a couple of private



Hermanus Koekkoek (1815 - 1882):
 "Dutch river scene with a sailing barge,
 fishermen and figures gathered on the bank"



Rhein-Herne-Kanal in Germany,
 picture taken from the roof of the
 gasometer Oberhausen, Raimond Spekking

Historically, inland waterways have been the cradle of civilization because they provide a habitat for human dwelling. The waterways were a driver of trade and transportation and nurtured cultural growth – controlling them allowed to exercise power. Their significance continued to diminish due to the motorization (resulting in more flexible transportation via road networks) and electrification (cities could meet their water & energy supply alternatively).
Nowadays, inland waterway transportation may only play a minor role in the field of transportation in total. However, it is a low-cost and emission-efficient mode of transport with considerable capacities in comparison to road or rail transportation. Electrification and other technological advances of the boats are expected to lower the greenhouse gas emission of the transportation sector even further. Albeit, the inland waterway infrastructure is a bottleneck for crossing transportation systems and supply systems (energy, water). Especially in urban areas, the waterway infrastructure is dilapidated and threatens to disrupt these systems.
Inland waterways provide ecological value as a habitat and, often, are embedded into the social or cultural narrative of the region. They are

Johannes Gast

Inland waterways in urban areas

an integral part of leisure activities, a city's water supply, tourism, public transportation, and logistics. Waterfront and riverside regeneration aim to utilize these parts by city planners even further.
Besides, there is much potential for further utilization, especially in combination with digital technology. For example, postal services are currently testing the application of cargo vessels as mobile micro-hubs to meet the increasing demand for last-mile parcel delivery in combination with bicycle couriers. Also, cities in the Netherlands supply urban catering and perform waste removal operations by ship. These applications, all, relief road traffic and avoid greenhouse gas emissions. However, the number of examples is limited.
The objective of this workshop contribution is to elaborate on how inland waterways affect the regions alongside them. What are the characteristics that affect urban planning, and how can they contribute to the sustainable growth of urban and rural areas in the future?
Johannes Gast has a background in industrial engineering and management. He acquired his M.Sc. on the topic of creating a data-

[illegible]

Eco-village concept design, Pan Tao



China is still experiencing fast development of urbanization and industrialization, every year there is more than 10 million rural population moving to cities for better jobs and living. For the past four decades, rural China has gradually degraded and traditional rural society roots have been cut in many places. For a sustainable future, China needs balanced development between urban and rural area. Therefore, the Central Government has put forward the “Rural Revitalization” as a national strategy since the year 2017.
K
The big challenge is how to revitalize rural economy to increase households’ income. The total revenue of Chinese agriculture nowadays is 6 trillion RMB per year, which means the average Chinese agricultural household income is ca. 3000 EURO per year. Currently the average rural household income is only 37% comparing to that of urban area. Rural households need to find new source of income besides agriculture business and off-farm jobs. There are two major factors limiting the rural economy growth. One limiting factor is prices of Chinese agricultural goods such as grains are much higher than international market. The further increase of Chinese farmers’ income becomes difficult unless government give more subsidies to farmers, which is unfortunately against WTO rules.

Pan Tao

Eco Villages in the big picture of China Rural Revitalization

Another limiting factor is that the properties in the rural area are not allowed for sale to the person if not in the same village. This prevents most of rural households to gain property market values. We can imagine nowadays how many rural houses are empty and abandoned for use since over 100 million rural households have moved to cities. The Central Government recognizes the problems and is taking action on rural land reform. CPC No.1 annual document has proposed an innovative land reform framework called “Three Rights Split”, namely, land ownership right, contract right and usage right can be separated. The ownership and contract right are remained to the rural community and farmers, respectively, and the usage right can be transacted on the market in order to attract long term private capital and talents to invest in the rural area. An amendment of land law reflecting the reform has been approved in September 2019. Actually the land reform has been very cautiously tested in 33 pilot counties for 2 years already.
K
We cannot say the rural land property will be privatized, but at least, it will be like urban land with 70-year usage right, which is long enough to attract private investment bringing the rural economy to another level. However, activating market may take another 2 years or even more. It will be some conflicts between the large quantity of rural land supply and urban land

market since the supply of rural land may affect the urban land market price, which is another very complicated and sensitive issue in China.
The land issue will be solved sooner or later. Then what are the most promising new model for rural economy? China can learn the experience from German Schrebergarden model, started in the mid of 19th centuries and spread to many countries in the world, having millions of little garden allotments for urban families. China can extend the German Schrebergarden model with farming service and second home development at large scale.
Chinese has traditional culture of Peach Blossom Shangri-La Dream. A lot of cityside people are looking for second homes with gardens in the countryside, especially for those living in the mega cities like Shanghai, Beijing, Shenzhen, etc. In the coming of aging society, a lot of senior retired people are also looking for affordable places where the younger generation can visit easily, friends can live together, enjoying diversified culture and beautiful nature.
Last year I once made a survey on every senior healthy person I met whether they would like to move out of cities. Nearly half of them said YES, the condition was that the location should be not far from city for the sake of medical service reason and it needs to be a comfortable community and nice

environment where they don't feel lonely.
The community-based and service-based eco village will be the ideal solution for promoting rural economy. This model is not only creating rural property values but also offering the employment opportunities to the local farmers for service. If we consider an average price for a countryside house cost ca. half million RMB and there is another 10 thousand RMB farming service fee paid to local farmers every year, calculating in a 50-year period (covering two generations), each urban family will spend 20 thousand RMB on the service garden homes, which will double or even triple the rural households' income if one farmer serves 3-5 urban families. Based on this assumption, in a long run if 100 million urban families in China are interested to live in the eco villages as their second homes, then 2 trillion RMB sleeping market would be activated. With the new money flowing into rural area every year, 700 million of current rural populations, who only have very limited social welfare coverage, could pay off the standard social insurance package at the price of 2000 RMB per year per person for 25 years. This will lay the solid foundation for social stability and further leads to rural revitalization with the rising of service-based farming.



The dividing gap between urban and rural areas is widening globally.
While the urban-rural divide is not limited to China, due to the diverse socio-economic landscape the potential for social tensions and conflicts might stress the one-party ruled country above average. The urban population explosion is a worldwide phenomenon that, for example, is enormously stressing the cities existing infrastructure and livelihood. High-tech and intelligent innovations are reforming the field of transportation and are said to be the key for smart solutions. The peripheral rural areas are not only geographically remote but mostly also socially and economically neglected. For this, rural areas facing their own challenges, such as aging society, emigration and the lack of investment in innovative infrastructure. In 2010, China's governmental elite agreed upon a new development model addressing several of the many socio-political challenges, i.e. energy supply, health and food safety or the persisting tension between urban and rural areas.
K
In the past decade, China's elite has shown political will to apply high-tech measures for its innovative development turning the future city into an intelligent one. While the concept of smart/intelligent city is not genuinely Chinese, the application and scope seems to be tailored for China's new developmental model. Under the current leadership, it comes as no surprise

Josie-Marie Perkuhn

that the government proclaims to undertake “the largest urban planning initiative in world history” as the ChinaDaily reported in December 2018. As a matter of fact, the cities’ future has already landed in terms of high-tech-driven adaption, scientific attention and the lots of monetary funds foremost spent by companies such as iFlytek, Tencent, Alibaba or Huawei. However, the outlook for the remote rural areas’ future is quite opaque. The intriguing question now is, whether that promising intelligent innovation also creates smart solutions to reduce the tension provoked by the urban-rural divide.
K
Nationwide health care is one of the prominent goals for the current leadership. Since the 20th Century, a functioning healthcare system for the masses is a gauge of political legitimacy. The current ruling government is prone to revive Mao ‘s ideological mind-set to balance for the pragmatic, mostly economic-driven, solutions pursued since Deng Xiaoping proclaimed the Chinese economic reform. That reform of market privatization has affected the socialist health system with the downside result of leaving foremost remote rural areas left behind – cut-off from costly innovative medical treatment methods. In fact, the health market is growing fast. The annual output value of medical device industry in China even doubled from 2007 to 2011, as ChinaBionews reported. Yet, on average, the accessibility

The Promise of Intelligent Innovation and the smart solution
for the urban-rural divide in the not so far future

to medical innovative treatment shrinks. China ranks among the fourth lowest countries by comparison of skilled healthcare doctors in relation to population. According to OECD data of 2017, China is only undercut by South Africa, India and Indonesia. Meaning, the devastating shortage of doctors and medical practitioners of all kinds is looming. Not so much for the megacities, lots of business attention and state-funded money is flooding into them to push forward intelligent innovation and intelligent healthcare solutions. Most of the 131 industries working on intelligent health projects are situated in the first tier metropolises. However, there is hope for the left-behind.
China's government has started to encounter the trend of economic privatization in the field of healthcare and promotes healthcare for the masses by the use of intelligent hospital designs. In accordance with the rather left-leaning ideas, the current government under Xi Jinping is facing the pertinent challenge of a nationwide healthcare coverage in a two ways: First, China is pumping money in the research and development of alternative medicine, known as Traditional Chinese Medicine, to increase the ratio of skilled professionals. Second, to become the world leader of intelligent innovation by 2045, China is pushing forward the integration of artificial intelligent

technology. The “cloud doctor” or Yun Yisheng, is a clinical application from iFlytek which includes among others image data examining, as Asia Today reported on August 3rd 2018. As of now, many innovations still remain to await audits before they are ready for nationwide use.
Regarding the healthcare system, intelligent innovation really might hold the key for reducing that social tension brought by a growing urban-rural divide. Especially the tendency to include robots, such as the AI programmed ‘Xiao yi’, in medical diagnosis and treatment, to rely on smart health applications for monitoring the chronically ill or to use telemedicine in order to support rural practitioners remotely, promises smart solutions for future villages. This is why the fast-paced development of intelligent innovation in healthcare provides a promising outlook for smartened-up villages in the not so far future. Rural areas will benefit from best practise projects, such as the Intelligent Health Hospital that was launched in Anhui, Hefei Province.
Josie-Marie Perkuhn is a research assistance at the Political Science department and at the Institute for Security Policy at Kiel University (ISPK). She graduated in Political Science and Chinese Studies. Her PhD research concerned the PRC's foreign policy regarding International Relations. At



In recent years China caught up in digitalisation at an amazing speed
and thanks to strong governmental support in Research and Development
(R&D) has become a world leader in some technological fields. Ensuring food
security and improving environmental quality became the main drivers for
the promotion of digital tools in agricultural production. At the same time
digitalisation is hoped to create new income opportunities in rural areas and
by this go against the depopulation of rural areas and the phenomenon of
“empty villages”.

The presentation looked at the status of digitalisation in rural China, its
impacts for sustainable development and how especially small farmers could
benefit from it. Email: eva.sternfeld@gmx.net




Urban kitchen waste , green waste plants, human waste, suburban agriculture and forestry waste, food processing organic waste materials, straw, vegetable vines, livestock and poultry manure, orchard foliage... organic resources “in situ, multi-level, comprehensive” cycle from the ecological environment to the agricultural sector, promote the quality and safety of food development, and form a closed-loop “ecological cycle.” The ecological cycle consists of three different forms: urban ecological cycle, agricultural ecological cycle and family ecological cycle. Conducive to the “climate and intelligent agriculture” advocated by the United Nations to promote global sustainable development.

Find the causal relationship between ecological environment, agriculture, food quality and safety. The pollution of organic waste in the ecological environment is converted into the source of agricultural organic matter, which fundamentally solves the food quality and safety, and exerts the cross-border of organic resources.

Internet, blockchain, and big data intelligence can only play a role in circulation and production efficiency, and cannot play a role in biomass instinct. Cycling is the best way to return to bio-organisms.

The key link of the ecological cycle - crushing : Any organic materials are directly pulverized without any water treatment, and the fineness after pulverization is two important problems of pulverization and ecological recycling.

It must be direct millimeter crushing, which is one of the core points of all plant recycling. In particular, when the fertilizer is resourced and the fineness is not enough, the biological fermentation is difficult to heat up, and it cannot be completely decomposed. After returning to the agricultural field, the damage caused by the secondary fermentation and pests and the rebirth of the grass species will not be worth the loss, so the maturity is critical.

Millimeter-scale pulverization cannot be affected by moisture, which is the key link of plant resource recycling, which directly determines whether it is operable. None of the devices on the market today solve this problem. “Millimeter” fineness after crushing: On the bio-organic fertilizer, the fermentation temperature that determines the decomposing and sterilization is a critical link to the speed and effect of the fermentation.

In biological feed, it is the key link of anaerobic fermentation effect, and the utilization rate of straw and grass is also a fatal key link. Only under the conditions of appropriate fineness, the water content is suitable, the fermentation temperature is not a problem, and the centimeter-level pulverization on the current market basically does not reach the fermentation mature fermentation result. Fineness and water content are the root causes of many organic fertilizers in Shanghai organic fertilizer industry.
In practice, after the farm waste plants have been crushed by millimeters, they are randomly stacked in the open space due to their own water content of about 50%, without any treatment. The next morning, they are measured with a 20 cm long thermometer. The temperature rises to 65 degrees Celsius.
Bio-fermentation is inseparable from pressure dehydration: For kitchen waste, leaf vines and other high-water content organic resources, it is necessary to enter the ideal biological fermentation state, and water treatment has become one of the main links.
Dehydration for fermentation: Organic resources, whether it is the recycling of anaerobic biological fermented feed resources, or the recycling of aerobic

biological fermentation fertilizers, high water content is a constraint problem.
Organic resources with a water content of more than 60% cannot directly undergo “natural” biological fermentation. The ideal moisture content of organic fermentation for biological fermentation is 50% to 60%, which is most beneficial to microbial decomposition.
When the water content exceeds 70%, the temperature at which the bio-organic fertilizer is fermented is difficult to rise, the decomposition rate is significantly reduced, and even the fermentation cannot be performed.
In the actual process of dehydration, it must be a low-cost physical pressure dehydration. It is not suitable for large-volume, low-value-added wet waste dewatering by external heating at high temperature and high-speed drying. In particular, the cost of heating and warming cannot last long.
The water that has escaped enters the sealed anaerobic biological fermentation and becomes a liquid fertilizer for agricultural cultivation such as vegetables.
Including all the dehydration of organic matter in the process of ecological recycling, it cannot be discharged into the river channel and sewage pipeline



The canteens with a counter bar for tea-making and dessert-making by the local elderly themselves. Particularly, the tables were changed from rectangular to round ones, the local elderly are more willing to chat with each other spontaneously without any external encouragement by the care-service staff; Photograph provided by Old Five Old Foundation and with the permission to use in public.



The tofu-rack-like counter area, designed with the local specialties of Shiding district, New Taipei City, is for the versatile use of the local elderly, such as health counseling, daily measurement of body temperature, blood pressure and so on; Photograph provided by Old Five Old Foundation and with the permission to use in public

Case Study on Shiding District in New Taipei City. An Exploration on the Community-based Care Network Formation for the Elderly in Remote Districts of Taiwan.
In remote districts of Taiwan, it is an important issue that the insufficiency of the community-based care for the elderly due to the lack of resource link, limited transportation, inaccessible welfare service delivery, the low proportion of young adults, and so on. In the view of policy, “Long-term Care Plan 1.0” and “Long-term Care 2.0”, featuring mainly community-based social welfare services, has respectively launched in 2007 and 2016, but the services and care workforce of community-based care are in fact most concentrated in urban areas. On the contrary, the services and care workforce in remote districts of Taiwan are actually deficient; therefore, the policy concept of “aging in place” is difficult to be implemented in remote districts of Taiwan. The purpose of the study is to understand how the community-based care network form in remote districts of Taiwan by the view of organizational sociology and regional sociology. In specific, by taking Shiding district, located in the southeast of Taipei Basin and one of the five remote districts in New Taipei City, as a case study to explore the reasons why an elderly-welfare-

Chia-Yi Chuang

oriented NPO, Old Five Old Foundation, can keep on supplying the elderly welfare services for at least 10 years. As Shiding district is known as “mountain city”, surrounded by hillside and hills, overlaid by rugged roads, and delimited as a water source protection area for using-water supply of the greater Taipei region, the regional development and the traffic network construction in Shiding are limited. Besides, the coal mining industry in Shiding had declined since the 1980s so the young workforce has been massively reduced and transferred to the areas or cities nearby. Due to the limitation of terrain, the industry decline and the transformation of demographic structure, the numbers of total population are constantly decreasing; however, the numbers of the elderly are rapidly increasing. Therefore, the care support system for the elderly is relatively an important issue. In fact, the care support system for the elderly in Shiding is moderately unfunctional because of the reasons mentioned previously, also the care resources from the external areas are not easy to access to the local. On the other hand, Old Five Old Foundation, an external non-profit organization supplying the care service for the elderly in Shiding over a long term, have
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An Exploration on the Community-based Care Network Formation for the Elderly in Remote Districts of Taiwan

[illegible]





A young farmer is working in the field in the New Territories, Hong Kong, Photograph: Hao-Tzu Ho



Socks factories of Shetou, Photograph: Wei-I Lee



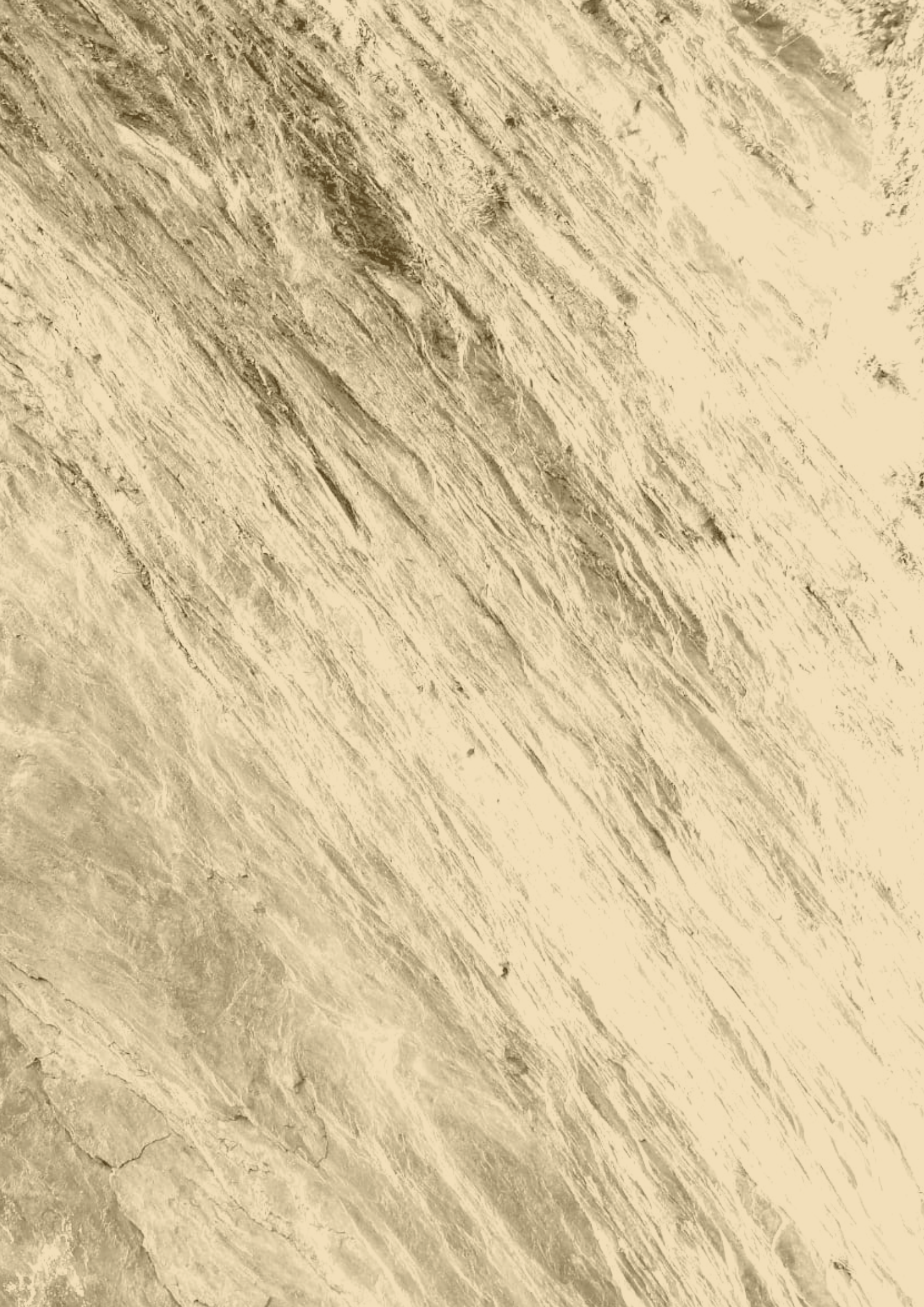
Shetou, a village in central Taiwan, once the territory of Austronesian aboriginals Hoanya, was colonised around three hundred years ago by Chinese who began to construct irrigation facilities, and developed agricultural exploitations, until the end of Japanese colonisation after the World War II. With the agrarian reform carried out by the nationalist government in the 1950s, the traditional rural land system was dismantled, as the economist Shinkei Liu pointed out in his analysis, the micro-peasants in possession of only about three hundreds square meters could never provide for a family by their agricultural production alone, so they constituted a massif low wage labour force pool to the benefits of governmental and private capital accumulation. It was under these circumstances that Taiwan initiated its export-oriented industrialization. Guided by the policy of “living rooms as factories” in the 1970s, Shetou became a prosper “socks village”, through the reconfiguration process of global textile production. As shown by the analysis of sociologist G.S. Shieh, the labor regime in Taiwan was a subcontracting system, essentially constituted of small bosses and homeworkers. The half of Shetou population was involved in the socks production, some as factory workers, others as homeworkers in subcontracted networks. Under the banner of

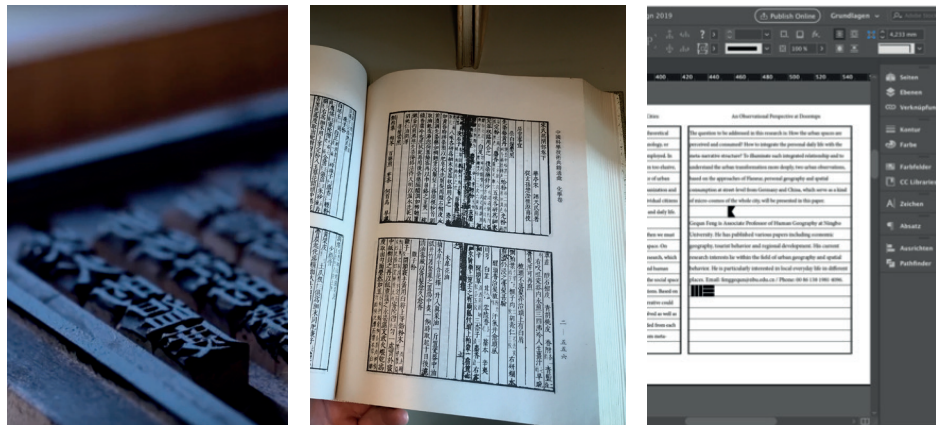
Wei-I Lee

productivism, the villagers were integrated in the global production chain, ready to serve the non-stop running machines, and their way of living changed completely. But the massif relocation abroad of Taiwanese factories in the 1990s led half of Shetou manufacturers to be shut down. Those who stayed, large plants or “invisible” factories, have all had to face the challenge of strategic transformation. Caught in transition between productivism and post-productivism, the producers made diverse decisions and explored different paths. This article will examine decades long life transitions of several small bosses and low wage workers of Shetou, in order to observe from an anthropological perspective, the human condition of people in different social positions, and the possibilities and limits of their social imaginary for the future. Wei-I Lee is associate Professor, Institute of Anthropology, National Tsing Hua University. In recent years, from an environmental anthropology perspective, I conduct my fieldwork on several local industrial zones in central Taiwan (in the Choshui and Tatu River Valley): (a) Industrial parks in rural zones: textile, plastic recycling, (b) Industrial parks in a small town:
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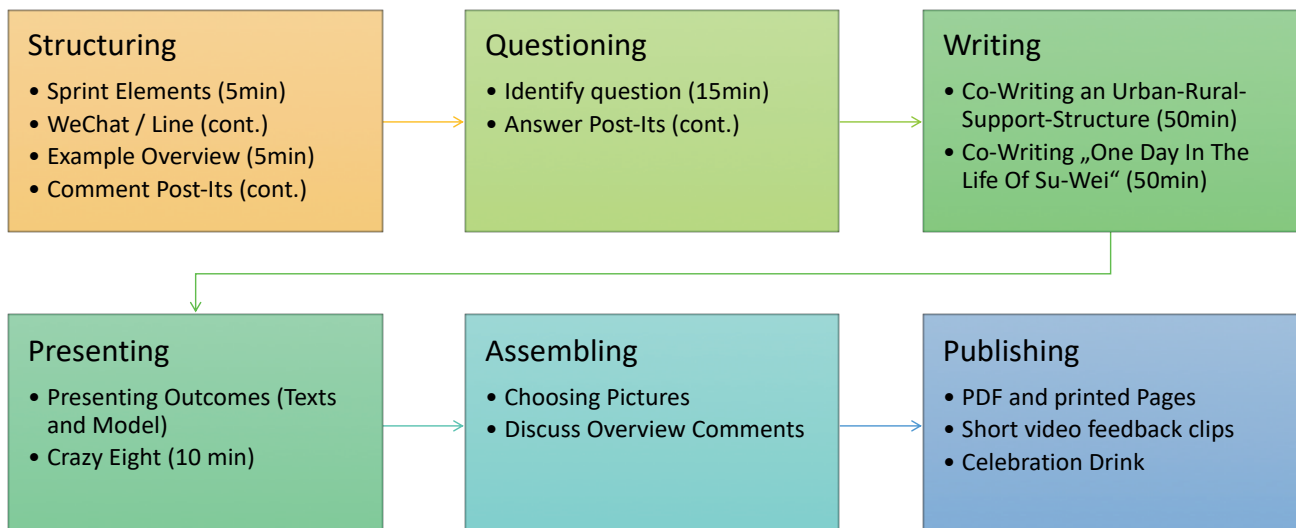
Social Life and Industrial Change in a Village of Central Taiwan.
Possibilities and Limits beyond Productivism

socks production, (c) Industrial clusters: valves and taps producers, through three research projects: (1) Greening Cultural Transformation of Island Petrochemical Industry, (2) Social Imaginaries: Anthropological Research on the Transformation of Local Industrial Zones, (3) Global Perspective, Local Routes and Social Imaginaries in Research of Mediation between Industry and Agriculture: Taiwanese Country-side Life in the Challenge of Post-productivism. Email: wilee@mx.nthu.edu.tw
K
Related Publications:
– Lee, Wei-I 2017 Mediation between Industry and Agriculture: An Exploration from a Symmetrical Anthropology Perspective on the Problems of Sustainable Development of Rural Industrial Park in Taiwan. Taiwanese Journal for Science, Technology and Medicine. Number 24:145-202.
– Lee, Wei-I 2016 Local World of Socks Industry Workers. In Local Societies of the 21st Century. Sociality and the Social Imaginary for Multi-local Identities. Edited by Ying-Kuei Huang & Wen-Te Chen. New Taipei City: Socio Publishing Co.





Sources of Contextual Inspiration



Book Sprint Elements

Explaining the Process to the Participants

Minimum Viable Product (MVP): A book that can be fully understood, but doesn't have to be perfect in any dimension

Aim: Write a text with the help of a physical structure / a fictitious person

Outcome: Two texts, one for each group: project description / fictitious day

Inspiration: Megastructures & craft material / fiction & backstory

Expertise: Bring in your individual knowledge, don't wait, but focus

Consistency: Don't try to find one solution, build bridges between ideas instead

Discussions: Always be positive and keep it short

Setting: The year 2020 / the year 2050

Material / Backstory: To be understood as orientation, not as facts

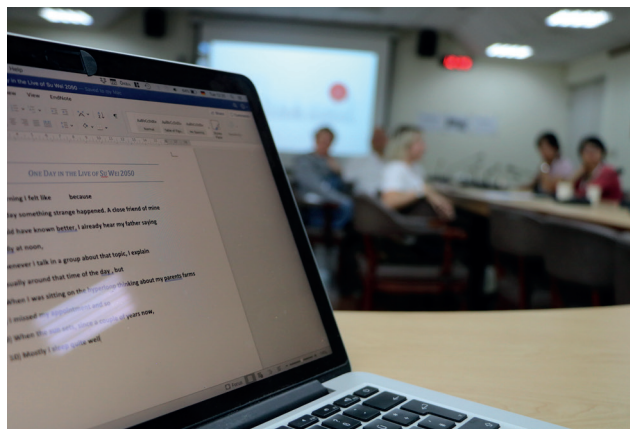
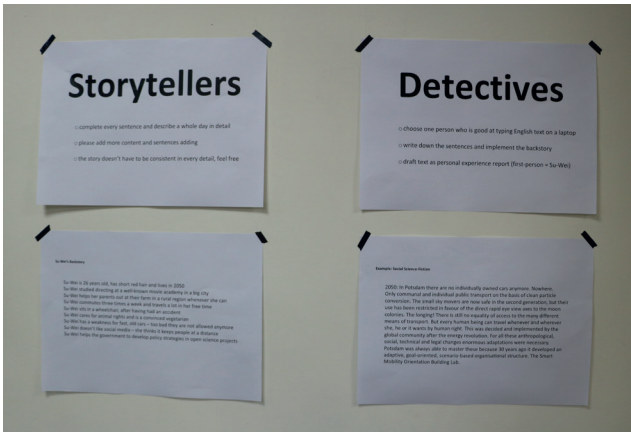
Your Role: Understand your role, but do not separate from the others roles

What brings us together? What will stay? One mayor challenge in keeping discussions alive and making them accessible (for colleagues, the public, funding institutions etc.) is to tie them together while the group dynamic still exists. Usually this is not possible due to short time spans, a focus on spoken word, insufficient preparation or limited budgets. That is the normal case. So, how can we accelerate the production of a “Future City, Future Village” outcome that pays respect to specifics such as: the qualification and number of participants, the limited time of being together, presented topics, common interests, technical equipment or anticipated future audiences?	
I proposed a book sprint. A book sprint is a method of creating a book, an eBook, a journal, or a leaflet collaboratively in a short period of time – usually three to five days! Book sprints make use of specific techniques of participation to ensure that a group of content experts under the guidance of one or more facilitators can write and publish an outcome directly at the end of the sprint period. For URBANI[XX], there were core elements (see image).	
The four facilitators managed interpersonal dynamics and production requirements through the book sprint phases. Since the Sino-German Alumni/ae Workshop was built on inputs, intercultural exchange, different	

Christian Berkes

languages and different socio-political settings, this role was crucial. The group discussed the process and expectations before the writing session.	
How did it go? A huge amount of material was assembled just in time (see this book). The two groups wrote two great texts in only 60 minutes using different stimuli. Structuring and articulating the whole process in detail was very important. We learned a lot about this open source method and got into intense discussions. With our experiences, the method is now tested for future workshops in the context of sub/urban transformation.	
I am a researcher at laF Urban Futures at the University of Applied Sciences Potsdam and founder of the publishing house botopress in Berlin. My conviction is that we need to blur the rigid distinctions between idea and material, project and documentation to create, discuss and represent modes of urban transformation that are more transparent, more democratic and more sustainable. Therefore, “translocal” is understood as fostering a movement of site-specific questions travelling between the partners, institutions and places. For more information, get in touch or (as an example) search for: Lambert Heller & Helene Brinken: “How to run a book sprint – in 16 steps” (2018).	
Email: berkes@fh-potsdam.de	

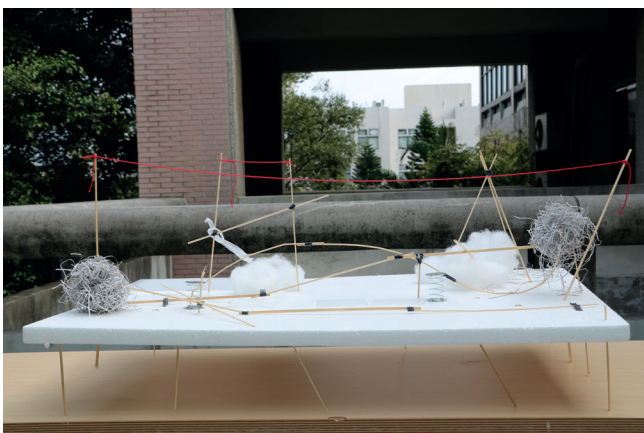
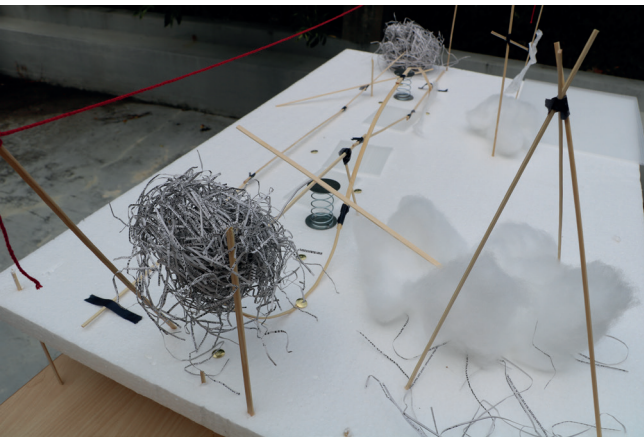
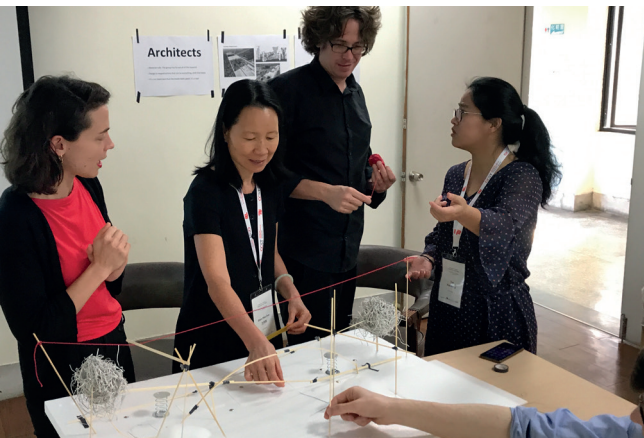
Book Sprint on Translocal Sub/Urban Challenges



Participants Book Sprint Group I:
 Chuang Chia-Yi
 Franzl Kerstin
 Ho Hao-Tzu
 Li Keping
 Sternfeld Eva
 von Carnap Kai (Facilitator)
 Wohlgemuth Sophie (Facilitator)

This morning I felt like I caught a cold because I went outside and caught a cold in the rain. Everyone is sick these days, because it's raining all the time.	
Yesterday, something strange happened. Inexplicably, a close friend of mine disappeared when he was on a driverless autonomous water taxi.	
I should have known better, because he was always suicidal, and I know he can hack into vehicles.	
Finally, at noon, his GPS-body signal started moving again. But I still don't know if he is alive.	
Whenever I talk in a group about death and suicide, I explain that traffic is the most common cause for deaths because most illnesses are cured.	
Usually around that time of day, I go to see my parents in the countryside.	
This was stressful, because no one took me this time, so I took the U-Ball.	
When I was sitting in the U-Ball thinking about my parents' farm, I was getting nervous about how to bridge the last mile, because I am in a	

wheelchair. I missed my stop to leave the U-Ball, so I ended up in Korea two minutes later.	
When the sun sets in Korea, since a couple of years now, temperature drops by 20 degrees and angry cows - on the hunt for humans - scare every one inside.	
Anyway, I sleep quite well, because I have an exo-skin, floating, survival sleeping bag, even reducing the hours I need to sleep.	



Participants Book Sprint Group II:
 Flock Rynne
 Netsch Stefan
 Shen Hsiu-Hua
 Tan Xiahong
 Berkes Christian (Facilitator)
 Jacob Nico (Facilitator)

The U-Ball, an urban-rural-support-structure, is located in-between and connects the cities of Berlin and Xinzhu. It stretches over a vast riverbed and connects a variety of rural areas with the more dense areas of the two cities. Altogether the structure is huge, you could even call it a megastructure. As a single person standing in the middle of it, you would not be able to really grasp it or get a full picture of it. The urban-rural-support-structure is in a way like a mega city such as Guangzhou. Nevertheless, its architects decided that there should be no buildings higher than four storeys. In that arrangement, very dense areas alternate with rather low density districts. A unique quality of the support structure is that it is made of many layers – some of them above the ground and many more underground. That makes the whole architectural structure very diverse. Each building is not higher than four storeys, but they are situated on different levels and that makes the skylines and the sublines very lively. The main functions of the urban-rural-support-structure are: connectivity, mobility and integration. It connects the urban city centres of Berlin and Xinzhu with AI-based agriculture farms in the rural areas. Not only people and goods are floating between the different spaces but also technology, data	
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and important traditional knowledge on all kinds of daily live. This mobility is achieved via a far-reaching network of underground tunnels, enabling ball-shaped speed cable cars to connect the two cities in only 10 minutes. This technology is called U-Ball. The overall societal meaning of the different stations connected by the U-Ball is distributed evenly. There are no meaningless or unimportant spaces, because every area contributes much-needed input for the whole support system. In every small network node, you can find locally designed spring stations as platforms to automatically jump out of the vehicle without stopping the U-Ball on its ride. The boarding process for the non-stopping U-Ball uses an automated human particle dissolving and recollection system (HPDRS). You could also use the HPDRS to get off the U-Ball, but people decided to use the jumping system just because it is way more fun. Especially when you jump from an underground level to one of the skyline top layers! This is not just thrilling, it also gave people a totally new understanding of landscapes, boarders, infrastructures and belonging. Rather than a mere topological addition of distinct areas, people began to see stacked and translucent fields of meaning and potentiality.	
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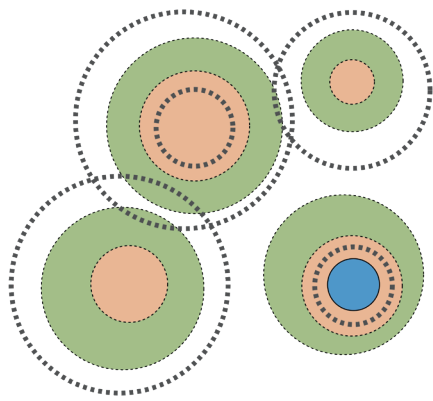
At some point, the architects, users and inhabitants of the support structure built a physical model of the architectural system to better understand and explain what is possible with it. They used different materials to characterize the key features of the U-Ball and how it works as a support structure connecting urban and rural sites.

Elegant wooden sticks are its main material. Those sticks could carry different forms of meaning. Sometimes they formed a tent structure to inhabit, sometimes they showed a built surface or underground structure, sometimes it represented a village layout and other times it followed the tracks the U-Ball is running on. The wooden sticks soon became a symbol of connectivity and also energy production. Because as soon as there was black washi tape attached to it, that signaled that it would also produce kinetic energy for the U-Ball to stay on its course.

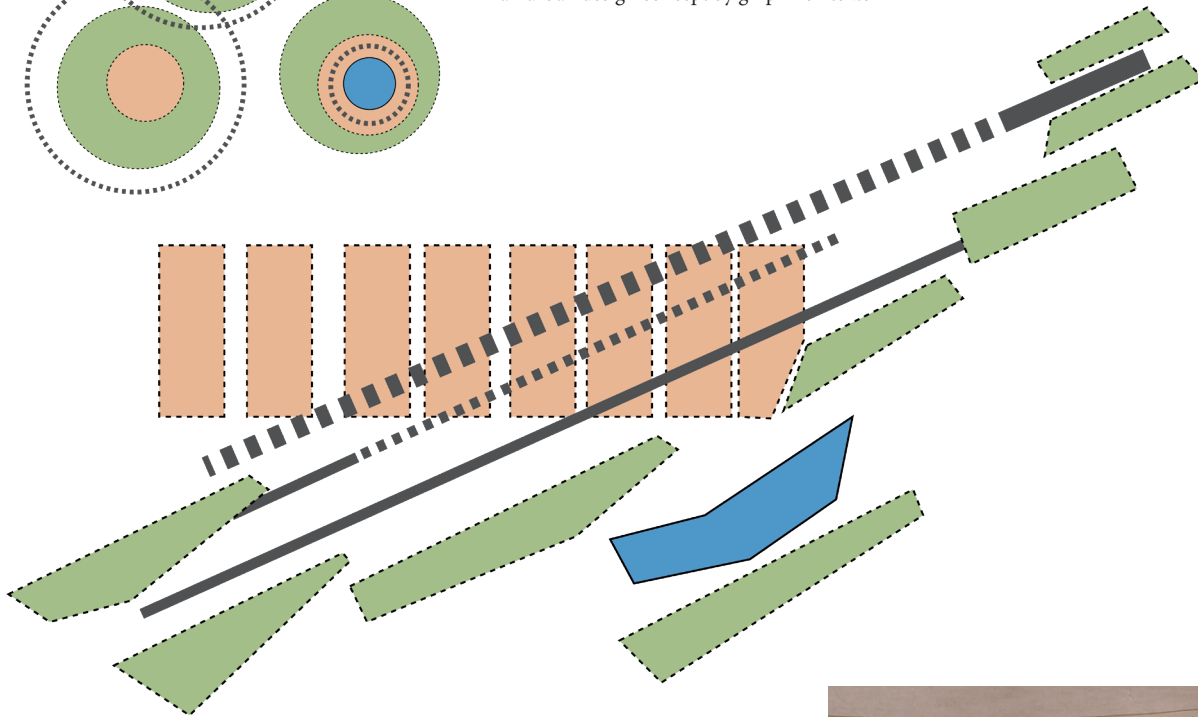
Another symbol with more than one association was the red cord. It allowed to show the connection of the U-Ball to the ground level and the upper architectural structures. At the same time, it was used as a demarcation line to illustrate where the surface area ended and the underground spheres began.

Transparent rectangular sheets were applied to show the usage of solar power panels and generators to provide energy for the machinery building the tunnel system. It also stood as a symbol for green and silent industrial sites right next to housing zones and traffic infrastructures. The solar system on the surface produces clean energy for the underground industrial sites. Additionally, private people also collect solar energy with more efficient photovoltaic panels on their roofs. The agency running the U-Ball-system is subsidizing this decentralized system.

Fluffy white cotton clouds were installed to mark the super safe and mobile landing platforms that catch you after being pushed out of the U-Ball by very strong silver springs. The mobile cotton clouds will then also help you to get home safely navigating through the urban-rural fabric. The process of getting off the U-Ball is initiated by pushing a golden button inside the U-Ball. In the model of the support structure, those golden buttons were shown exemplarily as golden pins. The capsule of the U-Ball itself was shown as a bundle of paper cuts. This not only symbolized the energetic movement of the U-Ball itself, it also showed the huge potential of the kinetic energy the U-Ball is producing by moving very fast on sloping planes: A gigantic slide producing energy and fun. That was the initial idea for the U-Ball that was invented by children.

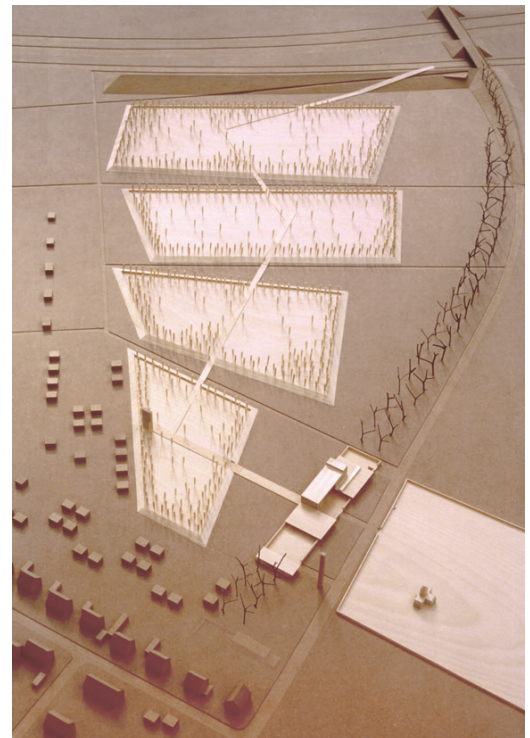


Comparative structure planning analysis of an urban design concept by gmp Architekten



Spatial structure; new urban design concept on the basis of former airport's spatial structure – retaining some elements and telling the history, which belongs to the area

Aerial view; by Google Earth



Graveyard Munich Riem: The 13 ha large graveyard presents itself to the outside as a park. The landscape floods the areas surrounding the islands with blooming meadows and individual fruit trees. Foot- and cycle- paths run through the meadow areas into all directions. The "last way" connects the islands with another, with the mortuary and with the old part of the graveyard. Centrally positioned water areas emphasise the changes in direction of the way, that finishes in an outlookplatform to the north.
lohrer.hochrein landschaftsarchitekten + stadtplaner

The changes of urban spatial structure and the densification bring more challenges: what is the future of city? How do we balance new and old? By comparison German and Chinese urban design projects, landscape project with different scales, it's shown that there is no unified solution, which important, is to hear, to read, to respective your city, then to find suitable methods, to create "city mark".
1. Compare urban design projects: An urban renewal and expansion. Riem exhibition city in Munich: Area 5,6 km2, Inhabitants 16000, Construction period 1995-2014. From 1995 the city of Munich began to develop a new district on the former airport area to high functional and formative level for living and working area, especially exhibition center. It also offers space for diverse infrastructure and commercial using. The main concept is: the intense interlocking of the city and landscape. During the shaped tree groups, roads and plazas to retain the runway of airport, to keep the identity of this area, to tell its own history to the visitors.
Lingang city of water droplets in Shanghai: Area 74 km2 (priority project), Inhabitants 800000, construction period 2003-2020. In order to accommodate the huge growth of population and industry in shanghai, the city planning

Wen Mei

department conducted an international competition for the planning of a new satellite city Lingang. It would be a livable city with a high degree of coordinated development such as society, economy, cultures and ecological environment.
City planning concept: instead of a high-density center, a circular huge lake with islands(which are with the using: cultural and leisure) in the heart of city. And the other functions like working and living will built as the bigger rings. The whole form looks like a droplet falling into water.
During the comparison, it would be found, that German project hat considered the before situation, to keep some before elements such as part of runway and control tower, and use different design methods to tell the story about the former airport. And the new city in Lingang with almost perfect form and planning, but the identity is lost. A project likes this could be everywhere. So I think, there are so many urban design methods, but which important is, to hear, read and respective the each city , to find its identity.
2. landscape project: A multifunctional landscape park, which could meet various requirements of society and citizens. As description the project of

New meets Old – thinking tomorrow's urban Space today

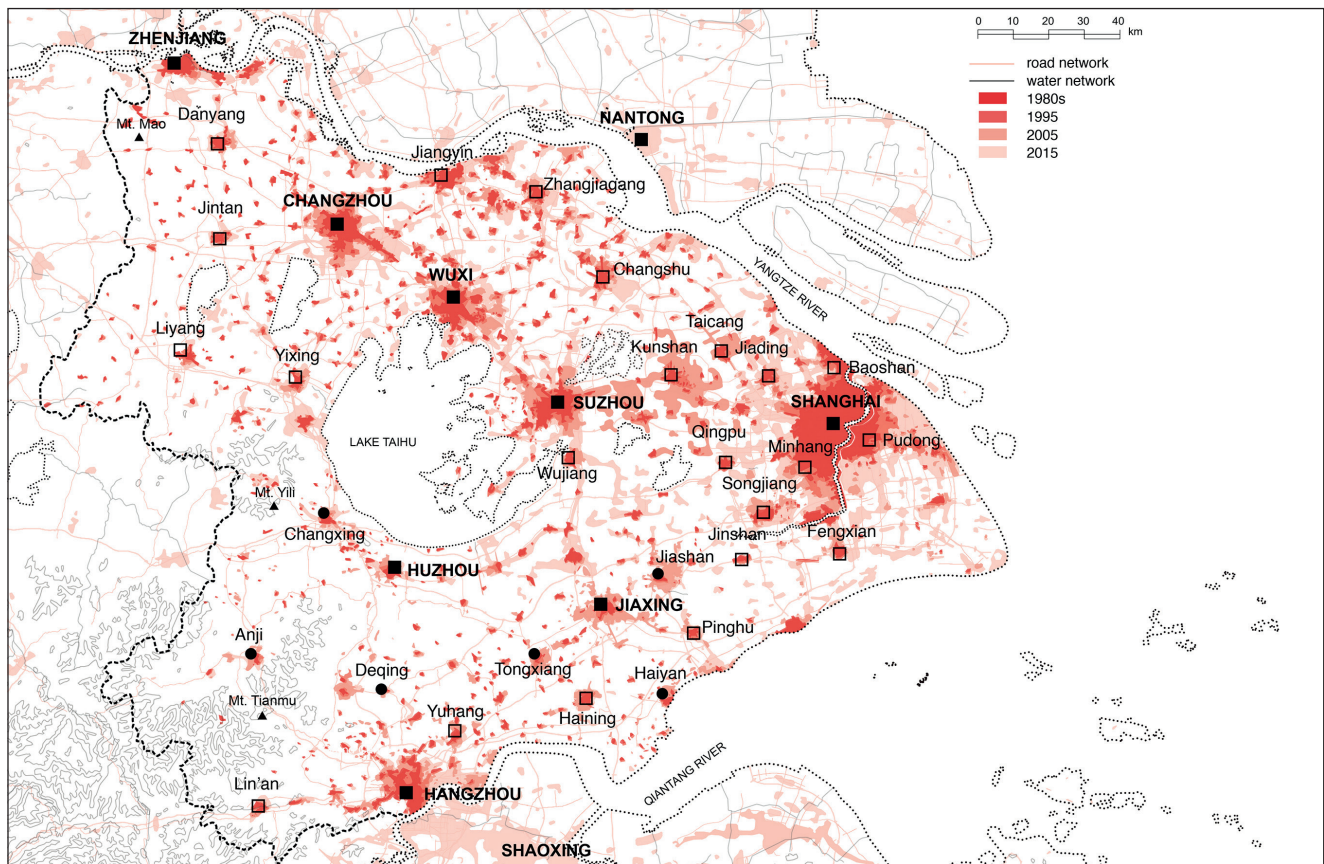


Diagram 1: Urbanization of the Yangtze River Delta by Yuting Xie
 (more detailed description see text on the following pages)

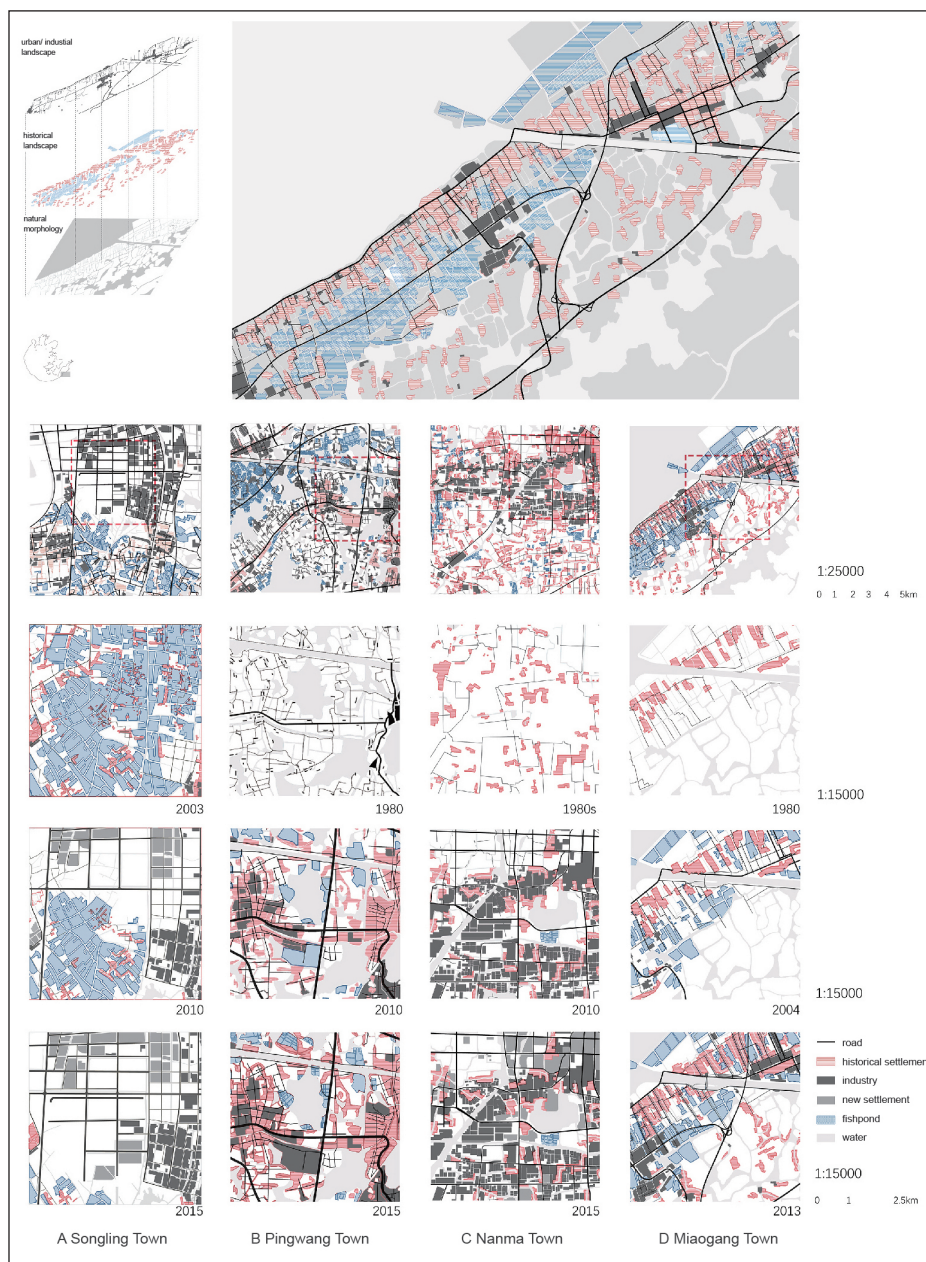
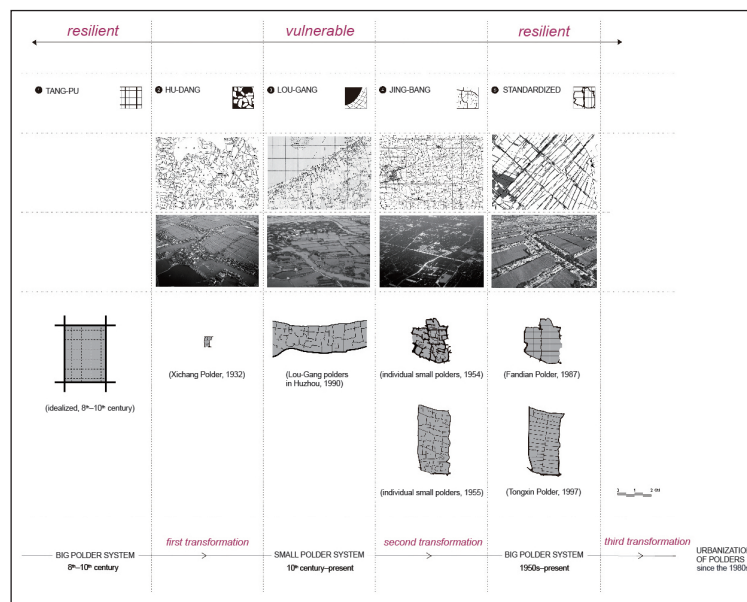


Diagram 2: Mapping Landscape Structures by Miao Yang, Boyan Liu, Yujin Zhang and Weihai Li; revised by Dingyi Ke (more detailed description see text)

Diagram 3: Polder Types in the Yangtze River Delta by Yuting Xie (more detailed description see text)

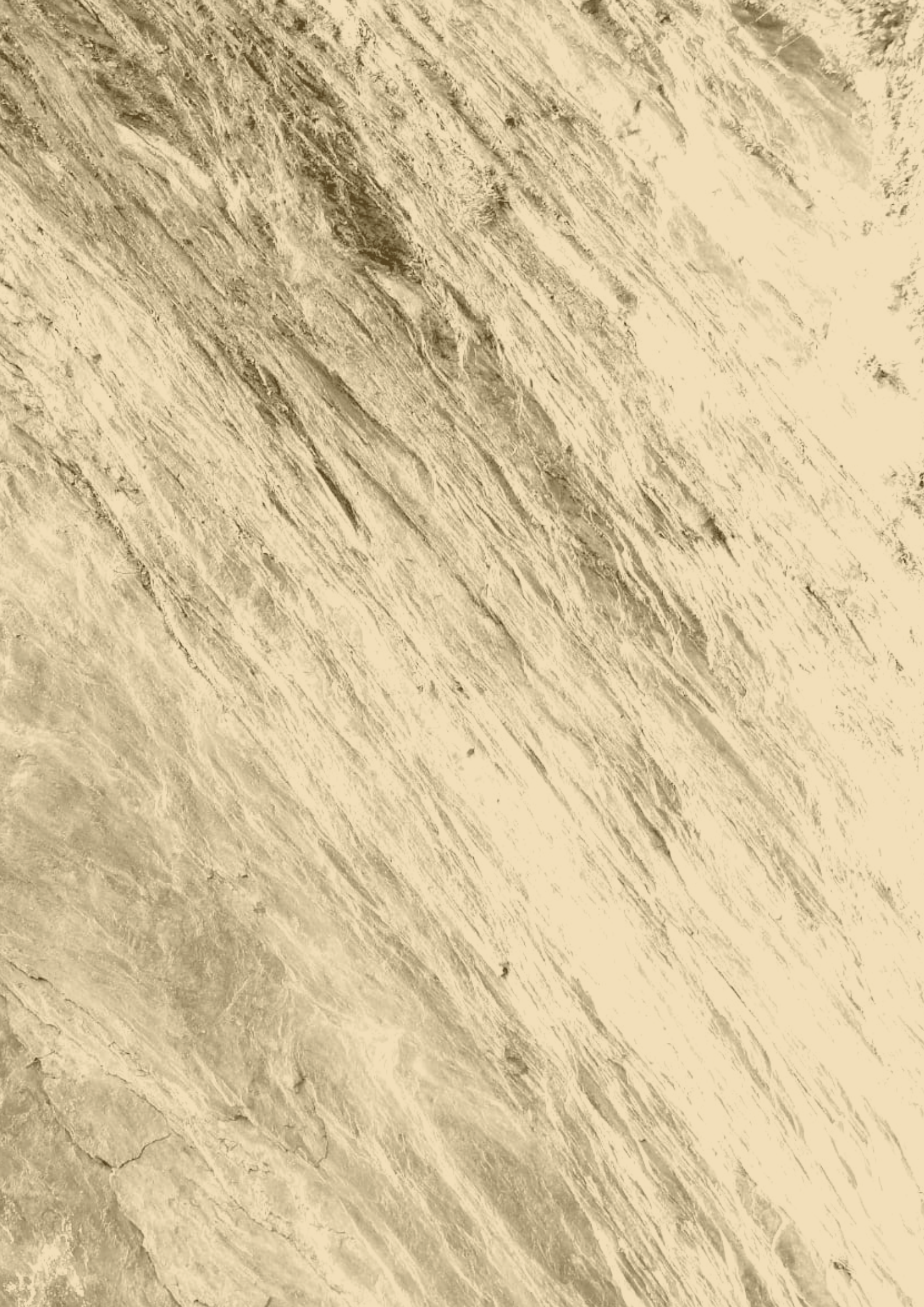


Accelerated urbanization and industrialization of recent decades in
China has been accompanied by the fragmentation and disappearance of
historic rural landscapes and the emergence of new but generic urban and
industrial landscape elements and structures. Especially in rapidly expanding
megalopolises, such as in the Yangtze River Delta (YRD), the rich historic
landscape forms, shaped by a long tradition of land reclamation, poldering,
intensive agriculture, and urbanization, have been overlapped and replaced
completely by modern land use types. The evolving metropolitan delta
landscape is characterized by a dense and hybrid structure as well as chaotic
or unplanned character. It is a mixture of highly fragmented fields, mass gated
residential areas, historic villages, rural factories, and large-scale transport
infrastructure with limited accessible open spaces and public service facilities.

This research developed a typological approach that is specific to the YRD
by adapting the methods of British Landscape Character Assessment and
Dutch polder classification to explore a more integrative and resilient urban-
rural transformation. Via mapping, describing and classifying landscape
character areas and types, landscape type profiles were generated to document
their cultural meaning and social function, patterns, landscape changes,
significance and vulnerability etc. To validate and apply the outcomes in

urban and landscape practice, we generated type-specific measures, including
landscape protection, transformation and critical reconstruction, in cross-
scale projects: such as the Jiangsu Province Studio “Cultural Landscape.
Urban Development. Renewable Energy” at the regional scale; the project
“Design Historic Landscape as Green-Blue infrastructure” in Wujiang District
of Suzhou at the local authority scale; and the integrated protection and
transformation plan for the urban wetlands in Hangzhou at the site scale. We
designed the historic landscape patterns and structures as permanent forms
for the local development of new housing, infrastructure, and green-blue
open space systems, in order to maintain and redevelop regional identity and
diversity.

Diagram 1: Urbanization of the Yangtze River Delta from the 1980s to
2015. Source: Author’s drawing. The layers of urbanized areas in 1980s,
1995, 2005 were obtained from the Dataset of Land Use in the Taihu
Basin (1980s, 1995, 2000, 2005), released by National Earth System
Science Data Sharing Infrastructure (2012); the urbanized area of 2015
was extracted from the urban layer of Google Maps 2015.





Walden Farm, Kika Yang



Insulaner Berlin Weissensee, Kika Yang



Projekt Drahnisdorf, Kika Yang

Being located at about two hours drive from a 20 million people city and at the same time at the border to a major ecological protection area is already enough to set a place in a quite special context. It has no other choice but to accept and deal with the fact of being a transition zone. The question would be then: how to go about it? Is it a matter of identifying differences and similarities or rather to get rid of them?

By means of analysing different cases, starting with this described situation - which is located at the heart of China, more precisely in the rural area of Mianyang, Sichuan province - and then comparing it to other contexts, for example in Berlin's countryside, as well as at its core, is certainly going to be revealing.

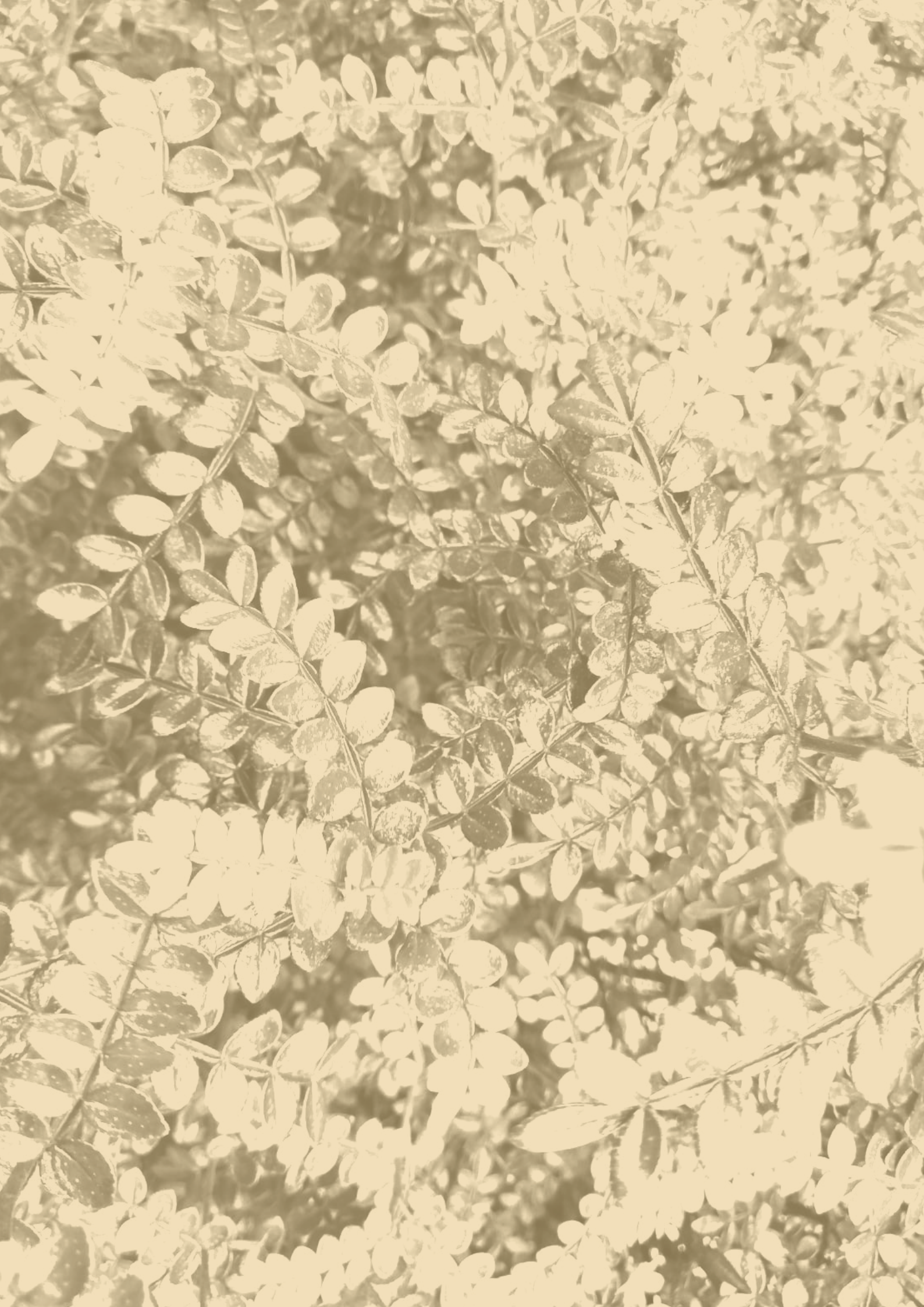
More fascinating than the given circumstances or actual results, is to compare how both processes may be so radically different, mainly due to social-cultural structures. Even in times of aggressive capitalism, very often decision making has a lot more to do with irrational aspects than with economical ones. And lack of reflection is perhaps one of the reasons why we are facing such troublesome times, especially concerning the balance of our planet.


Kika Yang

Integrative Structures: Rural meets Urban

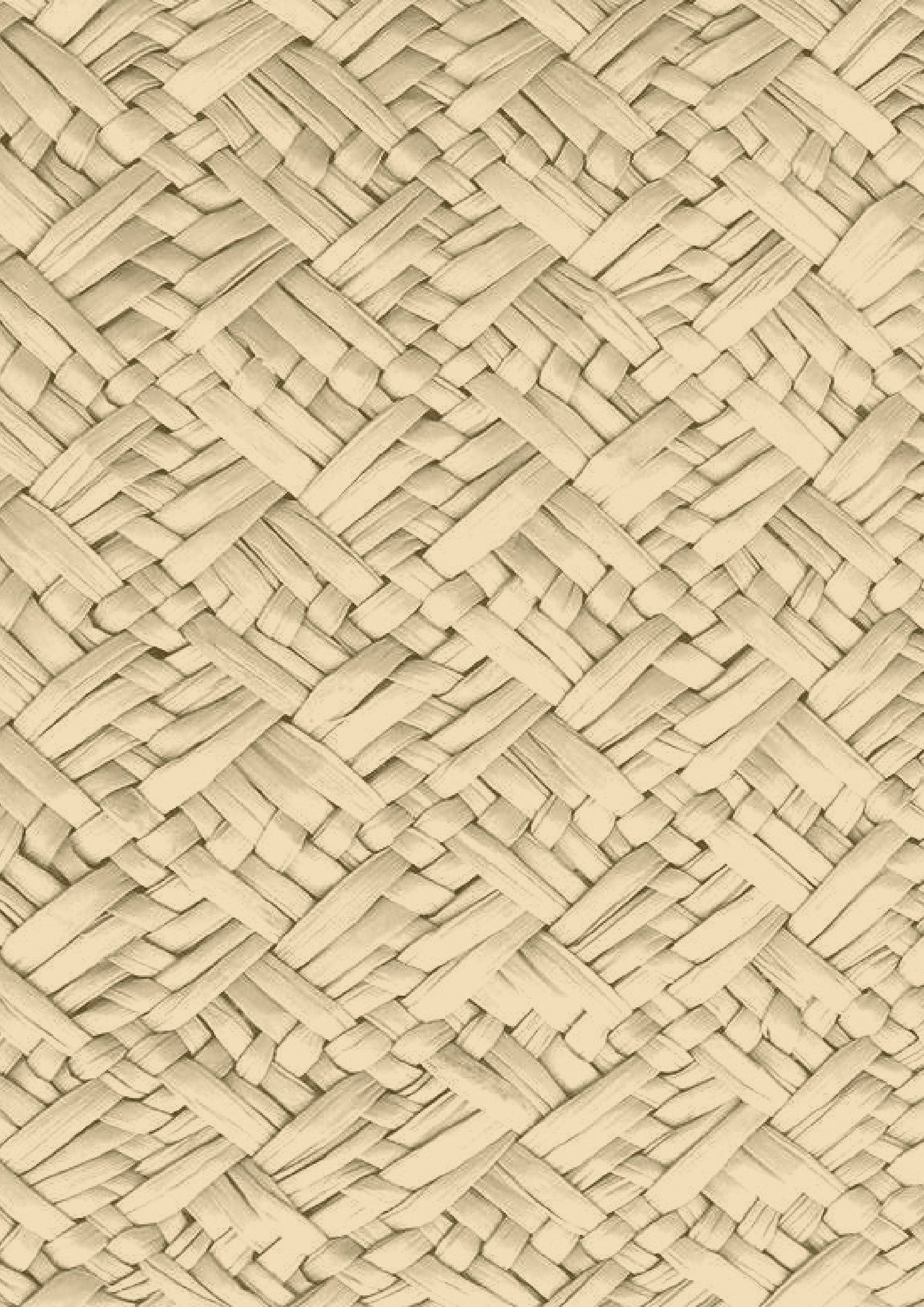
However critical it may look though, several initiatives show a lot is being invested in trying to find new solutions. It does seem that we are on the path to break free from paradigms and generate new organic and more adaptive structures.

I was born in 1981 in Brazil, daughter of a Sichuanese, blended with Austrian, Sicilian and Catalan blood. During my studies in Architecture & Urbanism, I joined the theory department as professor assistant and collaborated to the research group Signage. I worked for 10 years in projects for the megalopolis of Sao Paulo. After the experience gathered in commercial projects, I decided to get involved in cultural productions. Based in Rio de Janeiro (2010-2012), I developed the scenography for the competition winning design MICR 2012 – The International Red Cross and Red Crescent Museum in Geneva, Switzerland. I accomplished the master program 'Space Strategies' at the Kunsthochschule Berlin Weissenhof. In 2017 I came for the first time to China, seeking for the roots of my family. I have been nothing but absorbed by this country. Email: kika.yang@gmail.com

Urbanization of China has become an internal driver in China's economy and social development in recent years. The urbanization policies are at the heart of our understanding of the China Urbanization process. One of the most significant current discussions are the regulations of urban development and the changes of policies. There have been a number of studies involving urbanization policies that have been published. These have been noted that one aspect of urbanization policy, such as population policy, land policy, fiscal policy, etc. In addition, there has been no detailed investigation of urbanization policy change's characters across two dimensions: its time and its space. The central thesis of this paper is that construct the research framework of urbanization policy changes. Secondly, it is based on policy content to analysis the feature of the each stage using quantitative analysis method. After that, by employing policy model, I attempt to evaluate the new urbanization policy of local government.
From the point of view of time, the specific objective of this study was to divide the urbanization policy into three stages based on the background of urban development. China's urbanization policy has its own characteristics in each stage. During the period of 1949-1977, the speed of the urbanization was slowly due to the restrict of the household register system. With the

process of reform and opening up, the policy of population and land promote the urbanization rate increased greatly between 1978-2013. At this stage, the policy focus on the speed of the urbanization. People-oriented of New Type urbanization is improve the level of the urbanization along with the National New Type Urbanization Plan promulgated in 2014. This Plan is the guidance to the urbanization development. What's more, it is realize that the policy process changes from traditional urbanization high-speed to New Type urbanization high-quality.
From the dimension of space, this study set out the evaluation model, and it aims to analysis the fitting degree between the central government and the local government of the urbanization policy. Because of the own distinguishing feature in each province, therefor, the emphasis is different for the local government. The purpose of this evaluation model was to examine the diversity of the local government' urbanization policy from the regional perspective. This study provides new insights into central and local government urbanization policy's difference by analyzing and comparing the contents. It is significant theoretically and practically for the policy-making drafting the sustainable urbanization policy.





The spatial structure of Yangtze River Delta Region, showing that eight main cities are concentrated in a Z-shape region. Source: CR Land Research Paper, 2018

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URBANI[XX]

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Workshop II Future City, Future Village

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Technische Universität Berlin
Center for Cultural Studies on Science and Technology in China (CCST)
中国科技文化中心

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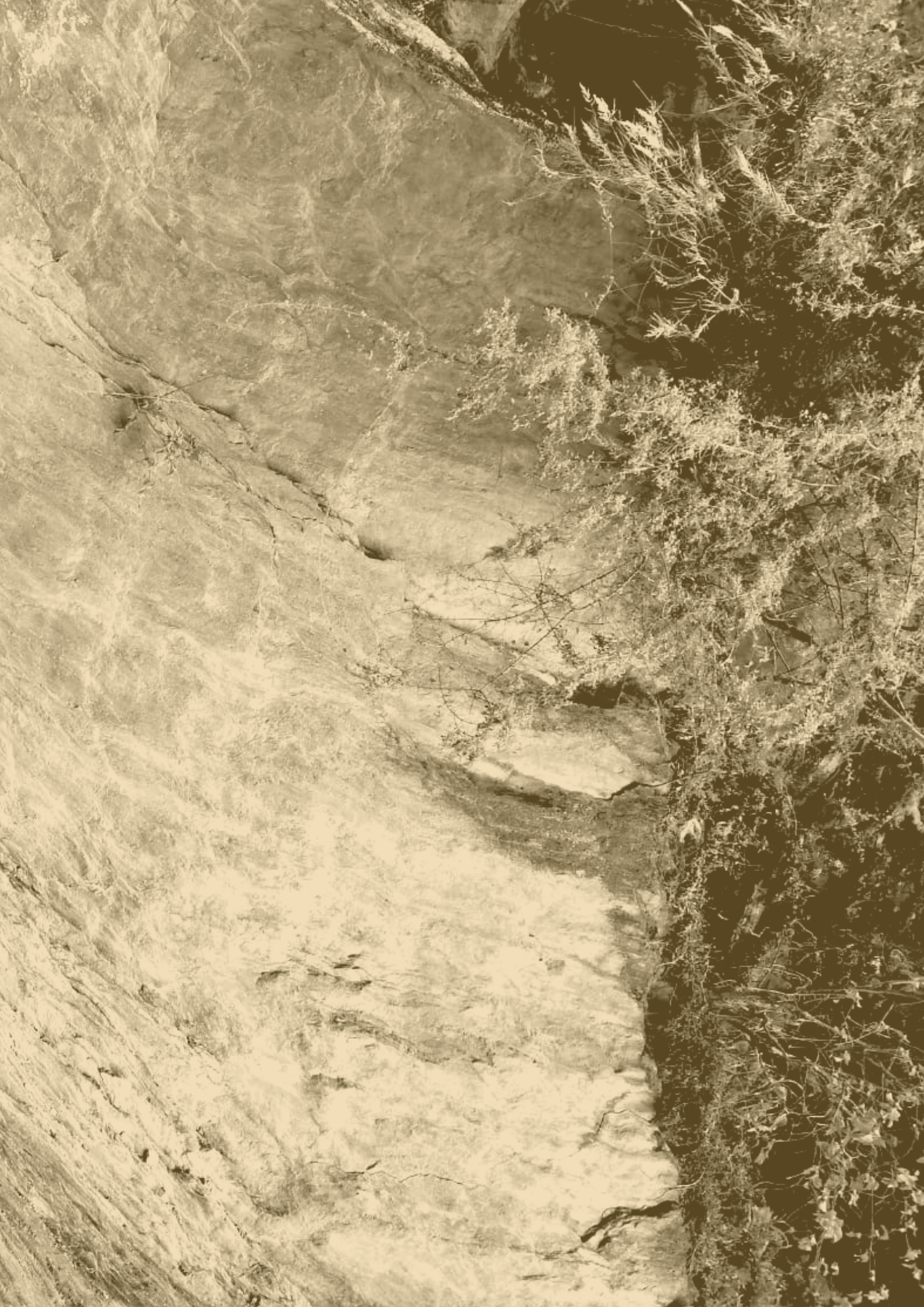
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More information on our activities and projects: www.china.tu-berlin.de





The National Tsing Hua University in Hsinchu, Taiwan, has a wonderful plum garden. The “Prunus mume” is half plum, half apricot. It is native to China. The plum is global. Its fruit is sweet. The plum is a product. People grow it, pick it, sell it, buy it, eat it. They do so in rural areas, in cities and everywhere in-between. The plum has many faces and even more relatives. It is yellow, pink, red, blue, violet or purple. The plum is nature. But it also is culture. The plum bears a magnificent blossom. The plum is politics as well. Its tree is resilient and persevere. The plum is childhood memories, the smell of fresh cake and the taste of iced tea. The plum has thin skin, soft flesh and a hard core. The plum lends its name to many families in different countries and languages. The plum is the subject of old stories and skillful drawings. The plum blossom is highly regarded as a symbol. The plum fruit is almost profane as a part of our everyday lifes.



Globalization and urbanization have brought opportunities and rapid development everywhere, especially to urban areas. In some cases, cities become connected to suburban and rural areas, which then develop into metropolitan regions. Yet more often, the disconnection between cities and villages leads not only to an unbalanced development of human resources but also to competition for natural resources.

What will the future of cities and villages in Mainland China, Taiwan and Germany look like? Ideally: smart, green, and sustainable! But how do we reach these aims?

At the National Tsing Hua University (NTHU) located in Hsinchu, Taiwan, the alumni/ae-workshop “Future City, Future Village” brought together a group of 40 international scientists and practitioners to introduce their concepts, theories and best-practice examples.

German, Chinese and Taiwanese participants from the fields of urbanization and urban-rural development highlighted the challenges that arise within various regions; through lectures, field trips and exercises, they have increased their understanding of the sustainable development of cities and villages, as well as how they interconnect and interact.

Specific topics included: challenges in technology, society, urban design, economics, mobility, governance, history, energy, and ecology. They have addressed digitalization and artificial intelligence, intra-urban and rural-urban social networks, regional balance and diversity, as well as globalization versus localization issues.

We are here on earth only temporarily, but what do we offer to our following generations in terms of urbanization, urban planning, and urban-rural transformation?

The book or PDF you are looking at is one outcome of our workshop. It offers you an opportunity to learn more about our ideas on green mobility, sustainable architecture, smart farming and more.

The workshop was organized by URBANI[XX], the German-Chinese Alumni/ae Network for Urbanization and Urban Development, which was established in 2017 by the China Center of TU Berlin, Germany and is funded by the Federal Ministry of Research and Education (BMBF).

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