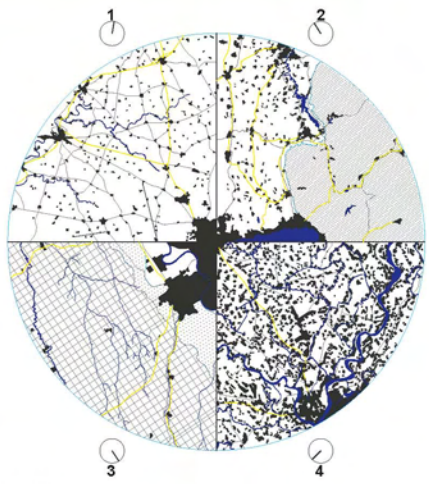
Leroux Marlène

EPFL (LAMU/CODEV)
PhD Candidate

MODERNISING RURAL CHINA

WITCH ALTERNATIVE TERRITORY SCENARIOS FOR CHENGDU PLAIN ?



COMPARATIVE STUDY
urbanistion rate at the same scale of agricultural areas.
1 / Orléans, France / 2 Lausanne, Suisse / 3 Omaha, USA / 4 Haidong, Vietnam

THE NESTED MAPS used in our analysis comprise three samples representing the same area at different scales. The **500 km** sample represents a region with a radius of 250 km around the area of study i.e. a surface area of 200,000 km2 (20 m ha). This allows us to locate our case study on the national scale (proximity to major urban hubs, industrial centres, major communication routes, etc.) and also in terms of major landscape features (coastal areas, mountain chains, major rivers, etc.). It should be noted that **250 km** is the distance that can be travelled in a day's journey; in our view the impact of elements beyond this distance is no longer related to their geographic proximity. The 100 km sample, i.e. a radius of 50 km around the area of study, allows analysis at a more local scale, situating the study zone within its more immediate context. Finally, the **2 km** sample covers the micro-local context, on a scale appropriate to walking and "soft" mobility. This scale permits precise observations of relations between the built environment, farms, fields and forests, allowing us to begin the process of identifying and classifying the elements that constitute **the reality of the Chinese rural condition.**

NESTED MAP
1 / Diam.500km at China scale 2 / Diam.500km at regionale scale 3 / Diam 100km , France / 2 Lausanne, Suisse / 3 Omaha, USA / 4 Haidong, Vietnam

The rural area studied is located on **Chengdu Plain**, under the direct jurisdiction of Dujiangyan (都江堰), a medium-sized, county-level city with a population of 600,000. This city in turn comes under the jurisdiction of Chengdu, the capital of Sichuan province. Dujiangyan was established alongside the famous dam built by governor Li Bing (3rd century BC), an exceptional irrigation system to which the whole of Chengdu Plain owes its fertility and agricultural abundance. This structure became a UNESCO World Heritage Site in 2000 – making Dujiangyan and its surrounding region a major attraction and boosting its development prospects.

The **agricultural character** of the rural area under consideration and the food supply issues China faces at national level have prompted the central government to take a stringent and highly detailed approach to controlling its development. On the one hand the region is the subject of numerous regional development plans (covering time spans of 30 to 50 years); on the other it is currently undergoing **"in situ" urbanisation**. These two modes of urbanisation, with their different time schemes, offer a fairly representative illustration of how national directives for building **"a new socialist countryside"** are put into practice

We should note that this process of regional transformation was accelerated by massive destruction caused by the major **earthquake** of May 2008 (7.8 on the Richter scale). The damage, mainly to public buildings (school buildings and dormitories) was considerable, involving not just economic hardship but the sudden and deeply distressing loss of thousands of children. For all the devastation, though, this natural disaster was unfortunately just one more misfortune for this densely populated, very poor region to bear. Yet it did focus attention on the region's situation and attract massive financing – new investors, developers, planners and experts who were generally more interested in the coastal regions. The region had suffered major human and material losses: now it was a matter of economic, social and political necessity to modernise and rebuild.

The 12th 5-year planning--
Construct a joyful lifestyle and beautiful homeland for peasant

_ Speed up the developement of modernize the agriculture
_ Improve the infrastructure and public service in countryside
_ Increase the income sources for the peasant
_ Improve the countryside developing organization system

Avancing the agricultural modernization, speed up the communist new rural construction.

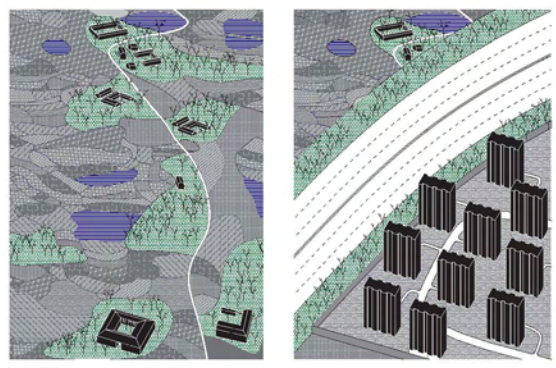
New socialist countryside propaganda

Urban planning disciplinary is a compilation of compiling a multitude of **national regulations and ratios** that can be observed in all urban projects particularly in rural context. In consequence, the same state amenities and infrastructures are being replicated everywhere. This drive to **rationalise and standardise** is intended to function as a safeguard, minimising divergence between regions – but by doing so disregards the actual availability of natural resources and significant climatic and cultural disparities (Friedmann, 2005).

Even the design of Dujiangyan new city pays particular attention to local specificities and especially to the waterway network. It still erase the rural identity and activity for the benefit of city development. This process, which materialises **urban power over the rural areas**, inevitably results in an extremely wasteful use of land and resources.

To improve it, the first step would be to consider these emerging areas in a more positive light and to look for ways of optimising them, ways of integrating the existing infrastructures with new development projects. Only once these **diagnostic tools** are in place will it be possible to establish strategies for developing urban scenarios that are sustainable, realistic and practicable, via the creation of new planning tools (Mostafavi, 2010).

These planning tools would need to be able to take national aspirations and ambitions into account while at the same time **optimising local resources**. Sustainable urbanism in China should integrate the existing infrastructures of rural areas as the "skeleton" of the territory planning while at the same time according agricultural land equal status with urban land.



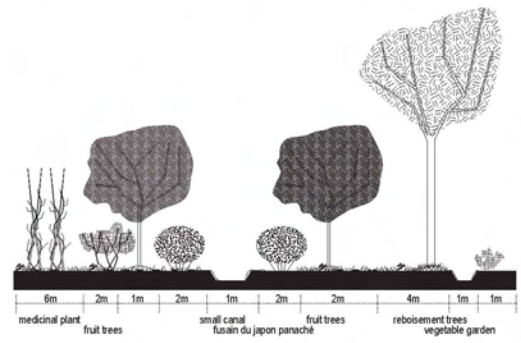
Before / After archetype of rural urbanisation

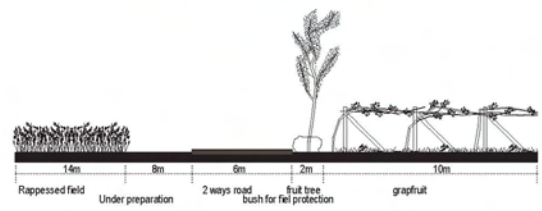
Dujiangyan new city masterplanning, Tongji Urban Planning Institut

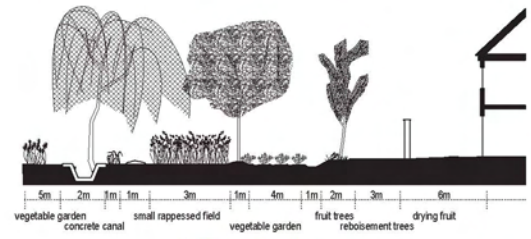
Analysis of the "nested" maps allows us to observe the reality of a region at a given time. The 500 km sample shows around fifty small and medium-sized towns gravitating around major cities like Chengdu. The anonymous towns forming this **"necklace"** have populations of between 200,000 and 2 million.

The 100 km sample reveals more small towns and villages, now with populations below 200,000. The Min river, which has its source at the end of the Himalayas chain, divides into channels which fan out across the whole of the plain. From the original riverbed measuring 150 m across, the river is divided to obtain a fine **network of irrigation** channels barely 10 cm wide. Thanks to the central Chinese subtropical climate (humidity, heat) a wide variety of crops can be grown and cropping frequency is high. The soil, which has always been fertile, is constantly enriched by sediments carried in the river water. This **exceptional irrigation system** gives the region its distinctive identity and has defined the way the area has developed for hundreds of years.

It is only on the 2 km sample that building masses can be observed. An extremely **dense network of villages** and hamlets covers the plain, showing a fairly balanced distribution of buildings, farms and land. These are linban evenly spread across the agricultural land. Distances between the hamlets vary from 500 m to 1500 m – a pattern that logically reflects the distances farmers can travel daily to reach their fields. Every family owns between 1 and 2 Mu (**1 Mu = 666 m2**). The very large number of agricultural plots means that the work is done mainly by hand: the areas involved are too small for using machines, both in terms of the investments involved and anyway purely for technical reasons. These spatial limitations result in agricultural operations that are highly labour-intensive. These are still family-run farms, which place **the emphasis on diversity**. Every space, however small, has something growing on it. A single row of lettuces fills a gap between two plots of tomatoes – accessed by a path no wider than 40 cm. Or rows of fruit trees provide shade for plants needing shelter from direct sunlight. Immersed in this world of minute detail and precision – like something out of Jonathan Swift – it is difficult to believe that such scenes are replicated across the whole of this vast territory, feeding tens of thousands of people. How can such a fine level of detail be integrated within huge regional planning projects?







Significant typical sections through Chengdu's plain agricultural landscape (First step of field's analyse)

7th international AESOP 2015
SUSTAINABLE FOOD PLANNING CONFERENCE
Localizing Food Strategies
FARMING CITIES + PERFORMING RURALITY 8.9/10 TORINO

POLITECNICO DI TORINO
UNIVERSITÀ DEGLI STUDI DI TORINO
University of Gastronomic Sciences
Università degli Studi di Scienze Gastronomiche

POSTER SESSION