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以国际视角审视 中国乡村景观与可持续城镇化

Rural China's Landscape and Sustainable Urbanization: An International Perspective

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摘要 / 中国的领导者于近期宣布，要实现在2025年城市化水平达到70%（城镇人口达到约9亿人）的目标，同时强调未来城市化将不再以特大城市的扩张（都市化）为特点，而是主要集中在村镇与小城市的发展（城镇化）。农业的地位随着中国的城市经济发展而逐渐衰退，而中国农业中心区域几千年的农耕文明也随着大量的乡村聚落一起被清除。这些急速的城镇化正在重新塑造中国的乡村，包括其景观、文化遗产以及社会结构。本文作者审视了这些多种多样的变化，并总结了在2014年华东师范大学设计学院组织的关于小城镇建设的设计课程上的成果。该设计课程在中国和欧洲分别展开，就主题为“新城镇建设过程中乡村自然与人文风貌的保护”的多种提案进行了讨论与评价。作者还陈述了景观设计——尤其是与绿色基础设施相关的设计与实施工作——如何在解决中国乡村的城镇化所面临的挑战过程中扮演起关键角色。

关键词 / 绿色基础设施；景观设计学；传统中国式乡村；城镇化

Abstract / China's leaders have set an urbanization target of 70% (approximately 900 million people) by 2025 and has emphasized that future urbanization will be characterized by growth in rural towns and small cities (ChengZhenHua, 城镇化) not by expansion of megacities (DuShiHua, 都市化). As a consequence of China's urban-focused economy, the role of agriculture has declined. Rural villages have been wiped out, and with them, thousands of years land cultivation and stewardship. Onrushing urbanization is reshaping rural China – its landscape, cultural heritage, and social structures. This paper examines these changes through the outcomes of a workshop about "Construction of Small Towns and Villages" organized by the ECNU School of Design in 2014 in China and Europe. At the workshop, proposals for "Preserving Rural Nature and Humanity Features during Urbanization" were discussed and critiqued. The paper concludes by describing how landscape architecture, and in particular Green Infrastructure, can play a key role in addressing the major challenges of Rural Chinese Urbanization.

Key words / Green Infrastructure; Landscape Architecture; Traditional Chinese Rural Village; Urbanization

1

中国的乡村景观在过去的50年发生了翻天覆地的变化。中国重大的经济改革始于36年前——1978年的“改革开放政策”（对外贸易自由），这一政策带来了巨大的经济变革，特别是在农业方面，废除了农业合作制并开创了以家庭为单位的农业结构，也就是众所周知的“家庭联产承包责任制”。中国经济的快速发展^①正是这些改革所带来的综合影响的结果。然而中国的经济发展无可避免地也带来了其他的变化，造成了显著的地域差异以及巨大的人口流动现象。地域的悬殊差距涉及了超过30个省市地区，而城与乡的距离更是异常巨大。城

镇人口在这些年增长了4亿^①——几乎完全集中在城市地区——而城镇化进程中总人口也增长了4亿。一些从事小型家庭农业生产的人寻找非农工作在很大程度上刺激了从农村到城市的人口流动，根据2006年的农业与农村地区人口普查的统计结果，这个数字达到了1.3亿^②。这些务工人员尽管在发达省市地区长期从事工业、制造业与服务业，却仍然居住在乡村地区，并继续兼营农业及村庄中的工作。这在2007~2008年的经济不景气所造成的数百万务工人员的失业大潮中体现得尤为明显：数据显示，有大约2 800万人回到了当时已由家中妇女所管理的农业工作。

1

The landscape of China's rural villages has changed dramatically over the past 50 years.

The Chinese economy began its great reform 36 years ago in 1978. The "Open Door Policy" — liberalization of foreign trade — was a key method of reform that involved dismantling agricultural collectives and establishing a family-based farming structure, the so-called "Household Responsibility System". The rapid development of the Chinese economy since the 1970's is a result of these reforms. Chinese economic development has also been accompanied by other changes that have resulted in greater regional and increasing demographic dynamics. Territorial disparities, especially between rural and urban areas, affect more than 30 provinces and metropolitan areas. One factor of growing urbanization is an increasing population of more than 400 million^[1], which has been almost exclusively concentrated in urban areas. The search for non-agricultural work by members of small household's farms has contributed to increased migration — some 130 million people according to the 2006 census^[2] of agriculture — to urban areas. These migrate workers are still considered residents in rural zones despite having worked for long periods in industry, construction and service economies in more developed provinces. This became especially evident in 2007 and 2008 when an economic recession and a consequent loss of jobs in urban areas resulted in millions of workers — some 28 million according to certain estimates — returning to their farms, the majority of which were being run by the women of the household.

These dynamics are dramatically reshaping rural China — its landscape, culture, and social structures — causing major environmental, social and economic challenges. Deterioration of the environment, notably air and water pollution, soil erosion, desertification, and a falling water table, especially in the north, are long-term threats to maintaining rapid growth of the economy.

China has also continued to lose arable land because of erosion and grey infrastructure development. Cultivable land is already very limited given the size of the Chinese



1. 高度开发的耕地 © Maria-Beatrice Andreucci
2. 乡村农民 © Maria-Beatrice Andreucci
1. High level of cultivated land exploitation © Maria-Beatrice Andreucci
2. Rural village farmer © Maria-Beatrice Andreucci

population, and the level of land exploitation is high, with many agricultural products using of the same land to produce double crop cycles (Fig. 1). Agriculture contributed 30% to the Chinese GDP in 1980 and by 2007 it was little more than 11%. At close to fifty percent, China has one of the highest percentage of irrigated land among all cultivated land. This, together with increasing competition for land and water use between agriculture, industry and civic requirements, already imposes severe limits on the



2

所有上述的变化都极大地重塑了中国乡村, 包括其景观、文化与社会结构, 并带来了环境、社会与经济等方面的重大挑战。对持续快速的经济发展的来说, 长期的风险在于环境的恶化, 显著体现在空气与水污染、土壤侵蚀、愈演愈烈的沙漠化, 以及在北方地区更为显著的水位持续下降。

由于侵蚀及灰色基础设施的建设, 中国也在不断地丧失适宜耕种的土地。对中国人口数量来讲, 可耕种的土地原本已很有限, 土地利用程度也已经很高, 例如很多农产品都有高产量, 并且同一块土地会进行两种作物轮作(图1)。1980年, 农业贡献了中国当年GDP的30%; 而到2007年, 这个数字却已降到了略高于11%。此外, 中国用于农耕与灌溉的土地大约在50%左右, 比例之高在世界首屈一指; 与此同时, 农业、工业以及市政对土地和水的需求也在日益增长。这两者使得水资源利用的形势更加严峻。合成肥料以及化石燃料等工业技术的运用, 连同其他现代化手段一起取代了长久以来的传统土地耕作方式与自然资本管理。政府出台了一些政策, 鼓励农民拆除他们的农宅, 搬入高密度的联排社区。有时通过多个村落的合并来复制城市生活, 旨在提供越来越多的消费机会以维持当地经济。不幸的是, 这些不断扩张的组团所占用的恰好是中国最好的农田。

随着来自农村的“民工”流入城市寻找工作机遇, 一些社会问题也因此而生。比如, 城市人对农村人的歧视, 以及农村流动人口的心理隔离问题(图2)。2007年, 每个城市家庭的平均收入约1.4万元, 而农村家庭的平均收入只有大约4 000元^[2]。差异的加剧从消费水平上也可见一斑。20世纪80年代中期, 城市家庭的消费是农村家庭的2.5倍, 而如今达到了3.5倍^[2]。今天, 农民、农村和农业的“三农问题”依然应是中国政府关心的重点议题之一^[2]。

2

由上海华东师范大学设计学院^③、意大利罗马大学^④及法国圣艾蒂安国立高等建筑设计学院^⑤联合组织的“中国小城镇与乡村建设”的国际设计课程, 旨在将中国、意大利与法国的学生和学者召集在一起, 对这一重要的主题进行探讨, 并就如何缓解城镇化与传统乡土景观保护之间的冲突提出设想和初步的解决方案。在华东师范大学设计学院的协调下, 今年设计课程的主题

集中在“新城镇建设过程中乡村自然和人文风貌的保护”上。

本次设计课程的成型依托于此前三年的高等教育方面的国际间合作。华东师范大学设计学院院长魏劭农在此方面付出了很多努力, 旨在促进欧洲和中国的学生、学者在理论与实践过程中积极面对规划与设计共同关心的当代重要问题。魏教授在解释他选择2014年主题的原因时强调, “中国所经历的非常规增长过程如同一个5岁的孩子一下子长成了一个50岁的男人”; “对于如何保存乡村中国的文化遗产与社会结构, 我们需要欧洲学术界和学者们基于长期综合的经验提出观点与意见, 并建立一个应用研究的共识”。从此角度来看, “在研究如何应用不同手段来解决城乡之间的巨大差异方面, 中国是一个很好的实验场所, 因为其地域的多样性, 同时36年来的经济转型中城镇化被证明是最具重大影响的变化之一。”

魏教授希望借由该国际设计课程, 对湖北省柏泉镇的村落与景观系统进行研究(图3)。当地的城镇化已经蔓延到了周边的乡野地区, 造成了诸多遗产的遗失、独特文化和高产景观的转型, 以及当地居民劳动大众的搬迁。该设计课程确立了4个指导性主题: 生态效益、社会和谐、经济增长, 以及乡村文化遗产保护。本次2014国际设计课程包括研讨会、对柏泉镇及其他村落的实地考察、对已有成果的回顾, 以及讲座等活动。

柏泉镇面积85km², 位于湖北省武汉市的西北郊,



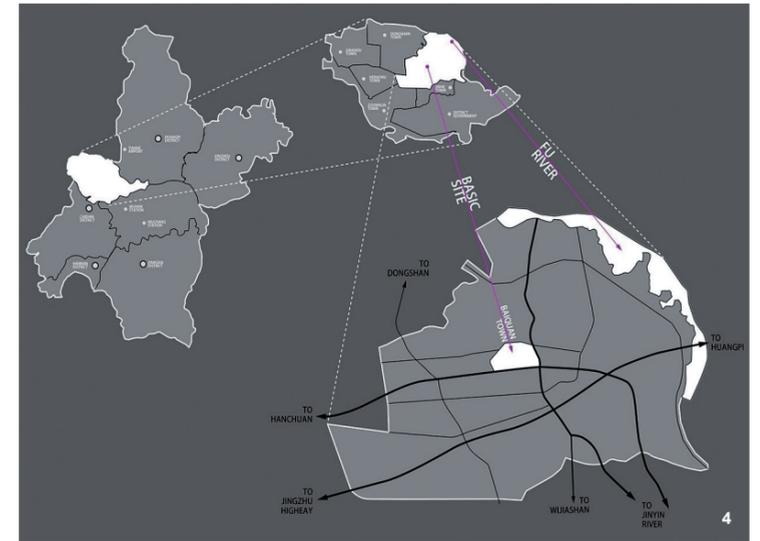
use of water. The adoption of modern industrial farming technologies such as synthetic fertilizers and fossil fuels has mostly displaced long-term traditional practices of land and natural resource management. Government policies have encouraged farmers to demolish their houses and to move to high-density urban townhouse communities. These new communities sometimes merge several villages into a replication of urban life aimed at providing opportunities needed to facilitate China's shift to a consumption-driven economy. China's best farmland unfortunately coincides with these growing agglomerations.

Social issues have developed as a result of the rural migrant “MinGong (民工)” entering urban areas in search of work, namely discrimination of ruralites in cities and psychological isolation of rural migrants (Fig. 2). In 2007 urban households had an income of some 14,000 Yuan while rural households had an income of only 4,000 Yuan^[2]. The increase in this difference is seen in consumption patterns. While in the middle 1980's urban households consumed 2.5 times as much as rural households, today they consume 3.5 times as much^[2]. Today the “three problems” of Peasantry, Rural Areas and Agriculture are a major concern of the Chinese government^[2].

2

The International Workshop on “Construction of Chinese Small Towns and Villages”, organized by East China Normal University (ECNU) School of Design in Shanghai^③, “Sapienza” Università di Roma (Italy)^④ and École Nationale Supérieure d'Architecture de Saint-Etienne (France)^⑤, aimed at bringing together academics and students from China, Italy and France to generate ideas and preliminary design solutions to reduce the conflict between urbanization and traditional rural landscape protection. This year's workshop centered on the theme, “Preservation and Use of Rural Nature and Humanities Features during Urbanization”.

The workshop came after three years of international cooperation in higher education that was started by ECNU School of Design's Dean Shaonong Wei to positively



1. 柏泉镇航拍图(图片来源: Google Maps)
2. 柏泉镇区位分析图
3. 柏泉镇资源分析图
4. Aerial view of Baiquan Town (source: Google Maps)
5. Location analysis of Baiquan Town © ECNU School of Design
6. Resource analysis of Baiquan Town © ECNU School of Design

engage European and Chinese academics and students on key contemporary issues of mutual interest in planning and design. Professor Wei explained his choice of the 2014 theme, affirmed that “The abnormal growth process that China is experiencing is comparable to an infant aging from a 5-year-old child to a 50-year-old man... insights and



距市中心仅17km (图4)。柏泉镇的悠久历史可以追溯到商代 (公元前1600~1046年), 这里是楚文化的发源地, 现今仍留存有重要的遗迹 (图5)。由于其丰富的水资源 (水域面积950hm²), 柏泉镇以“水乡”闻名。当地的地域性聚落体系一直与其环境资源及乡村景观紧紧相联。而现在, 这种重要的联系似乎正在该地区逐渐逝去。自然且高产的景观正在经历深层次的转型; 古老而富足的水乡, 以及曾经沿河分布的传统村落 (图6-1) 正在不断消失, 取而代之的是低品质的密集型新民居, 而居民们也对村庄渐渐失去了归属感 (图6-2)。

原有道路被新的基础设施所覆盖的现象屡屡发生, 它们打破了古老、有效的灌溉水渠网络, 对环境及当地居民造成了无法估计的损失。近期的规划试图将很多小型但却重要的地域标志抹掉, 企图用单一的水系取而代之, 以使其发挥旅游业带动的作用——而非生态作用。政府仍然在“不遗余力”地用高楼大厦取代传统的民居, 大片大片地侵占农田、填充水塘, 乡村居民的生活也因此发生了巨变。

该研究工作分为分析和概念设计两个阶段, 这两个阶段都旨在深入了解不同尺度下的柏泉镇的文脉特征以及现状问题, 并重点关注现今的当地环境背景, 通过研究主要的文化传统与当地不断的变化来形成新的设计方案。2014年9月28日, 中国、意大利和法国的学术小组在于上海举办的终期汇报^⑦上, 向专家及政府官员展示了他们的方案。

圣艾蒂安国立高等建筑设计学院设计小组的方案

(图7) 在对中国村落重新解读的基础上, 将村落视为“有想法、有决策力及土地组织力的社区”。他们在三个主要聚落区的东北面划定了一个新的扩展区。设计以提出解决方案为首要目标, 着重处理燃眉之急: 方案恢复了现存的传统民居与村落, 并在参考当代新的居住模式的基础上提高了居住密度。该方案的总体规划核心部分还包括在柏泉镇提出了以家庭为单位的、环境敏感型新农业模式, 以及对茅庙传统市场和公共空间的总体再设计 (图8)。

罗马大学的设计方案由文化、传统与创新之间的相互联系而形成。对现有及未来规划的综合研究准确地框出了整体解决方案——“重新连接系统” (图9)。这个术语是指一种整合的网状系统, 包含住宅、服务设施、良好的公共空间、不同种类的农业地块、节点与路径, 以及绿色基础设施。这个“重新连接系统”并不会在新的其他地区扩张, 而是考虑重新建立已有城市肌理间遗失的联系。需要特别指出的是, 绿色基础设施本身就代表了多种多样的自然、文化和社会经济过程互动的媒介, 并早已被地方农业及城市肌理刻画雕琢。方案中的关键驱动元素包括: “生态湿地公园” (图10)、“城市新农业”以及所有连接居住区域和新的公/私服务设施的开放空间——“传统药学中心”、“警世果园”和旅游商业服务。这一方案一方面寄希望于保留当



critical views, based on long time consolidated experiences, coming from European academics and professionals, are needed to establish a common ground of applied research aimed at preserving cultural heritage and social structure of rural China.” With that respect, “China is a good laboratory for studying the nuance variations of how best correct the massive imbalance between urban and rural areas, thanks to its great local diversity and also because urbanization has already proven to be one of the most impacting changes in China’s 36 years of economic transition.”

Professor Wei’s goal of the international workshop was to study the rural villages and landscape around Baiquan Town (Fig. 3), in the province of Hubei, where the pressure of urbanization is threatening the surrounding countryside. The workshop would look at the site in terms of loss of heritage, transformation of a unique cultural and productive landscape and displacement of local people. Four workshop themes were developed: Eco-efficiency, Social harmony, Economic improvement and Rural Cultural heritage preservation. The 2014 international workshop included seminars, field trips to Baiquan Town and other villages, work reviews and presentations.

The village of Baiquan covers 85 square kilometers in the Northwest suburbs of Wuhan, and is only 17 km from the city center in the province of Hubei (Fig. 4). Baiquan has a long history beginning during the Shang Dynasty (1600 B.C. ~ 1046 B.C.) and is considered the cradle of Chu culture, which is still significantly reflected in the local culture (Fig. 5). Thanks to its abundant water resources — 950 hectares^⑥ — Baiquan Town is known as the “land of water”. Its settlement has always been linked to

- 6-1. 柏泉镇传统民居
- 6-2. 柏泉镇高密度的新型住宅
- 7. 圣艾蒂安国立高等建筑设计学院提交的总体规划方案 © École Nationale Supérieure d'Architecture de Saint-Etienne
- 8. 圣艾蒂安国立高等建筑设计学院提交的详细方案 © École Nationale Supérieure d'Architecture de Saint-Etienne
- 6-1. Traditional housing in Baiquan Town © ECNU School of Design
- 6-2. The intensive new settlements in Baiquan Town © ECNU School of Design
- 7. Master plan by École Nationale Supérieure d'Architecture de Saint-Etienne © École Nationale Supérieure d'Architecture de Saint-Etienne
- 8. Detailed plan by École Nationale Supérieure d'Architecture de Saint-Etienne © École Nationale Supérieure d'Architecture de Saint-Etienne



政府, 居住

政策, 居住

LE PARC FÉDÉRATIF

① 巨型公园

② 新旧相连

③ 传统与现代之间的新发展

④ 修复村屋

⑤ 市场周围新密度

8

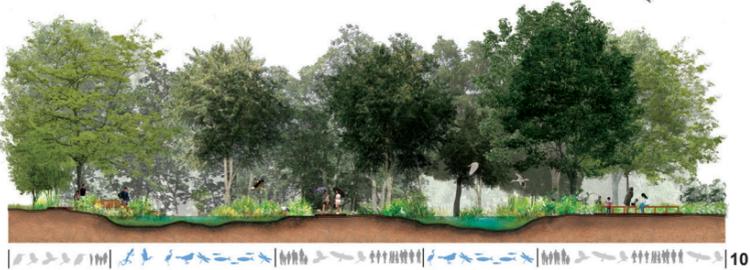
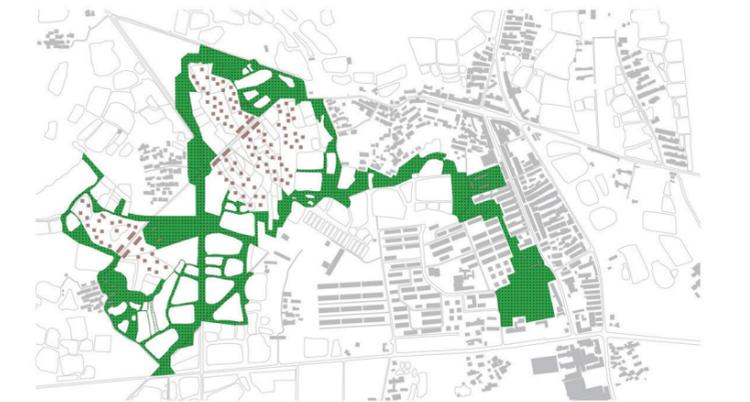
地的传统，而另一方面则意识到，同样需要将当代中国文化引入到内陆地区和以农业为中心的传统居住肌理环境中。这些文化与运作的方法被视作“为社会创新而设计”。设计团队以此为考量，形成了设计方案。他们不仅对社会、产业和经济背景做出了准确解读，而且最重要的是，从最初的设计阶段开始，设计团队就参考了未来设计成果最终受益人群的意见。通过对形态与技术特点——比如对中国传统建筑以及柏泉镇当地特色的全面研究与了解，这个意大利小组完善了他们的设计。

华东师范大学设计学院的两个方案重点突出了柏泉镇社区间的隔离，以及社会服务和现代功能的缺失。华东师范大学设计学院的王锋博士向听众展示了一个“不断生长的、具备感情的综合新城”。她阐述了旨在重新平衡柏泉镇社会结构、经济发展、生态和生活质量的研究和预测。通过对场地原有条件（自然资源）和现有建筑肌理进行充分利用（图11），并对村镇和民居之间的开放空间进行改善，使得该方案切实贴合柏泉镇的实际情况。特别是在经济方面，为了满足农民工的需求，老年住宅产业和旅游资源被视为重点发展方向。通过改造现有住宅楼、限制土壤消耗、建立新型交流网络，以及广泛实施的绿色基础设施，这些手段使得此概念设计进一步丰满（图12）。

华东师范大学设计学院的李开然博士在汇报会上介绍了第二个方案：将柏泉镇定义为一个“绿道城市”（图13）。该团队对柏泉镇周边资源进行了综合分析，以判断城市发展和东西湖地区潜在工业发展的两极性。凭借武汉市和柏泉镇间良好的连通性和高效的交通网络，华东师范大学提出了具有双重意义的商业发展策略。连接现在区域内分散的多个旅游资源，在一方面形成发展当地旅游业的必要基础，而另一方面则鼓励中老年人从武汉迁居至此，以减轻劳动力短缺的压力。他们方案中的“柏泉镇绿楔方案和绿芯设计”还考虑了现代都市农业和生态科技产业（图14）。

3

所有上述方案所描绘的定位——无论是科学层面的，还是政治层面的——都是基于最前沿的研究，以及规划与景观设计的实验，这些理念在中国已家喻户晓[®]，其试图勾画一种发展模式，旨在通过广泛的绿色基础设施建设来解决大规模移民向大城市涌入的问



- 9. 罗马大学提交的总体规划方案 © Sapienza Università di Roma, Planning, Design, Technology of Architecture Department
- 10. 罗马大学设计的柏泉生态湿地公园 © Sapienza Università di Roma, Planning, Design, Technology of Architecture Department
- 11. 华东师范大学设计学院所做的柏泉镇肌理分析 © ECNU School of Design
- 9. Master plan by Sapienza Università di Roma © Sapienza Università di Roma, Planning, Design, Technology of Architecture Department
- 10. Baiquan Eco-wetland Park, by Sapienza Università di Roma. © Sapienza Università di Roma, Planning, Design, Technology of Architecture Department
- 11. Fabric analysis of Baiquan Town, by ECNU School of Design. © ECNU School of Design

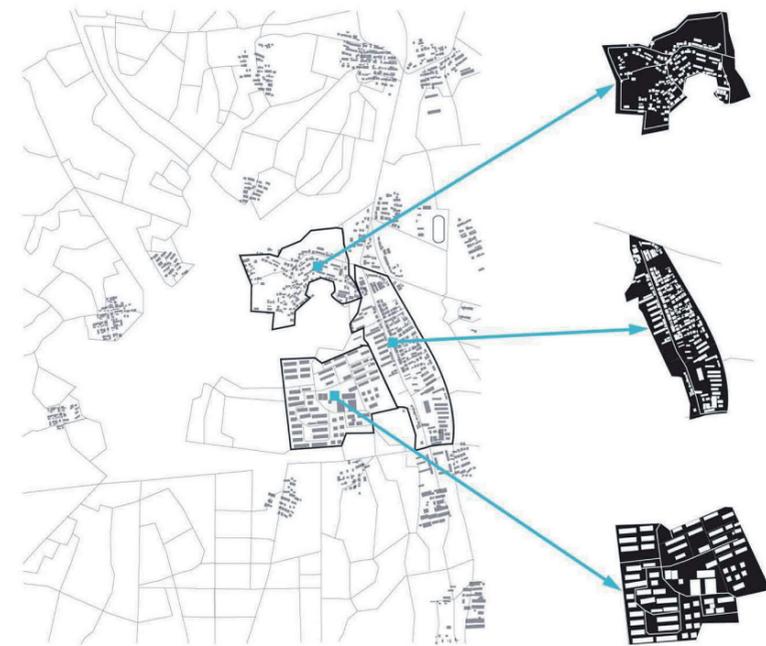
its environmental resources and rural landscapes. This key relationship is threatened by increasing urbanization. The historically productive landscape is experiencing a rapid transformation as the ancient and rich water lands and the traditional villages' housing (Fig. 6-1) are being reduced to allow room for new settlements of high density but low quality of life, and the inhabitants have lost their sense of belonging to the village (Fig. 6-2).

New infrastructures often overlap the original paths, interrupting the ancient, efficient irrigation network, causing immense damage to the environment and its inhabitants. Recent planning has tried to obliterate the many small, but significant, territorial signs into a single water system to play a touristic, rather than an ecological, role. The government is still actively replacing traditional homes with high-rises, paving over vast swaths of farmland and filling ponds, drastically altering the lives of rural dwellers.

The research was organized into two phases of analysis and concept design, both aimed at understanding the

characteristics and current issues of Baiquan Town at different scales. The research focused on the local setting, major cultural traditions, and ongoing dynamics of the area to formulate new proposals. Chinese, Italian and French groups presented their proposals to an audience of peers and government officials in a final conference^② held in Shanghai on September 28, 2014.

École Nationale Supérieure d'Architecture de Saint-Etienne's proposal (Fig. 7) was based on an interpretation of the Chinese village as a "community of thought, of decision-making and land organization". A new expansion zone was defined facing northeast in the three main settlements. The design prioritized the recovery of existing traditional housing and villages while densifying according to new contemporary residential models. New family-based and environmental sensitive agricultural models, together with the Mao Miao traditional market and public space were at the core of the French school's master plan for Baiquan Town (Fig. 8).



1900s-1970s



1980s-1990s



2008s-2013s

题，并顺应乡村向新型生态城镇的转型。绿色基础设施项目的实施已得到了世界范围的有效运用，其可以突出基本的结构特征、确保生态系统的服务和景观质量，并消减负面趋势，与此同时，还能够为未来以人为本的发展提供可持续的手段。

毋庸置疑，在柏泉镇开展的基于绿色基础设施的设计与实施工作将成为一种具有高成本效益、高弹性的发展途径的代表，亦是推进中国城镇化的一种方式——其同时具有经济效益性、环境安全性、政治可行性和社会公平性。项目将在包括环境、社会、经济等诸多方面产生可观的效益，在那些绿色空间被侵蚀和环境破坏严重的地区，这些效益格外显著。其中预期的环境收益包括：农业及可持续的渔业、栖息环境的改善、空气质量的提升、能源节约以及碳足迹的降低；预期的社会收益包括：休闲、教育机会、特色场所的创建、公共健康及安全、社会公平。此外，我们都知道环境和社会效益是可以被转化为经济效益的——并不是粗略的，而是可以进行科学测量的——环境和社会效益所产生的经济价值甚至会更加巨大，因为这关系着地方的传统文化以及普通人的生活和日常需要。

在这一框架下，魏劭农教授在汇报结束之时强调了华东师范大学设计学院对新国际合作研究项目的兴趣，并总结道：“城市和村庄是一对孪生兄弟，其在人类文明的发展过程中应运而生”；“乡村地区的发展需要崭新的视角来审视，需要得到更广泛的关注，不仅仅是因为这可以促进一个更加平衡的经济发展，更是因为对中国长期的可持续发展而言，这是最基本的问题”。LAF



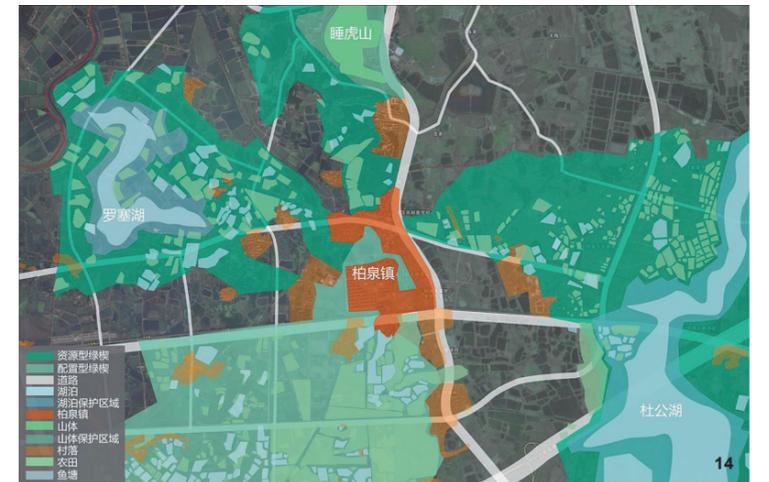
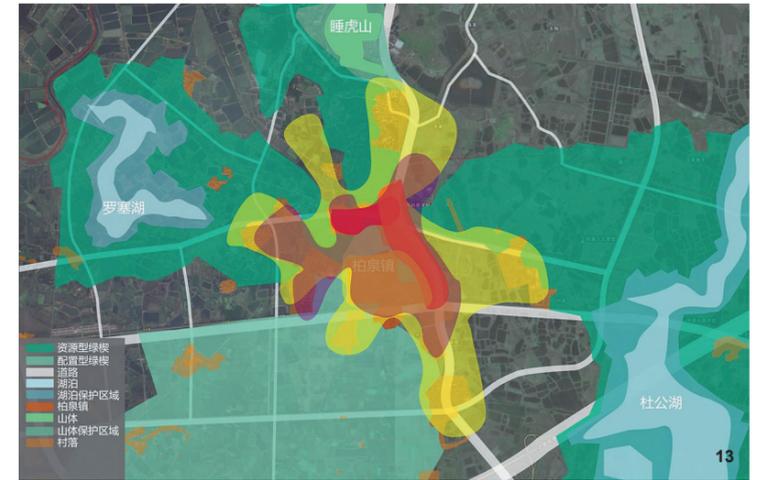
注释

- ① 据世界银行预计（《世界发展指标》），1990~2006年间，中国经济的年平均增长率约为10%。
- ② “三农”问题是与中国大陆农村发展相关的三个问题：农业、农村和农民。
- ③ 华东师范大学设计学院：魏劭农（华东师范大学设计学院院长、协调主任）、郑运帷、王锋、陈彦。
- ④ 意大利罗马大学：Antonio Paris（规划、设计与建筑技术学院系主任，科学协调员）。环境技术设计小组：Luciano Cupelloni（导师）、Maria Beatrice Andreucci、Flavia Laureti；规划小组：Giovanna Bianchi、Antonella Galassi（导师）、Camilla Ariani、Giulia Bortolotto、Enrica Gialanella、Micaela Scacchi、Jie Zhao；设计小组：Loredana Di Lucchio（导师）、Tania Dionisi、Jingjing Lin、Arianna Salvetti。
- ⑤ 法国圣艾蒂安国立高等建筑学院：Claude Tautel（科学协调人）；Romain Chazalon（导师）；Frédéric Dellinger、Florian Kleinfenn、Amandine Bachimont、Maxime Blanc、Mael Bret Caoxu、Alice Chen、Fanny Chevreton、Marie Duchand、Audrey Gamblin、Alice Giani、Chloé Grossetete、Marie Hugues、Eve Laville、Mattieu Maitre、Wang Nalya、Anais Nenert、Stéphanie Noir、Laure Pouzol、Valentine Skawinky、Victor Siyao Yang、Sophie Yi、Sophy Wang、Sharon Zhang。
- ⑥ 包括玉屏湖、上玄教湖、杜公湖、小罗赛湖及湿地公园、府河及湿地公园。
- ⑦ 出席汇报会的包括：来自法国圣艾蒂安国立高等建筑学院Jean Atali、来自以色列耶路撒冷贝扎雷艺术与设计学院的Yuval Yasky；华东师范大学副校长任友群；农业部农村经济研究中心主任宋洪远；中国城市发展研究院副院长、原国家发展改革委城市和小城镇中心副主任袁崇法；华东师范大学商学院院长冯学钢；华东师范大学城市发展研究院副院长曾刚；昆山方向发展股份有限公司以及苏州禾道股份投资有限公司也出席了该汇报会，亦有所贡献。
- ⑧ 例如，土人设计在过去的15年中在中国规划和设计了300余座生态城、1000个景观项目，这些项目涉及200座城市，其中已建成项目超过600个。

12. 华东师范大学设计学院提交的第一个总体规划方案 © ECNU School of Design
 13. 华东师范大学设计学院提交的“海星形”概念设计 © ECNU School of Design
 14. 华东师范大学设计学院提交的城郊地区绿楔方案 © ECNU School of Design
 12. Master plan by ECNU School of Design © ECNU School of Design
 13. Concept design of "Starfish shape", by ECNU School of Design © ECNU School of Design
 14. Suburbs green wedge plan, by ECNU School of Design © ECNU School of Design

Sapienza Università di Roma's design proposal correlated culture, tradition and innovation. A comprehensive study of current and future planning framed the overall project's solution through a "reconnection system" (Fig. 9). This terminology signifies a network of integrated residential and service components, public space and agricultural areas and Green Infrastructure (GI). The "reconnection system" involved re-establishing lost relationships among existing urban fabrics without expanding into new areas. GI in particular represented the medium upon which various natural, cultural, and socio-economic processes interact and were originally articulated, always with reference to local agricultural and urban context. The key drivers were: the eco-wetland park (Fig. 10), urban new agriculture and public open spaces that connect the residential areas with new public and private services, such as traditional medicine centers, didactic orchards and tourist services. These strategies wish to preserve the local traditions and to introduce contemporary Chinese culture into inland areas and traditional agricultural centers. The cultural and operational approach of "Design for Social Innovation" contributed, with this respect, to the formulation of the proposal. It included, since the early design phase, the involvement of people who will ultimately benefit from the design. A comprehensive study and understanding of the morphological and technical features, the "Fundamentals" of the Chinese traditional architecture and Baiquan Town, completed the Italian contribution.

The two proposals by ECNU School of Design focused on the Baiquan communities' isolation and lack of social services and modern functions. A "growing, emotional and integrated new-town" was presented by Dr. Wang Feng of ECNU School of Design. She described a set of studies of proposals aimed at rebalancing social structure, economic development, ecology and quality of life in Baiquan Town. The approach made full use of the original conditions of the site (natural resources) and of the existing building texture (Fig. 11), together with the improvement of town and housing interstitial space. From an economic perspective, the elderly housing industry and touristic resources were



identified as key assets to accommodate migrant workers' needs. Residential retrofitting, soil consumption limitations, new communication networks, and Green Infrastructure will help reinforced the concept design (Fig. 12).

A second proposal, introduced by Dr. Karen Li of ECNU School of Design, positioned Baiquan as a "greenway city" (Fig. 13). The Chinese group developed a comprehensive analysis to help determine the relationship between city development and industrial potentialities in the Dongxihu District. Linking transportation networks between Wuhan and Baiquan Town, the ECNU School of Design developed

a twofold business strategy by linking tourism resources in the areato create a critical mass for industry and encourage elderly migration from Wuhan to alleviate the labor shortage. Modern urban agriculture and eco-tech industries were also considered in their “Green Wedge Plan and Green Chipset Design for Baiquan Development” (Fig. 14).

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The described proposals — scientific and political — are based on advanced research and experimentation in planning and landscape design — already well known in China[®] — which tends to integrate mass migration to the big cities with transformations of rural villages through the widespread implementation of Green Infrastructure. GI project implementation offers effective operative devices to accent basic structuring characteristics, providing improved ecosystem services to counteract negative tendencies, while concurrently providing sustainable means for further anthropocentric developments. A project based on Green Infrastructure design and implementation in Baiquan would represent a cost-effective and resilient approach, and provide the tools and instruments to promote urbanization in China in ways that are economically sound, environmentally safe, politically feasible, and socially desirable.

Substantial environmental, social, and economic benefits would be produced. Particularly accentuated within areas where green space has been eroded and environmental damage is more extensive. Among the estimated environmental benefits: agriculture and sustainable fish farming, habitat improvement, air quality, energy savings and carbon footprint reduction. Among the expected social benefits: leisure, education opportunities, identity places’ creation, public health and safety provision, and social equity. Environmental and social benefits translate into economic and scientifically measurable benefits that are even more significant when obtained in respect of the traditional culture of the place and of common people, their life and their daily needs.

Within this framework Professor Shaonong Wei concluded the conference by reconfirming ECNU School of

Design’s interest in international cooperative and research projects which advance the idea that “cities and villages are twin brothers, born in the process of development of human civilization” and “the development of rural areas deserves renewed greater interest, not only because this will encourage a more balanced economic development, but also because it must be seen as essential for China’s long-term sustainability”. **LAF**

NOTES

- ① According to World Bank estimates (*World Development Indicators*) China had an annual growth rate of about 10% between 1990 and 2006.
- ② The Tree Rural Issues or “San Nong” refers to three issues relating to rural development in Chinese mainland : Agriculture, Rural Areas and Farmers.
- ③ East China Normal University School of Design (China): Shaonong Wei (ECNU School of Design Dean and Chief Coordinator), Yunwei Zheng, Feng Wang, Yan Chen.
- ④ Sapienza Università di Roma (Italy): Antonio Paris (Director of Planning, Design, Architectural Technology Department and Scientific Coordinator); Luciano Cupelloni (Mentor), Maria Beatrice Andreucci, Flavia Laureti (Environmental Technological Design); Giovanna Bianchi, Antonella Galassi (Mentors), Camilla Ariani, Giulia Bortolotto, Enrica Gialanella, Micaela Scacchi, Jie Zhao (Planning); Loredana Di Lucchio (Mentor), Tania Dionisi, JingJing Lin, Arianna Salvetti (Design).
- ⑤ École Nationale Supérieure d’Architecture de Saint-Etienne (France) : Claude Tautel (Scientific Coordinator), Romain Chazalon (Mentor), Frédéric Dellinger, Florian Kleinfenn, Amandine Bachimont, Maxime Blanc, Mael Bret Caoxu, Alice Chen, Fanny Chevreton, Marie Duchand, Audrey Gamblin, Alice Giani, Chloé Grossetete, Marie Hugues, Eve Laville, Mattieu Maitre, Wang Nalya, Anais Nenert, Stéphanie Noir, Laure Pouzol, Valentine Skawinky, Victor Siyao Yang, Sophie Yi, Sophy Wang, Sharon Zhang.
- ⑥ Yuping, Shangyaojiao, Dugong, Xiaoluosaihu lakes and wetland parks, Fu river and wetland park.
- ⑦ Jean Attali of École Nationale Supérieure d’Architecture de Paris Malaquais (France); Yuval Yasky of Bezalel Academy of Arts and Design Jerusalem (Israel); Youqun Ren, Vice Chancellor of ECNU; Hongyuan Song, Director of Research Center for Agricultural Economy of Ministry of Agriculture; Chongfa Yuan, Associate Dean of China Urban Development Planning Institute and Former Associate Director of Small Towns and Villages Center of National Development and Reform Commission; Xuegang Feng, Dean of School of Business, ECNU; Gang Zeng, Associate Dean of Urban Development Research Institute, ECNU, also attended and contributed to the conference which was endorsed by Kunshan Direction of Deevlopment Limited Company and Suzhou Grasspower Venture Investment Limited Company.
- ⑧ Turenscape in the past 15 years has planned and designed over 300 ecological cities and 1,000 landscape projects in China. Projects are located in 200 cities and more than 600 projects are built and realized.

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