

设计是变革的工具：

香港后海湾后生产性景观的改造与更新

Design as A Tool for Change:

Transformation of the Post Productive Landscape of Deep Bay, Hong Kong

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摘要 ……

对社会、生态和经济层面的内容进行研究，将展现一种大多数设计师与决策者常常忽略的设计语言。通过利用影像以及地图等媒介进行探索性研究，LandLAB试图揭示具有潜在复杂性的景观基础设施中所隐含的重重问题，从而对规划设计领域的某些观点提出挑战。

LandLAB是一个构建于北京大学与土人设计之间的研究平台。2013年3月，LandLAB与来自香港大学和北京大学的学生共同开展了为期7天的联合研究课程。探讨如何减弱城市化对景观生态产生的影响。该研究课程以“后生产性景观的改造与更新”为主题，邀请了来自土人设计的嘉宾进行演讲和主题介绍。这是一个为学生、老师和相关专业人士设立的，可就景观城市化中的问题各抒己见、交流学习的研究平台。

关键词 ……

LandLAB研究平台；景观设计；短期研究课程；后生产性景观的改造与更新；后海湾

Abstract ...

Studying social, ecologic and economic dimensions, a design language is revealed ignored by most designers and policy makers today. LandLAB challenges issues in planning design to think about the importance of landscape behaviors affected by urbanization through exploratory research principals to understand unforeseen complexities in landscape infrastructure where problems are typically hidden, yet revealed through imagery and maps.

LandLAB is a joint research laboratory between Peking University and Turenscape. Recently, having joined forces with HKU and PKU students for a 7-day joint workshop during March 2013, exploring impeding urbanization affects on landscape ecologie. The workshop titled, "Transformation of Post Productive Landscape", was programmed with guest lectures from Turenscape, as well as tutorial sessions. This was a learning laboratory for students, teachers, and professionals alike, to teach, learn and explore new insightful methods towards landscape urbanism.

Key words ...

LandLAB; Landscape Design; Workshop; Transformation of Post Productive Landscapes; Deep Bay

1 教学愿景

可持续环境的重要特质表现为适应性强，即具有应对干扰和突发事件的系统能力；应对干扰是指为建立弹性的城市框架所做出的规划决策；应对突发事件是指为已建成环境中可预见的干扰提出指导原则。在过去的30年中，中国经历了惊人的增长过程，5亿人口涌入城市之中。这一前所未有的进程已经超出了其承载能力，导致无法推进和维持已完成的进程。预计到2050年，将有5亿新居民迁移到新的城市中，可持续环境中的突发事件已经变得难于修正，但却更加显而易见。现在正是探索新的框架的时候，以为未来建立更具适

应性和弹性的城市系统。

从设计师的角度出发，可以从多个视角对中国的城市结构进行解读。无论你的兴趣所在是景观设计、城市设计或建筑设计中的社会或文化设计，你所得出的很多与功能相关的观察结果正在逐渐趋同。举例来说，当我们看到的是一个500m见方的超大街区中不断重复出现的住宅或购物中心时，我们会思考，这是否缺乏人性尺度？也许你会更关注交通基础设施或水质问题？食品安全？空气污染？疾病扩散？开放空间网络、生态性和可持续性的缺失？不论中国的承载能力是否与其当前的城市形态学或生活质量相冲突，通过不同

规模的各类调查，我们都开始对中国快速城市化进程的环境质量提出质疑。

城市的不断扩展终将超出其承载能力，这将会进一步降低生态服务的效能。比如位处环渤海地区的国际级新兴都市北京和天津，就正处在这种不断转型中。在中国，还存在开始经历转变的另一区域，一个由中国大陆和香港共同管理其转变的地区：即我们所知的后海湾。

对社会、生态和经济层面的内容进行研究，将展现一种大多数设计师与决策者常常忽略的设计语言。通过利用影像以及地图等媒介进行探索性研究，LandLAB试图揭示具有潜在复杂性的景观基础设施中

所隐含的重重问题，从而对规划设计领域的某些观点提出挑战。

2 LandLAB研究平台

LandLAB与来自香港大学和北京大学的学生共同开展了为期7天的联合研究课程，探讨如何减弱城市化对香港后海湾（图1）的景观生态产生的影响。该研究课程以“后生产性景观的改造与更新”为主题，邀请了来自土人设计的嘉宾进行演讲和主题介绍。这是一个为学生、老师和相关专业人士设立的，可就景观城市化中的问题各抒己见、交流学习的研究平台（图2）。

在LandLAB，我们就基于道德和环境伦理的设计决策，与景观设计和城市设计中的设计弊端等方面进行了探索。LandLAB与众不同的特点之一就是试图将课程、学生旅行基金以及老师/学生共同的设计研究合作这三种模式相结合。通过这种强有力的模式，LandLAB得以在各大高校之中展开研究活动，也能够与现实世界中的利益相关方以及政府机构建立良好关系（图3，4）。

香港大学助理教授麦咏诗指出，“本次与LandLAB合作的教学愿景旨在使学生对后生产性景观建立新的认知，即把后生产性景观视作可随着时间而不断提升和转变的动态媒介。”



2



1

景观生态学的出现为理解空间组织方式与其中的物质演变过程及流动方式之间的关系提供了认知。生态系统的不断变化的动态状态和亚稳定性，在景观设计实践中创造了新的范式。“我们希望同学们构建起强调生物物理学景观、城市生态以及基础设施等多方面的综合知识体系”，北京大学博士候选人、LandLAB组织者陆小璇指出，“这个研究室是一个实验性平台，是一个以多学科框架为指导，在各种复杂多变的环境下进行设计的综合体。”

LandLAB激发学生去思考城市化对景观行为产生的影响。我们通过完善不合理的城市策略以拓展它们的运作途径，运用地图和公共数据了解景观的复杂性，这些问题通常是隐藏的，但将通过探索性研究

主体得以展现。这些探索结果共同构成了指导性原则，从而我们可以为现实世界中的利益相关方以及政府机构讲解有关生态保育的重要性以及减缓城市化的影响。城市化是持续的，但是简单的城市规划原理能够对其进行引导，从而更好地设计未来的城市，提升城市承载能力。中国的城市正以指数速度增长，但是我们仍有时间探讨并预测城市发展的多样化图景，同时让

1. 后海湾地图，包括米埔自然保护区、洪水桥、南生围和落马洲河套地区。
2. 《后生产性景观的改造与更新——案例1：香港后海湾》一书的封面。

1. Map of Deep Bay, including Mai Po, Hung Shui Kiu, Nam Sang Wai, Lok Ma Chau Loop.
2. Book cover of Transformation of The Post Productive Landscape — Case 1: Deep Bay, Hong Kong.



景观基础设施策略在这一过程中起到更大的指导作用。通过在混合规划设计中运用简单的变量，我们将在社会和景观基础设施优化方面获得一系列的成效。

3 后生产性景观的改造与更新：香港后海湾

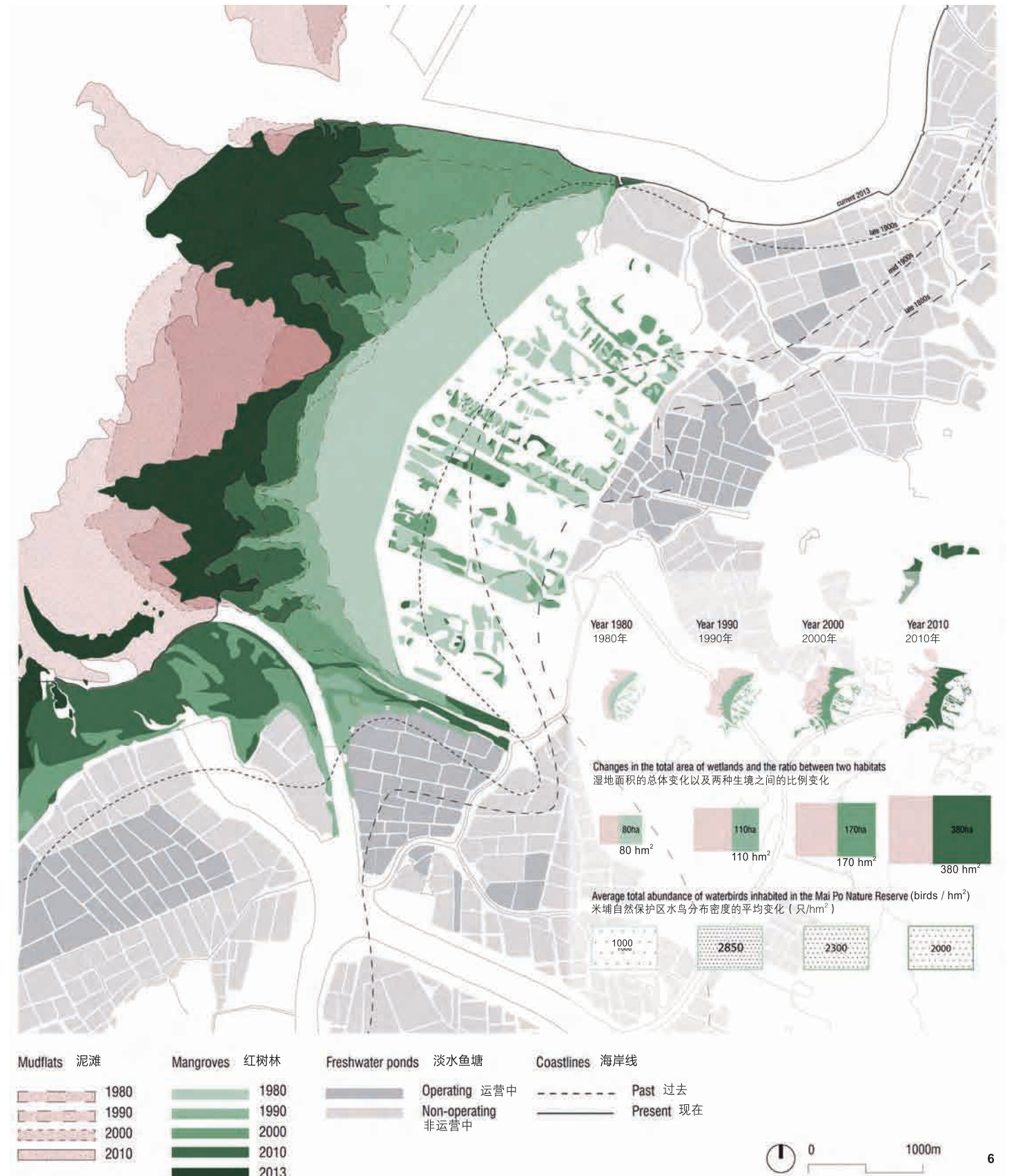
后海湾面临的重大挑战包括缺乏后续开发土地、生态压力和水产养殖业的衰退。合理的土地利用策略及生态保育等挑战成为需要探讨的问题。本次研究课程旨在拓展同学们对城市不断变化的形态、基

础设施和生态复杂性的认知。后海湾地区拥有悠久的历史背景。为了引导研究课程的进行并确保学生在特定主题下进行完整而深入的调查，我们设立了4个理论主题来引导研究过程。

3.1 修复

米埔保护区由被废弃的鱼塘和其他曾用于水产养殖的生产性景观“复原”而来。米埔的生物多样性以及从生产性景观向生态景观的“复原”已经得到世界范围的认可。然而，经过生态复原的米埔保护

3. 土人设计国际所所长杨杰的演讲现场。
4. 业主在为大家介绍洪水桥货运集装箱场地的情况。
5. 米埔自然保护区。深圳的飞速发展对其咫尺相隔的米埔地区产生了影响。世界野生动物基金会对该保护区的生物多样性投入了巨额资金，以使其继续成为《国际湿地公约》中的一员。
3. Lecture given by Kenneth Yeung, the director of Turenscape International Studio (TIS)
4. Site introduction given by property owner during the Hung Shui Kiu cargo container site visit.
5. Mai Po Nature Reserve. The rapid development of Shenzhen affects Mai Po in close proximity. WWF invests a significant amount of money into the expansion of biodiversity in the reserve area to maintain it as a Ramsar site.



6. 深圳河最近的渠道化及其支流在很大程度上增加了后海湾的沉积现象。无意间从深圳引入香港的外来物种红树林，在过去的数十年中使得后海湾的泥滩和红树林面积显著增加。© 郑天朗，李康婷，梁历恒，史书茵
6. The recent channelization of the Shenzhen River and its tributaries largely contributed to increase the sedimentation phenomenon in the Deep bay. Exotic species of mangrove were unintentionally introduced from Shenzhen to Hong Kong, dramatically increasing the expansion of the mudflat and the mangroves in the Deep Bay in the past decades. © Tinlong Cheng, Hongting Lee, Likheng Leung, Shuhan Shi



区内红树林过量生长，导致了后海湾周边土地受到洪水的严重困扰——红树林粗壮的根系成为雨季向后海湾排洪的阻碍。这种状况促使我们重新思考生态“复原”的合理方式，特别是针对这样一个处于动态变化之中的场地（图5，6）。

3.2 演化的过程

落马洲河套地区的形成源于深圳河的截弯取直计划。然而，这一行为导致该地区的土壤受到严重污染。作为位于深圳和香港之间的一块被忽视的土地，目前就该地区所提出的方案更多地偏重于开发利益而非治理土地污染等内在问题。相比传统的从用地功能出发的规划方式，学生们的一系列研究展示了生态演替策略能够为场地提供一个更好的更新途径（图7，8）。

3.3 再生

再生过程不仅发生在城市地区。类似于南生围、和生围和大生围这样的村庄，

它们的存在正因社会对房地产发展的渴求而受到威胁。这些村庄的土地所有权正在被开发商追逐以期将其转换成商品房建设用地。香港特殊的农村文化景观濒临消失。我们需要一套全新的景观更新策略，以保护并延续现有的乡村景观及本地居民独特的生活方式（图9，10）。

3.4 废弃地的重生

洪水桥地区曾经拥有大量农业用地。随着香港农村地区农业性生产的逐渐衰落，耕地被转化成存储集装箱的地方。洪水桥变成了位于香港葵涌码头和中国大陆边境口岸之间的一个非正式后勤地。然而，随着中国华南地区更多货运枢纽的建立，对香港货运枢纽的需求将会降低，这些集装箱储存区预计将在不久后就会被淘汰。随着洪水桥货运仓储的迁出，我们应该思考什么才是这类可利用土地的最佳规划策略（图11，12）。

后海湾是开展景观设计研究的一片宝

贵的试验田。它不仅拥有丰富的生态性可供研究，开发压力、周围的城市化和污染问题，以及其对于中国华南地区的文化意义，使之成为了错综复杂的、但却具有研究价值的系统。本次研究课程的目的是拓展个体对所见、所感、所想的认知，从而提高环境景观效能提供新的思路。本次研究成果旨在为香港大学和北京大学的未来联合设计课程的开展完成一系列初步研究，并在未来研究合作的基础上对中国广大地区的后生产性景观展开调查。LAF

7. 落马洲河套地区。这是米埔自然保护区附近介于深圳和香港之间的一片遭到重度污染的被忽视的景观。目前就该地区所提出的方案更多地侧重于土地开发而非土地整治。
8. 落马洲河套地区生态修复分析 © 廖康融, 余颖欣, 卞雨佳, 闫筱菡
7. Lok Ma Chau Loop. An undervalued landscape between Shenzhen and Hong Kong adjacent to Mai Po that has high traces of contamination. Rather than remediating the land current proposals focus more on development.
8. Ecological restoration analysis of Lok Ma Chau Loop. © Stephanie Liu, Wingyan Yu, Yujia Bian, Xiaodi Yan

1 Pedagogical Vision

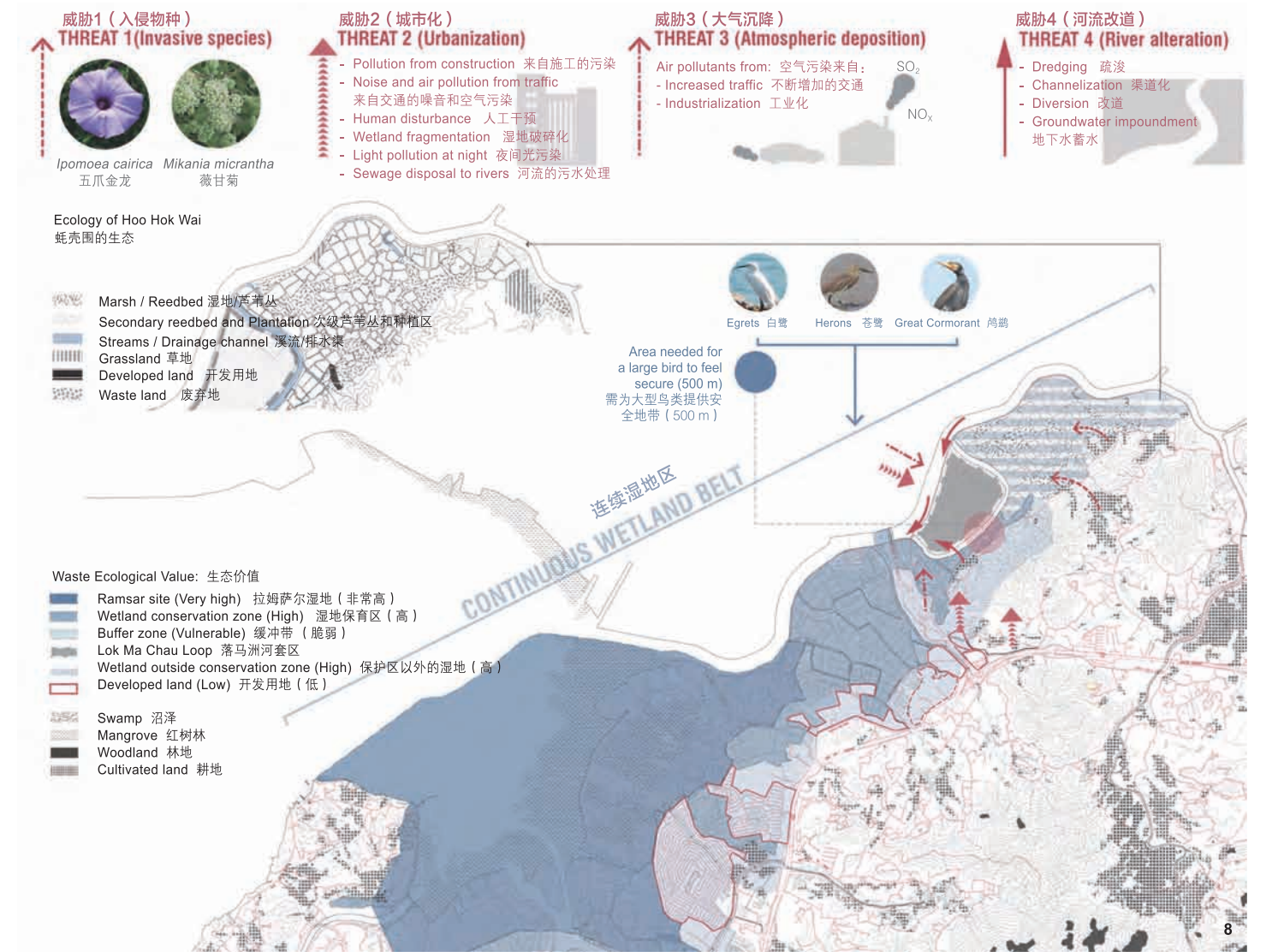
The critical attribute of a sustainable environment is adaptability, a capacity of system in responding to disturbance and contingency: Disturbance regarding to planning decisions made for a resilient urban framework and contingency referred to as setting forth guiding principals to foresee disturbances in the built environment. In the past 30 years, China has witnessed astonishing growth inhabiting half a billion people into its cities. This unprecedented process has exceeded its capacity to unwind and sustain what has already been accomplished. As 500 million new inhabitants are expected

to migrate into new cities by the year 2050, contingencies of a sustainable environment have become less amendable, yet more transparent. Now is the time to search for a new framework to set forth a more adaptable and resilient urban system for the future.

Experiencing China's urban fabric from a designer's perspective can be visualized through many lenses. Whether your interests draw you towards social or cultural design in landscape architecture, urban design or architecture, many observations regarding function become familiar. Maybe it is the copy / paste architecture of residential housing and malls superimposed on a

0.5 km square megablocks. Is it the lack of human scale? Maybe you are drawn to the transportation infrastructure or water quality? Food? Pollution? Disease or perhaps the lack of open-space networks, ecology and sustainability? Whether the threshold lies in conflict with China's current urban typology or the quality of life, within various observations of either scale we begin to question the environmental quality of China's rapid urbanization process.

As cities continue to infringe beyond their urban thresholds they will continue to impede on ecological services. Cities such as Beijing and Tianjin, for example, are in constant



transformation; two municipalities on the brink of closing in on the Bohai coastal region identifying itself as a new world class city. There is a shift occurring at another threshold in China, a threshold governed by China's mainland and Hong Kong, this area is what we know as Deep Bay.

Studying social, ecologic and economic dimensions, a design language is revealed ignored by most designers and policy makers today. LandLAB challenges issues in planning design to think about the importance of landscape behaviors affected by urbanization through exploratory research principals to understand unforeseen complexities in landscape infrastructure where problems are typically hidden, yet revealed with proper design tools.

2 LandLAB Research Platform

LandLAB is a joint research laboratory between Peking University and Turenscape. Recently, having joined forces with HKU and PKU students, together we orchestrated

a seminar collaborating on a 7-day workshop during March 2013, exploring the impending urbanization affects on landscape ecologies at Deep Bay, Hong Hong (Fig. 1). The workshop titled, "Transformation of Post Productive Landscape," was programmed with guest lectures from Turenscape, as well as tutorial sessions. This was a learning laboratory for everybody students, teachers, and professionals alike, to teach, learn and explore new insightful methods towards landscape urbanism (Fig. 2).

At LandLAB we are conjuring between design decisions based on ethical and environmental moral, and design malpractice in landscape design and urban design. One unique characteristic of LandLAB is its combination of coursework, independent student travel fellowships, and faculty / student design research collaborations. Through this powerful combination, LandLAB is able to operate within the universities, but also engage with real-world stakeholders and officials (Fig. 3, 4).

"Our pedagogical vision for LandLAB is to allow students to build a new perception on post productive landscape as a dynamic medium that evolves and transform overtime," states Vincci Mak, Assistant Professor at Hong Kong University.

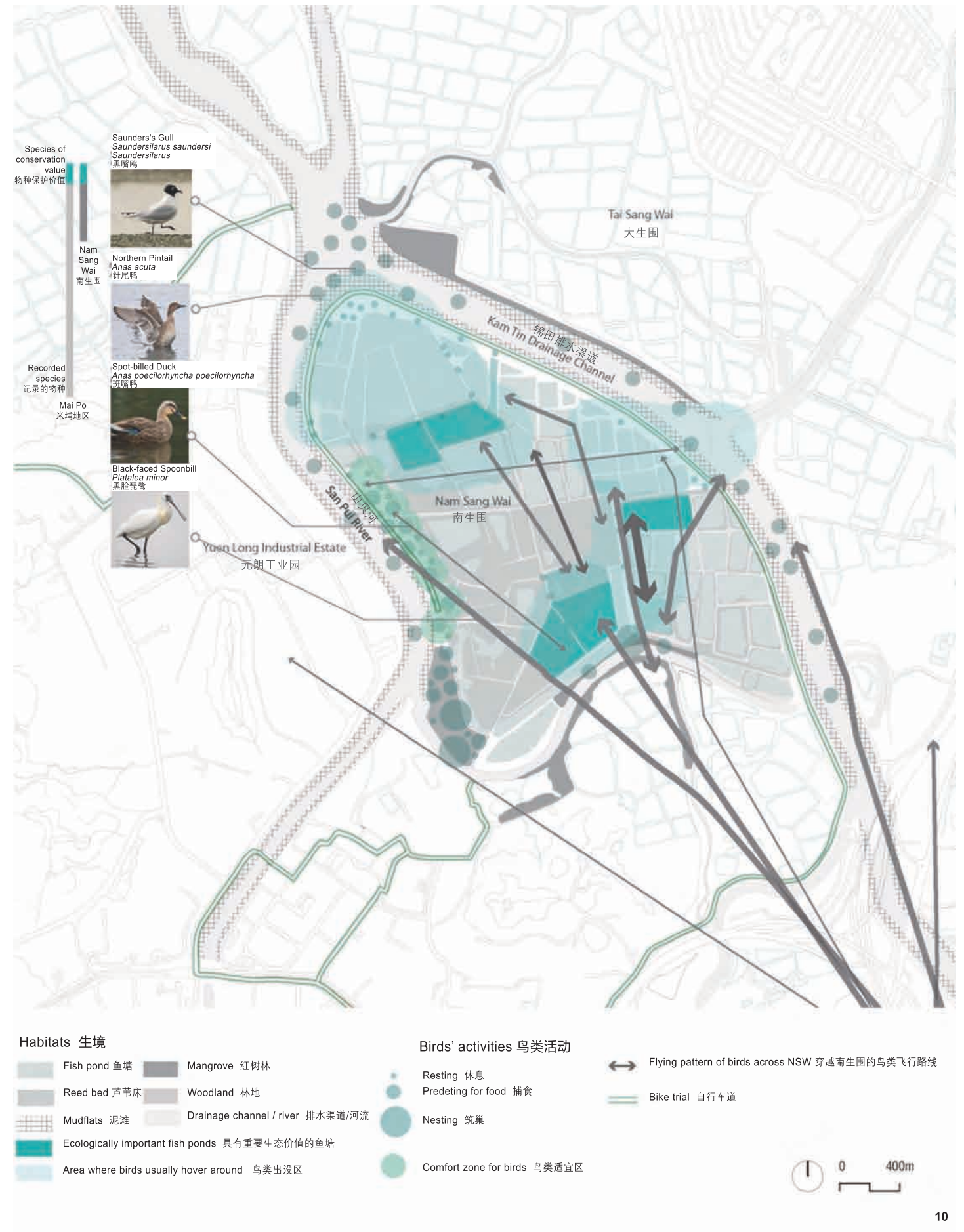
The emergence of landscape ecology provides an understanding of spatial configurations in relation to processes and flows. The notion of ecosystem as non-equilibrium dynamics and metastability generates the new paradigm in landscape architectural practice. "We encourage students to form a collective body of knowledge emphasizing on biophysical landscape, urban ecology, and infrastructure," states Xiaoxuan Lu, PhD candidate at Peking University, and coordinator of LandLAB. "This laboratory is an experimental platform and is a synthesizer who works with multiple disciplines and designs upon dynamic complexities and changing circumstances."

LandLAB challenges students to think about landscape behaviors affected by urbanization. We help broaden their tool palette by developing illicit urban strategies and using maps and public data to understand complexities in landscape where problems are typically hidden, yet revealed through exploratory research principles. Together these revelations become the guiding principles from which we can educate real world stakeholders and officials about the importance of ecological preservation and the affects of impeding urbanization.



9

9. 南生围的泥滩。独特的文化景观在遭到入侵后，被迫消失在乡村地区。为了平衡生态系统，新的综合系统的建立是这种文化景观得以生存的关键。
10. 南生围生境分布 © 冯兴齐, 潘雯怡, 黄圣恩, 臧雅然
9. Mudflats in Nam Sang Wai. Unique cultural landscapes are invaded upon and forced out of rural Hong Kong. In order to balance the ecology, a new integrated system is crucial for its survival.
10. Habitat distribution in Nam Sang Wai © Hingchai Fung, Wenyi Pan, Shaine Wong, Yaran Zang



10



11

Urbanization is constant but can be guided by simple city planning fundamentals to better design our future cities and urban thresholds. Cities in China are growing at an exponential rate, however there is still time to explore alternative options by predicting growth while allowing greater landscape infrastructural interventions. By tossing in one simple variable into the mixture of planning design, we can achieve a ripple effect to better society and landscape infrastructure.

3 Transformation of the Post Productive Landscape: Deep Bay, Hong Kong

Deep Bay is confronting significant challenges including the lack of land for further development, ecological pressures and decaying aquaculture industry. The defiance of proper land-use strategies and ecological preservation comes into question. This workshop aims to broaden the individual perception of urban dynamics, infrastructure, and ecological complexities. The Deep Bay site is very rich in its context. In order to guide this workshop and make sure students experience a thorough and in-depth investigation in a particular topic, four categories of theoretical themes are set out to guide the process of research.

3.1 Restoration

The Mai Po area in Deep Bay was “restored” from former fish ponds and other aquacultural productive landscapes. Its biodiversity and its original “restoration” from productive landscape to ecological landscape were recognized by around the world. However, the “restored” ecological area of Mai Po now has an excess of mangroves, causing flooding issues on the land area near Deep Bay. The roots of mangroves are very strong and thick, that when flooding happens on the landside, the mangrove roots become the hindrance for floodwater to flow to the water area of the Bay. Such scenario poses

questions of how restoration should be considered, especially in conjunction with a site that is dynamic with development (Fig. 5, 6).

3.2 Evolutionary Process

The Lok Ma Chau Loop was formed because of the Shenzhen River Straightening Scheme. However, because of such operation, the soil that formed the Loop’s land was highly contaminated. While it is a undervalued piece of land in between Shenzhen and Hong Kong, current proposed functions for the Loop are focusing more for development-sake rather than healing the intrinsic issue of the land contamination. Students examined whether application of the understanding of evolutionary process as well as ecological succession strategies could be a better approach for such site rather than the traditional program-oriented planning (Fig. 7, 8).

3.3 Regeneration

Regeneration does not only happen in urban areas. In rural villages like Nam Sang Wai, Wo Shang Wai, Tai Sang Wai, their existence is threatened in a society hungry for real estate development. Many of them are being sought after by developers to convert the land into residential properties for sale. Unique cultural landscapes are then forced to disappear in the rural Hong Kong. A new set of landscape regeneration strategies may be needed to safeguard the existence and continuation of such landscape and living style in our rural area (Fig. 9, 10).

3.4 The Aftermath of Dross

There used to be a lot of agricultural lands in the Hung Shui Kiu area. With the phasing out of agricultural production in the rural Hong Kong, these farm plots are converted into temporary container storage areas as informal backup support for the cargo traffic

in between Hong Kong’s cargo terminal in Kwai Chung and the border control points into China’s mainland. However, such container storage function is estimated to phase out soon, as more cargo terminals established in South China area will reduce the demand for Hong Kong’s cargo terminal. With the “moving out” of the cargo storage in Hung Shui Kiu, what will be the best strategy to plan for such available lands (Fig. 11, 12)?

Deep Bay was a valuable testing ground for everybody. Not only does it have a rich ecology to study, the pressure for development, adjacent urbanization and pollution, and its cultural significance to the South China region, make it a complex yet intricate system to explore. The workshop functioned as gateway to broaden the individual perception of what is being seen and what has been sought to further the enhancement of new ideas for the sake of environmental landscape. The work generated during this workshop was intended to form a

set of preliminary research for a future joint studio between HKU and PKU, as well as the basis for further research collaborations to investigate other post-productive landscapes in the greater China region. **LAF**

11. 洪水桥货运集装箱场地。随着农业性生产的逐渐衰落，这些农业用地转变成成为临时的集装箱储存区域。
12. 在意识到洪水桥地区将不可避免地成为开放式仓储区后，学生们开始尝试利用当地（建成）遗产作为重新定义由货柜装卸站产生的废弃景观的推动力，并基于这些具有历史地标价值的系统，对这些废弃景观进行另一种解读。
11. Hung Shui Kiu cargo container site. Phasing out of agricultural production, the rural farm plots are converted into temporary container storage facilities.
12. Realizing the inevitable end of the open storage business in Hung Shui Kiu area, the students tried to use the local (built) heritage as a driving force to redefine the drosscape generated by the container depots, and to generate alternative interpretation to these abandoned landscapes based on a system that values proximity to historic landmarks. Heritage will be used to leverage an incentive to recover an identity in Hung Shui Kiu.



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