# EDITORIAL
# 主编寄语

**时间** 2020年1月10日　**地点** 泰国曼谷水上市场　**拍摄** 俞孔坚

运河曾是泰国首都曼谷生命机体的血脉，也是为城市提供源源不断生态系统服务的基础设施，与水为友、与水相适应的水上社区与街市应运而生。但近年来对机动车出行的依赖和水系连通性的人为阻断，终结了城市与自然的共生关系，曾经繁荣的水上社区日渐凋敝。

**Date** January 10, 2020　**Location** Floating Market in Bangkok, Thailand　**Photographer** Yu Kongjian

Canals were once the lifeblood of Bangkok as well as the infrastructure that provided continuous ecosystem services for the city. Floating communities and markets were born in such synergy between water and city. However, the expansion of motor vehicle transportation and other man-made engineering infrastructures that blocked canals end up the symbiosis, and the once prosperous floating communities now are nothing but obsolete.

# 基于自然，让自然做功：国土空间规划与生态修复之本

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**摘要**

笔者近来造访了三座在人居环境上颇具挑战性的城市，对人与自然的共生关系有了更为深入的理解。在墨西哥首都墨西哥城，为应对洪水、满足城市供水，城市建设日渐侵蚀自然生态基础设施，导致当地水资源逐渐耗尽、城市下沉，当地富有特色的水上田园也消失殆尽；在孟加拉首都达卡，水体污染问题严峻，城市公园弥足珍贵，成为了人们少有的喘息之地；在泰国首都曼谷，为应对洪水而增建的闸门使得昔日繁荣的运河光景不再，水上社区和街市逐渐荒废，城市道路拥堵和大气污染随之而来。所有这些都是国土空间的规划问题，其核心和关键是如何在自然基底中为发展中的城市选址，以及如何在城市的基底中保留和完善生态基础设施。国土空间规划和生态修复之根本是让自然做功，并收获自然所提供的免费生态系统服务。这是人类福祉的基础，也是城市可持续发展的根本出路。

**关键词**

人居环境；生态基础设施；城市建设；共生关系；国土空间规划；自然系统

https://doi.org/10.15302/J-LAF-1-010006
收稿时间 RECEIVED DATE / 2020-01-19
中图分类号 / TU984
文献标识码 / C

**本文引用格式 / PLEASE CITE THIS ARTICLE AS**

Yu, K. (2020). Work with and by Nature: The Essence of Territorial Spatial Planning and Ecological Restoration. Landscape Architecture Frontiers, 8(1), 4-9. https://doi.org/10.15302/J-LAF-1-010006

近两个月来，我频繁造访了世界上人居环境颇具挑战性的三个城市：墨西哥首都墨西哥城、孟加拉国首都达卡，以及泰国首都曼谷。

在墨西哥城，我随当地的城市研究专家、国家水务局及市水务局的主管沿着溪流谷地走街串巷、长途踏勘。在溪流的源头山林，我感受到了溪水的清澈与凉爽；而进入城市后，水流则变得浑浊并散发着恶臭；贪婪的城市建筑和道路将溪谷胁迫得只留下一条窄缝；为应对季节性洪水的威胁，城市不得不斥巨资渠化河道、高筑河堤，将本可优美流淌并给城市带来巨大福祉的溪流直接排入粗大的水泥管道中，囚禁于黑色中窒息而亡，随后与污水一起从城市的另一端排出。各方人士对目前恶化的人居环境几乎都束手无策，因而不得不跨流域调水以满足城市供水需求，同时投资建设更庞大的管道系统。于是，灰色的钢筋水泥工程不断覆盖绿色的自然生态基础设施，自然的自我调节功能逐渐丧失，热岛效应加剧。这个曾经漂浮在湖泊中的城市，几乎已经耗尽来自高原湖泊的水资源，接着又吸干了地下水，导致城市逐年下沉[1]。由于地下水得不到补充，阿兹特克人富有特色的水上田园消失殆尽。

在达卡，刚下飞机的乘客随即会被警告不能直接饮用自来水，因为几乎所有的地表水都已遭到污染，管道中的自然水源也无法保证未被污水渗透[2]。随后，在当地向导的引导下，我参观了当地所谓环境最好的社区。这是一个安保森严的封闭社区，社区周边的公园是达卡市中心唯一可观的公园。公园中原有的河流被切割成孤立的水泊，黑臭水体经由污水管道源源不断地排入其中。在入水口处，水面露出一排鱼嘴，鱼儿们在挣扎地呼吸。尽管政府花费了很大的精力进行治理，却收效甚微。然而，来此锻炼的人却络绎不绝，他们就如同探出水面拼命呼吸的鱼儿一般，这里成为了他们仅有的喘息之地。筹建中的新城选址于水泊对岸的田野上，这里是平坦低洼的河漫滩，每逢雨季都会被两米深的水流淹没，偶尔会形成几处长满树木的孤岛，被奉为神圣的宗教场所。平原之上是蜿蜒的线性人造高堤，村庄大多建设于此，堤脚下是因取土而形成的水塘，兼做旱季水源之用。这一派田园牧歌的景象与隔河相望拥堵不堪的达卡市区相比，真有天壤之别。

在曼谷，我有幸参与了近年来当地最大的一项人居环境建设工程——政府付出巨大代价，迁出了一处有近一个世纪历史的制烟厂，并将场地开辟为森林公园。然而，这样的城市生态修复工程对这个拥有一千多万人口的特大城市来说，无异于杯水车薪。来自世界各地的游客大多被那些风情独特的佛塔和寺庙所吸引，或迷恋于无微不至的泰式服务。当走出弥漫着异国香水的酒店大堂，来到建筑后方的街道或运河旁，一种完全不同却更为真实的曼谷的气息扑面而来。于是我踏上了别样的考察路线，在当地专家的带领下，乘船沿古老的运河深入城市和郊区，感受最真实的泰国。运河曾经是曼谷生命机体的血脉，有数百年历史的寺庙不时映入眼帘，但两岸的果园大多已荒废，民房和商铺凋敝，一些曾经的豪宅也因久无人烟而被热带植被所覆盖。我心生疑惑，为什么这样有特色的水上街市衰败如此？专家告知，这些运河原本非常繁荣，也是当地最受青睐的旅游胜地[3]，但政府为了保护居民免受洪水危害，在河口修建了

# WORK WITH AND BY NATURE: THE ESSENCE OF TERRITORIAL SPATIAL PLANNING AND ECOLOGICAL RESTORATION

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**ABSTRACT**
Through his recent visits to three cities facing severe and challenging living environment, the author had a deeper insight into the symbiosis between human and nature. In Mexico City, the capital of Mexico, urban construction practices against floods and for water supply encroach on natural ecological infrastructure, resulting in the exhaustion of local water resource, city sinking, and erased indigenous cultural landscape of floating gardens. In Dhaka, the capital of Bangladesh, where water bodies are heavily polluted, scarce urban parks become the only refuge for citizens. Finally in Bangkok, the capital of Thailand, estuary gates built to block floods invade the once prosperous canals, accelerating the decline of floating communities and markets and exacerbating traffic congestion and air pollution. Learning from these cases, cities must become better at territorial spatial planning and have the foresight to develop and grow while preserving and improving existing ecosystems. Essentially, territorial spatial planning and ecological restoration is to work with and by nature that would provide generous ecosystem services for humans, and, eventually, to increase people's well-being and enhance cities' development of sustainability.

**KEYWORDS**
Living Environment; Ecological Infrastructure; Urban Construction; Symbiosis; Territorial Spatial Planning; Natural System

Over the past two months, I have visited three cities facing severe and challenging living environment: Mexico City, Dhaka, and Bangkok, capitals respectively of Mexico, Bangladesh, and Thailand.

In Mexico City I was accompanied by local urban experts and heads from national and municipal water authorities to make a long site survey along the river valley. At the source of the river in the mountains, I enjoyed the clear and cool stream water. But, entering the city, the river became turbid and stinky. Sprawling urban buildings and roads transformed the meandering river into a narrow channel. Facing seasonal flooding, the city invested generous funds to channelize the river with high levees. The river that was once beautiful and had brought great benefits to the city now is imprisoned in thick concrete, dark pipes, drained as sewage. At the end of wits, the city is constructing a larger pipeline system to transfer water from other basins, as a costly solution to the deteriorating living condition, to meet the city's daily need. Now any green ecological infrastructure is covered with reinforced concrete, degrading the river's ability to self-regulate and causing severer heat island effect. The city, once surrounded by lakes, has almost used up its groundwater and the water from the adjacent sources and is suffering from subsidence year by year[1], not to mention the erased cultural landscape of the indigenous Aztecs.

In Dhaka, visitors are warned not to drink the tap water because the surface water, as well as the water from natural sources conveyed by municipal pipes, is almost contaminated[2]. Led by the local guide, I visited a gated community, thought to have the best living environment in the country, that was heavily fortified away from its surrounding. The park nearby the community was the only green space in central Dhaka. The river that passed through the park had been cut into isolated ponds, full of dark and stinky water. Rows of fish mouths emerged at the water inlet — the fish were struggling to breathe. Despite the great effort the government has made in water management, very little has affected. Surprisingly, large numbers of people come to the park, like the fish reaching their mouths out of the water trying to breathe. The park was the rare place where they could get relieved. A new city is in the works on the other side of the river, where currently a low-lying floodplain is often inundated with water two-meter deep in the rainy season. Occasionally, several tree-covered islands emerge and are regarded as sacred religion spots. A constructed levee separates villages from the floodplain. At the base of the levee there is a pond formed by the excavated dirt. It serves as the water source for the villages during the dry season. This idyllic scene and lifestyle is dramatically different from the crowded Dhaka across the river.

Finally, in Bangkok I revisited an urban design project of my team, which is also one of the largest resettlement projects in the city in recent years. The government relocated a 100-year-old tobacco factory and transformed the site into a forest park. However, such an urban ecological restoration action is utterly inadequate for a city with a population of over 10 million. Tourists from all over the world enjoy Bangkok's rich architecture and culture a lot — the unique pagodas and temples, or the meticulous Thai service. However, when I walked out of fancy hotels with exotic aroma in the air, I experienced a completely different and more authentic Bangkok when passing through the streets and along the canals. Guided by local experts, I took a boat along an ancient canal that was once the lifeblood of Bangkok. Besides the temples with hundreds of years of history, what came into my view were the abandoned orchards on both sides, obsolete residences and stores, and derelict mansions covered by overgrown tropical vegetation. I wondered why such a unique water corridor had declined. Our guides explained that the canal was once the most popular destinations in the area[3]. However, to protect the local residents from floods, the government built estuary gates that resisted floods but also limited boating. As a result, tourists no longer came and the locals had

许多闸门，此举在阻挡洪水的同时，也牺牲了行船的便利，因此游客不再光顾，居民也迁至他方。另外，陆路交通和汽车的发展也取代了这座城市对水上交通的依赖，原本与水共生且独具曼谷特色的水上社区和街市更为荒废，随之而来的城市道路拥堵和大气污染也日益加剧。

以上三个城市的魅力都在于城市与自然的和谐共生，而这一魅力的消失，或者说是悲剧的产生，都缘于和谐关系的终结——不论是阿兹特克人的水上田园，与洪水相适应的达卡聚落，还是曼谷的水上街市：城市建设侵占湖泊及河流等关键自然系统空间；城市盲目扩张，超越了自然的承载力；过分依赖基于工业文明的灰色基础设施，导致河道等生态基础设施废弃，可持续的生态系统服务随之消失。究其本质，所有这些都是国土空间的规划问题，其核心和关键是如何在自然基底中为发展中的城市选址，以及如何在城市的基底中保留和完善生态基础设施，使其为城市提供高品质的生态系统服务。

紧接着的问题是，如何挽救由于人类的短视、无知或高傲而带来的城市现状，以及如何修补已经不适宜人类居住的城市。其核心是修复城市中的自然系统，包括为自然争取更多的空间，重建“山水林田湖草”生命共同体的连续性和完整性，以及让自然系统充分发挥生态系统服务。

国土空间规划和生态修复之根本是让自然做功，并收获自然所提供的免费生态系统服务。这是人类福祉的基础，也是城市可持续发展的根本出路。**LAF**

moved elsewhere. Worse, auto infrastructure had replaced water transportation, and, along with the declined floating communities and markets, Bangkok is suffering from an increasing congestion of urban roads and heavy air pollution.

All of the three cities have strong historical connections with nature. Yet, in each the relationship has been cut off, whether it is the loss of the Aztec floating gardens, the decline of Dhaka settlements that can accommodate floods, or the fading of Bangkok's floating markets. As urban construction encroaches on key natural systems, including lakes and rivers, urban growth often overpowers natural resiliency. In these cases, cities begin to rely on grey infrastructure rather than ecological infrastructure, resulting in a loss of sustainable ecosystem services. Cities must become better at territorial spatial planning and have the foresight to develop and grow while preserving and improving existing ecosystems.

The next question is how do we remedy the current urban challenges resulted from humans' shortsightedness, ignorance or arrogance, and how do we repair urban landscapes that are no longer suitable for human inhabitation? The answer is to restore the natural systems in cities by preserving more room for nature; to restore the continuity and integrity of the natural system of mountains, waters, forests, fields, lakes, and grasslands; and to help maximize the ecosystem services of these natural systems.

Essentially, territorial spatial planning and ecological restoration is to work with and by nature that would provide generous ecosystem services for humans, and, eventually, to increase people's well-being and enhance cities' development of sustainability. **LAF**

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