探索与过程

水陆之间

专栏编辑

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长久以来，水作为直接影响人类生存的必需元素，“其天然特性受到限制和操纵以满足人类需求”[1]。诸多关于水的研究表明，人类因生存需求建立的控水体系对历史进程产生了深远影响，而试图通过水渠或水坝对水进行控制的行为促生了根深蒂固的陆地 – 水体二分概念。牛津词典将“土地”定义为“地球表面未被水体覆盖的部分”，亦体现了这一二分概念。通常，土地被视为某种不包括沼泽、河口、潮汐区、湖泊、池塘以及溪流的“地理单位”[2]。这种二分概念反过来也支持着人类对水体的进一步驯化，即通过建立基础设施来存储和调节水资源，并将其与陆地分离。

面对极端天气和气候事件发生频率的增加以及大规模控水基础设施带来的不利的环境和社会影响，环境学者和实践者提出了一种强调环境混合性的别样视角。该视角挑战了人造与自然、陆地与水体之间的界线，呼吁人类与自然系统进行合作而非抵抗，强调自然界中陆地与水体的不断交融，以及能够包容混乱性和周遭环境变化的多种水陆混合形态的存在。与上述观点相呼应，本期的两个项目并非将陆地置于水体的对立面，而是探讨了能够吸水和保水的陆地。它们并未将水管理框定于工程学或水文学的语境之内，而是强调由文化和自然共同促生的水陆混合环境所具有的生态系统服务功能。

在《当代基塘景观的空中观察》一文中，来自香港大学的田梦晓对珠江三角洲独特的基塘景观展开了细致研究，并强调了此类景观中所存在的水土协同效应。历史上，基塘系统是一种为了应对多水的自然环境、满足当地生产需求而发展起来的渔农整体生态系统。这一系统促成了土（基）与水（塘）之间复杂的能量、营养以及水分流动。通过将历史卫星影像与无人机调查结果进行比较，田梦晓指出，当代基塘景观所经历的快速转变，特别是系统的碎片化以及表面材料和水土比例的不断变化，损害了基塘系统长期存在的水土协同效应和生态功能，如小气候调节、地下水补给，以及雨洪调蓄功能。田梦晓认为，基塘景观的精髓并非其几何外观，而是存在于水土之间的物质与能量的循环流动，而水土协同效应的延续有助于建立具有韧性的城市未来。

来自宾夕法尼亚大学的何洁茹在《在水体中/截获水分：在中国山西省的采矿景观中创造雨》一文中对干燥 – 湿润的二分概念提出质疑。她将目光聚焦于中国山西省——一个因干旱气候和过度耗水的采矿业而面临水资源短缺的地区。以景观学者阿奴拉德哈・马图尔与迪利普・达・库尼亚所提出的“无处不在的水分”[3][4]这一概念为基础，何洁茹挑战了通过工程基础设施将水及其环境相分离的传统防洪抗旱途径，提倡建立一种通过景观基础设施构建地区水分的方法，即将自然中的雨水及其存在于空气、地层、动植物中的多种形态纳入水资源范畴。通过绘制汾河沿线的连续剖面，何洁茹展现了景观中所包含的水分层次，以确认下一步设计干预的关键位置。通过对采矿产生的污废水进行处理，并在汾河河谷山麓开展种植设计和地形改造工作以加强景观持水能力，何洁茹的设计策略有助于重新调整区域水分，从而调解由于水资源短缺加剧而引发的冲突。

田梦晓和何洁茹提倡理解并运用那些具有地域精神、能够包容模糊性和流动性的景观智慧和策略，而非建立所谓的“万能方案”和“绝对控制”。两位作者挑战了那些过于狭隘的“水资源管理”定义和实施方法，通过动摇存在于陆地与水体、干燥和潮湿、人造基础设施和自然之间的传统二分概念，推动水陆协同景观的社会和生态效益的生发和延续。

EXPERIMENTS & PROCESSES

PART-LAND, PART-WATER

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Water, as the most critical requisite element for human survival, has long been domesticated, and "its natural properties have been constrained and manipulated to cater for human need"[1]. There is a rich body of literature on how reaching out to establish control over water, which is often driven by the raw instinct to survive, has profound implications during the course of history. The efforts to control water by keeping it in the channels or behind the dams have shaped the deeply entrenched land-water dichotomy. Such a dichotomy is also expressed through Oxford Dictionary's definition of land, that is, "the part of the earth's surface that is not covered by water." Generally, land is perceived as "a unit of geography"[2] that excludes swamps, estuaries, tidal areas, lakes, ponds, and streams. Such a dichotomy supports human's behavior of building infrastructure to store and regulate water and separate it from the land.

In face of increasingly frequent extreme weather and climate events as well as adverse environmental and social impacts associated with large-scale water-control infrastructure, an alternative perspective that celebrates the hybridity of environments has been advocated by scholars and practitioners. Such a perspective challenges the line between man-made and nature and land and water, calls for the need to work with rather than against natural systems, and sheds light on the constant negotiations between land and water in nature and the existence of various forms of land-water hybrids that accommodate messiness and contextual variations. In line with these arguments, two projects in this issue portrait lands as spongy and aqueous rather than in opposition with water. Instead of isolating water management issues within the context of Engineering or Hydrology, the projects highlight ecosystem services provided by land-water hybrids that are coproduced by culture and nature.

In Seeing from Above: Observation of Contemporary Dike-Pond Landscape, Tian Mengxiao from the University of Hong Kong celebrates land-water synergy in her close examination of the unique dike-pond landscape in the Pearl River Delta. Historically emerging as a response to the region's flood-prone watery natural environment and food production demand, dike-pond system is an integrated agriculture and aquaculture ecosystem that enables an intricate energy, nutrient, and moisture flow between land (dike) and water (pond). By comparing old satellite photos with her own drone surveys, Tian identifies the rapid transformation of the dike-pond landscape, including notably fragmentation of the system and changing surface materials and dike-pond ratio. This transformation has impaired the long existing land-water synergy and ecological function of the dike-pond system, such as microclimate regulation, groundwater replenishment, and flood water storage. Rather than simply preserving the geometrical appearance of dike-pond system, Tian calls for the need to restore the cyclic flows between land and water for a resilient urban future.

In In-between Waters / Intercepting Wetness: Inventing Rain in the Mining Landscape of Shanxi Province, China, He Jieru from the University of Pennsylvania questions the dry-wet binary in her vision of an alternative hydraulic future for Shanxi, a region facing water deficit due to its arid climate and excessive consumption of water by the coal mining industry. Building upon Anuradha Mathur and Dilip da Cunha's idea of "ubiquitous wetness"[3][4], He challenges the conventional flood and drought mitigation approaches that separate water from its milieu by engineered infrastructure, and suggests a landscape infrastructure approach that can construct wetness from engaging with rain held in air, strata, plants, and animals. By producing a series of transverse sections along the Fen River, He reveals the gradients of wetness embedded within the landscape and identifies critical locations to carry out further design intervention. By remediating coal mining drainage and strengthening the wetness holding capacity of landscape through planting and grading at the foothills of the Fen River Valley, He's design strategies help adjust regional wetness to mediate conflicts caused by intensified water deficit.

Rather than advocating for a universal solution and absolute control, Tian and He embrace landscape wisdoms and strategies that are contextualized in local terms and can accommodate ambiguity and flux. By destabilizing the conventional dichotomies between land and water, dry and wet, and infrastructure and nature, they prepare the ground for nurturing social and ecological benefits of land-water synergy landscape that are often overlooked when water management is narrowly defined and implemented.

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