



EDITORIAL

主编寄语

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西溪南丰乐河上的一道堰——吕塌，建于公元527年，至今已有近1 500年历史。这样的低堰，在徽州地区有很多，在不破坏区域自然水系格局的前提下，仅仅将水位抬高数尺，便能有效减缓来自山区的急流，灌溉千万顷良田；这样的低堰又与分布在村中和田野上的口口方塘相串联，形成了一个完整的海绵系统，正是：“半亩方塘一鉴开，天光云影共徘徊；问渠那得清如许，为有源头活水来”。只可惜，这千年石堰如今却被钢筋水泥所替代，尽管尚保留了低堰的功用，却少了许多生态与美的价值。

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The Lv Weir, one of the weirs along the Fengle River in the town of Xixinan, was built in 527 A.D.. Low weirs, such as Lv Weir, are very common in the region of Huizhou. Only elevating the water for a few feet, the weirs help slow down the mountainous torrent and irrigate vast farmlands without disturbing the regional structure of the natural water system. The weirs are connected with distributed ponds in the village and the field, reflecting beautiful scenes described in some poems, and creating an integrated water management system that is exactly the same as what a Sponge City would act. Unfortunately, the stone weirs have been gradually replaced by concrete and steel structures which perform as the low weirs but without the ecological and aesthetic values.

“海绵”的哲学

主编 俞孔坚

译 陈立欣 萨拉·雅各布斯

 尽管自以为披荆斩棘地为“海绵城市”的规划建设做了不少工作，但真正使“海绵城市”在今天得到广泛重视，还是因为习近平总书记的倡导及随之而来的有关部委的积极推动。为了贯彻落实中央城镇化工作会议精神（其间“海绵城市”得到了大力倡导），2014年2月，《住房和城乡建设部城市建设司2014年工作要点》中明确提出：“督促各地加快雨污分流改造，提高城市排水防涝水平，大力推行低影响开发建设模式，加快研究建设海绵型城市的政策措施”，并于同年11月发布了《海绵城市建设技术指南》；2014年底至2015年初，海绵城市建设试点工作全面展开，并遴选出第一批共16个试点城市。一时间，“海绵城市”这一概念进入了广大城市决策者的视野。“海绵城市”的概念被官方文件明确提出，代表着生态雨洪管理的思想和技术将从学界走向管理层面，并在实践中得到更有力的推行。但不难发现，我国目前出台的相关实践导则主要围绕以LID技术、水敏感性城市规划与设计等为代表的西方国家先进的生态雨洪管理技术而展开，也越来越聚焦于城市内部排水系统和对雨水的利用、管理，并且在具体技术层面的诠释依旧未能摆脱对现有治水途径中“工程性措施”的依赖。

 在我看来，“海绵城市”的理念不应拘囿于此。它为在不同尺度上综合解决中国城市中突出的水问题及相关环境问题开启了新的旅程，包括雨洪管理、生态防洪、水质净化、地下水补给、棕地修复、生物栖息地的营造、公园绿地营造及城市微气候调节等。因此，我们需要对“海绵城市”概念有更深刻的理解；否则“海绵城市”建设将很快沦为中央职能部门的权力寻租机会、地方政府新的GDP增长点、各类工程公司谋取暴利的借口，甚或将会开启新一轮诸如河道整治、挖湖堆山之类的“破坏性建设”。“海绵城市”的哲学恰恰是对简单、粗暴的工程思维的反叛。这种反叛集中体现在以下几个方面：

 完全的生态系统价值观，而非功利主义的、片面的价值观：稍加观察就不难发现，人们对待雨水的态度实际上是非常功利、非常自私的。砖瓦场的窑工，天天祈祷明天是个大晴天；而久旱之后的农人，则天天到龙王庙里烧香，祈求天降甘霖，城里人却又把农夫的甘霖当祸害。同类之间尚且如此，对诸如青蛙之类的其他物种，就更无关怀和体谅可言了。“海绵”的哲学是包容，对这种以人类个体利益为中心的雨水价值观提出了挑战，它宣告：天赐雨水都是有其价值的，不仅对某个人或某个物种有价值，对整个生态系统而言都具有天然的价值。人作为这个系统的有机组成部分，是整个生态系统的必然产物和天然的受惠者。所以，每一滴雨水都有它的含义和价值，“海绵”珍惜并试图留下每一滴雨水。

 就地解决水问题，而非将其转嫁给异地：把灾害转嫁给异地，是几乎一切现代水利工程的起点和终点，诸如防洪大堤和异地调水，都是把洪水排到下游或对岸，或把干旱和水短缺的祸害转嫁给无辜的弱势地区和群体。“海绵”的哲学是就地调节旱涝，而非转嫁异地。中国古代的生存智慧是将水作为财富，就地蓄留——无论是来自屋顶的雨水，还是来自山坡的径流——因此有了农家天井中的蓄水缸和遍布中国广大土地的陂塘系统。这种“海绵”景观既是古代先民适应旱涝的智慧，更是地缘社会及邻里关系和谐共生的体现，是几千年来以生命为代价换来的经验和智慧在大地上的烙印。我家的多位祖先就因为试图将白沙溪上游的一道水堰提高寸许，以便灌溉更多田亩，而与邻村发生械斗甚至献出生命。这样惨痛的教训告诫我们，人类要用适当的智慧，就地化解矛盾。

 分散式的民间工程，而非集中式的集权工程：中国常规的水利工程往往是集国家或集体意志办大事的体现。从大禹治水到长江大坝，无不体现着这种国家意志之上的工程观。这也是中国数千年集权社会制度产生和发展的重要原因之一。在某些情况下这是有必要的，如都江堰水利工程，其对自然水过程的因势利导中所体现出的哲学和工程智慧，使这一工程得以延用至今，福泽整个川西平原。但集中式大工程，如大坝蓄水、跨流域调水、大江大河的防洪大堤、城市的集中排涝管道等，失败的案例多而又多。从当代的生态价值观来看，与自然过程相对抗的集中式工程并不明智，也往往不可持续。而民间的分散式或民主式的水利工程往往具有更好的可持续性。中国广袤大地上古老的民间微型水利工程，如陂塘和水堰，至今仍充满活力，受到乡民的悉心呵护。非常遗憾的是，这些千百年来滋养中国农业文明的民间水利遗产，在当代却遭到强势的国家水利工程的摧毁。“海绵”的哲学是分散，由千万个细小的单元细胞构成一个完整的功能体，将外部力量分解吸纳，消化为无。因此，我们呼吁珍惜和呵护民间水利遗产，提倡民主的、分散的微型水利工程。这些分散的民间水工设施不仅不会对自然水过程和水格局造成破坏，还构筑了能满足人类生存与发展所需的伟大的国土生态海绵系统。

 慢下来而非快起来，滞蓄而非排泄：将洪水、雨水快速排掉，是当代排洪排涝工程的基本信条。所以三面光的河道截面被认为是最高效的，所以裁弯取直被认为是最科学的，所以河床上的树木和灌草必须清除以减少水流阻力也被认为是天经地义的。这种以“快”为标准的水利工程罔顾水文过程的系统性和水文系统主导因子的完全价值，以至于将洪水的破坏力加强、加速，将上游的灾害转嫁给下游；将水与其他生物分离，将水与土地分离，将地表水与地下水分离，将水与人和城市分离；使地下水得不到补充，土地得不到滋养，生物栖息地消失。“海绵”的哲学是将水流慢下来，让它变得心平气和，而不再狂野可怖；让它有机会下渗，滋养生命万物；让它有时间净化自身，更让它有机会服务人类。

 弹性应对，而非刚性对抗：当代工程治水忘掉了中国古典哲学的精髓——以柔克刚，却崇尚起“严防死守”的对抗哲学。中国大地已经几乎没有一条河流不被刚性的防洪堤坝所捆绑，原本蜿蜒柔和的水流形态，而今都变成刚硬直泄的排水渠。千百年来的防洪抗洪经验告诉我们，当人类用貌似坚不可摧的防线顽固抵御洪水之时，洪水的破堤反击便不远矣——那时的洪水便成为可摧毁一切的猛兽，势不可挡。“海绵”的哲学是弹性，化对抗为和谐共生。如果我们崇尚“智者乐水”的哲学，那么，理水的最高智慧便是以柔克刚。

 海绵的哲学强调将有化为无，将大化为小，将排他化为包容，将集中化为分散，将快化为慢，将刚硬化为柔和。在海绵城市成为当今城市建设一大口号的今天，深刻理解其背后的哲学，才能使之不会沦为新的形象工程、新的牟利机会的幌子，而避免由此带来的新一轮水生态系统的破坏。诚如老子所言：“道恒无为，而无不为”，这正是“海绵”哲学的精髓。



SPONGE PHILOSOPHY

CHIEF EDITOR Kongjian YU
TRANSLATED BY Connie CHEN Sara JACOBS

I have done a lot of work — often forwarding thinking and groundbreaking — for the design and construction of Sponge Cities, but the true driving force in the development of a Sponge City is proactive administration by President Xi Jinping and related national departments. In the spirit of urbanization put forth by the central government, the notion of a Sponge City was clearly mentioned in February 2014. In *Working Points of Ministry of Housing and Urban – Rural Development of the PR China* in 2014, the central government urged local governments to increase reform of rainwater and sewage diversion, improve urban flood systems, and carry out low-impact development. The Ministry also urged policy research into Sponge City construction, and published *Sponge City Construction Techonology Guidelines* in October 2014. Sponge City programs were carried out from the end of 2014 to the beginning of 2015, selecting 16 cities as the first pilot cities. The Sponge City concept was clearly proposed in planning documents, but it became public almost overnight. Its incorporation into official rhetoric represents how the ideology and technology of ecological stormwater management has been raised to policy level and become a powerful part of professional practice. However, currently, most guidelines are still about learning best practices of LID, Water Sensitive Urban Planning and Design from western countries, specially focusing on the internal urban drainage system and the utilization and management of stormwater. The interpretation of specific technology still depends on engineering strategies.

The concept of Sponge City is more than that. It will start a new journey for approaching water issues and other prominent environmental issues at different scales, including stormwater management, eco-flood control, water purification, supplements of underground water, restoration of brownfields and urban habitats, and improvement of green spaces and urban micro-climates. We need to better understand the concept of the Sponge City; otherwise it will fall through the cracks and be treated as an “excuse” for power rent-seeking of some central government agencies, a “stimulus” for local economic growth, and an “opportunity” to engineering companies to profiteer; or even start a new round of “destructive projects” such as artificial channels, lakes and hills. The philosophy of Sponge City should inspire a rebellion against traditional engineering practices. We need to consider the following:

Value complete ecosystems rather than provincial interests. The public attitude towards rainwater is utilitarian and selfish. Workers at a tile factory might pray for a sunny day, while farmers suffering from drought pray for rain. The Sponge philosophy is inclusive of multiple approaches to rainwater. It values the affect that rainwater has on an entire ecosystem, not just one group of people or species. Humans benefit the most from a Sponge City, but we must remember that every drop of rain water has value and meaning. Sponge City cherishes and intends to conserve every drop of the gift from the nature.

Resolve water issues on site. Transferring risk, through shifting water from one place to another, is the intension and solution of almost all the modern hydraulic engineering projects, even often with disastrous consequences. For example, levees and long distance water transport drains water downstream, often taking it away from water-scarce regions or disadvantaged groups. The Sponge City draws on historic practices to regulate flood and drought conditions on-site and conserve runoff. The Sponge philosophy does not only grow on the ancestors’ wisdom and sacrifice in regulating flood and drought but also embodies geographical society and neighborhood. It is a sorrow to recall that some members of my family died in fighting for increasing the height of the weir in order to lead more water of the Baishaxi River for irrigation.

Decentralize civil projects. Traditional hydro projects, such as King Yu’s taming of the flood or the Three-Gorges Dam, reflect a nationalized power through civic infrastructure. Centralized systems have dominated in China for a thousand years. It is necessary in some cases, such as Dujiangyan irrigation system, the hydraulic project with the lasting positive effect on the western Sichuan Plain. But, overall, the failings of centralized projects — dams, levees, and urban drainage projects — are too great to count. Centralized projects that work against, rather than with, ecological forces are not in our best interest. Distributed civil hydraulic projects are more sustainable. Mass, micro-hydraulic projects spread over ancient farmlands, and are maintained by the local people. These types of systems are far more successful in the long run than single-used macro engineering projects. More and more of these types of landscapes are being destroyed in favor of larger, powerful national hydraulic projects. The Sponge City will distribute water to form a larger system of integrated units. We call for conservation of these projects which are nondestructive to natural watershed structure and integral to the establishment of a national-scale Sponge system.

Slow down rather than speed up, store rather than discharge stormwater. The basic philosophy of modern anti-flood projects is to rapidly drain stormwater. Smooth channel interfaces are regarded as the most efficient and direct form. As a result, removal of trees and shrubs on riverbeds is taken for granted in order to reduce hydraulic “resistance”. Such “quick-focus” hydraulic projects neglect the systematic nature of water so that the destructivity of the flood is strengthened and transfers the upper river disaster downstream. Channeling separates water from creatures, from land, from textures and surfaces, people and cities. They deplete groundwater and make habits degenerate. The Sponge City will slow down and tame the water, and enable downward movement that will help infiltrate and supply groundwater, benefit wildlife habits, and purify water to better serve urban environments.

Flexible rather than rigid resistance. Modern anti-flood projects miss an important aspect of Chinese philosophy — taming hardness with softness. Few rivers are free from the constraint of a rigid levee in China. The original meandering rivers have been turned into stiff and straight drainage channels. Floods from these types of rigid systems result in massive destruction that destroys everything in their path. The Sponge philosophy encourages flexibility, so the best to interact with water is to tame hardness with softness.

Sponge City philosophy highlights a conversion from big to small, from exclusive to inclusive, from centralized to distributed, from fast to slow, and from hardness to softness. At the heart of this position is what Lao-tsu said: Nature does not hurry, yet everything is accomplished. When Sponge City becomes a popular slogan, thorough understanding of its philosophy turns out significant.

