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改变景观的力量——德克·西蒙斯教授专访

The Powers Changing the Landscape: Interview with Professor Dirk Sijmons

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摘要: 在今天, 我们的生存环境面临着诸多挑战, 包括气候变化, 生物多样性减少, 可用于发展的土地资源接近上限等等。面对这些问题, 前荷兰首席国家风景园林师德克·西蒙斯认为我们必须关注那些能够改变景观的力量, 不管它们是水利工程、旅游业、农业还是新能源。西蒙斯在文中介绍了他的过程导向方法论的思想起点, 并通过几个获奖项目阐释了他如何运用这一方法。同时特别强调对生态系统的保护和修复是这个时代最重要的议题之一, 也是我们这一代人最重要的使命之一。作为风景园林师, 设计结合研究是我们的有力武器。我们不能仅关注眼前工作, 还需要用长远的眼光批判地看待整个城市化进程。

关键词: 景观过程; 生态设计; 荷兰风景园林; 设计结合研究

Abstract: Our living environment is facing many challenges today, including the climate change, biodiversity loss, limited unoccupied land for development, etc. In such an era, Dirk Sijmons, former State Landscape Architect of the Netherlands, believes that we must look at the powers which can change the landscape, no matter water management, tourism, agriculture or energy transition. In this article, Sijmons introduced his starting point of this process oriented methodology, and illustrated how did he applied it in his awarded projects. He also emphasized that conservation and repair of ecosystems is one of the greatest missions of our generation. And research by design is our powerful tool. We landscape architects must look beyond property lines, and be critical about the whole urbanization process.

Keywords: landscape process; ecological design; Dutch landscape architecture; research by design

德克·西蒙斯教授是世界知名的荷兰风景园林师, 有着丰富的实践及教学经验。他曾担任荷兰森林署风景园林部的负责人, 并于 2004 年被任命为荷兰国家首席风景园林师。他参与创立了 H+N+S 景观设计事务所, 并主导了诸如“还河流以空间”和“沙引擎”等国家级的项目。他也是代尔夫特理工大学风景园林学位项目的奠基人之一。2017 年, 他获得了风景园林界的至高奖项——杰弗里·杰里科终身成就奖。借西蒙斯教授访问北京的机会,《风景园林》杂志有幸与他进行了深入交流, 并与读者共享。

LA: 《风景园林》杂志

DS: 德克·西蒙斯教授

LA: 在讨论您的工作以前, 让我们先追溯一下您的学生时代吧。当您还是代尔夫特一名建筑系学生的时候, 您就为自己“创立”了一个名为“环境规划”的学位项目, 而且您当时对克里斯·范·鲁文^①的理论有着特别的兴趣(图 1、2)。在您日后的实践中, 我也看到他的理论的影响。为什么那时您会对他的理论很有兴趣呢? 他日后是如何影响您的呢?

DS: 你必须结合时代背景来看范·鲁文的著作。我们是在 20 世纪 70 年代初“建立”了我们的学位项目，那个时候环境主义思潮正流行。对我来说，他的理论之所以对我有着很多启发和影响，是因为我第一次看到有人用生态学的思想把“形式”和“过程”联系起来。其中，形式和过程也可以被理解为空间和时间。因此，我们说服了学校的教授去聘请他（来学校授课）。我起初接受的是建筑学教育，真正成为了一名风景园林师是很久以后了。受他启发，我在设计中从来不只关注形式，而是同时关注形式背后的过程。这颗种子在学生时代萌芽，贯穿了我的职业生涯。

在今天，范·鲁文已经快要被遗忘了。即使在荷兰也是如此。从某种意义上来说，任何不用英语发表的学术著作都会逐渐“消失”。如果你用诸如荷兰语这样的小语种写作，你就成了这一语言区的囚徒。这对于发表研究的科学家本人和后世同一领域的研究者都是灾难性的。因此，我们认为纪念他的最好方式就是用英文出版他的著作。于是我们有了《克里斯·范·鲁文的理论：一些关键要素》。

LA: 您在 20 世纪 70 年代提出的“框架理论”在今天看依然独特。它不同于常见的蓝图式规划，既提供了必要的规划控制，又保留了足够的灵活性。您是否能为我们介绍它诞生的故事呢？

DS: 我必须首先澄清的是，“框架理论”不是我个人的贡献，而是一群专家的智慧结晶。这一理论是针对荷兰当时面临的一个严重问题提出的。在荷兰，改变大地景观的主要力量并非城市化进程，而是农业现代化（图 3）。当我在国家森林署工作的时候，我们遇到了一个困境：每一次，我们都跟随农业的发展制定空间规划，然而，（由于农业发展太快）每次规划完成时，留给农业的空间已然不够了。于是我们要重新调整，而每一次调整都是以清除林地、水渠等景观要素为代价，换取大规模、同质化的农业用地。我们十分担心最后会失去（除了农业以外的）所有的景观要素。

针对这一问题，荷兰希望我们能制定新的发展策略。从空间动态变化的角度，荷兰的地理景观由两种完全异质的景观类型组成：一方

面，我们有飞速变化的农业景观，它持续产生着颠覆性的影响；另一方面，我们有诸如森林、自然保护区、水源地等相对稳定的景观，它们需要较长的时间发展、定型。我们需要同时适应这 2 种完全不同景观。“框架理论”所做的就是将二者分开（图 4）。我们为森林、河流这样的“慢”景观设计了稳定的空间框架，并通过政府力量进行管理。除这个框架以外，我们为农业发展留足了灵活的、大尺度的地块。

这一概念在当今的城市中也有用武之地——你没必要设计得事无巨细。比方说，我们可以为交通基础设施、水利系统等相对固定的元素设计一个尽可能完善的框架，至于其他功能，留出发展弹性即可。

LA: 尽管“框架理论”已经被提出几十年了，今天的人们仍然在做蓝图式规划。在您看来，这种做法是否存在问题？

DS: 蓝图式规划非常过时，但的确仍未退出历史舞台。它其实是无效的，因为你没办法对所有的事情进行规划。美国拳王迈克·泰森有句话说得妙：每个人都有一个计划——直到他被打倒。这也是总体规划的困境——当你的设计考虑了每个细节时，一旦有些事没有按照预期发展，或者外部条件发生变化，你就被困在了一个没法适应新变化的规划里。

因此我认为蓝图式规划确实是个问题。我很喜欢彼得·波塞尔曼^②的一句话：“如果你想要犯错误，那你得用一种能被弥补的方式去犯”。不过，在一个严格的总体规划中，所有元素都是紧密关联的，牵一发而动全身。因此，这样的规划一旦出错就无从补救。我想，对今天的风景园林师和城市规划师来说，最重要的任务之一就是生态系统修复了，或者我把它叫作重新“编织”城市的“地毯”（图 5）。我们已经没有太多空间可以扩张了，我们必须得调整现有的空间。这相当复杂，因为每平方米的土地上都有既定的利益相关方。这比作一张漂亮的渲染效果图要困难得多，它不仅仅是关于要新建什么，更是关于要“除掉”什么。这是你们这一代人面临的挑战，希望你们成功。

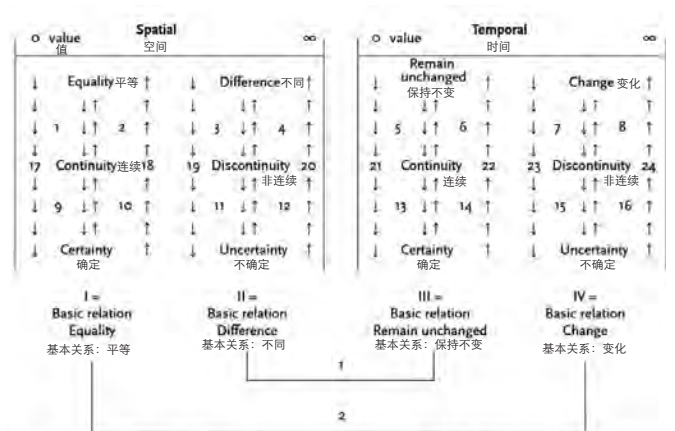
LA: 我注意到您后来的作品与“框架理论”有着微妙的联系。比如，在“沙引擎”项目中，您“设计”了一种机制，而非造型。您能否为我们讲讲“沙引擎”背后的故事？

DS: 和之前一样，我觉得把“沙引擎”说成是我的作品太不公平，它是包括科学家、工程师、生态学家、风景园林师等通力合作的结果。

在荷兰，做项目的传统几乎和在中国做项目的传统正相反。在中国，或许你的设计

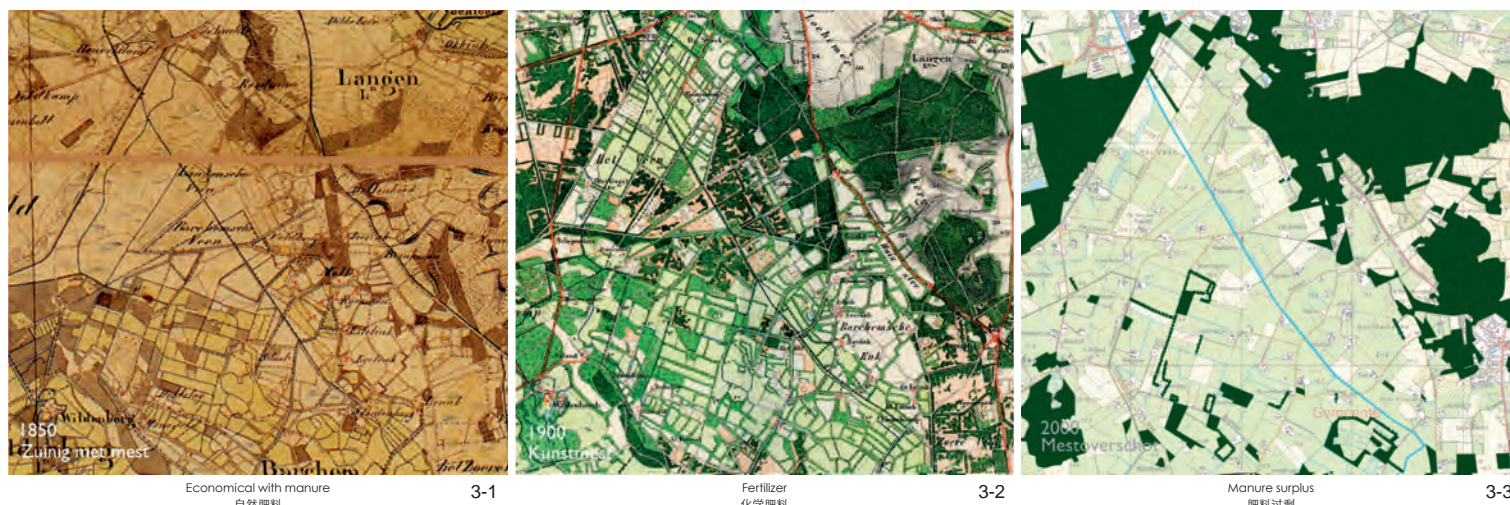


1 德克·西蒙斯 1972 年与荷兰最有影响力的生态学家克里斯·范·鲁文进行野外调查，此行的目的是寻找一种名为小贝母 (*Fritillaria meleagris*) 的植物
Dirk Sijmons on a field trip in 1972 with Chris van Leeuwen, the Netherlands' most influential ecologist, searching for *Fritillaria meleagris*



1 = Biodiversity is difference. Difference is promoted by management and other environmental conditions remaining unchanged. 生物多样性意味着差异。这种差异需要通过管理和环境条件不变来实现
2 = The second law of thermodynamics teaches us that change leads to equality, in other words greater dynamics in environmental conditions lead to equalizing > to fewer species. Nature conservation therefore does not imply doing nothing, it can only be carried out by continuing to do the same (stability of the environment).
热力学第二定律告诉我们，变化导致趋同，换句话说，环境条件的巨大动态化导致均衡及更少的物种。因此，自然保护并不意味着不作为，而是必须通过重复原有条件来维持环境的稳定性。

2 克里斯·范·鲁文于 1971 年绘制的反映植被变化时空关系的图解：根据热力学第二定律，变化带来熵增。作用于植被的变化过程意味着植被总体多样性逐渐降低。同理，自然保护未必是不干预，而是通过干预维持原状
The basic relations between spatial and temporal processes in vegetation



3-1 1850年前后荷兰巴彻姆地区的地形图，图中显示大片的野生石楠草地被用于牧羊。这种情况是由于天然肥料的缺乏所导致的
 Topographic Map of the surroundings of Barchem (Netherlands) round 1850 showing large heathlands being used collectively for grazing sheep. Shortage of natural fertilizers shaped the farming ecology and the landscape

3-2 1900年前后荷兰巴彻姆地区的地形图，图中表明人工肥料的发明使得完全开垦石楠草地成为可能。同时，景观单元的尺度在变小，因为农场的尺度变小了
 Topographic Map of the surroundings of Barchem (Netherlands) round 1900 showing how the introduction of artificial fertilizers made it possible to reclaim most of the heathlands. A small scale landscape emerged because the farms were also relatively small

3-3 2000年前后荷兰巴彻姆地区的地形图。土地的重新分配、单元面积增加、农业机械化和地下水控制等手段造就了图中更为开阔的景观。不能在农场经济发挥作用的景观要素消失了。目前的问题是牲畜排泄物太多
 Topographic Map of the surroundings of Barchem (Netherlands) round 2000 shows how land re-allotment, scaling up, mechanization, groundwater control created a more open landscape. Landscape elements that were not functional any more for the farming economy disappeared. Too much manure is the problem now

还没结束，项目就已经开始施工了。而在荷兰，一个项目在真正执行前要经历漫长的讨论和协商。关于我们的海岸地区的规划有无数个，特别是荷兰角港到海牙这一段。每一个提案的诞生都会让人们热情高涨，然而一年以后，所有人都开始担心诸如预算之类的问题。几年以后，人们的热情就消退了。再过几年，又一个新的提案出现了，轮回再次上演。

因此，我们对雄心勃勃的大计划没有兴趣。我们更想为未来做个实验，或许它会成为大项目的先导。从管理的角度来说，我们的确视角不同。此外，我们所做的不是用传统的工程手段加固海岸，而是让自然过程来帮我们实现相同的安全目标。让北海的洋流侵蚀“沙引擎”，并把沙子带到海岸线上脆弱的部位，的确是很巧妙的办法。只有通过先进的计算模拟，我们才有可能这么做。很多人认为我们的做法会以损失所有的沙子告终。不过，我在代尔夫特理工大学的同事马塞尔·史蒂夫教授通过精确的模拟发现，绝大部分沙子会被强烈的水流带回陆地加固海岸，只有极少数沙子会流失（图6、7）。

“沙引擎”的位置是经过精心计算后选择的，所以这或许不是一个通用的海岸加固的方法。这个项目中可以推而广之的方法是利用自然过程替代使用大量混凝土的传统工程手段来实现目标。这也是我所感兴趣的部分。

LA: 您如何看待景观都市主义？您认为景观都市主义和荷兰本土的理论之间是否有联系？

DS: 我对景观都市主义很感兴趣，首先，它让我放眼关注世界各地根植于当地地理景观的人类聚居地，而不是把目光局限在荷兰境内。查尔斯·瓦尔德海姆曾经提到，景观过程既可比城市化进程，也可作为城市化的范本。这也让我很欣赏，因为这种看待城市的方式是基于过程而不是基于形式的。此外，很多规划师通常会关注城市里那些充满活力的高密度地区，然而，我们必须承认，在很多地区，城市密度正在降低。对于这些收缩的区域存在的问题，我们同样需要可持续的解决策略。（对城市而言）集聚化发展并非万灵药。让我们把视角放在一个更长的时间维度上——300年以后，你将如何对待这些半城市化、半农耕甚至半荒

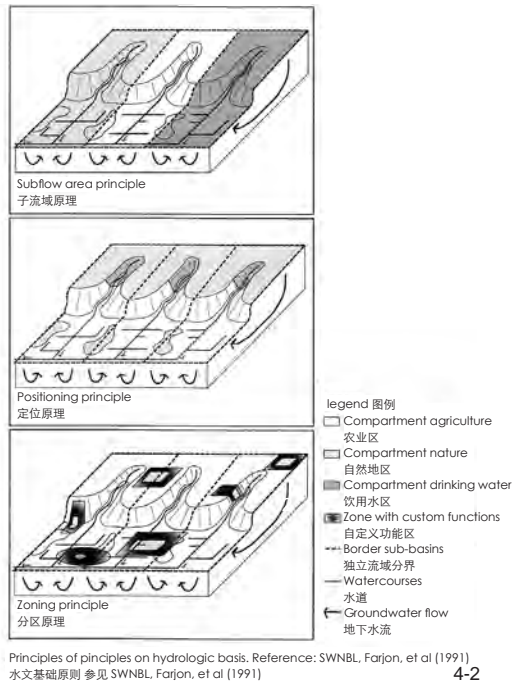
野的地区？这些地方和城市一样有趣，这里发生的事情或许还能启迪生活在高密度地区的人们：例如，为了过更加可持续的生活，你可以为自己生产食物和能源（图8）。

LA: 您曾在荷兰森林署工作了大概10年，并于2004年被任命为荷兰国家风景园林师。在此期间，您是否参与过政策制定？

DS: 我通过递交提案和建议的方式参与政策制定，这是一种非常间接的方式。

当我在森林署工作的时候，我和我的同事致力于“发展”自然。在荷兰的传统观念中，自然只是农业发展的副产物。我们所有的土地都是开垦过的，我们几乎没有任何原生的自然。荷兰景观中最耀眼的特征都来源于农业。比如，我们有大片的草场，因此吸引了大量生活在草地的鸟类。但是，就像我之前提到的，由于农业发展太快，这些自然特征逐渐消失，一些物种濒临灭绝。在20世纪80年代，自然几乎已被宣告死亡。

在这样的背景下，东瓦德湖是绝对的意外发现。它本是一块圩田，按计划应成为工业区，不过人们没有及时排干这里的水。令人惊奇的



4-1 框架理论图示：将相对静态的景观要素（林地、自然保护区、水源地）组合成框架，同时为农业等动态变化的要素创造更大尺度、更灵活的开放空间
Casco concept. A spatial example of how to consolidate landscape elements to a much more robust frame work for the low dynamic land uses (nature, forestry, drinking water production) on the one side and scaling up (and clearing) for a more flexible work space for the high dynamic land uses (agriculture)

4-2 在框架理论中，有多种方式让“静态”的林地等和“动态”的农业用地水利系统互相独立，每种方式都可以暗示或加强二者的空间分隔
Casco Concept. Hydrological separation of the two types of land use is possible in different ways, each indicating or strengthening the spatial separation

5 “重新编织城市之毯”——荷兰南部布拉邦特地区规划。2014年鹿特丹建筑双年展“城市与自然”参展项目，实物为3.5m×9m的巨型挂毯
Reweaving the Urban Carpet. The plan for Brabantstad, an urban landscape in the south of the Netherlands for the IABR Urban-by-Nature in 2014 was literally presented as an enormous tapestry of 3.5x9 meters

是，自然“回归”了这片沼泽地。成百上千的鹅开始在这里繁殖，而从19世纪中叶以来就已经没有鹅在荷兰自然繁殖的记录了。这证明荷兰的自然绝没有失去生命力。只要给予合适的条件，自然将展示它惊人的力量。东瓦德湖的奇迹鼓舞了大量的创新(图9)。我们的“鹤计划”和框架理论都受到了它的影响(图10)。后来的“给河流以空间”等项目也间接地受到了它的影响。

当我担任首席风景园林师时，我更多的是一名顾问，而不是有什么实权。比如，在制定“给河流以空间”计划时，我促成决策者将空间质量列为项目的第二目标。你可以为确保风景园林师日后有机会介入特别的项目打下基础，这是顾问的角色之一。同时，我也给出建议。我们正处在能源革命的起点，从空间的角度来说，这意味着我们得从广袤的地表上获取“稀薄”的能源(风能和太阳能)。在未来，我们的地平线上或许会密密麻麻排满了风力发电机，它们是如此醒目，不管你在哪里都无法忽略。针对这个问题，我精心撰写了一份报告，阐释我们如何应对这些“怪兽”。这也是我关注能源革命的开始^[1]。

LA: 当您担任首席风景园林师时，您主要的关注点是什么？在我们面临的诸多问题

中，您如何确定哪些更重要呢？

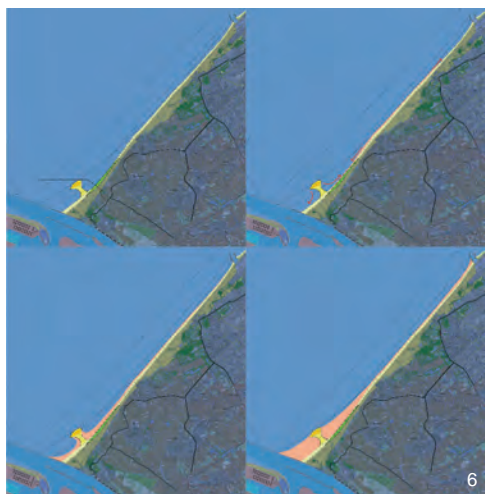
DS: 我对能够影响景观变化的过程和力量始终抱有浓厚兴趣。而好奇心会带我发现那些关键的问题。比如，我曾对旅游业进行研究，因为当时旅游业深刻地影响着欧洲的景观。你如何才能让这一产业不仅仅去蚕食它所处的环境，并动摇它赖以生存的经济基础呢？我同时关注特定类型的休闲业。例如我注意到，在荷兰，越来越多的马场正取代农场。我认为这就是一种改变景观的力量。那么，我们就得去跟马场的主人和骑马的人去探讨，我们怎么才能建立既美观又可持续的马厩和围栏。我对于发电和水管理的兴趣是出于同样的道理。我们的景观从未停止改变，它像一面镜子反映着社会的变化。所以我对单纯的保护性计划始终提不起兴趣，因为你没法让世界停止运转。与其尝试封禁改变的力量，不如同它们进行一场“柔道”。其中的要诀是，让这些力量为景观做有意义的贡献，并把它们同景观遗产联系起来。

我对景观历史也很感兴趣。伊尔可·马绍尔^[3]的研究表明，用于制作蓝色染料的植物，深刻地改变了德国图灵根地区的景观。如果这么小的东西都能对景观产生巨大影响，那么作为设计师，你可以追踪它们的痕迹，并尝试驾驭它们。这是一种很有趣地看待我们

学科的方式。

如果我必须列一个优先级列表的话，对荷兰来说，最重要的无疑是确保我们的国家仍然在物质空间中“存在”……这就包括了水利系统、防洪设施等。第二重要的是基础设施，既包括为人、货物而建设的硬质基础设施，也包括为动植物而设的生态基础设施。至于城市中具体的功能性用地、度假区等，则排在第三位。

如今，这些问题无疑与气候变化、生物多样性减少有着紧密联系。这让我十分担心。我很喜欢的一个词叫作“化石能源表现主义”，它代表了我们现在得益于化石能源能做的所有事情，而这个时期会很短暂。从阿姆斯特丹到意大利的航班最低只需要40欧元，这简直比我待在家里还要便宜。它之所以如此廉价，是因为自二战以来航空燃油就被禁止征税。但是，航空的鼎盛时期或许终将结束。气候变化和生物多样性锐减要求我们重新审视我们的生活方式。说到这里就必须提到“人类纪”了——属于人类的地质纪元。一方面，这意味着我们是地球上的“瘟疫生物”；另一方面，我们是很特别的一种，因为我们可以反思我们所作所为的后果。我们不仅需要中和环境变化的消极影响，还得想方设法去除掉带来影响的原因——造成温室气体排放的原因、造成动植物



6 这些早期草图展示了在海中特定位置放置的沙子，可以被洋流带到海岸线上的其他位置，从而起到加固海岸的作用。这种“自然建造法”可作为挖沙船的替代选项
These first sketches show how an overdose of sand in the form of a dune acts as a constant feeder of sand for the coastal stream that will transport the sand to the North and thereby nourishes the weak spots of the Dutch coast. This 'building with nature' offers an alternative for pump dredger ships

濒危的原因，等等。

LA: 您有多年的教学经历，并参与创立了代尔夫特理工大学的风景区系。作为教授，您想要教给年轻人的最重要的事是什么呢？

DS: 我最想告诉年轻人的是，只要我们用心对待，所有景观中的“运动”都可以为景观带来积极贡献。当我受邀参与蒙特利尔世界设计峰会时，我开了一个玩笑：如果你把问题丢给风景园林师，我们的答案常常是“公共空间”。“把问题变成公园”虽然是个玩笑，不过也揭示了风景园林学科的核心。这是我们为社会带来的贡献。

不过，有些问题一开始并没有明确的客户，也不会自发地变成项目。例如，通过比较城市化发展区域及世界生物多样性地图，我们可以发现绝大多数生物多样性热点也正是最密集的人类聚居区（图 11）。如何才能应对这种尺度的问题呢？必须迂回前进。在这个例子中，你或许可以吸引世界自然保护组织或者联合国的注意，让他们把这一问题提上各国政府的日程。最后，这个问题或许会转化为地方政府的自然保护计划。等到这个时候，我们风景园林师才有了实际的客户和项目。这整个过程

或许需要 12 个步骤，历经 10 年才能完成。如果想要开始这个过程，我们只有通过设计结合研究的方式。这或许是我们风景园林师对于世界环境问题最有价值的贡献。学生必须被给予探索的自由，去研究这些没有客户的问题，而不是只做一些类似商业项目的设计。这是我想要教给年轻人的关键一课。而设计研究只能在大学里生根发芽，并借由竞赛、展览、会议等为人所知，唤起公众的觉醒。比如，如果通过三维图纸向政客展示珠江三角洲海平面上升的后果，他们立即就会明白这个问题有多严重。设计结合研究是风景园林学科的实验室，我们的未来就藏在其中。

LA: 您近期关注哪些问题？为什么？在您看来，在接下来的 10 年中，风景园林学面临的最重要的议题是什么？

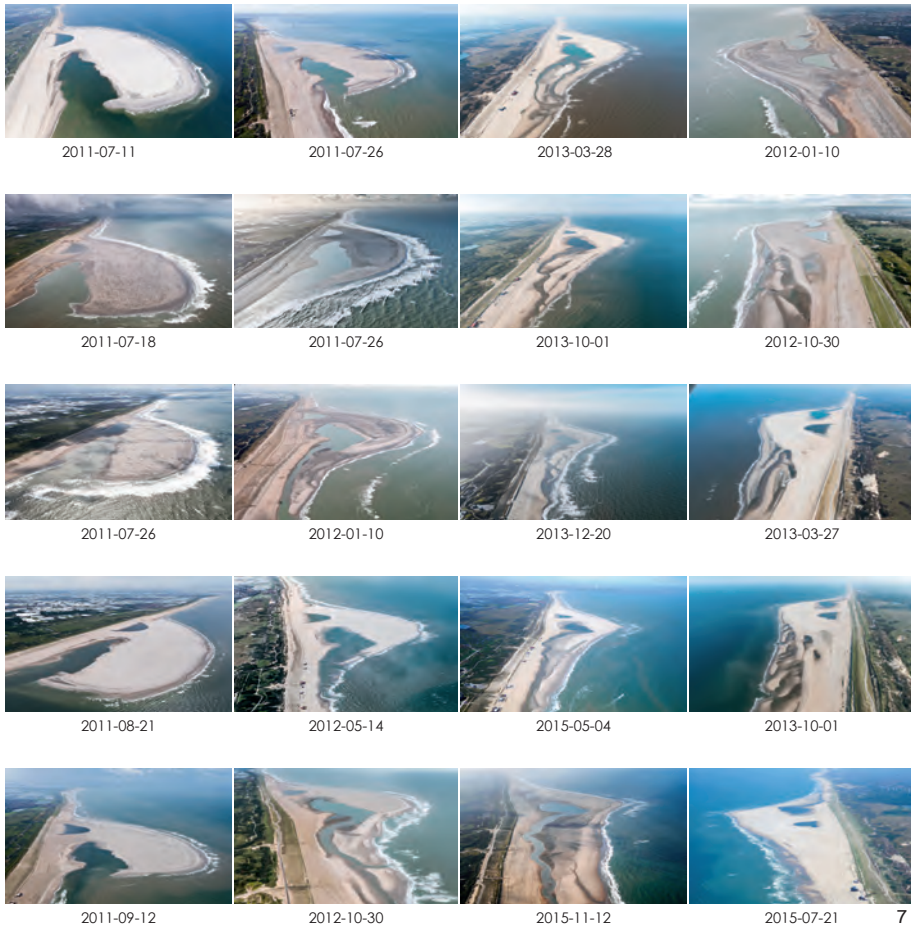
DS: 我很关心城市化和农业发展对气候变化和生物多样性的综合影响，生物多样性的问题甚至比气候变化还要严峻。此外，自从递交了关于北海风电的提案后，我在关于能源变革的讨论中也一直很活跃（图 12）。虽然我已经到了领抚恤金的年纪了，我仍然非常忙碌。

我在我的讲座《接触，对比和交融》中提到，自然环境和城市化在不同尺度上有不同的交互机制，相应地，风景园林师和规划师可以用不同的方法去处理二者之间的关系。我们必须注意的是，“自然”其实一直都存在于我们的城市中。我们使用的材料，我们建造的工程结构和水网系统本质上都是一种自然的表达。只要我们对这些建设处理得当，我们就已经可以获得额外的好处了。不过，二者冲突的核心还是生物多样性丰富的地区与指数增长的城市化区域之间的重合。要解决这个问题，建立严格的自然保护区的传统手段或许仍然是最可靠的。只有这样，由多种生物构成的生态网络才能幸存。这要求我们借助生态学的帮助，在合适的地方建立合理的连接，给予侵蚀、沉积、植被演替、动物捕食等自然过程发生的空间。如果这实在太过困难，重塑我们的城市也是一种选择。我们可以在城市中建立小规模的自然保护地。世界上的很多城市本来就建立在古老的农田之上，这样的地区本来也需要我们采取不同的策略。

我认为，我们曾拥有的关于城市和自然关系的原型，对于如今的城市环境仍然很有借鉴意义。花园城市，卫星城市和广亩城市可以被转译为对比、接触和融合的策略。

关于极端气候带来的问题，在荷兰，我们现在成立了“气候圆桌”。这个组织由社会中的 5 个主要组成部分（工业、城市建设、农业及土地管理、能源、交通）构成，试图通过采用清洁能源以及降低温室气体排放来减轻气候变化的影响（图 13）。我想中国也正竭尽全力达到《巴黎协定》中所指定的目标。能源是其中的核心问题之一——天然气是我们从石油转向可再生能源的跳板吗？它将对我们的社会产生怎样的影响？这些问题带我们回到了我们事务所成立的起点：关注农业的未来。在“框架理论”中，我们把农业用地和自然地分而治之，但是现在情况不同了，因为农业在气候政策中扮演了重要角色。粪便处理带来的温室气体排放，反刍动物的新陈代谢，泥炭地的水管理……都会影响气候变化。甚至就算是热带地区的土地功能变更，都能影响荷兰的食品工业。下面的数字可以让你对农业的地位有个直观印象：陆地上总生物质能的 95% 是人工饲养的动物；25% 的初级生产（地球上所有生物通过光合作用积累的能量）被人类消耗（图 14）。这样的比例已经到了耸人听闻的程度。有人就算地球再多十亿人口我们也能轻松供养，这种想法是很危险的。因为这太难了。从这个意义上说，少吃点肉无论如何都是好主意，它能直接影响气候变化。不过我并没有看到任何迹象表明全球肉类消费在减少。人类的生活方式对这个星球来说是一种掠夺。

这 2 个问题是我最最近主要担忧的事情。我向来是个乐观主义者，而我现在的立场是“终局乐观主义”——我相信最终我们会解决所有问题，但通向终点的道路大概充满了艰难险阻。由于气候变化和生物多样性减少，我们会面临很多危机，诸如洪水、移民，甚至饥荒。我们必须全副武装，以应对艰难的日子。不过，我心中充满希望。希望和乐观有着微妙而重要的区别。乐观主义者在某种程度上是保守的，因为他们认为现状可以接受，



7 “沙引擎”实施后的前4年里（2011—2015）的定时影像。同挖沙船相比，这种加固海岸的方式比较慢，但可以使侵蚀、沉积、演替等自然过程逐渐发生

Time lapse photo's of the Sand Engine taken during the first four years after its execution (2011—2015). The advantage of this slow way of beach nourishment is that natural processes such as erosion, sedimentation and succession are given time and space

8 东沃德，一个非常“不荷兰”的项目。在这里，每户人家拿到不同大小的土地，用于建造房屋，并且与邻居协商修建道路、给排水系统等。此外，这里的居民被要求必须在自己的土地上发展都市农业。图中显示的是东沃德的一部分，这里的住房数量在接下来的几年里将达到15 000栋

Oosterwold, a very Un-Dutch project. Lots of different sizes are given out to citizens, not only to build their own houses, but also together with their neighbours arrange the collective facilities such as roads and sewer systems. Urban agriculture on your own lot is mandatory. (situation in 2018 of a small part of Oosterwold that is to grow to 15.000 houses in the coming years)

我们总能从中趟出一条路。而希望意味着就算环境冷酷，我们仍怀有前行的力量。

LA: 您为观测城市中的环境质量制作了特别的地衣镜。对绝大多数风景园林师来说，他们的大部分项目都在城市中，而很少有机会在全球视野下思考问题。对于以中小尺度项目为主要工作的人们，您有没有什么具体建议？

DS: 我的内置LED灯光的透镜确实是为观察地衣设计的。这些顽强的小生命让我深深着迷，因为它们自身就形成了迷你的景观（图15）。我从几年前开始对他们感兴趣。在繁华的商业街上，观察它们是一种带有冥想意味的自然体验。当然，地衣也是环境质量的指示剂。它们对城市交通和火力发电所产生的二氧化硫（SO₂）尤其敏感。我建议人们赶紧开始关注身边的地衣，不论是不是生活在北京这样的大城市。

LA: 最后，您是否关注过中国在发生什么事情？您对中国风景园林师有没有什么特

别的忠告？

DS: 我只是一个远距离旁观者，并未亲历中国的种种，所以我的想法或许未必可靠。中国人在工程领域的才能有目共睹。在过去的几十年里，中国工程项目的发展规模十分庞大。然而，同工程上的成就相比，中国人对生态的关注和了解或许慢了半拍。这个差距必须被消除。风景园林学正是能为此效力的学科之一，因为我们站在工程学和自然科学的交点上。除了这一点，我们还需要对城市化保持批判性思考。因此我认为中国风景园林师的影响是至关重要的。你们可以在项目中充分应用自然的知识，这绝不是为了限制设计，而是为了给设计赋能（图16）。

注释：

① 克里斯·范·鲁文（1920—2005），荷兰著名生态学家。他的著作作为国家层面的可持续空间规划奠定了基础，现在荷兰政策中的主要生态网络即是源于他的思想。

② 彼得·波塞尔曼，加州大学伯克利分校教授，在全球范

围内参与规划和设计项目。他的主要著作包括《城市变迁：理解城市形态与设计》《场所代表：城市设计的现实》。

③ 伊尔可·马绍尔执教于德国埃尔福特应用技术大学，她主要研究文化景观与区域景观。

④ 图1由基斯·道维斯汀摄；图2由克里斯·范·鲁文绘制；图3来自荷兰国家测绘局；图4由凯克斯特拉·弗里兰特1982年绘制；图5来源于荷兰AWB公司，LOLA景观设计事务所，弗洛里斯·阿克玛德城市规划事务所；图6来源于H+N+S景观设计事务所，2009；图7来源于荷兰国家水利与基础设施部；图8来源于Municipality of Almere；图9由德克·西蒙斯摄；图10来源于迪克·德·伯豪因，迪克·哈姆豪斯，劳德维克·范·纽文豪斯，威廉·欧福马斯，德克·西蒙斯和弗里斯·维拉；图11来源于理查德·维勒，克莱尔·霍克 & 黄杰（音译）《世界尽头地图集》。宾夕法尼亚大学，费城，2017。图12由马特·哈耶尔，德克·西蒙斯，H+N+S景观设计事务所，汤斯敦能源网络公司，伊可菲斯能源咨询公司为2016年鹿特丹双年展制作；图13由H+N+S景观设计事务所根据世界资源组织的数据制；图14由H+N+S景观设计事务所制，数据来源于《收割生物圈》，法斯拉夫·斯米尔，2015；图15-1由安娜玛丽·贝兹摄；图15-2由德克·西蒙斯摄；图16来源于伯劳虎德地产。

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(编辑 / 刘昱霏)

Dirk Sijmons is an internationally notable Dutch landscape architect, who has rich working and teaching experience. He used to be the head of the Landscape Architecture Department of the Dutch Forestry Commission and he was appointed as Chief State Landscape Architect of the Netherlands in 2004. He co-founded H+N+S Landscape Architects, where he engaged in renowned projects like Room For The River and the Sand Motor. He was also one of the founders of the Landscape Architecture Diploma Program in Delft University of Technology. In 2017, he was announced as the winner of Sir Geoffrey Jellicoe Award. Thanks to his visit to Beijing, *Landscape Architecture Journal* is honored to have the chance to introduce his notions to our readers. Here in after is the full text of our interview.

LA: *Landscape Architecture Journal*

DS: Dirk Sijmons

LA: Before we come to your own works, I'd like to trace back to the seeds in your college years. When you were an architecture student in Delft, you created your own diploma program called 'environmental planning', and you had a particular interest in Chris van Leeuwen's^① theories(Fig. 1, 2). And I do see Van Leeuwen's clues in your later practice.



9 东瓦德湖是一片自然发展区，位于荷兰佛列夫兰省两个城市之间。这里的特别之处是大型食草动物种群，主要有柯尼克马（图中所示）、赫克牛、灰雁和红鹿 Oostvaardersplassen. A nature development area between two cities in the province of Flevoland where large herbivores were introduced. Photo taken from the train. The main roles are being fulfilled by Konicks horses (photo), Heck cows, Greylag Geese and Red Deers

Why his works were interesting for you at that time? How did it influence you later?

DS: When you look at van Leeuwen's work, you have to situate that in its time. We made our own study program at the beginning of the 1970s, which was the time of the environmental wave. His work was so influential and inspirational for me because for the first time I saw somebody who had an ecological concept that connected pattern and process. In another word, space and time. Then we convinced our professors that they should hire him. I was trained as an architect in the beginning, and I became a landscape architect much later. Inspired by him, I do not only design the patterns, but also look at the process behind the patterns, from then on to the rest of my career.

Van Leeuwen is almost forgotten today, even in the Netherlands. In a way, everything that is not published in English gets 'invisible'. If you publish your work in a small language like Dutch, you became the prisoner of the language area. That's tragic for both scientists who wrote their works and following people who can't get access to previous researches. Therefore we thought the best way to honor him is to publish his work in English: *The theory of Chris van Leeuwen: Some important elements*.

LA: The 'Casco Concept' you proposed in the 1970s is still unique today. It was not blueprint planning. It created great feasibility yet provided necessary control. Can you tell us the story about how it was born and developed?

DS: Firstly I must say that 'Casco Concept' is not my own personal contribution, it was made by a group of specialists. It was the answer to a big problem in the Netherlands back to at that time. In the Dutch context, the force that changes the landscape is not the urbanization process, but the modernization of agriculture (Fig. 3). When I worked at the State Forestry Service, we confronted a dilemma: we made landscape plans which went along with and gave form to the modernization

of agriculture. But time and time again, as soon as the projects were finished, the working space for agriculture was already too small in scale. And the whole story started again by removing landscape elements like forests, hedges, and ditches to make room for homogeneous large-scale agricultural landscape. We were afraid that this would leave us empty handed with no landscape elements at all.

We were asked by the Ministry of Agriculture to devise a new strategy to tackle this problem. If we look at the Dutch landscape, we have two absolutely different types of land use in terms of spatial dynamics. On the one hand, we have this ever-evolving agriculture, which is turning everything around. On the other hand, we have land uses which need time to develop, including forestry, nature conservation, the source of drinking water, etc. Thus we need to facilitate both the dynamic part of the landscape and the stable landscape part. What Casco Concept does is to take the two things apart (Fig. 4). We made a framework consisting of the stable parts, and the government had the responsibility to take care of that. For the rest, we have flexible large-scale working spaces where agriculture can develop.

That concept can also be projected to present urban landscapes. You don't have to design everything. For instance, we can make a really good plan by fixing and designing only the stable structures: the water systems and the traffic infrastructure. For the rest, we keep it more flexible.

LA: Although 'Casco Concept' was invented decades ago, people are still making blueprint master plans today. Do you think that is a problem?

DS: Blueprint plans are so out of date but they are still being made today. It's not working, because you can not plan everything. American boxer Mike Tyson had a fantastic phrase: everyman has a plan, until he gets hits. That is also what happens with masterplans: when you design into every detail, when something goes another way, or some conditions change, you are trapped in a plan

which can not answer these new challenges.

So I think blueprint planning is a problem. I like what Peter Bosselmann^② said: if you want to make mistakes, make them in a way repairable or reversible. I think this is very wise. But in a strict master plan, where everything is interlinked, you can't make such repairs. As landscape architects and urbanists, I think one of the most complex tasks we have today is ecosystem repair, or I call it reweaving the urban carpet (Fig. 5). We don't have much expansion areas anymore, we have to repair what is already there. It is so complex because there are vested interests on every square meter of land. It's much more complicated than making a 3D rendering for something new you are going to build. It's also about what you are going to remove. That is the challenge for your generation. I wish you a lot of success.

LA: I see delicate connections between Casco Concept and your later works. For instance, in the Sand Motor project, what you 'designed' is the mechanism instead of the form. Can you tell us the story of the Sand Motor?

DS: Again, I think it's unfair to refer Sand Motor as 'my' work. It is done by lots of people, including scientists, engineers, ecologists, and landscape architects.

In the Netherlands the tradition of making plans is an almost reversed version of Chinese situation, which you're probably still designing while they've already executed your ideas on site. In the Netherlands, there is an enormous amount of deliberation, debates and discussions before something is actually done. There were a lot of ideas to reform our coastline, especially the part between Hoek van Holland and Den Haag. Every time when a plan was presented, it brought enthusiasm. After one year, everybody started to worry about budget issues and the likes. Then enthusiasm faded. After some years, another plan came, the same story happened again.

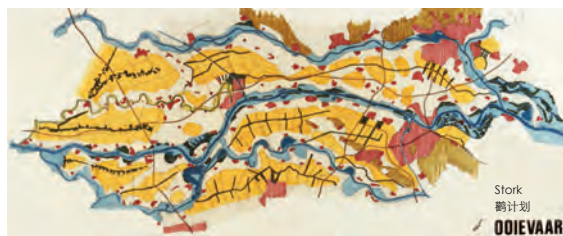
Therefore we thought it's not a good idea to make too ambitious plans, and we made the Sand Motor as a small pilot of a future, possible much larger project. From a governance point of view, we did take a different angle. What we did with it was not to reinforce the coastline with conventional engineering means. Instead, we brought the natural processes to attain the same kind of safety. You could say it is fantastic to let the flows in the North Sea to erode the Sand Motor, and transport the sand to the weak parts of the coast. This is only possible with advanced modelling. Many people believed that we might lose all the sand by doing so, but my colleague Marcel Stive of TU Delft found

out in modelling that the coast stream is strong enough to work it out and lose only a fraction of the sand (Fig. 6, 7).

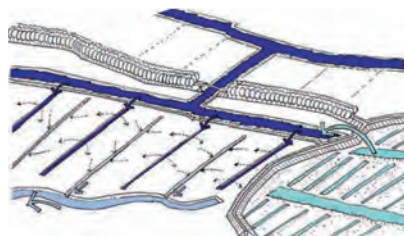
The location of Sand Motor is strategically chosen. It may not be a universal solution for all the coastal lines. What is universal is that you can use natural processes to meet your target, instead of using engineering ways with a lot of concrete. That's the interesting part for me.

LA: What do you think of Landscape Urbanism? Do you think there is any connection between the Dutch theories and Landscape Urbanism?

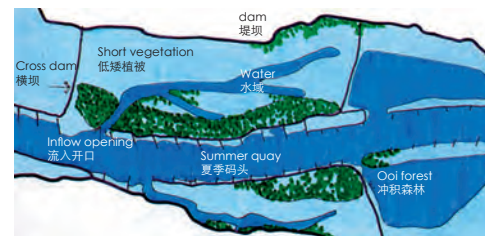
DS: What Landscape Urbanism interests me, firstly, is that we look beyond the Dutch situation, and look at those human settlements around the world that listen to the landscape. Charles Waldheim also mentioned that the landscape and landscape changes can both be an analogue and a model of urbanization. I like the fact that it's also a process-oriented, not pattern-oriented way to look at urbanization. Last but not least, many urbanists focus on the dense, dynamic aspects of the cities. However, we have to acknowledge that in large parts of the world, the urban density is decreasing. We also need sustainable answers for the problems arising in these shrinking areas. The densification is not a catholicon. Think about 300 years from



10-1



10-2



10-3

10-1 “鹤计划”概念平面，项目覆盖范围约90km×20km。本规划针对荷兰河流上游地区发展提出，是1985年EO·韦尔斯竞赛（荷兰最重要的区域规划竞赛之一）获胜方案，也是“框架理论”的第一个大型实践项目

Plan Ooievaar (overview plan, area covers 90km x 20km), winning entry of the Eo Wijers Competition (one of the most important regional planning competition in Netherlands) 1985, showing the perspectives for ecological and economic development of the upper river area of the Netherlands. The plan was the first large scale pilot for the Casco-concept

10-2 “鹤计划”细节：为农业发展提供灵活的空间。这种水利系统可以使不同地块的地下水位不同，农场主可以通过精确控制水位发展不同的农业形态

Plan Ooievaar (detail), interventions to provide a flexible working space for agricultural development. A high and a low water system allowing individual farmers to fine tune their water tables and thereby boosting their production

10-3 “鹤计划”细节：通过降低夏季堤坝的高度，可以为河流沿岸的自然过程提供更多时间和空间，从而得到一个更为生机勃勃的自然系统

Plan Ooievaar (detail), interventions showing how nature development can give more spatial and temporal freedom for river processes by lowering the summer dikes, that could result in a robust framework for nature

now, what are you going to do with the half urbanized, half agrarian or natural lands? They also have very interesting characteristics and qualities. These characteristics may also inspire you in dense areas: in order to be sustainable, probably you can produce your own food and energy (Fig. 8).

LA: You've worked in Dutch Forestry Commission for about 10 years. And you've been appointed as Dutch Chief State Landscape Architect in 2004. Did you engage in policy making back to that time?

DS: I involved in policy making by means of making plans or advice, which is an indirect way of influencing policy.

In the years I worked in Forestry Service, we were very active in nature development. In Dutch ideology, nature is the side effect of farming. All of our land was reclaimed, we almost have no natural areas. The most spectacular elements of the landscape are side effects of farming. For instance, we have species-rich grasslands and thousands of meadow birds, etc. As I mentioned, as the agriculture expanded fast, these natural areas qualities were taken over gradually. Following the news of agriculture success, species became extinct. In the 1980s nature was almost pronounced dead.

Oostvaardersplassen was an exceptional discovery. It was a polder supposed to become an industrial area, but people didn't drain it in time. Surprisingly, nature 'came back' in the marshy area as a squatter movement. Thousands of geese started to breed in that area, although they stopped to breed in the Netherlands since mid-19th century. It proved that Dutch nature was not dead at all. Given the right conditions, it could become incredible. This observation also spurred a lot of innovations (Fig. 9). The Plan Ooievaar was especially inspired by that, and we had Casco Concept (Fig. 10). Much later those influenced projects like Room For The River indirectly.

When I was appointed as the Chief Landscape Architect, I was rather an adviser than a man with real power. For example, I helped to make spatial quality as the second goal of Room For The River

Project. You lay the foundations of exceptional projects, where if you would be sure that landscape architects could be involved in such projects. That was the role of State Advisor of on Landscape Architecture. And also, I gave advice. We are in the beginning of energy transitions. The essence of the spatial aspect of the energy transition is that we will have to harvest 'thin' energy (wind and solar) on enormous surfaces. One day you may have a horizon full of wind turbines. They are immediately visible from everywhere. I wrote a thoughtful report on wind turbines about how you can deal with these 'monsters'. That's the start of my interest in energy transitions^[1].

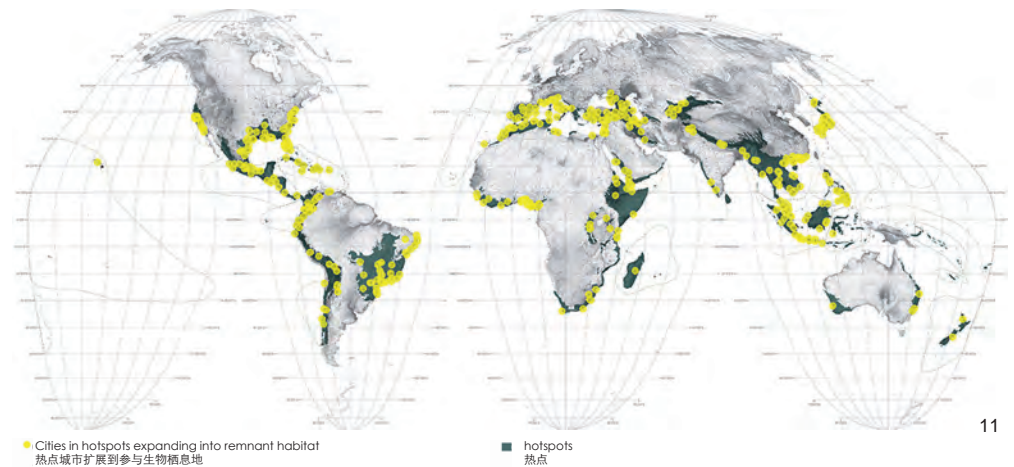
LA: When you served as the State Landscape Architect, what was your major concern? How did you set your priority levels among all kinds of issues?

DS: I have always been interested in what are the processes and powers that make the landscape change. A little curiosity may bring me to the key issues. For instance, I did a study on tourism, I did a study on Tourism, because tourism was effecting the European landscapes in a spectacular way by that time. How can you make this enormous powerful industry not only eroding its surroundings and thereby eating its own economical fundament? I was also interested in certain types of leisure. What I saw

in Holland was that parts of agricultural landscape were being occupied by horse riding fields. I thought if that is a force which can change the landscape, we have to talk to these horse riding people and see how beautiful yet sustainable horse stables and fences can be made. Same storylines go for electricity production and water management , etc. Our landscape is forever changing. It is a mirror of our society. So I have never been very interested in pure landscape conservation. We can't let the world stop. You can better judo than box against these forces of change. The trick is to invite them to make a meaningful contribution to the landscape and get related in an intelligent way to the landscape heritage.

I also have a great interest in landscape history. According to Ilke Marschall^③, the plant used for making blue paints had shaped the landscape around Thuringia. If the small thing like this has an enormous impact on the landscape, as a designer, you can trace its clues, jump onto it and ride the tiger. That is a nice way to look at our discipline.

If I must make a priority list out of these issues, for the Netherlands, the top is everything that keeps the physical existence of our country, including hydrological system, water defence systems, etc. And then infrastructure is second place, both hard infrastructure for cargos and people and soft ecological infrastructure for



11 位于世界生物多样性热点区的超过 30 万人口的城市
 Hotspot Cities: cities of 300,000 or more people projected to sprawl into remnant habitat in the world's biological hotspots

biota. Land occupations like urban districts and recreational areas are in third place.

In present days, these issues are closely connected climate change and biodiversity loss. That worries me most. I like the phrase “fossil expressionism”, which intimates that everything we can do is because of the relatively short period with the windfall of fossil fuels. I can fly from Amsterdam to Italy for 40 euros. It's even almost cheaper than staying at home. It is so cheap because the tax on aero kerosene has been banned since the end of World War II. But the heyday for airplanes might end somewhere. The context of climate change and biodiversity loss asks us to rethink the way we live. Here comes the Anthropocene, the age of mankind. On the one hand, it's a warning that

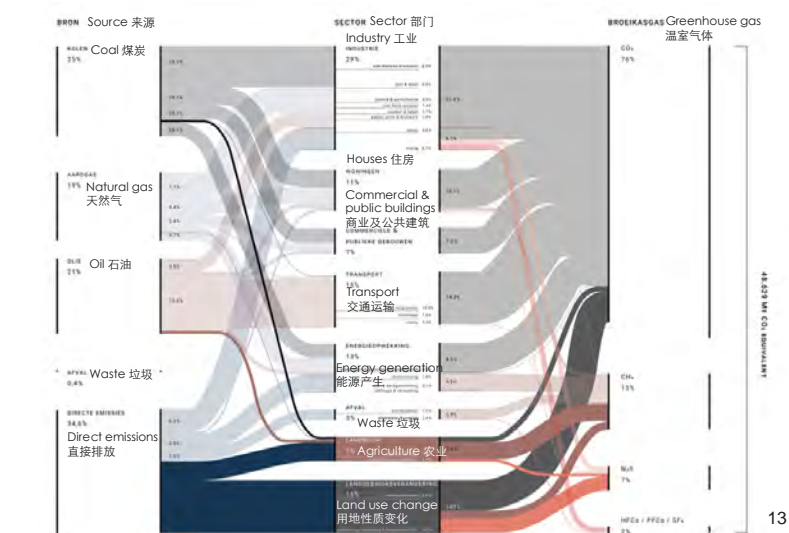
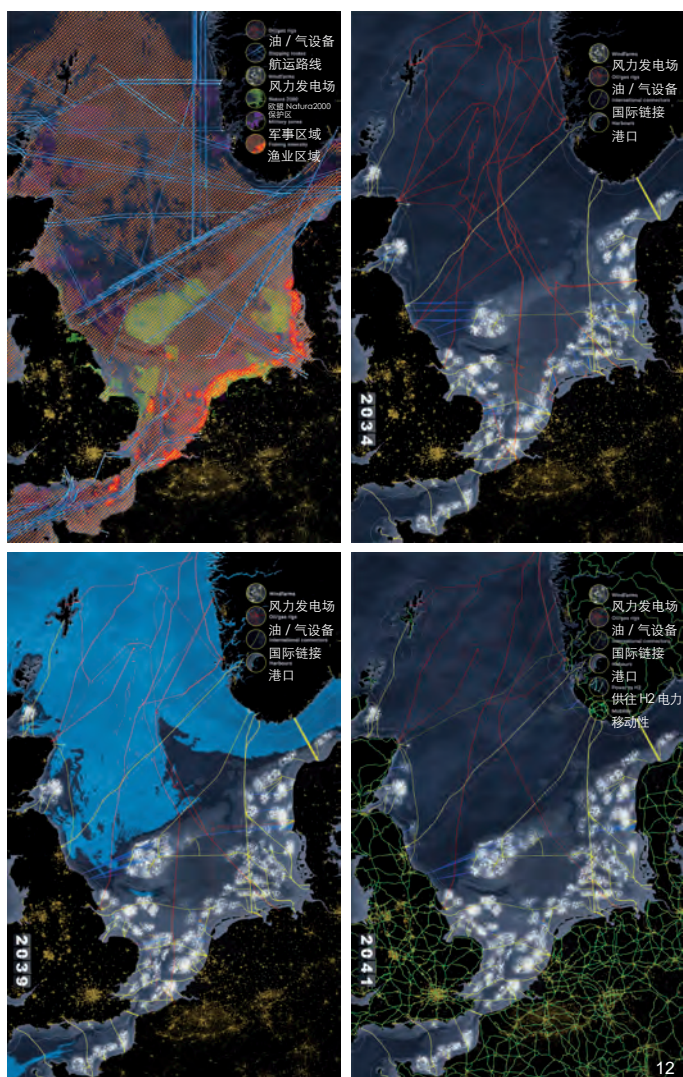
we human beings are ‘plague organism’, on the other hand, we are the reflective ‘plague organism’ which can think about the effects of what we do. We have to not only mediate the negative impact, but also take away the causes—the causes of greenhouse gases, the causes of extinction of animals and plants, etc.

LA: You've been teaching for years and you are one of the founders of the Chair of Landscape Architecture in TU Delft. As a professor, what is the most important thing you want pass on to young people?

DS: What I want to pass on to young people is that everything that moves in the landscape can be made to a meaningful contribution to the landscape, if loving care is being added by

young designers. I was invited to Montreal for World Design Summit, and I made a little joke in my speech: if you throw problems to landscape architects, public spaces always seem to come out as solutions. “Turning problems into parks” was a joke, but it also indicated the hard core of our discipline: it is our social contribution.

However, there are some problems that wouldn't be turned into projects spontaneously and that don't have a client. Like what the combination of the areas of future urbanization with the World Biodiversity Map shows, most biodiversity hotspots coincide with dense human occupations(Fig. 11). How can you find a client to deal with a problem on this scale? You have to take a detour to get through. In this case, you may attract attention from IUCN



12 设计结合研究拥有强大的图示作用，本图展示了2050年在北海地区建造25 000个风力发电风车的情景。这一计划将占用部分北海海域面积，覆盖北海周边国家90%的用电需求，同时创造更具活力的海洋生态系统

An Example of the power of research by design to fight the crisis of the imagination. Two stills from '2050, An Energetic Odyssey' an animated floor projection that shows how 25,000 wind turbines can be built and gradually occupy parts of the North Sea, providing 90% of the electricity demand of the North Sea Countries while boosting the marine ecosystem

13 生物多样性和能源革命紧密相关。本图展示了世界上所有温室气体的来源，其中“土地功能变更”是和交通废气排放同等严重的问题。土地变更中有多达75%的温室气体排放是由于南美洲草原开垦，以及印尼和巴西的热带雨林开垦造成的。这些开垦一部分是为了食品工业和饲料业，另一部分是在迎合发展生物燃油的错误社会导向

Where biodiversity and energy transition meet. A diagram of the world sources of greenhouse gasses. Please take a look at the contribution of 'land use change' in the total problem, it is as large as the world's transport sector. And land use change for almost 75% (!) stands for reclamation of South American pampa's for soy bean plantations and the reclamation of tropical rain forests, in Indonesia and Brazil. Partly because of the ill informed call for biodiesel and partly for the food industry and agriculture's fodder demand

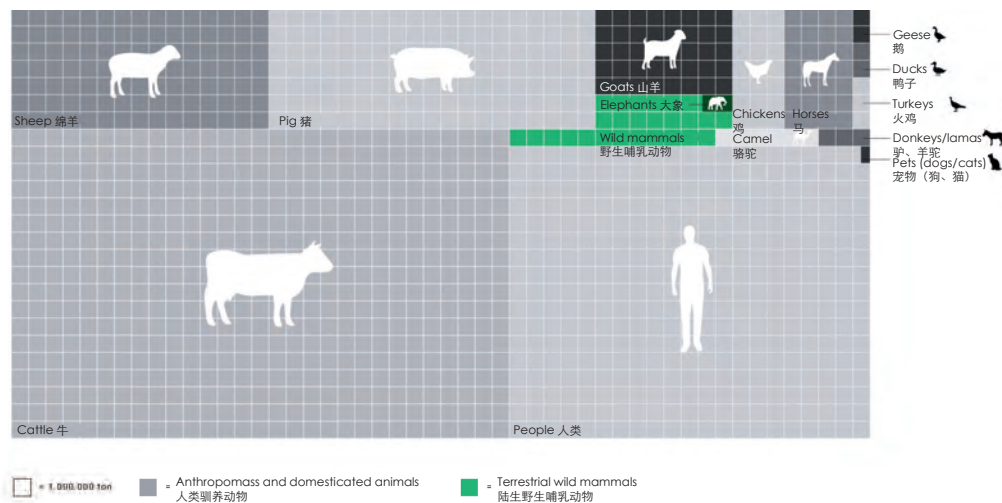


Figure X: total biomass of terrestrial mammals; striking dominance of humans and their domesticated animals in relation to wild terrestrial mammals
图 X: 陆地哺乳动物总生物量; 与野生陆地哺乳动物相比, 人类及其家养动物具有显著的优势。

14 本图展示了陆地脊椎动物的生物量总和的构成。其中, 95% 为人类及人工饲养动物, 仅有 5% 为野生哺乳动物

The biomass of vertebrate land mammals. The infographic shows that 95% of that biomass is 'us', humans with our domesticated animals, leaving only 5% for all the wild mammals

or United Nations, to prioritize this problem among national governments. In the end, the regional nature conservation plans may come out. Then you have real projects with real clients for landscape architects. The whole process is probably consists of 12 steps, and it takes 10 years to go. We can only take this detour through Research by Design. This might be the most valuable contribution of landscape architecture to the world's environmental problems. Students should be given the academic freedom to explore the problems without clients, instead of only be trained with commercially like projects. That's an extremely important element I want to give to the young generation. This element can only thrive in universities, spread out through competitions, conferences and exhibitions, and then raise the awareness of the general public. For instance, if you show the 3D drawing of what happens to Pearl Delta Areas if sea level rises half meter to politicians, they immediately understand how urgent the problem is. Research by Design is the laboratory of our discipline. Our future lays in it.

LA: What is your recent focus and why? In your perspective, what would be the significant issues in Landscape Architecture in

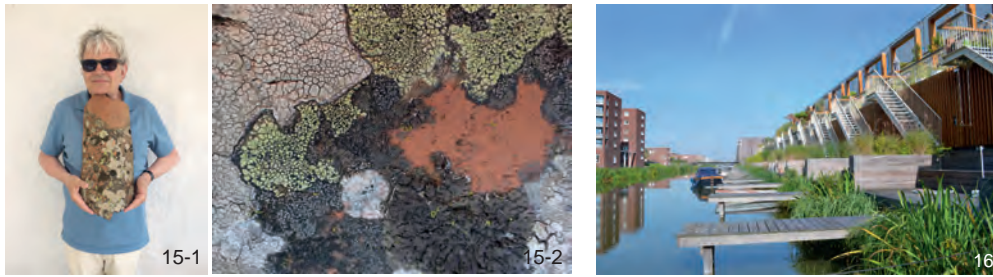
the coming decade?

DS: Firstly I worry about the combined impact of urbanization and agriculture, not only on climate but also on biodiversity. Biodiversity is even a wicked problem than climate change. And I am still very active in the discussion on energy transition, continuing my proposal of wind turbines in the North Sea (Fig. 12). I am an old age pensioner, but I still have a busy schedule.

Like I tried to elaborate in my lecture Contact, Contrast and Contract, there are different ways that landscape architects and urban planners can deal with the relationship between urbanization and nature that also have their agency on different scales. First, we have to realize that there will always be 'nature' in the city as a natural expression of the materials we use, the structures we build and the water systems that interlace our cities. That is a free bonus we can enlarge by using the right materials. But for the head-on collision in the making between the biodiversity hotspots and the areas where exponential urbanization is expected can best be solved by using the traditional and trusted instrument of making of strict nature reserves where the whole ecosystem web of biodiversity can

survive. These are greatly helped by choosing the right scale and connectivity so that natural processes such as erosion, sedimentation, herbivory and predation have enough functional space. If this is impossible, molding the city form could be a second-best alternative. This includes smaller nature-reserves in the city. We must also realize that most cities in the world are settlements situated in also old or very agricultural landscapes. It is a different situation that will ask for a different mitigation strategy. My hunch would be that reassessing the archetypical models of the relationship between city and landscape/nature could provide a fertile strategy for these 21st-century urban landscapes. The Garden City, The Lobe City and Broad-acre City can be transformed to Contrast, Contact and Contract strategies.

Coming back to the problem of Climate disruption: Now in the Netherlands we have so-called 'Climate Tables', consisting of 5 sectors of society (Industry, Built Environment, Agriculture and Land Use, Electricity Production & Mobility), trying to find solutions to decrease the impact of climate change by means of an energy transition and reducing outpour of greenhouse gasses (Fig. 13). I think it is same for China that there is a great focus on how to reach the goals of Paris Agreement. Energy is one of the core topics. Is gas indeed a stepping stone between coal and sustainable energy? How are we going to get this enormous demand in energy? How can we find substitute resources? And how is it going to affect our society? That brings us back to where our bureau began: looking at the future of agriculture. In Casco Concept we separate agriculture from the framework, but now agriculture plays a significant role in energy transition climate policies because of the direct emissions, due to manure management, the metabolism of ruminants, the water management in peat areas and most of all: the land use change in the tropics that can also be converted to the food industry. And to get an idea of the dominance of this agricultural complex: 95% of total biomass of the mammals on land is us with our domesticated animals. 25% of the net



15-1 德克·西蒙斯在意大利西西里发现了一块生长了近 20 种地衣的屋瓦

Dirk Sijmons with roof tile with some twenty species of lichens on Sicily, Italy

15-2 屋瓦上的迷你地衣景观——图中共有 4 种地衣类植物，分别为地图衣属植物 (*Rhizocarpon geograficum*, *Rhizocarpon richardii*)，平茶渍衣属植物 (*Aspicilia spec*) 和异褐梅属植物 (*Allantoparmelia alpicola*)

Detail of the miniature lichen landscapes on the roof tile with *Rhizocarpon geograficum*, *Rhizocarpon richardii*, *Aspicilia spec* and *Allantoparmelia alpicola*

16 自然友好的城市发展：艾尔伯赫地区的内部运河为艾尔湖水生生态系统提供了避风港，保证水岸生态发展旺盛。这里的设计要点通过一系列小型码头保护软质驳岸不被侵蚀

Nature inclusive Urbanism. The inner canals of IJburg offer lee zones in the aquatic ecosystem of the IJmeer where riparian banks can flourish. Crucial detail: landings are provided in the design to prevent the banks to be eroded

primary production of our planet (the energy or biomass produced by plants through photosynthesis in the whole terrestrial and ocean ecosystems) is appropriated by humans (Fig. 14). These numbers are staggering. It's very dangerous to think we can easily feed 10 billion more people. It will be very hard. In that sense eating less meat is a good idea anyway, which is directly connected to climate change. However, I don't see any indication yet that the meat consumption is going down worldwide. We are keeping a system that is really plundering the planet.

These two are my real concerns recently. I've always been an optimist and I still am, but I changed my position to an end optimist that everything will be okay in the end. In the meantime, we will have a lot of crises with flooding, migration, and even hunger, because of climate change and biodiversity loss. I'm afraid it's not going to be easy. We have to boost brace ourselves for rough times. But I have hope. And there is a subtle but important difference between optimism and hope. Optimists tend to be conservative in the sense that they think the present situation is basically okay and that we can build out from that. Hope is something that keeps you going also if the situation is grim.

LA: You have a specially made lichen lens to observe the environmental qualities in cities. For most landscape architects, their daily work is mainly based within cities and they have little chance to think globally. Do you have some specific suggestions for people who do small to middle scale projects? How can they take care of biodiversity and ecosystems in cities?

DS: The lens with its build-in LED is to observe lichens. I am fascinated by these most sturdy, symbiotic organisms that (Fig. 15) produce the most interesting miniature landscapes. I picked up this interest years ago. It is a meditative way to have a nature experience out of the commercialized beaten paths. And yes, lichens are a fine indicator for air pollution. They are especially sensitive for SO₂ that is produced by traffic and coal-fueled electricity plants. That's why I wish everybody in and around Beijing a swift return of the lichens in the city.

LA: Last but not least, have you kept an eye on what happens in China? Do you maybe have any words for Chinese landscape architects?

DS: I am only an observer from a distance, not a close inspector, so my opinions could be superficial. Chinese people have the talent for

engineering. In the past decades, the engineering projects have gone tremendously big in China. However, the concern and knowledge for ecology might be left behind the potential of engineering. This gap has to be closed, and landscape architecture is one of the disciplines that can bridge the gap. We are on the crossroad between engineering and natural sciences. Besides mediating between the two, we can also be critical about what happens in the urbanization process. Therefore I think the impacts of Chinese landscape architects are crucial. You can really import the knowledge of nature into the projects. They are not meant to stifle the design but really enrich and empower the design (Fig. 16).

Notes:

① Chris van Leeuwen (1920—2005) was a noted Dutch ecologist. His work formed the basis for national policies on sustainable spatial planning. In particular, the principle of ecological main structure used in current policies is based on his work.

② Peter Bosselmann, professor of UC Berkley, works internationally on design and planning projects. His publications include *Urban Transformation: Understanding City Form and Design*; *Representation of Places: Reality and Realism in City Design*.

③ Ilke Marschall teaches in Erfurt University of Applied Sciences in Germany. She focuses on cultural landscapes and regional landscapes.

④ Fig.1©Kees Duijvestein; Fig. 2©Chris van Leeuwen, 1971; Fig. 3 Topographic Service of the Netherlands; Fig. 4©Kerkstra en Vrijlandt, 1982; Fig. 5©AWB, Lola Landscape Architects, Floris Alkemade Urbanism; Fig. 6©H+N+S Landscape Architects, 2009; Fig. 7©Rijkswaterstaat; Fig.8©Municipality of Almere; Fig. 9©Dirk Sijmons; Fig. 10©Dick de Bruijn, Dick Hamhuis, Lodewijk van Nieuwenhuijze, Willem Overmars, Dirk Sijmons and Frans Vera; Fig. 11©Richard Weller, Claire Hoch & Chieh Huang, *Atlas of the End of the World*. UPenn, Philadelphia, 2017; Fig. 12©Maarten Hajer, Dirk Sijmons, H+N+S Landscape Architects, Tungsten, EcoFys for IABR, 2016; Fig. 13©H+N+S Landscape Architects, Data source: World Resources Institute; Fig. 14© H+N+S Landscape Architects, source of the data: Vaslav Smil, *Harvesting the Biosphere*, 2015; Fig. 15-1©Annemarie Bets; Fig. 15-2©Dirk Sijmons; Fig. 16© Blauwwoed.

(Editor/LIU Yufei)