Wuhan East Lake Scenic Area

Development Strategies and Sustainability Concepts

武汉东湖风景名胜区发展策划

ISOCARP International Society of City and Regional Planners

10 October 2012

Preface

This report brings together the work of eight planning professionals who took part in the UPAT in the period 11-16 March 2012, and it supersedes our interim report dated 15 April 2012. It takes into account the feedback we have obtained from representatives of the WPDI and other Wuhan organizations to our three presentations, the first of these being on 16 March in Wuhan, the second taking place on 10 April through the medium of a teleconference, and the third on 27 June. This version contains some important clarification in respect of our total package which seeks to integrate a tourism development of the highest quality with the conservation and enhancement of the East Lake's beautiful natural environment. We hope that our ideas will be of interest to all parties and individuals involved.

We are very grateful to the WPDI for their hospitality in providing such excellent accommodation for the UPAT's working week in Wuhan, for the various visits that were organised for us, for the documentation which provided the bedrock for the team's work, and for the discussions and expert feedback. The team came away from Wuhan with a great appreciation of what has been achieved in the City and the earnest hope that their deliberations will be of some assistance to the authorities in in forging an exemplary future path for the East Lake Scenic Area.

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前言

这份报告凝聚了2012年3月11日至16日期间UPAT国际规划师小组8位专业规划人员辛勤工作的成果。报告考虑了武汉市规划院和其他相关机构的代表对小组3月16日在武汉的第一轮汇报和4月10日的电视电话会议以及6月27日在武汉的审查会议的汇报内容的综合反馈。报告包含了国际规划师小组对东湖风景区在进行资源保护和提升自然景观品质的基础之上发展高品质旅游业的重要构想。希望我们的规划愿景能够符合武汉市人民的共同利益。

我们非常感谢武汉市规划院在UPAT小组武汉工作期间无微不至的款待，为我们组织了多样的实地考察，为我们的工作提供了详实的基础资料。当我们离开的时候，我们满怀着对这座城市的欣赏和喜爱，并诚挚的希望UPAT的规划成果能为武汉市相关规划部门提供东湖风景区未来发展路径的参考。

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Acknowledgments

Wuhan Planning & Design Institute
Yu Yiding, President
Hu Fei, Vice President
Xiao Zhizhong, Director
Wang Yun, Deputy General Planner
Sun Hongjie, Local Coordinator
Lee Sophia, Local Coordinator
Ha Sijie, Local Coordinator

Wuhan Land Resources and Planning Bureau
Wu Zhiling, Deputy Head
Liu Qizhi, Deputy Head
Wu Ling, Department Head

Wuhan Land Resources and Planning Bureau East Lake Branch
Tang Xiangguan, Head
Liyanxin, Deputy General Planner

East Lake Management Office
Zhen Bie, Deputy Head
Zhang Zhiping, Director

International Society of City and Regional Planners
Martin Dubbeling, Vice President - UPATs
Ric Stephens, Team Leader
Chris Gossop PhD, Rapporteur
James Colman, Senior Planner
Stefan Rau, Senior Planner
Sebastien Goethals, Planner
Mei Yun, Planner, Translator
Yu Yang, Planner, Translator

致谢

武汉市规划研究院
于一丁院长
胡飞副院长
肖志中所长
汪云总工程师
孙鸿洁工程师
李晓绯工程师
哈思杰工程师

武汉市国土资源和规划局
吴之凌副局长
刘奇志副局长
吴凌副局长

武汉市国土资源和规划局东湖分局
汤晓光局长
李延新总规划师

东湖生态旅游风景区管委会
甄别副主任
张治平局长

国际城市与区域规划师学会
马丁. 都柏林 副主席—分管国际规划师咨询团队
瑞克. 史戴芬 队长
克里斯. 高赛普 ，资深规划师
吉姆. 寇曼，资深规划师
史黛方. 劳，资深规划师
塞巴斯申. 高赛， 规划师
梅芸，规划师，翻译
余洋，规划师，翻译

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Introduction

Wuhan Planning & Design Institute (WPDI)

The Wuhan Planning and Design Institute (WPDI) is a public sector consultancy working in close collaboration with the Wuhan City Planning Bureau and East Lake Administration. The Institute has prepared a 2025 Master Plan for the Wuhan East Lake.

International Society of City and Regional Planners (ISOCARP)

The International Society of City and Regional Planners (**ISOCARP**) is a global association of experienced professional planners.

Urban Planning Advisory Teams

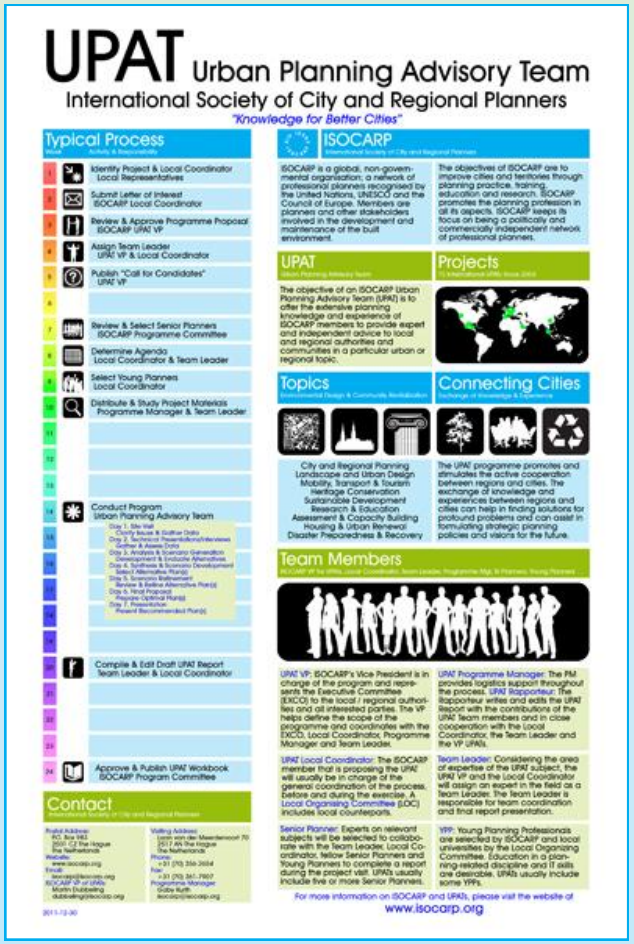
The objective of an ISOCARP Urban Planning Advisory Team (**UPAT**) is to offer the extensive planning experience and expertise of ISOCARP members for international planning projects, programmes and policies.

Brief

The WPDI has entered into an agreement with ISOCARP to organize and conduct a UPAT to study and prepare a “Development Strategies and Sustainability Concepts Report” for the Wuhan East Lake Scenic Area. The report addresses ecological preservation, tourism, transportation, conceptual design in the study area and the explored area.

Programme March 11-16, 2012

Day 1: Orientation & Visits
Day 2: Interviews, East Lake Site Visit & Objectives
Day 3: Interviews, Site Visit 2 & Work Program
Day 4: Site Visit 3, Focus Groups & Team Review
Day 5: Design Charrette & Team Review
Day 6: Presentation to Wuhan Land Resources and Planning Bureau & East Lake Administration Officials



介绍

武汉市规划研究院

武汉市规划研究院（WPDI）是一个与武汉市规划局和东湖风景区管委会密切合作的非营利性研究机构。规划院参与了规划期为2011-2025年的武汉市东湖风景区总体规划，并持续关注该规划的实施。

国际城市与区域规划师学会

国际城市与区域规划师学会（ISOCARP）是一个在专业规划方面经验丰富的的全球性协会。

国际规划师咨询小组

国际城市与区域规划师学会城市规划咨询小组（UPAT）的目标是提供ISOCARP成员丰富的规划经验和专业知识以帮助国际规划项目提供可实施的方案和政策。

简介

武汉市规划研究院已与国际城市与区域规划师学会达成协议,将共同组织和研究准备“武汉东湖风景名胜区发展策划报告”。该报告将重点阐述关于东湖风景名胜区和东湖东进区域有关生态保护，旅游和交通运输等策划方面的内容。

项目时间，2012年3月11-16

第1天：项目空间定位及实地调研
第2天：项目采访，东湖实地考察及目标
第3天：项目访谈，第二次实地考察&制定工作计划
第4天：第三次实地考察，小组讨论&明确规划重点
第5天：设计研讨会及小组讨论
第6天：向武汉市国土资源和规划局和东湖风景区管委会做第一次汇报

1. Project Brief and Report Structure

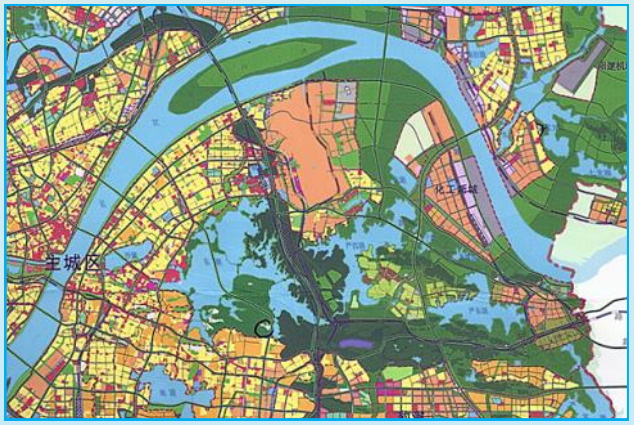
项目简介和报告的结构

The East Lake lays within the built up area of Wuchang which is one of the three component parts of the City of Wuhan. It has the distinction of being the largest inner city lake in China [33 sq km]. The project that we were presented with involves transforming the lake and its immediate hinterland (together, the Wuhan East Lake Scenic Area, WELSA) into an attractive lake resort representative of the urban living style of Wuhan. That objective is set out in the document '*Wuhan Development Strategies and Sustainability Concepts for the East Lake Scenic Area; Project Task Documents'* (referred to by us as Document 1). It also indicates that this should have an atmosphere that brings together both the traditional and the modern, as well as being influenced by international developments. Moreover, landscape and ecological considerations are to feature prominently in the UPAT's proposals—lake and city, man and nature are to co-exist harmoniously.

In deciding how to approach our commission, we have looked carefully at the briefing materials and requirements set out in the *Project Task Documents* (Document 1) and also those in the '*Brief Introduction to East Lake Scenic Area'* (our Document 2), and we have obtained additional insights from our meetings with WPDI and other officials. We also have as necessary background information the article '*Planning the Ecological Spatial System of the Megacity of Wuhan*' by **Liu Qizhi**, **He Mei** and **Wang Yun** which appears in ISOCARP Review 07 (Document 3). We understand that Document 2 includes relevant objectives, policies and proposals that derive from the East Lake Scenic Area Masterplan and that the three documents cited above provide the essential policy and factual base for our own work.

Based largely on these foundations, and on what we saw on our site visits, we have structured our report as follows. After a brief look at the development objective, in which we identify key themes for our studies

Wuhan East Lake Scenic Area Location



Wuhan Spatial Development Strategy

东湖位于武汉市三镇之一的武昌地区，它是中国最大的城中湖［33平方公里］，我们提出的方案包括将湖泊和其直接腹地（统称武汉东湖风景名胜区）转变成一个具有吸引力的武汉城市风格湖区度假村。这一目标记录于文件“武汉东湖风景名胜区发展策划项目任务文件”（以下简称为文件1）。它还表明这一项目的发展将汇集传统与现代的风格，并被国际事态的发展所影响。此外，从景观和生态因素的角度出发，UPAT建议整合湖泊与城市，人与自然的关系，并在突出景区自身特色基础之上使建成区与自然区和谐共存。

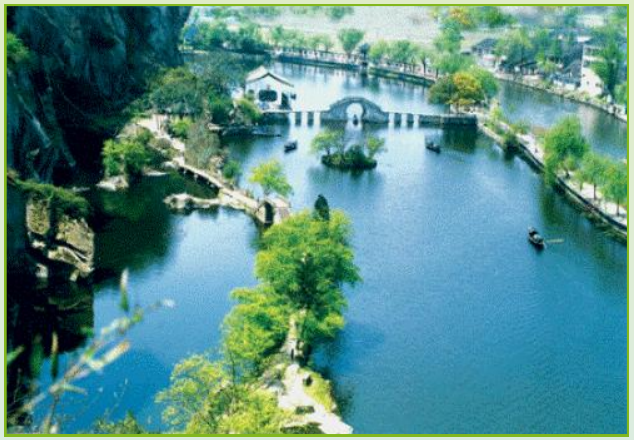
关于如何对待我们的任务，我们已经仔细审阅了项目任务（文档1）和“东湖风景名胜区简介”（文档2）所记载的新闻发布会所需展示材料的要求。此外，通过与武汉市规划研究院及其他官员的工作会议以及对必要的背景资料的研究，我们对此项目有了更多的见解，如“武汉特大城市的空间规划的生态系统”刘奇志，何梅，汪云，在ISOCARP回顾07（文件3）中的阐述。据我们了解（文件2）包括了基于东湖风景名胜区总体规划的有关目标，政策和建议。通过以上三个文件，我们得到了后续工作所需的必要政策基础。

很大程度上基于这些已有的工作和我们在实际工作中所看到的，我们最终报告的结构如下：首先是总结总体发展目标部分，确定我们的研究对象（第2部分）和其中的关键主题，其次我们关于东湖2025年的发展愿景是我们报告的重要导向之一（第3部

1. Project Brief and Report Structure

项目简介和报告的结构

(Section2), we turn next to our overall vision of how the East Lake could be 2025 and it is this that provides the essential direction for our proposals (Section 3). The next section covers our insights into each of the key themes (Section 4). Out of those insights we develop our policies, concepts and specific proposals (Section 5). In addition, the design proposal of the East Lake Scenic Area has been related to the planning project of its explored area (Section 6). Finally in Section 7 Conclusions – we set out ten conceptual sentences which summarise the UPAT's general approach to the planning and management of the East Lake Scenic Area. The long-term perspective offers a framework of enhancing the East Lake Green Wedge and developing Wuhan into an international city.



分）。下一部分，对于我们各方向主题进行了深入探讨（第4部分）。在这些见解之外，我们还对相关政策进行了深入理解，并根据其特点提出具体的建议（第5部分）。在第6部分， 我们将有关东湖风景区的提议和东湖东进区域项目融合到一起。最后，在第7部分结论篇，我们总结了UPAT小组对于东湖风景区和东湖东进项目区的规划和管理基本策略的十大概念性原则。这些高度提炼的远景规划为创造和加强东湖绿楔和加快武汉作为全球性城市的崛起提供了一个框架。

2. Development Objective

Our analysis of the briefing material has included an overview of the series of maps at the end of Document 2. Among other things, these maps establish the locational context for Wuhan and the East Lake at various levels, they depict the uses that surround the Scenic Area, they show how this area has been subdivided into smaller lake, scenic and ecological areas, and they depict existing and proposed land uses, as well as areas earmarked for protection. These maps have been invaluable to us in our attempts to 'further specify the general development objective, tourist image positioning and spatial pattern, and put forward certain constructive opinions and suggestions'.

We have been mindful too of the broader spatial planning vision for the Wuhan as set out in Document 3. This is about the definition of the built up area and green areas of Wuhan and how the shape and extent of the developed area on the one hand, and that of the ecological system, on the other is to be determined and maintained. In terms of the present Scenic Area, East Lake lies at the East Lake wedge, one of six such green wedges defined for Wuhan. Under this strategy, only limited uses (which can include core facilities for tourism) are allowed for the future development of East Lake, and such projects will receive strict scrutiny.

East Lake Chu Tower

2. 发展目标

我们的分析包括在文件2结尾处的对系列地图进行分析的简明材料，和其他的内容一起，这些地图从不同层次对武汉和东湖风景名胜区进行了空间定位，他们清楚地描述了风景区周边的地形地貌，表明了东湖是怎样成为基于景观性，生态性的较小规模分区子系统，并且他们也清楚的描述了现有和潜在的景区土地利用方式，尤其是这片区域旨在被保护。这些空间区域对于我们来说是非常宝贵的，尤其是我们旨在进一步对于整体规划目标进行梳理，如旅游愿景定位和空间模式的详细设计，对其提出合理的建设意见和建议。

我们在文件3中对武汉更加广泛的整体空间规划有了更加深入的成熟想法，对绿地空间和建成区定位以及确定如何维护生态系统。从目前的风景名胜区来说，东湖位于武汉绿地系统的6个城市绿楔之一的东部绿楔之上。东湖的未来建设只能集中在有限的用途（其中可以包括旅游业的核心设施），并且这些建设项目在将来建设之初就将得到相当的严格审查。

3. Our Vision for 2025

In seeking to elaborate the development objective, we formulated an ambitious vision for 2025 of a high quality tourist resort that would co-exist harmoniously with an enhanced natural environment, existing communities and the cultural heritage.

Thus the vision of the UPAT for the East Lake Scenic Area is that by 2025 it will be an inspirational example of sustainable development in China's paramount "Lake City" which provides:

- an enhanced visitor experience, based on ecotourism principles, that benefits both the people of the Wuhan area and those from wider afield, showcases the achievements of Wuhan, and matches the best available in other Chinese cities;
- a cleaner and healthier lake environment, together with an enhanced landscape, wildlife and cultural heritage for the benefit of this and future generations;
- improved accessibility to the Scenic Area coupled with better connectivity within its perimeter, especially by boat, bus and other low carbon means;
- enhanced economic and employment opportunities, including tourism & travel, research & development, arts & crafts and other sectors of the local economy.

Communication Advantage of East Lake

3. 2025年我们的愿景

在寻求制定发展目标方面，我们为东湖风景名胜区2025年发展制定了一个雄心勃勃的愿景，希望将其建设成为高品质的旅游度假胜地，增强自然环境的保护和体现景区氛围，争取让建成环境与生态景观和地方文化遗产和谐互动。

因此UPAT对东湖名胜风景区2025年的愿景是，将其打造成中国最重要的"湖城"，作为可持续发展的一个鼓舞人心的例子。

- 基于生态原则，增强游客的经验，有利于武汉地区人民的利益，从更广泛的地区范围展示武汉取得的成就，争取成为中国其他同类城市生态旅游景区建设中的最佳范例；
- 一个更清洁，更健康的湖泊环境，一起为这一代人和子孙后代的利益增强景观良好性，保护野生动物的生存环境和延续当地的文化遗产；
- 增加获得更好的交通连接的可能性，以低碳手段在风景区周边规划船舶，公共汽车等交通工具的路线联系；
- 增强经济发展潜力和增加就业机会，包括观光旅游，生态科技研发，促进工艺品和当地经济发展的其他部门。

4.1 Tourism

Scenic Beauty, Ecological Integrity and High environmental Quality: primary assets to be valued

We are in no doubt that the East Lake Scenic Area is a resource of considerable quality, and one that provides much potential for further improvement. While it is partially fringed by the built up area of Wuhan, its natural setting of wooded hills continues to dominate in many views and, seen together with its causeways, bridges and other man made elements, this is a highly distinctive place.

The basis for all tourism and for all planning of and in Wuhan East Lake Scenic Area (WELSA) is to restore, strengthen, maintain and ensure the sustainability of the area's major characters, properties and functions: natural beauty, ecological integrity and environmental quality. To ensure the enjoyment today and for future generations it is essential to restore and conserve its ecological integrity and environmental quality. The primary objective for the planning and management of the East Lake Scenic Area is to secure a harmonious form of development which balances the establishment of a lake resort able to accommodate the tourism flows of the future with measures to restore and conserve the natural beauty, ecology and biodiversity of the lake and its surroundings.

The planning process needs to fully understand and acknowledge the WELSA's importance as an ecological and cultural area that operates at various spatial levels, with regards to its functions for the hydrological system, regional biodiversity, and its urban climate functions mitigating Wuhan's extreme hot summers.

Any changes to the built environment within the Scenic Area, and involving its management will need to follow a regime of strict care for the environment.

4.1 旅游业

风景秀丽，生态完整性和高质量环境：重视主要资产

毫无疑问，东湖风景名胜区是一个相当优质的资源，并有进一步改善的潜力。虽然风景区中包括有指状的武汉市建成区部分，但其山上树木茂盛的自然环境中仍然营造了良好的景观，并与景区中的各种堤道，桥梁和其他人造元素一起组成了一个非常独特的地方。

所有的旅游和武汉东湖风景名胜区规划的基础工作是恢复，加强，维护和确保该地区的主要特征，性质，功能和可持续性的自然风光，保证生态完整性以及提高环境质量。为了确保当代人和子孙后代的利益，这些都是必不可少的恢复和保护生态的完整性和环境质量的条件。东湖风景名胜区的规划和管理的主要目标是确保旅游度假区的建立，保证湖区和谐平衡的发展，使湖泊能够容纳未来的旅游客流和旅游基础设施建设，并为潜在矛盾提供可能的应对措施，恢复和保护自然风光，增强生态湖区及其周围地区的生物多样性。

规划过程要充分理解和认知东湖风景名胜区在生态和文化领域的经营空间和维护各级水文系统，保护生物多样性的区域，此外，其城市气候的重要功能旨在减轻武汉极端炎热的夏天。

风景名胜区涉及其管理范围内的任何建筑环境的变化都需要遵循严格的环境保护与监督制度。

4.1 Tourism

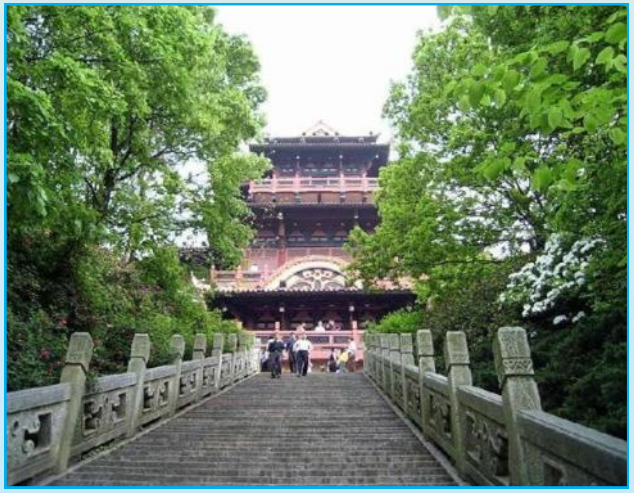
Environmental regulations will need to be strictly followed through a multi-layered and multi-sector approval process including environmental assessment (see 5.3) to safeguard the area's natural beauty, its ecological functions and raise environmental quality generally.

Level of importance and catchment of Wuhan East Lake Scenic Ecological Area

The WELSA is an ecological area and eco-tourism park simultaneously combining 5 territorial levels and corresponding catchment territories:

1. **Global Level**. Hubei Thousand Lakes Ecological World Heritage Park (or a part thereof). N.B There is a case for a UNESCO World Heritage Site status.
2. **National Level**. Part of and gateway to an ecological national park system: Central Yangtze River Lakes National Ecological Park.
3. **Provincial and Regional Level**. The WELSA is also, maybe most notably, a regional destination and amenity: WELSA and Hubei Lakes Provincial Park.
4. **City Level**. The WELSA is a Wuhan City Park: East Lake Ecological Park.
5. **District and Neighborhood Level**. WELSA is also a district park and neighborhood parks to the adjoining urban communities fringing the Lake, mostly to its west and south: Wuchang East Lake Parks.

This multi-level function is important to note as it requires careful strategies with regards to access points, routing, amenities provided as well as operations and ecological management. E.g. as a high-level eco-park a small number of entrance points may suffice whereas as city- and district parks many access points will be needed.



4.1 旅游业

环保法规需要通过多层次，多部门的严格审批过程，包括环境影响评估（见5.3），以保障该地区的自然美景，普遍提高其生态功能和环境质量。

武汉东湖风景名胜区的生态重要性和集聚水平

东湖风景名胜区是同时结合五个空间层次和相应的流域地区的生态旅游公园：

1. **全球层面**，在有联合国教科文组织的世界遗产地位的情况下，可以考虑建设湖北千湖生态世界遗产公园（或其一部分）。
2. **国家一级**，作为国家公园生态系统的组成部分，建设长江中游国家生态湖区公园。
3. **省级和地区级**,东湖风景名胜区最值得注意的是作为一个区域的美化标志，建设东湖风景名胜区和湖北湖省立公园。
4. **城市化水平**， 东湖风景名胜区是武汉市的城市公园也是东湖生态公园。
5. **区域和邻里层面**。东湖风景名胜区也是一个地区公园及邻里公园，作为毗邻城市社区边缘的湖。它的西面和南面主要是武昌东湖生态公园。

这种多层次的功能需要重点注意的是因为它需要仔细考虑接入点的策略，游线，娱乐设施以及提供经营生态管理。例如作为一个高层次的生态公园，较少的入口可能就足够了，而作为城市和地区的公园将需要许多入口。

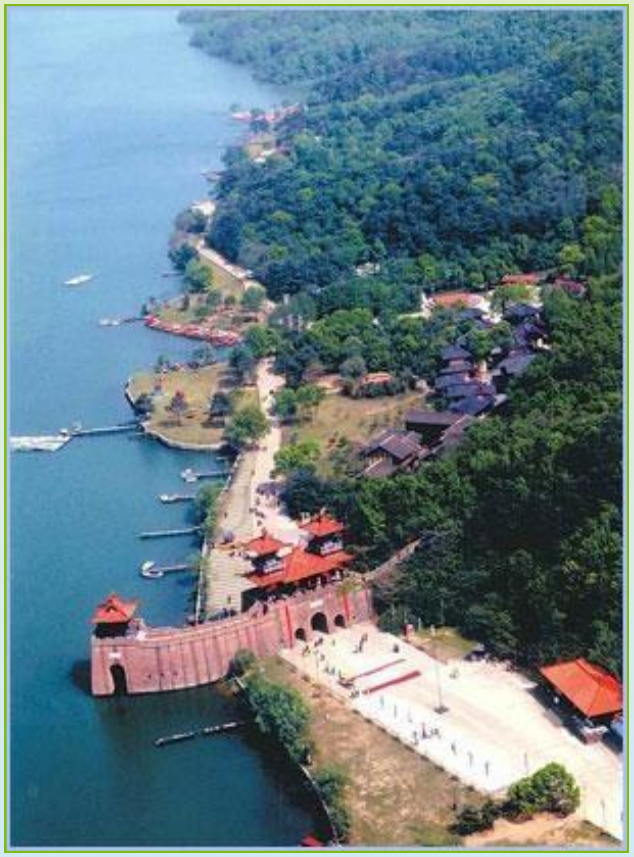
4.2 Ecology

Introduction

The East Lake Scenic Area includes the following strategic planning elements:

- **Water-based elements** include: the lake surface itself and its creeks and tributaries; the water body as a habitat for natural biota, a resource for fishing and for permaculture, and a food source for birds; irrigation canals; the lake's bed and benthic material; and water-related scenery, including boat moorings and anchorages.
- **Land-based elements** include: traditional lakeside villages and farms; tourist attractions; natural forests and other vegetation; roads, causeways and related infrastructure; artificial beaches; boardwalks; urban development (housing, retail, recreational, sporting, institutional, government, commercial, service infrastructure etc.); sewerage and stormwater installations; wharves and jetties; navigation facilities.
- **Cultural elements** include lake-side monuments; heritage sites; foreshore landmarks; public recreation sites; significant natural features; land-based scenic attractions.

All the above elements will have a place in any strategy for the lake. The briefing documents which derive largely from the Masterplan contain many references to lake ecology and to the intentions of government to protect and conserve environmental assets. These are summarised in Appendix A and they provide the official context for a more detailed assessment and analysis of the East Lake environment and its constituent ecological systems. Moreover, we are aware that those intentions derive from the very top levels of government; we note the recent speech of **Premier Wen Jiabao** in which he advised the National People's Congress that the government "does not intend to pursue fast economic development at the sacrifice of the environment and people's health" (*China Daily* March 10). Such pronouncements indicate that the future planning of the East Lake Scenic Area must



4.2 生态

介绍

东湖风景区包括以下战略规划要素：

- 水体元素：湖面本身的小溪和支流，天然生物群，渔业和农业的资源，鸟类的食物源栖息地，灌溉水渠;湖床，和水有关的风景，包括游船码头。
- 土地元素：传统湖畔的村庄和农场，旅游景点，自然森林和其他植被，道路，堤道和相关基础设施，人工沙滩，木栈道，城市发展建设（房屋，零售，娱乐，体育，体制，政府，商业，景区服务设施等），污水和雨水基础设施，船舶码头，导航设施。
- 文化元素，包括湖边的文物古迹，水滨地标，公共休闲场所和有显著自然特征的各种景点。

上述所有的元素将在湖泊的战略规划中出现，来自该总体规划的简报文件中包含许多有关保护和保存湖泊生态环境资产的政府意图。这些内容包括UPAT对东湖环境及其组成的生态系统进行更详细的评估和分析，被总结在附录A中。此外，我们注意到，在国务院总理温家宝在全国人民代表大会最近的讲话中强调政府中并没有打算以牺牲环境和人们的健康以换取经济的快速发展（《人民日报》3月10日）。这样的言论表明，东湖风景名胜区未来的规划必须把健全的环境管理放在一个高度优先的位置。

4.2 Ecology

place a high priority on sound environmental management.

Environmental Overview

The East Lake is not a single, homogeneous water body with a simple easily identifiable shoreline; the evidence provided indicates a wide variety of ecological elements and each of these demands careful assessment and a separate planning response.

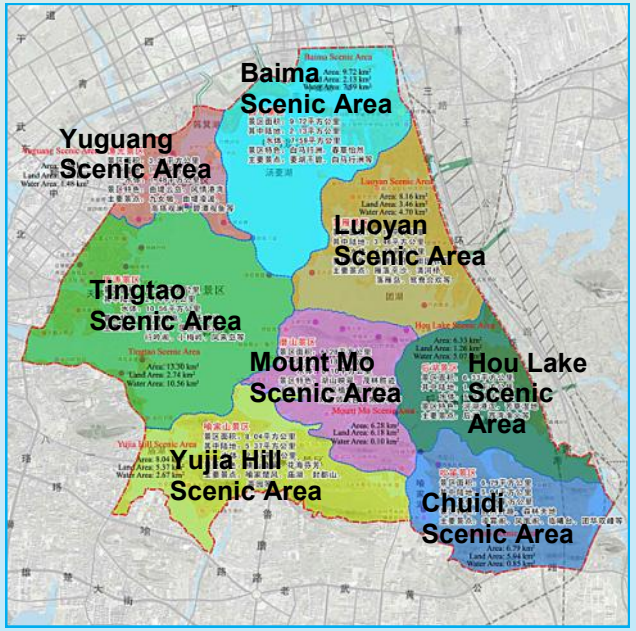
This aquatic environment is framed by land-based elements and development of various kinds. The lake itself is the largest in the Wuhan metropolitan region. Its western and southern foreshores have been heavily modified and are largely urbanised, with numerous cultural and historic sites. Environmental quality on the eastern and northern shorelines has been eroded by recent and ongoing road and rail infrastructure projects. Much of the lake's shoreline is vulnerable to serious degradation from urban run-off and refuse from nearby housing and related development.

Natural vegetation has been replaced by introduced species in many locations. The lake accommodates many recreational and tourism sites, some of which are very popular whilst others have seen patronage decline due to changing tastes and obsolescence. Some sites generate heavy traffic (e.g. those along the central causeway); others reveal a variety of environmental management challenges.

The following smaller Scenic Areas are identified in the overall East Lake Scenic Area Master Plan (Map 12). It must be acknowledged that scenery is an intangible quality; defining boundaries or edges to 'scenic areas' is a helpful planning tool but is not necessarily an indication of the real world situation.

Yuguang Scenic Area: Land area 1.76 km sq; water area 1.48 km sq

Wuhan East Lake Water and Mountains



4.2 生态

环境概述

东湖是不是一个单一的同质水体，由简单的易于识别的湖岸线所提供的证据表明其中包含多种生态元素，这些需要仔细的评估和规划响应过程。

这个水环境的发展框架是基于陆上的各种元素架构的。东湖本身是在武汉都市圈地区内最大的水体，但是它的西部和南部的湖岸线由于城市化被发生了大量改变，有众多的文化和历史遗址。最近和正在进行的道路和铁路基础设施项目侵蚀了其东部和北部湖岸线上的环境，然而岸线多是严重退化的部分集中在脆弱城市运行系统和景中村部分。

从许多地方引进物种使天然植被已被替换。湖中目前容纳有许多娱乐和旅游景点，其中有一些是很受欢迎。而由于不断变化的旅游口味和设施的维护不善，点游客量不断下降。在一些景观节点所生成的交通十分繁忙（例如湖中央的三叉交通区域）;这些现象都揭示了各种对环境管理的挑战。

下面较小的风景名胜区是整体的东湖风景名胜区总体规划（图12）的有机组成部分。必须承认，风景是一种无形的品质，用规划工具去定义“风景名胜区”概念的边界或边缘，不一定能真正反映世界发展的趋势。

渔光景区：土地面积1.76平方公里，水域面积1.48平方公里
混合密集开发的住房，剩余湿地和过时

4.2 Ecology

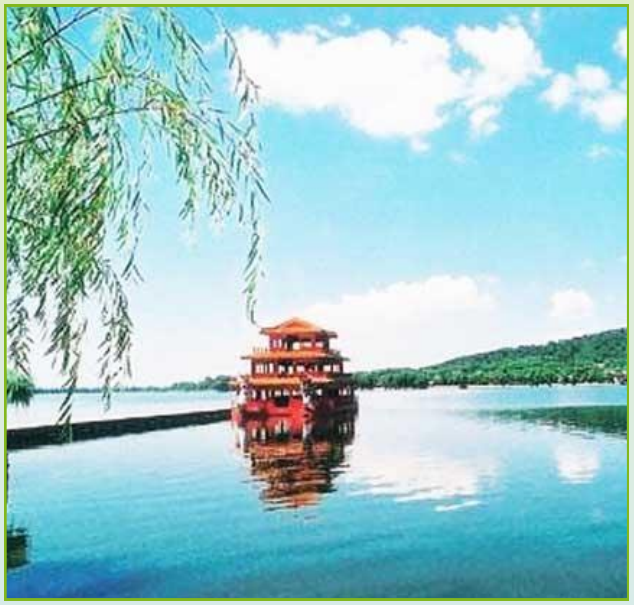
Mix of densely developed housing, remnant wetland and obsolete farmland; productive farms; modified shoreline; narrow 2-lane causeway; heavy traffic link to eastern shore.

Baima Scenic Area: Land area 2.13 km sq; water area 7.59 km sq
Extensive farm smallholdings; aquaculture; wetlands; traditional villages; un-sealed roads; modified shoreline; irrigation canals; complex land ownership pattern; extensive excavation/construction sites in north; huge civic construction works immediately adjacent on north-east.

Luoyan Scenic Area: Land area 3.46 km sq; water area 4.70 km sq
Complex shoreline with numerous coves and embayments; small forests and wetlands; traditional villages and remnant farmlands; extensive cycle and walking trails along foreshore, with fine panoramic views across the lake to the west and north

Hou Lake Scenic Area: Land area 1.26 km sq; water area 5.07 km sq
Highly vulnerable to pollution from adjoining construction works; scattered settlements; farms; natural and modified shoreline; poor water quality due to constricted waterway, urban runoff

Chuidi Scenic Area: Land area 5.94 km sq; water area 0.85 km sq
Rising ground; remnant forest; urbanised in southern sector; evidence of serious gross pollution in south-eastern corner; attractive shoreline.



4.2 生态

的生产农场，被侵蚀的湖岸线;狭窄的2车道三岔口，繁忙的连接到东岸的交通。

落雁景区：土地面积3.46平方公里，水域面积4.70平方公里
延展的小农场;水产养殖;湿地;传统村落;未封闭的道路，被侵蚀的湖岸线;灌溉水渠;复杂的土地所有权模式，北部广泛的城市建成区;巨大的公共设施建设工程紧邻东北部。

落雁景区：土地面积3.46平方公里，水域面积4.70平方公里
拥有众多的湖岸线和小湖湾，小森林和湿地，传统村落和破碎的农田;广泛的交通环岛和步行道沿着复杂的交通环线，景区横跨湖区西部和北部。

后湖景区：土地面积1.26平方公里，水域面积5.07平方公里
毗邻建设工程;污染的居住；农场;自然和修改的湖岸线，由于水质差而形成的狭窄水道，城市径流极易受污染

吹笛景区：土地面积5.94平方公里，水域面积0.85平方公里
升高的土地;省域的森林;南部地区的城市化;严重污染的东南角;有吸引力的湖岸线。

4.2 Ecology

Mount Mo Scenic Area: Land area 6.18 km sq; water area 0.10 km sq

Major forest eco-systems; steep terrain in northern sector; extensive flora/ fauna habitats; remnant traditional villages and small-scale farming; well-developed network of tourist routes and mountainside attractions; southern sector mainly urbanised, adjoining the city's extensive tertiary education precinct along Luoyu Road.

Yujia Hill Scenic Area; land area 5.37 km sq; water area 2.67km sq

Heavily urbanised around perimeter; modified shoreline; large-scale institutional and university development.

Tingtao Scenic Area: land area 2.74 km sq; water area 10.56 km sq

Adjoins eastern edge of city centre; heavily urbanised hinterland; predominantly high-density residential with extensive commercial precincts; several important and popular lake-side parks and cultural sites which generate heavy traffic, waste loads and numerous environmental challenges ; largest of the scenic areas; urbanised western lake foreshore; historic sites; vulnerable to serious degradation from urban run-off and refuse from nearby housing and related development; greatly modified shoreline; natural vegetation replaced by introduced species.

Throughout the designated Scenic Areas are numerous traditional rural smallholdings and farms. Regardless of their commercial viability they are important environmental and ecological resources:

- they are valuable sources of fresh garden produce—immediately available to the growing city;

4.2 生态

磨山景区：土地面积6.18平方公里;水0.10平方公里

主为要森林生态系统;北部地区地形陡峭，丰富的植物/动物栖息地;残余传统的村庄和小规模渔业养殖;发达的旅游线路和山峦景点网络;南部地区城市化，沿珞瑜路毗邻武汉高等教育区。

喻家山景区;土地面积5.37平方公里，水域面积2.67平方公里

大量围绕周边土地的城市化;改造湖岸线；发展大型机构和大学。

听涛景区：听涛景区：土地面积2.74平方公里；水域面积10.56平方公里

毗邻市中心的东部边缘，腹地严重城市化;以高密度住宅与广泛的商业街区为主，由于毗邻几个重要的湖边公园和文化遗址所以容易产生拥挤的交通，其产生的废物量对环境提出众多的挑战;风景区内最大的分区;城市化进程中的西部湖滨留存有一定古迹;脆弱的城市运行系统和附近的房屋及相关的发展严重退化;受侵蚀的湖岸线;自然植被被引进品种取而代之。整个风景名胜区中有许多传统的农村小农场，不论其商业上的可行性，他们是仍然是重要的环境和生态资源：

- 他们是宝贵来源，产生立即提供给不断增长的城市生态承载力的清新田园，；
- 他们是'绿色'花园，集中了植物群落和栖息地;
- 他们是水体吸收的节点，从而减少入湖径流雨水;
- 他们是视觉上对比附近的高密度发展的区域，有吸引力的一个值得欢迎的景点。

- they are ‘green’ —gardens, plant communities, habitats;
- they absorb stormwater on site—thereby reducing run-off into the lake;
- they are visually attractive—a welcome contrast to nearby high density developments.
- they are part of the “lungs” of the city and help to maintain air quality.

Current threats to the ecosystem

The ISOCARP Review article by **Liu Qizhi**, **He Mei**, and **Wang Yun** (Document 3) makes it clear that in Wuhan (as in ‘mega-cities’ elsewhere), rapid urbanisation is bringing major challenges for planning and environmental management. According to these writers, the consequences of urbanisation (for Wuhan’s lakes) include declining water quality, the ‘capture’ of scenic areas and prime foreshore locations by developers, unresolved disputes over the future of traditional farmlands and villages, negative impacts from insensitive tourist developments and pollution from inadequate sewage treatment infrastructure.

Our recent studies and field observations indicate that these consequences are all applicable to the East Lake. Two characteristics of the lake are of particular importance. First, it is a very large water body and it is highly irregular in shape. Second, hydrologically, it appears similar to a closed system; there is no major tributary; and there is no regular tidal flushing such as takes place in coastal locations. Flood/drought events affecting the lake seem to be rare. From the briefing documents, we note that, notwithstanding the remedial action, the East Lake remains significantly polluted although the level of pollution varies considerably. From our visits we saw examples of environmental degradation, in the form of solid waste and garbage, sedimentation of water bodies and obsolete/derelict buildings.

- 他们是城市的“肺”的一部分，有助于维护空气品质。

生态系统当前面临的威胁

刘奇志，何梅，汪云在ISOCARP中的评论文章（文件3）清楚地表明，武汉（作为“特大城市”）规划和环境管理，城市化快速发展将带来重大的挑战。根据文中所说，城市化的后果（武汉的湖泊），包括水的质量下降，在“提升”风景名胜区和管理湖滨节点的开发过程中由于包括有传统的农田和敏感旅游发展的村庄会产生的可能争端包括污水处理和基础设施不足。

我们最近的研究和实地观察都表明，东湖风景名胜区面对的这些困境中的两个特点是特别重要的。首先，它是一个非常大的水体，形状高度不规则。第二，水文，湖泊类似一个封闭的系统，没有大的支流;有没有定期径流循环，且不在会发生在沿海地点的潮汐。影响湖泊的洪水和干旱事件似乎是罕见的。从相关文件中，我们注意到目前尽管采取了补救措施，东湖仍然有显著的污染。从我们的访问中我们看到了环境恶化的例子，如固体废物和垃圾处理，水体侵蚀和再利用陈旧/废弃的建筑物沉降的问题。

生态保护和恢复水景生活系统景观

正如水是生命之源，东湖是武汉武昌区城市整体生活的重要可持续发展的命脉，为城市提供重要的生态服务。可以通过控制湖的面积，形状和其绿色开

4.2 Ecology

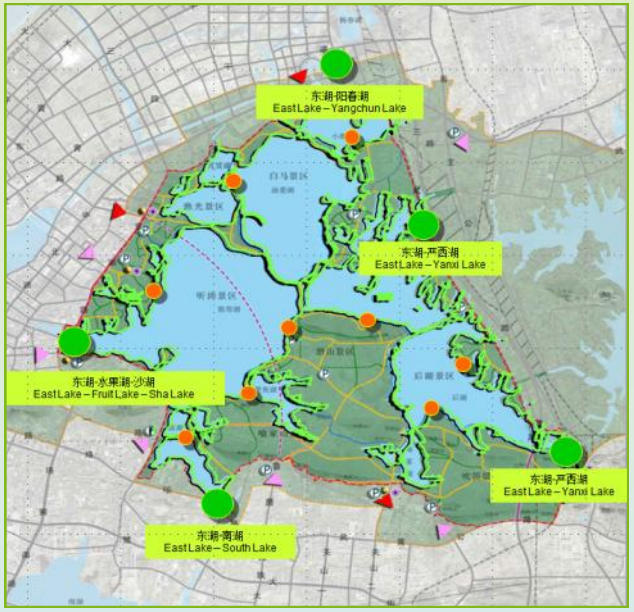
Ecological Preservation and Restoration—Water LifeScape

Just as water is the source of life, The East Lake is the lifeblood for the survival and sustainability of urban life in Wuchang District and Wuhan at large as it provides important ecological services for the city. Thus the lake sustains life forms in the area and shapes green open space, and wildlife habitat thus improves bio-diversity; it is a climate regulator as it regulates the heat and humidity for Wuhan which is a city known for its harsh weathers. The shrinking in size and deterioration of the lake in past years call for great caution from planners and decision makers, therefore our plan proposes strict preservation and the restoration of the water area and its related habitats in the East Lake area. It is safe to predict that ecological preservation and restoration will greatly enhance its scenic and tourism values as seen in numerous cases around the world.

The beauty of the East Lake is the aesthetic manifestation of its ecological health, without which its scenic value will be lost. As we have learned from the pollution levels of the past, levels which peaked in the late 1990s, the scenic value of the lake is rooted in its ecological health.

One of the problems of current landscape design in the area concerns the focus on visual quality and the so-called picturesque while ignoring or hiding its ecological aspects. Our proposals would create a strong link between the ecological features of the landscape and its visual presentation through careful design. Effective visual and other aesthetic presentation of the ecological value is expected to greatly improve people's environmental and ecological awareness while giving the area a unique image.

Related to that new awareness we seek to re-establish the lake as a pool of ecological intelligence; an incubator of ecological technologies; and as a center for ecological consciousness and education. The lake



LifeScape

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放空间维持生命的形式提高野生动物栖息地的生物多样性;不仅如此，它可以进行气候调节，因为它能调节热量和湿度，这在以恶劣天气而闻名的武汉是十分重要的。规划者和决策者呼吁人们关注湖面积的变化和其环境的恶化，尤其是谨慎对待过去几年的湖体萎缩，因此我们的计划提出了严格的控制水域面积，并保护和恢复东湖区域及其相关栖息地的生态安全。从世界各地的众多案例中我们得到的经验是，如果对其生态安全进行预测，保护和恢复生态，将会大大提高其风景旅游价值，。

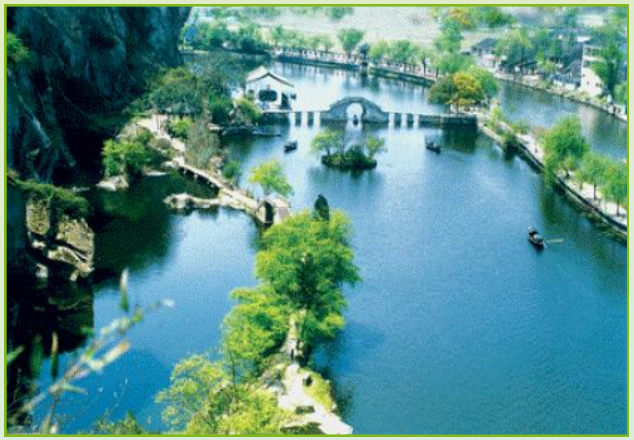
东湖的美丽景观是其生态健康审美的具体表现，如果没有这些，东湖将失去其景观价值。正如我们已经了解到，东湖的污染程度在20世纪90年代末达到顶峰的水平，然而东湖景区的真实价值植根于它的生态健康。

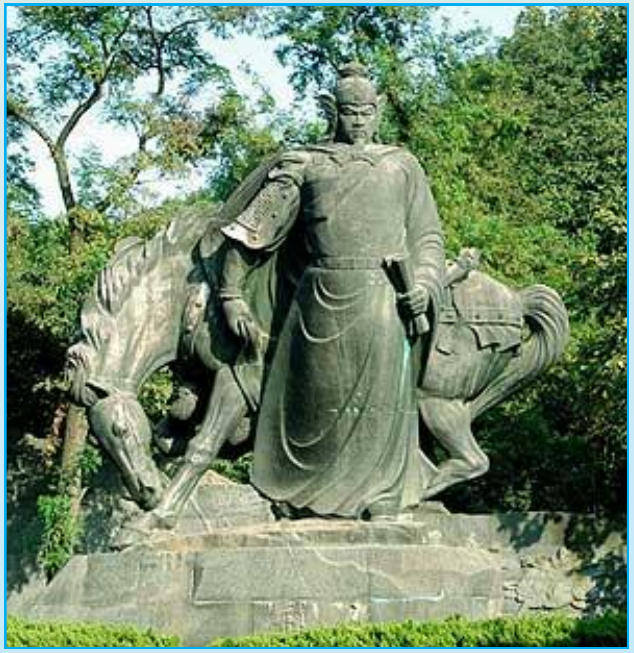
目前该地区的景观设计的问题之一是设计景观，提高其视觉质量和将其定位为风景如画的焦点，而不是忽略或隐藏其生态方面的功能。我们建议将其创建成一个具有精心设计的景观和视觉呈现的生态功能的综合体，有效地表现其视觉和其他生态价值，大大提高人们的环保和生态意识，同时也形成该地区独特的形象。

有关新的认知，我们寻求重新建立湖泊生态智慧意识和教育中心，将其打造成生态技术的孵化器。从某种程度上来说，湖泊本身看起来可能成为人类建成系统的物理屏障，但它是一种理想的化身，是信

4.2 Ecology

may seem a physical barrier for human systems but it is an ideal embodiment and medium for the flow of information, energy and communication. Considering the large human-flow inside the Scenic Area and the range of major educational institutions around the lake, the East Lake can be a source of ecological education and technological innovation, improving people's ecological consciousness and create new eco-economy opportunities for the future development of the city.





4.2 生态

息，能源和通讯流量的介质。考虑到景区内大量的人流和湖周围主要的教育机构的地理范围，东湖同时也是生态教育和技术创新的源泉，提高人们的生态意识和创造具有新的生态经济发展机会的未来城市模型。

4.3 Transport and Mobility

In the current context of rapid urbanization of China, the city of Wuhan is becoming today a key hub of transportation at the national level. Located on one hand in the middle of the Yangtse River axis, between Shanghai and Chongqing, and on the other hand in the middle of the Beijing-Guangzhou high-speed train route, Wuhan is facing the challenge of a sustainable urbanization and development.

During this development process, the urbanization of Wuhan will interact continually and confront with the natural and ecological heritage of the region, famous for “its hundred lakes and rivers”. As a perfect potential place for harmony between city and nature, the city of hundred lakes is also facing the modernization of its road and rail infrastructure, which has to contend with “hundreds of natural barriers”.

The proximity of the new Wuhan-Guangzhou High-Speed Railway Station, implemented close to the northern most point of the East Lake, is very meaningful because it shows how the East Lake is becoming step by step an enclosed urban lake. Furthermore, the East Lake is now one of the most connected tourist spots of China and its potential attractivity is highly improved. Nevertheless, this extensive natural area is also seen as a physical barrier for transport connections between several urban areas.

However, the development of key economic and tourist functions in such an important and, in many ways, well connected Scenic Area will generate a considerable increase of all kinds of trips into and around the area. Today, the East Lake can be defined as a “Respiration Island” and a “Green and Blue Heart” in a central metropolis under rapid development. Compared to the high-speed rythms of construction and lifestyles of the urban areas of Wuhan, the East Lake offers to Wuhanese citizens and tourists a unique place of slow-speed rythms and activities, in harmony with nature and water.

Intermodality Car and Water Shuttle

Wuhan Railway Station

4.3 交通与流动性

在目前中国快速城市化的大背景下，武汉市已成为国家一级运输的重要枢纽。坐落在长江黄金水道之上，上海和重庆之间，也是京广高速火车路线上的重要节点，鉴于此，武汉正面临着一个可持续发展的城市化的挑战。

作为“百湖之城”和一个完美的城市与自然之间的和谐共存的地方，在这一发展过程中，武汉的城市化进程将不断与该地区的自然生态和文化遗产互动和产生矛盾，城市面临着现代化的公路和铁路基础设施的建设，然而其中有数以百计的天然屏障与之抗衡。

新的武汉 - 广州高速铁路站站点实施工程接近东湖的最北端点，从地理位置上来说，这是非常有意义的，因为它显示了东湖如何一步一步从封闭湖泊变成的城市湖泊系统的组成部分。此外，东湖是目前中国与高速铁路最直接连接的旅游景点，因而大大提高了其潜在吸引力。然而，这一丰富的自然区域也同时被视为为几个市区之间的交通连接上的物理屏障。

然而，在这样一个重要的发展阶段，在许多方面连接的风景名胜区的主要经济和旅游功能的发展会产生对周围地区的各种交通需求的大量增加。如今，东湖可以被定义为“呼吸岛”和“城市绿色和蓝色的心”，在中心城市的快速发展下。武汉市区的建设和生活方式在经历高速变化的过程，东湖提供给武汉市民和游客的独特的缓慢休闲活动体验，与大

4.3 Transport and Mobility

Following these observations, can we maintain this unique quiet and slow-speed character as we open up the East Lake to greater economic development, through some innovative transport and mobility vision related to the interaction between the Lake and the City?

Several opportunities and threats define the East Lake in terms of mobility, and can be balanced to steer its development towards a 'slow-speed oriented area':

- ***Several terrestrial axes*** cross the East Lake, providing unique views across the water body but their environmental quality is threatened today by traffic congestion and poor consideration of pedestrians and cyclists;
- The opportune ***location of the high-speed train station,*** close to the northern part of the lake, which is not, however, planned to be connected visually to the station in the coming years;
- The ***ambitious planning of several subway lines*** (4, 8, 11) and stations along the East Lake that will increase the connectivity between the City and the lake;
- The ***extensive scale and position of the water body*** which could provide an ***opportunity of connection*** between various lakefronts, neighbourhoods, tourist spots and campuses. Today, the lake area is still seen as a natural barrier in term of urban transport.

These elements are both opportunities and threats because of their potential to support sustainable mobility on the lake but also because they could be the vectors of uncontrolled increases of traffic with adverse consequences for the environment and human well being.

Defined as a major component of urban liveability, here, mobility meets ecology and tourism development considerations. As we will develop under Policies and

Bicycle and Pedestrian Network

4.3 交通与流动性

自然的和谐相处。

根据这些意见，我们可以保持这种独特的宁静和低速特征为我们争取东湖更大的经济发展潜力，通过一些创新的运输和移动方式使湖和城市之间的相互作用更加紧密。

在流动性方面东湖面对一些机会和威胁，可以将其引向“面向低速区”的平衡发展：

- 几个地面轴穿越东湖，形成了其独特的景观特征，但整个水体的环境质量受到威胁的今天，原有规划对交通拥堵和行人和骑自行车的考虑明显不足。
- 高速火车站适当的位置和空间尺度可以作为连接湖泊与游客和湖岸的节点，靠近湖的北部空间现在还没有合适的建设，但计划在未来几年内从视觉上与城市交通连接并形成自然屏障。
- 几个地铁线（4，8，11）和沿东湖站，将成为增加城市和湖泊之间的连通雄心勃勃的规划;
- 广泛的规模和水体的位置，可提供各种湖岸前区，居民区，旅游景点和校园之间连接的机会。今天，湖面仍被看作是一个长期的城市交通的天然屏障。

这些元素都是其潜在的机遇和威胁，在湖面上用以支持可持续的流动性，但也因为他们可能失控以及交通量的增加，所以也可能成为对环境和人类福利有不良影响的载体。

4.3 Transport and Mobility

Proposals, we envisage a form of lake transport management that enhances innovation, stimulates the tourism economy, and fosters ecological preservation and environmental improvement.

Water Shuttle Network Phase 3

Solar-powered Catamaran

4.3 交通与流动性

定义为一个城市宜居的重要组成部分，在这里，流动性符合生态和旅游业的发展考虑。正如我们将要制定的政策和建议，我们设想通过水上运输管理提高到一种新的交通形式，刺激旅游经济，促进生态保护和改善环境。

5.1 General Approach

Harmonious Development

The achievement of our vision of a future East Lake tourist resort as 'an inspirational example of sustainable development' will be dependent upon an integrated planning approach for the East Lake which balances environmental, economic, social and cultural considerations to provide a clear framework within which the City of Wuhan, developers and all other stakeholders can plan their activities to the best effect. Those four considerations should all be considered but we cite the environment first because it is its protection and enhancement that will provide the basis for an enduring and successful tourist resort.

That fundamental care for the environment should be at the heart of any planning because it is the beauty and the wildlife value of this area that is the essential resource upon which a tourism strategy must depend. A soundly based plan for the Scenic Area should place great priority on protecting ecological systems, the landscape and the natural environment generally—even if this means foregoing some short-term revenue or profit in the case of individual projects. Such a loss will be balanced by the long-term benefits flowing from an ecologically successful project. The challenge must be to secure tourism developments that are of the highest quality and to reject those that fail to live up to the standards that are called for in an environment of this quality. Indeed, developed along ecotourism principles, we envisage a tourism area that will emphasise such quality in terms of its design and consideration of the environment, together with the tourism experience that it will offer, and we

5.1规划策略

和谐发展

我们未来的东湖旅游度假区将成为可持续发展的一个鼓舞人心的例子，其愿景的实现将依赖于东湖平衡环境经济，社会和文化方面的考虑，提供一个明确的框架，综合的规划方法。将武汉市政府，开发商和所有其他利益攸关方的意见综合以协调各种建设活动，从而取得最好的效果。这几个方面都应该被考虑，但环境有限，所以它的保护和改善将提供一个持久的和成功的旅游度假区的发展基础。

环境应该是任何规划的核心，因为它是必不可少的资源，旅游战略必须依靠本地区的自然资源优势，如野生动植物的价值，对于环境的基本管理。 一个风景区的生态健康计划应该放在保护生态系统高度优先的位置，景观和自然环境一样，即使这意味着放弃一些短期的收入或个别项目的利益。这样的短期损失将从一个生态项目成功的长期利益中得到平衡。我们所面临的挑战是必须确保最高质量的旅游业的发展，并拒绝那些不利于这种品质的环境标准。事实上，对于开发生态旅游的原则，我们设想在其设计和环境考虑方面强调这样的质量，提升旅游经验。总的来说我们看到这些不同因素实际上完全兼容，并可以加强彼此。此外，我们相信这种规划路径与东湖风景名胜区总体规划的目标是一致的。

第5条规定了我们对东湖风景名胜区建设的建议。

5.1 General Approach

see those factors as entirely compatible, in fact as reinforcing one another. Moreover, we believe this to be an approach that is consistent with the overall planning objective for the East Lake Scenic Area as set down in the Master Plan.

Section 5 sets out our recommended policies and proposals for the WELSA. Thus the next three subsections address the three topics of ecotourism, ecology and transport. We then turn in 5.5 to our recommended strategy for tourism development before covering implementation questions in 5.6. The final section deals with governance and our ideas for an East Lake Foreshore Authority.

5.1规划策略

因此，将在接下来的三个小节解决生态旅游，生态保护和景区交通的三个主题。然后，在我们讨论旅游发展战略的执行问题之前（小节5.6/ 5.5）。将在最后一节阐述我们对于东湖风景名胜区从行政角度进行管理的想法。

5.2 An Ecotourism Development

Tourism: Ecotourism as overarching principle

Ecotourism is defined as “responsible travel to natural areas which conserves the environment and improves the welfare of local people.” [Ecotourism Society] The East Lake is a very special place and an invaluable and beautiful, attractive destination with a large catchment area and it is a most important ecological area to be restored and conserved. It is the largest inner city lake in China. Moreover, it is one of "1000" Hubei lakes and 1 of 27 city lakes. The Hubei lakes function as an important hydrological system for the entire central Yangtze region.

As China urbanizes mostly through rural to urban migration and as Wuhan grows and expands into the countryside, natural and agricultural areas become invaluable resources for the country at large. Green spaces inside and next to agglomerations become even more important as they fulfill multiple functions: they are much needed places for citizens' recreation near to where many live and work (local and regional weekend and daily tourism); they are important ecological infrastructures having multiple roles in respect of water systems, biodiversity, local climate, air quality, and carbon sequestration; and they may serve as cultural references to local traditions of ecological small scale farming and land cultivation.

The following ecological tourism principles are considered applicable to WELSA:

- tourism facilities and developments, and the income to be derived from them, should help support ecological restoration and conservation and raised environmental quality standards;
- tourism activities and amenities should respect natural, ecological and cultural features and absolutely minimize their impact on the environment;

5.2生态旅游发展

旅游：生态旅游作为首要原则

[生态旅游协会]将生态旅游定义为“负责任的旅游，关注高效利用自然环境，提高当地人民的福利。”东湖是一个非常特殊的宝贵和美丽的地方，有一个大的城市水域，它的吸引力是需要恢复和保护重要的生态区。同时它还是中国最大的市内湖泊。此外，它是湖北省上千个湖泊和127个城市湖泊之一。湖北省湖泊体系对于整个长江流域的水文系统都具有重要的生态功能。

随着中国城市化进程，大量农村人口向城市迁移，进入大武汉这样的大城市，并将其影响扩大到农村，因而自然和农业领域逐渐成为国家宝贵的生态资源，在大的绿色空间范围里，生态斑块的功能十分重要，因为它们履行多种功能，既是附近市民休闲的地方，又是许多生活和工作（地方和区域的周末和日常旅游）的场地，它们包含重要的生态基础设施，有多个水系统，在生物多样性方面和调节当地气候，空气质量和固碳方面的作用也十分显著，它们还可以作为小规模的生态农业和土地耕种的地方传统文化的体现。

以下被认为是适用于东湖风景名胜区生态旅游的原则：

- 旅游设施的建设所取得的经济收入应用于支持生态恢复和保护，提高环境质量标准；
- 旅游活动和设施应当尊重自然，保存其生态和

5.2 An Ecotourism Development

- tourism developments and activities should safeguard the natural and scenic beauty of WELSA;,
- tourism activities and new tourism developments should undergo a multi-layered and multi-sector approval process which should include environmental assessment and compensation of impacts;
- tourist journeys—there should be a presumption in favour of ecologically efficient and minimal-impact travel modes, involving boats and buses for longer trips, and walking and cycling for recreational journeys.
- tourism developments and facilities should follow the highest environmental standards, including being low carbon..

Types of ecotourism suggested for the WELSA

Various types of ecotourism are put forward for the enjoyment and ecological/ cultural education of visitors and to enhance the experience of natural purity engendered by the Lake environment. We also recognise that 'more intensive' forms of tourism already take place within certain established centres, in particular the Tingtao Scenic Area; and our proposals cater for some extension of these, However, we see the East Lake as substantially a place for quieter, more contemplative, forms of recreation, forms that are based on its existing natural character and its cultural features and strengths.

Most of these forms of ecotourism celebrate being in and observing nature: the lake, lakeside and wetlands, hills and forests, orchards and traditional organic farm fields, flower gardens and fruit tree orchards. Some of those proposed would highlight the educational aspects of innovative ecological research, novel methods of

5.2生态旅游发展

文化特色，减少建设对环境的绝对影响；

- 旅游业的发展和活动应维护东湖风景名胜区然风景的秀丽；
- 旅游活动和新的旅游发展要经过一个多层次多部门的审批程序，其中应包括环境影响的评估和补偿；
- 旅游行程，应该有一个有利于生态效率和生态影响程度最小的出行方式，规划设定涉及船只和长途旅行的巴士，步行和骑自行车休闲旅行的线路。
- 旅游发展和设施，应当按照最高的环保标准实行低碳化. .

东湖风景名胜区的生态旅游类型建议

提出了让游客享受不同类型的生态旅游和生态/文化教育，提高的湖泊环境，营造天然纯净的经验。我们还认识到风景区中心部分可采取“更密集”的旅游形式，特别是在听涛风景区，我们的建议不仅仅是为了迎合这些风景区扩展，还看到了空间上的大尺度东湖景区的安静的特质，根据其现有的天然风貌和文化的特点进行娱乐游憩方面的合理规划。

多种形式的生态旅游模式包括有这些空间载体，如自然湖泊，湖边和湿地，丘陵和森林，果园和传统的有机农田，花圃和果园。这些突出创新的生态研究模式，可以恢复自然环境和探索先进的环保质量

restoration and advanced environmental quality management; some might invite interaction with visitors where they could participate in the actual works of ecological restoration and maintenance, monitoring and evaluation.

The types of tourism suggested here are intended to create synergies among themselves while not simply adding tourists and activities but complementing activities and having activities at different times and places in the WELSA. Planning for them should follow the minimum impact principle. Managing circulation and transportation is an essential factor especially at weekends and on national holidays when tourist masses are expected, and in Section 5.4 we outline proposals for a park and ride system.

We discuss various forms of ecotourism below:

Nature Tourism

Ecologically efficient nature tourism is the most significant form of tourism of the WELSA and it is also one that should be promoted and expanded. The main attraction of the East Lake is its natural scenic beauty, its environmental purity and its peaceful serenity. To ensure its enjoyment today and for future generations it is essential to restore and conserve its ecological integrity and environmental quality.

Finding ways and managing the enjoyment and respite of the natural scenery and its ecology with the least possible impact on it, is a challenging task and it is an imperative. In terms of getting around, cycling lanes, walking paths and hiking trails should be harmoniously integrated into the Scenic Area. Applying great sensitivity so as to minimize ecological and visual impact, existing routes should be extended and made into a convenient network such that cycling and walking become a popular choice for travel and for enjoying nature. A system of low-impact docking stations and boat houses for kayaks, canoes, dragon boats and a

管理新方法，在教育方面，管理机构可能会邀请游客在那里他们可以参与实际工程的生态恢复和维护过程，以及监测和评价的互动。

这里旅游的类型建议的目的是建立彼此间的协同作用，而不是简单地增加游客量和活动种类，补充在不同的时间和空间维度的东湖风景名胜区旅游活动。规划应遵循将生态影响力降到最低的原则。将生态流通和交通管理作为群众旅游时的重要因素，尤其是在周末和节假日，在5.4节中，我们规划出了可行的公园交通系统。

如下我们将讨论各种形式的生态旅游：

自然旅游

生态高效的自然旅游是东湖风景名胜区旅游业的最显著的形式，应得到促进和扩大。东湖的主要吸引力是自然的秀丽风景，安详宁静的纯粹环境。为了确保其今天和子孙后代的利益，恢复和保护其生态的完整性，提高环境质量是必不可少的。

寻求各种方式管理东湖的自然风光并评价引入旅游活动后可能对其产生的影响是一项艰巨的任务，但也是势在必行的。将其周围的自行车车道，步行道和远足小径和谐的融入风景区的建设对当地非常敏感的环境是由负效用的，所以应尽量减少生态和视觉冲击力，延长现有交通流线，从而制作成一个方便的网络，例如，骑自行车和步行旅行以享受大自然成为流行的选择。同时引入船只接驳区和船屋，

variety of rowing boats linking with the walking and cycling trails would enhance the experience of visitors.

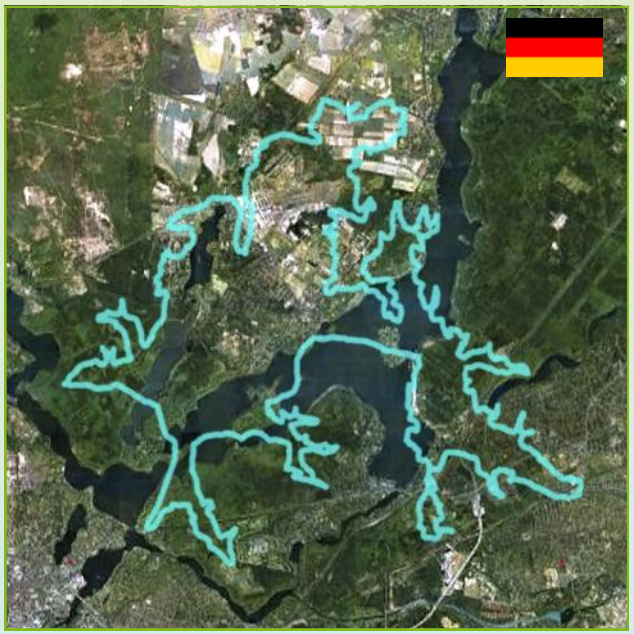
Low impact developments formed of ecological materials might be introduced to enhance nature tourism, for example single small huts and tree houses for nature observation and urban jungle adventure for children. Some very limited guest facilities might also be acceptable.

Case Study

Berlin Park System, Southwest and Southeast Lake and Forests Areas, Germany

The capital city of Germany is blessed with a lot of greenery and many lakes and canals. Open spaces traverse the city and green wedges come right to the urban edges. A few large inner city parks, most prominently the “Tiergarten” serve the city and its residents and visitors well as ecological infrastructure and amenities. Green Boulevards and canals, both lined by large trees, and a network of cycleways, connect the peripheral green system with the inner city parks and neighborhood plazas. The mature street trees and the urban fabric of 6-7 storey perimeter blocks with semi-private green courtyards means that greenery is ubiquitous throughout the city.

The largest green expanses of Berlin however can be found in its southwest and southeast. The “Wannsee” in the southwest is a lake in a forest setting with some single family housing. Along its shoreline it features a famous beach and beach-house as well as various boating facilities with a variety of sailing, rowing and canoeing. The southwest lake and forest park system links all the way to the northwest with the Spandau District’s lakes and canals with their green space and related forms of recreation. The southeast lake- and river-system, with the “Mueggelsee” being the largest lake, is equally beautiful. There, a few suburban towns



Wannsee, Berlin Germany

Wannsee Beach, Berlin Germany

皮艇，划艇，龙舟。并将步行和自行车道连接与各种游船设施整合，形成统一的公共交通系统，加强游客的旅行体验。

生态材料的发展可被引入以提高旅游的品质，例如用于大自然观察的小茅屋和用于儿童的都市丛林冒险的树屋。另外一些非常有限的对生态环境影响较少的旅游基础设施也是可以被接受的。

案例研究

德国柏林公园系统

德国的首都城市拥有大量绿地和众多的湖泊运河。开放空间穿越以城市绿楔的形式蔓延至城市边缘。一些大型的市内公园中最突出的是“蒂尔加滕”，其很好的服务于城市与当地居民和游客，提供了很好的生态环境的设施和服务。绿色大道和运河两旁都种满了大树，并规划有一个自行车道网络用以连接市内公园和附近广场周边的绿地系统。成熟的行道树和城市结构布局中在道路两旁有6-7层的半私人的绿色庭院式住宅楼，使绿化在整个城市中无处不在。

然而在柏林西南部和东南部有城市中最大的绿色开放空间，在西南地区森林中的“万湖”是在一些单体家庭的住房。. 沿其湖岸线有一片拥有各种帆船，赛艇和皮划艇的一个著名的湖滩，周边有许多住宅以及各种划船设施。西南湖和森林公园系统充分体现出斯潘度区的湖泊和运河河河绿地和相关的娱乐形式向西北。东南湖和河流系统，与

5.2 An Ecotourism Development

5.2生态旅游发展

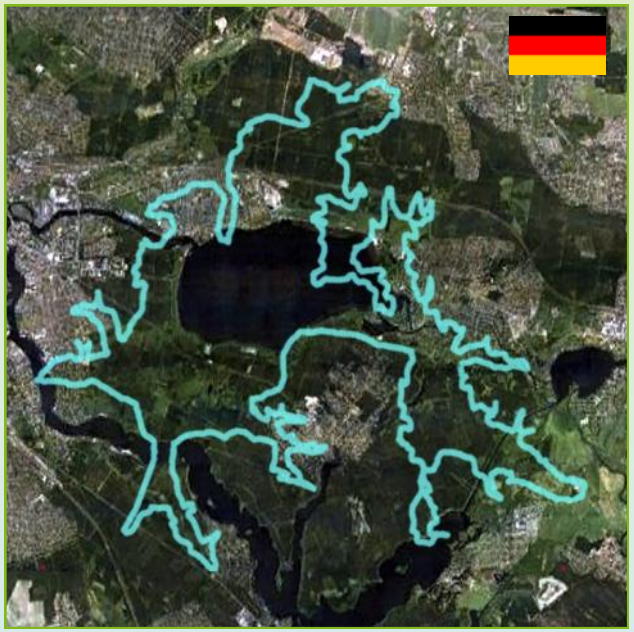
are located within the forest and partly along the lakeshore, the historic town of Koepenick being the most famous waterfront town..

Berlin's lake and forest park systems serve ecological functions for hydrology, urban climate and air quality. The absence of lakeshore roads ensures ecological and landscape integrity, while pathways for bicycles and pedestrians, and roads leading to the lakes, ensure public access, without impeding the experience of the natural lake scenery. And both parks lie within the administrative boundary of the city and are firmly preserved as ecological green space.

Cultural Tourism

Ecologically efficient cultural tourism is envisaged as one of the highlights of the East Lake. Strengthening cultural features and historic heritage, both tangible and intangible, will make culture an important contributor to the richness of the tourism experience. We propose that a variety of cultural forms, both as physical structures as well as events and festivals, should be developed to play a more significant role within the Scenic Area.

Chu historic culture features important traditions, most notably music and performing arts. Already, the main pagoda in the East Lake area, the Chu Heaven Tower on Moshan Hill, as well as the Chu castle over the lake, offer impressive views of the mountain and over the lake. We propose the addition of further features of this kind, artfully placed to enhance the visual experience of the lake and define landmarks for orientation. This might be done in a way similar to the works at the West Lake in Hangzhou. The aim should be to create a unique Wuhan East Lake identity building on existing features and traditions, rather than



Mueggelsee, Berlin Germany

Wannsee, Berlin Germany

"Mueggelsee"最大的湖泊，同河是美丽的。在那里，坐落在森林和沿湖岸交界处的郊区城镇科恩尼克是最有名的湖滨小镇的历史名镇之一。
柏林的湖泊和森林公园生态系统服务于城市水文，气候和空气质量。湖岸道路的建设一方面需要确保生态环境和景观的完整性，另一方面也为自行车和行人提供通往湖泊的途径，确保公众能获得无阻碍的天然湖泊风光的经验。两个公园位于城市的行政边界内，牢牢地保存了城市公共开放空间的生态绿地。

文化旅游业

生态高效的文化旅游设想是东湖旅游发展规划的亮点之一。以丰富的旅游体验加强有形和无形的文化特征和历史遗产是文化旅游的一个重要因素。我们建议应规划各类文化旅游空间结构以及活动和节日形式，使东湖独特的人文特质在景区内发挥更加重要的角色。

楚历史文化具有重要的传统，其中最显着的就是音乐和表演艺术。东湖磨山楚天台的表演就给人留下了令人印象深刻的印象，在湖中。我们建议巧妙地布置各类表演以提高湖的视觉经验，并定义其方向地标。不仅是要引入类似在杭州西湖的行为艺术表演作品。我们的目标应该是建立一个具有结合独特的武汉东湖现有的特点和传统的身份结合的风景名胜区建设，而不是盲

5.2 An Ecotourism Development

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on current fashion.

The other great cultural and historic treasures of Wuhan should be kept alive and celebrated in the East Lake area and new cultural references added, including music, poetry, calligraphy, sculptures, fountains, and tea, flower and bamboo culture.

Case Study

Hangzhou West Lake, China

The famous “sister” to Wuhan’s East Lake, the West Lake in Hangzhou is enormously successful as a nature and culture tourism destination with a large number of beautiful scenic, historic and cultural features. The backdrop of forest-hills behind the lake creates a unique beauty and the added pagodas on the hills surrounding the lake make a picturesque addition reminiscent of Hangzhou’s history as a capital city during the Southern Song. Compared with the East Lake, Hangzhou’s West Lake is much smaller meaning that it is practicable to cycle around the lake or row across it in one afternoon, or take a tour of its main attractions in one or two days. This makes it a perfect amenity for an inner city nature park. The West Lake is very accessible and it has beautiful pedestrian pathways and cycleways with a rental bicycle service.

Manually operated, traditional boats can be rented and enjoyed even after dark. Several pagodas and historic towers (or towers recreated in historic style) enhance the cultural experience and some historic Buddhist temples just west of the lake form attractive and authentic destinations. A new museum is located adjacent to the lake and a limited number of hotels in a landscape setting have also been allowed.

Four Seasons Flower Economy

This would involve the consolidation of the garden developments at the Moshan Scenic Area and include the provision of an Autumn Garden. We propose the

从目前的潮流.

应维持其他大武汉的文化和历史珍宝的生命力，在东湖区引入新的文化参照物，包括音乐，诗歌，书法，雕塑，喷泉，茶叶，花卉，竹文化等。

案例研究

杭州西湖

杭州西湖风景秀丽，具有良好的自然生态景观和深厚的历史文化底蕴，其作为旅游目的地是极其成功的。在湖泊，森林，丘陵的背景下，西湖景区创建了一个具有独特的美感和融合了周围景观与杭州历史的综合体，同样处于省会城市，杭州西湖与东湖相比，空间尺度上要小得多，这意味着它从管理角度它的可操作性更强，只需要一个下午就可以很好的游览其主要景点游览完毕。除此之外，它还是城市内部的自然公园和美化市容的景观节点。西子湖畔的交通更加十分便利，不仅有美丽的行人通道和自行车道，还有出租自行车的服务。

由人工操作的传统船只可以被租用和享受，湖边有佛塔和历史悠久的塔楼（或延续历史风格重新建造的塔），住对加强旅游文化经验和提升湖区的佛教吸引力是由助益的，因此在其周边相邻的湖泊和景观附近设置有限数量的酒店也是被允许。

四季鲜花经济

以春花，秋菊，夏荷，冬梅为主题，新增菊园设置在磨山景区靠城市的闲置地块上。并在每个花园已

following:

Based on the existing gardens “Sakura/ Peony in Spring, Lotus/ Water Lily in Summer, Plum Blossom in Winter”, construct a “Chrysanthemum in Autumn” garden on available land in the Moshan Scenic Area. Create a ‘Photosynthesis Theatre’ to provide a light show for evening performances and a four-season flower repertoire drawing upon the local historical and cultural background.

Integrate with the gardens production, education and academic research, based on the professional capability of the China Academy of Science, Huazhong Agricultural University. Construct semi-public laboratories on the nursery land, to give visitors opportunities to enjoy the beauty of natural plants as well as the attraction of science, combining recreational tourism with professional experience.

Make multiple use of the Photosynthesis Theatre, with regular Flower Day Festivals, Weekend Flower Markets, and charity auctions for the best flowers and flower production, using the proceeds to sponsor start-up ecological businesses.

Case Study

Physalia—A Renewable Energy Generating Amphibious Garden

A product of **Vincent Callebaut Architects**, this aquatic system is a sum of nature and biotechnologies designed to navigate and clean European rivers between the Danube and Volga, between the Rhine and the Guadalquivir, or also between the Euphrates and the Tigris. The zero carbon emission architecture is designed to harvest renewable energy to make the prototype a positive energy one, where it can generate more energy that it consumes.

The concept is built around four gardens. Thus, the “Water Garden” marks the main entrance of the

East Lake Lotus Blossom

Physalia

有建筑群的基础上加建或改造每次可容纳300人左右的温室剧场，配合灯光表演，以武汉历史文化为背景创作结合四时花语的剧目在晚间表演。产学研一体开发，依托已有的中科院植物所和华中农业大学的科技实力，在四个花园的苗圃中建立半开放植物实验室，让人们既可以参观奇花异草，又能亲自感受到科学的神奇，寓教于乐.

复合利用光合作用剧院和实验室场地，定期举办花朝节和成立周末花卉市场，将品相上佳的盆栽和收获的鲜花制作成各种香薰和美容产品作为慈善拍卖之用，资助东湖景中村居民的生态创业。

案例研究

僧帽，一个可再生能源发电两栖花园

Physalia内部用四个主题表达水的未来的不用含义，它们代表着四元素的共生。四元素发挥他们各自特点，互补并最后在这个两栖世界里整合起来：

“水”之花园，大型玻璃平台悬在水面上，光通过反射传到内部下层。水上阳台还可以完全开放自己的河流景观，通过外部河流的微风让内部拥有呼吸。

“土”之花园：分析水生生态系统的国际实验室的心脏部位。整个房间上面绿色的植物直立生长着。肥沃的土地过滤雨水，并自形成空间中央的景观吊顶。

“火”之花园：保证水下休闲展览的封闭空间。柔软的休闲扶椅围绕着防火船身里一个巨大的烤火处，它是一个水生生态系统的长期展览的空间。

“气”之花园，这个生态的圆形剧场开辟了通往

5.2 An Ecotourism Development

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Physalia. The heart of the structure constitutes the "Earth Garden," which is dedicated to international researchers who analyse the aquatic ecosystem crossed by the vessel. The structure also features a "Fire Garden" that is a confined and protecting underwater lounge and an "Air Garden," which is space of oxygen and light that spreads under a special lens. This area opens toward the exterior landscape.

Agritourism

A consequence of China's urbanization is that people are getting out of touch with the way that food is grown and produced, and with how farming works and how traditionally cultivated landscapes are operated. In industrialized countries therefore, agricultural tourism has become increasingly popular especially for young urban families. In addition to providing urbanites with an authentic farm experience, it offers farmers a potential source of additional income. Present policies aimed at relocating certain villages away from the East Lake are proving expensive and it is possible that by promoting agritourism this way, that villages could become seen in a more positive light rather than being a problem. We propose the following as forms of agritourism:

1. **Farmer's restaurants**—Already, there are a number of farmer's restaurants along the shore of the lake and in the villages on its western side. These should be upgraded and themed as places offering good, honest countryside cooking based on locally produced organic ingredients.
2. **Bed and breakfast**—Farmers should be allowed to offer rooms for accommodation and breakfast as an additional income; this would be subject to appropriate regulations defining quantity, quality and hygiene standards. Potentially this could

West Lake, Hangzhou China

外部景观和城市。并由椭圆形的耳朵状充气和光电缓冲器下方的尖端组成，形成挤压的圆形形状的"水"的构成和戏剧舞台般的旋转水吧。这里是完美的会议和讨论地点。

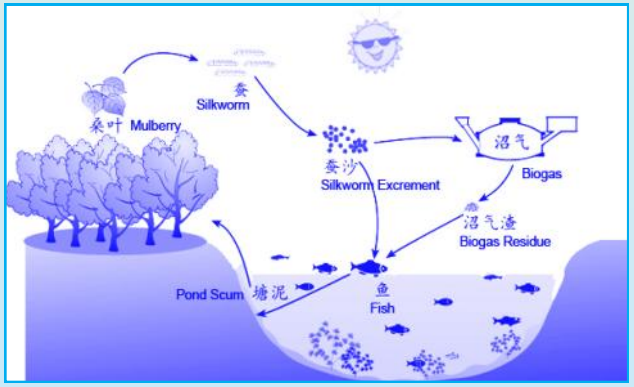
农业景观

中国城市化的一个后果是，人们与粮食种植和传统的生产生活方式越来越脱节，农业工程和传统经营耕地的景观正在逐渐消失。因此，在工业化国家，农业旅游已成为越来越受欢迎的旅游形式，尤其是对于年轻的城市家庭。向城市居民提供一个真实的农场体验，不仅可以为农民提供额外收入。同时，在目前的政策下强制让某些村庄搬迁离东湖名胜风景区的地理空间范围的经济代价是十分昂贵的，所以通过这种方式促进农业旅游，可以以更积极的心态来解决景中村问题，而不是作为一个不可转移的社会矛盾，而我们建议作为农业旅游的形式如下：

1. **农家乐的餐厅，目前沿着湖边，尤其是在其西侧的村庄已经有**一些农民的餐厅，可以对这些餐厅进行升级，以合适的主题为地方提供良好有机食物的体验和没事享受。
2. **民宿，农民应该被允许将自家住房的**一部分出租，作为一个可提供额外的收入的民间小型提供早餐的旅社，当然这些建设将是在适当的法

provide an attractive source of income as well as a pleasant tourist experience for urbanites.

3. **Organic, traditional demonstration farm**—The intrinsic beauty, harmony, and small scale of so many of China's traditionally cultivated landscapes are increasingly becoming like an endangered territorial species. In the eastern part of the Scenic Area, there still are some of these traditional farms left. Suitable examples should be retained and managed as purely organic farms where children could learn how to grow vegetables, work earth dams and manage a traditional irrigation system to water a field. 'Do it yourself' farm fields and on-site -organic farming ' learning and doing' would enhance the East Lake experience, especially for local urban residents.
4. **Museum Village**—The principle adopted in (3) above could be extended in scale to embrace clusters of dwellings, or (following the principles set out in the case study of Cloppenburg below) even to the level of a small village.
5. **Boat Museum**
   In conjunction with the Museum Village, a boat museum could provide reproductions of historic river and lake boats.
6. **Organic Mulberry Dyke Fish Pond** (Yuguang Scenic Area)—This would involve an ecological transformation for the fish ponds and paddy fields to create a type of farming based on sustainable theory. The fish ponds would be deepened and mulberry trees planted on the adjacent fields within soil that would be enriched through the use of fish waste. This efficient, ecological system, would enable a special 'East Lake' agricultural brand to be created, producing organic fish, silk and mulberry products, and providing new employment opportunities for the residents of East Lake villages. A second gain would be the creation of a new agricultural landscape close to the East Lake, and a further agritourism attraction.



Mulberry Dyke Fish Pond

规确定下统一规划数量，质量和卫生标准。这样不仅可能吸引潜在的收入来源，更为游客提供了宜人的都市旅游体验。

3. **有机，重视传统示范农场的内在美与和谐，强调中国传统的种植景观，保护许多小规模的濒危物种，尤其重视在风景区的东部地区仍然存在着的**一些传统的农场，将其作为纯粹的有机农场，在那里让孩子们学习如何种菜，管理传统的田埂灌溉系统，纯粹的中国传统农业体验。 加强东湖在农业景观和参与式农业旅游方面的经验，特别是为当地城镇居民服务。
4. **博物馆村**，在上述（3）通过的原则，可当地住宅集群的规模并将其升级，或在村庄水平设置在博物馆形式的农村体验，用下面的案例研究的原则。
5. **船博物馆** 和上述的村博物馆结合在一起，船博物馆可以展出有关历史河流和湖泊船只的复制品。
6. **将风景区内的硬化渔塘和水田进行生态改造**，以可循环理念推广桑基塘，充分利用土地，形成挖深鱼塘，垫高基田，塘基植桑，塘内养鱼的高效人工生态系统。并创立自有农业品牌"东湖"有机鱼，桑椹和汉绸。解决部分景中村居民的就业和就地安置问题，缓解改造过程中可能产生的社会矛盾。
7. **马术中心** 马术旅游将骑马这项活动中的文化和休闲方面的功能再现出来。东湖东向项目区内的多个马道为马术旅游提供了一个绝佳的机会。

7. **Equestrian Centre**
   Equestrian tourism (equitourism) reintroduces the cultural and recreational aspect of horseback riding. The East Lake Eastward multi-corridor trails provide an extraordinary opportunity for equestrian trails.

Case Studies

Traditional Mulberry Dyke Fish Pond, Huzhou, China

Proposal (5) above stems from existing practice in Huzhou. Its success relies on consolidating the interrelationship between the dyke and the pond. The pond supplies the dyke with the fertile mud that the peasants heap onto the dyke two or three times a year; with each layer measuring at 5 to 6 cm thick. Pond mud decomposes on the dyke and then becomes the primary source of fertilizer for the mulberry trees. The peasants of Shunde County estimate that 100,000 kg of pond mud are the equivalent of 50 kg of chemical fertilizers, and that each heaping adds the equivalent of 15 kg of urea to the soil. The mud is better than chemical fertilizer because it includes the organic matter which the plants need. It also acts as a mulch to suppress weeds, it reduces water evaporation, and it maintains soil fertility for a longer period of time.

Agritourism, Tuscany, Italy

Tuscany in Italy has been a culturally and agriculturally significant place for hundreds of years and it has been a destination for agritourism for at least thirty years. The region is characterized by mountains, hills, vineyards, legendary cities like Florence and Siena, and beautiful hill-towns. Tuscany is also famous for its cultural achievements especially for the renaissance, and also for its agricultural products like wine, cheese, and olives. Agritourism in Tuscany thus is a rich experience combining beautiful landscape, rural character and cultural richness. The agritourism industry is very well organized most notably through

Agritourism, Tuscany Italy

Museum Village Student Fieldtrip, Cloppenburg Germany

案例研究

传统的桑堤鱼池，湖州，中国

基塘农业是我国珠江三角洲地区的劳动人民在长期的农业生产实践中创建的耕作经营管理制度的一种新型农业。在珠江三角洲中部，有许多地势低洼的地方，每逢暴雨便积水不退，后经人工改造，把洼地深挖成池塘养鱼，挖出的泥土堆在四周成“基”。“基”既可在暴雨洪水时防止塘水泛滥，又可在“基”面上栽培桑树、甘蔗、果树等。比如，“基”上种植桑树，桑树可以养蚕，蚕沙投入池塘又可成为鱼的饵料，鱼类及微生物分解后的塘泥又成为“基”面上作物的肥料，两者相互促进，互为利用构成基、塘互养的水陆物质循环体系。

休闲观光农业，托斯卡纳，意大利

意大利的托斯卡纳数百年来的一直是富有文化和农业意义的地方，它是至少已有30年历史的乡村旅游目的地。该地区是以山地，丘陵，葡萄园为特点，具有传奇色彩的城市，如佛罗伦萨和锡耶纳都是是美丽的山镇。尤其是文艺复兴时期的成就和当地丰富的农产品，如葡萄酒，奶酪和橄榄等都是著名的托斯卡纳地区标志。因此，在托斯卡纳乡村旅游是经验丰富将美丽的景观，乡郊特色和历史文化相结合的复合旅游产品。其农业旅游行业组织得非常好，尤其是通过各种竞争景区节点，包括工作农场，农村公寓和整个农舍或乡村别墅单间等。行业如此发达，使农业本身成为景区内部一个相对次要的角色。当地美丽的山水风光和身后的文化底蕴也强烈的吸引这游客们的关注。

various competing websites. Offers range from single rooms in working farms, apartments and entire farmhouses or countryside villas. The industry is so advanced and developed that the aspect of farming itself as an attraction plays a relatively minor role. It is rather the landscape scenery and the cultural places that attract most visitors' attention.

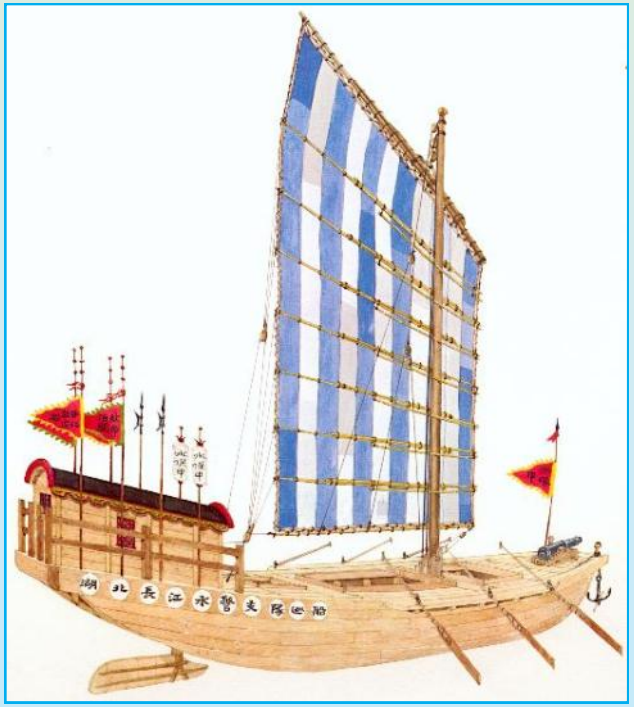
Museum Village, Cloppenburg, Germany

The Cloppenburg Museum Village and Lower Saxony Open-Air Museum is the oldest museum village in Germany. The museum is a research and educational establishment in the field of cultural and countryside history; it is a non-profit organisation. Although the museum does not set out to compete for visitors, in 2009 it had more visitors than any other museum in Lower Saxony (250,000). In 2004 the attendance included about 60,000 young people, who visited the museum as part of their school curriculum

On an area of about 20 ha, the Open-Air Museum portrays rural life in the Lower Saxony region from the 16th century to the present. Over 50 historic buildings with their associated rural gardens and surrounding agricultural fields serve to illustrate the changing relationship of man to his environment. In the early days of the museum, a form of reconstruction was chosen that showed the houses in their original state. Important construction variants of the Low German house and East Frisian Gulfhaus are presented in this way. Since the 1970s the houses have been reassembled, conserving the traces of their history as well as the biographies of their former occupants. In addition to buildings that underpinned farming and crafts, and the residential homes of country folk, the museum site also has a timber framed church from Klein-Escherde (built in 1698) and a village school from Renslage (built in 1751).

Viking Ship Museum, Oslo, Norway

The main attractions at the Viking Ship Museum are the



Historic Yangtze River Police Boat

德国馆村

克罗伯格博物馆村是位于下萨克森州的露天博物馆，也是德国最古老的博物馆村之一。博物馆是融合文化和农村的历史领域的研究和教育机构，它是一个非盈利性组织。虽然博物馆不会截留游客，但是2009年的现实博物馆村比下萨克森州的其他任何一个博物馆都有更多的游客（250,000）。在2004年的游客中包括约60,000年轻人，因为参观博物馆已成为学校课程的一部分。

在面积约20公顷的露天博物馆村中描绘了下萨克森州地区从16世纪到现在的农村生活变迁过程，其中还包括相关的农村庭院和周围的农业领域的50多个历史建筑，充分说明了环境是怎样改变人的社会关系。在博物馆的初期，旨在重建原始状态的农村房屋，延续德国下萨克森地区和东弗里斯兰重要住宅建设变化形式。自20世纪70年代的住宅和其他建筑已被重组，以保护他们的历史痕迹，并附以他们的原住户的传记。此外，博物馆村的建设带动了当地农业和工艺品经济。不仅如此，博物馆村还有一个克莱恩顿集成的的（1698年建）木材构筑的教堂和一个来自任斯莱格的乡村学校（建于1751年）。

挪威奥斯陆维京海盗博物馆

维京海盗博物馆的主要亮点是三艘海盗船：Oseberg号，Gokstad号和Tune 号。

此外，来自维京时代的展品包括雪橇，床，马车，木质雕塑，帐篷部件，水桶以及其他陪葬品。展示的许多船

5.2 An Ecotourism Development

Oseberg ship, Gokstad ship and Tune ship. Additionally, the Viking Age display includes sledges, beds, a horse cart, wood carving, tent components, buckets and other grave goods. Many fully or nearly fully intact Viking ships are on display. Its most famous ship is the completely whole Oseberg ship.

Educational Tourism

Under this heading, we propose the following:

1. **Educational tourism trails**—these might include trails related to geology, wetlands ecology etc. and they would be equipped with educational interfaces (mobile devices, signs). They would be linked to environmental learning centres and a landscape and lakes ecology museum (see below)

2. **Science and Technology Centre**—Within the East Lake Scenic Area, there should be a series of small environmental learning centres and related to the Environmental Science Centre, there should be a Landscape and lakes ecology museum with laboratories for all to learn about how our environment functions and how we can improve it. [See Ecology, Section 5.3]

3. **Digital WELSA**—under this initiative, part of the Environmental Science Centre, a digital information system would be developed whereby sensors throughout the park would provide a public website with a constant stream of information regarding environmental quality.

Case Studies

Peggy Notebeart Nature Museum, Chicago USA

Celebrating 150 years of science exploration and education, the Peggy Notebaert Nature Museum is the

Peggy Notebeart Nature Museum, Chicago Illinois USA

Outdoor Biome, Eden Project, Cornwall UK

5.2生态旅游发展

只近乎完美。此馆最著名的海盗船是一艘完好无损的Oseberg号船。

教育旅游

在这一标题下，我们提出以下建议：

1. **教育旅游的线路规划，这些可能包括地质，湿地生态等学科内容，将通过教育展示系统（移动设备，标志等）在景区中形成对生态保护理念的普及系统，与环境学习中心和湖泊生态博物馆（见下文）**一起成为的东湖风景名胜区中亮丽的风景线。
2. **科学和技术中心，东湖风景名胜区内应该设有**一系列的小型的环境学习中心和相关的环境科学中心，并应该设立具有公众参与的开放实验室的以生态景观为主导的湖泊博物馆，只有充分了解我们的环境，我们才能更好的改善它。［生态部分，第5.3节］
3. **数字东湖风景名胜区，根据这一倡议，环境科学中心的**一部分应包括数字信息系统开发，传感器等，为整个园区充分提供一个有关环境质量的信息公共网站

案例研究

佩吉Notebeart，美国芝加哥自然博物馆

佩吉诺特巴特自然博物馆有150多年的科学探索和教育历史，成立于1857年，作为芝加哥科学学院的教学和学习中心。博物馆在2008年迎接了超过

5.2 An Ecotourism Development

5.2生态旅游发展

teaching and learning center of the Chicago Academy of Sciences, founded in 1857. The Museum welcomed over 304,000 visitors in 2008. More than 1.8 million visitors have walked through the doors since opening in 1999. The Museum trains and offers resources for almost 2,000 Chicago teachers in over 430 schools, providing hands-on exhibitions and programs to 70,000 students annually. An education innovator, the Museum's Science on the Go! program pairs with more than 150 teachers to enhance science education in classroom and has shown a correlation between the program and improved student test scores.

The Museum is a working demonstration of green technology with 1,600 square meters of rooftop gardens, solar panels and an eco-friendly water distribution system.

Eden Project, UK

Located in Cornwall, UK, in what once was a disused clay (Kaolinite) pit, you can discover a rich and abundant garden with over one million plants. Considered by the Guinness Book of Records to be the world's largest greenhouse, the Eden Project is a unique resource center for people who want to know more about nature and the environment.

Medical, Health & Wellness Tourism

We propose the following:

1. **A traditional Chinese Medicine Clinic with associated herb gardens and processing facility**—this would be a small scale but high standard facility that would provide both treatment but also training for students learning TCM.

2. **Nature based wellness, ecological spas, yoga and gymnastics**—given the ecological values to be pursued within the WELSA, we envisage these

304,000名游客。从1999年开放以来已接待超过1.8万人次游客。博物馆为近2000名芝加哥教师提供了培训和资源，为学校每年提供超过70,000名学生的展览和节目。集中在教育创新的方案，对150多名教师怎样通过提高在课堂上的科学教育以提高学生的考试成绩之间的相关性进行了研究。

博物馆1600平方米的屋顶花园是太阳能电池板和生态友好的配水系统的绿色技术与示范

伊甸花园，英国

在英国康沃尔郡，坐落在曾经是一个废弃的粘土（高岭石）坑上，你可以发现一个有超过一百万的丰富的园林植物被吉尼斯世界纪录记载为世界上最大的温室的伊甸园项目，它是一个独特的，以便人了解更多关于自然和环境信息的资源中心，和景观展示集合体。

医疗，保健及健康旅游

我们提出以下建议：

1. 传统中国中医诊所与相关药草花园医疗设施，将再次设立一个规模小，但高标准的设施，既可以为患者提供治疗，同时也可为学生提供中医培训的场所。

2. 自然健康，生态水疗，瑜伽和体操等活动可以很好的体现东湖风景名胜区所追求的生态价

'spiritual health' facilities being appropriate in selected places. However, as with the TCM clinic we favour the use of existing buildings or brownfield sites.

3. **Vegetarian restaurants and detoxification**—we see scope for specialist restaurants l focussing on healthy and organic food and some on vegetarian cuisine offering detoxification diets. Wherever, possible, locally grown food should be used, including produce grown within the WELSA.

Case Study

San Benito Health and Wellness Farm, Philippines

The Farm at San Benito is located a 90 minutes drive south of Manila in an area of lush green jungle, offering views of mountains. They claim to be recognised 'as one of the few truly integrated medical and wellness resorts' and that 'guests will surely come back home fresh, rejuvenated, and recharged with energy'. There are 24 suites and villas in a low-impact ecological garden setting.

Hongshan Vegetable Bolts

The Farm at San Benito, Philippines

值，我们设想在这些"精神健康"选定地方的建设适当的活动设施。然而，作为与中医诊所的综合开发，我们赞成使用现有建筑物或进行棕地改造。

3. 排毒素食餐馆，我们看到让景区餐厅提供素食排毒餐及开发专门类有机食品的商机。使用当地种植的食物的地方，尤其重点集中在东湖风景名胜区内生长的蔬菜瓜果。

案例研究

圣贝尼托卫生和健康农场，菲律宾

圣贝尼托农场位于郁郁葱葱的绿色丛林地区，距离首都马尼拉以南90分钟车程，有良好的山脉美景。当地旅游机构声称作为真正的集成医疗和健康的度假胜地之一，客人肯定会在当地感受到回家般新鲜，充满活力的充电是旅游度假体验。其中，以最低限度影响自然环境的情况下，生态园林中设置有24间套房和别墅。

5.3 Ecology—A Water LifeScape　5.3 生态—具有生命活力的水景

Earlier, under the chapter Themes, we envisaged a Water LifeScape which reveals ecological vitality through what is visible and beautiful of the scenic area and enhances the ecological processes and services which comprise the basis for the East Lake. Related to this vision, we propose four main policy directions:

1. the creation of a stronger eco-link and interface between city and lake to maximize the ecological edge effects and the benefits of the lake as a scenic and recreational amenity for urban residents, and as a step towards moderating the local climate;

2. a greater recognition of the need for balance between development and the preservation of important ecological resources and habitats through:
   - effective planning in which areas appropriate for development can be indicated while others are safeguarded for ecological purposes; and
   - the application of environmental impact assessment and related methodology (see below)

3. —a switch in the emphasis of landscape design from one based primarily on aesthetics to an approach centred upon ecological aesthetics which combines the pursuit of beauty with the incorporation of inherent ecological values.

4. —at the level of the Wuhan city region, the pursuit of an integrated planning approach for the broader lake ecological system. (this recognises the direction of the newly introduced ecological spatial system for Wuhan with its structure of development axes and green wedges (Document 3 and the on-going lake network linking project).

The threats we have identified under Themes may not necessarily point to an irreversible decline in eco-system quality. However, they are signals that warrant

在早前的主题章节之中，我们设想通过视觉上美丽的风景名胜区和增强东湖的基础设施建设以揭示其生态过程和服务，其中包括生态活力水生活景象。要实现这一构想，我们提出了四个主要的政策方向：

1. 在东湖与城市之间建立更紧密的生态联系和生态界面，从而最大化湖泊生态边缘效应和东湖成作为城市居民风景旅游和公共服务设施的功能，并使其成为改善当地气候的一个步骤；
2. 通过如下步骤深入理解如何平衡城市发展与保护重要生态资源及栖居地
   - 进行有效规划，明确提出城市适宜建设区与生态保护区
   - 并且应用程序环境的影响评估和相关方法（见下文）
3. -景观设计的根本指导思想的转变，从以视觉美学为中心转向对于生态美学的强调。即强调视觉美学与景观内在生态价值的结合。
4. 在武汉市市域的尺度上，进行更广泛的湖泊生态系统的综合规划。（在这一层面上考虑新制定的武汉生态空间系统规划中所包含城市发展轴和绿楔的等生态相关内容，如文件3中六湖连通项目）。

在主题章节中，规划指出了当前东湖景区所面临的诸多挑战，但这并不意味着动画的生态系统必然面临不可逆转的生态恶化的问题。但是，这些危险的信号意味着我们必须进行细致和积极的研究和畜

careful and diligent scientific investigation. Planning policy should be based on the results of such studies; and improvement projects, and development proposals should likewise be assessed having regard to available scientific evidence. That should be done through independent environmental impact assessment (EIA). Related to that, we commend the application of specific methodology to measure the environmental performance of individual developments such as that provided by BREEAM and applied widely to performance ratings around the world (see case study at the end of this section).

We see these techniques as forming part of a package of policy measures/methodologies that are needed to secure the quality/ sustainability of new developments and improvements in environmental quality across the WELSA as a whole; they include an Environmental Management Strategy. We address this package further in Section 5.6.

For the present, in respect of ecology, we propose two specific initiatives:

1) East Lake Science and Technology Centre (The "Green Technology" Centre)

We see this as being a collaborative venture bringing lakeside universities and research establishments together in order to facilitate:

- joint research into the East Lake environment and ecological systems;
- the provision of a sound scientific basis for lake planning and development;
- the birth and growth of new business enterprises focussing on the lake, seen as an important economic resource;
- the design of lake-side facilities;
- the publication and distribution of information about

力。任何一个开发项目都应该进行环境生态方面的科学评估。并基于研究结果制定规划策略。其有效方式之一是进行独立的环境影响评估（EIA）。与此相关，我们还建议使用具体的方法来评估各个项目的环境表现，例如BREEAM等在世界各地广泛应用的标准（见案例研究，在本节结束）。

我们认为，在东湖景区的整体规划和开发中，需要通过使用这些方法并形成一整套系统的政策措施/方法，来保证景区的新开发项目的质量和可持续性，并达到环境质量的改善；其中的重要一环是环境管理战略。在之后5.6节中规划将对其进行详细阐述。

就目前来说，在生态方面，我们提出两项具体倡议：

1）东湖科学和技术中心（"绿色科技"的中心）

我们将其构想为一个合作式项目，促成东湖沿岸的高校和研究机构的合作，从而促进：

- 对于东湖环境和生态系统的联合研究；
- 为东湖的规划和为未来发展提供科学依据；
- 将东湖视做重要的经济资源，从而建立基于东湖资源的商业模式和企业；
- 湖滨公共设施的设计；
- 出版和发布有关湖泊的信息；

the lake;
- the promotion of the lake as a centre for good science and management.

Initially the new Centre could be housed on one of the university campuses. Later it could move onto its own lakeside site—perhaps using an existing vacant or underutilised building before being established in its own permanent purpose-designed headquarters. We foresee this Centre as having visitor facilities, and becoming a tourist attraction in its own right.

Appendix B sets out in a simplified format some suggested research projects which could be undertaken by the proposed new Centre. If a healthy lake system is the ultimate goal, all these projects should be considered.

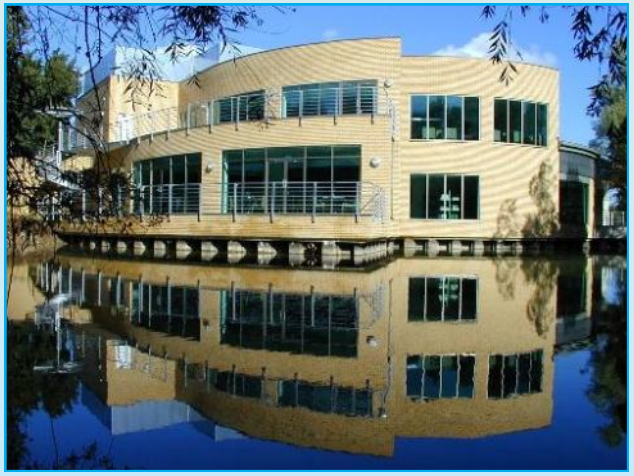
Case Study

Cambridge Science Park, UK

Cambridge is a world famous university city, some 80km to the north of London. Founded in the 13th century, it has recently celebrated its eight hundredth anniversary. With its well resourced colleges and departments, it remains today at the cutting edge of research and innovation. Through the University's links with private industry, new laboratories have been funded and research groups established within the existing colleges; these complement the University's established academic and applied research. However, space in the medieval city core has become very limited and, under the trend known as the Cambridge Phenomenon, research and development activities became increasingly concentrated within employment sites on the edge of the city.

An important example of this is the Cambridge Science Park located on the northern edge of the city. The land involved formerly belonged to Trinity College. Used for military purposes during World War II, the site had become derelict and threatened by planning blight.

East Pond, Cambridge Science Park, UK
英国剑桥科学园区的东部池塘



Cambridge Science Park, UK
英国剑桥科学园区

初期，生态科学与管理中心可以设立于大学校园之内。随后在东湖周边地块中独立设置——可以使用现有的闲置或空置建筑物之中，有条件时建设永久的专门的总部。生态科学与管理中心中应该设置参观展示内容，使其自身也成为一处旅游景点。

附件B中列出了生态科学与管理中心可能从事的研究项目的简表。要最终建立起一个健康的湖泊系统，所有的这些项目都应得到实施。

案例研究

英国剑桥生态科学公园

剑桥是世界著名的学府和大学城，距离伦敦北部80公里。始建于13世纪，迄今已有800余年的历史。其各院系有着丰富的学术与经济资源，在研究与创新方面一直居于世界高等学府的前列。通过与私人企业的合作，各学院通过企业资助建立了大量的新的实验室和研究课题小组；这些丰富了大学现有的学术和应用研究。然而，建于中世纪的城市历史中心空间非常有限，而且在所谓的“剑桥现象”的趋势的推动下，研究和开发活动越来越集中于城市边缘地段，因为这些地段往往是就业与工作的中心。剑桥科学园区就是一个重要的案例。它位于城市的北部边缘地区。其使用的土地原属于Trinity学院。随后，地块在二战期间用作军事用途，地块随后面临衰败和规划不善的威胁。

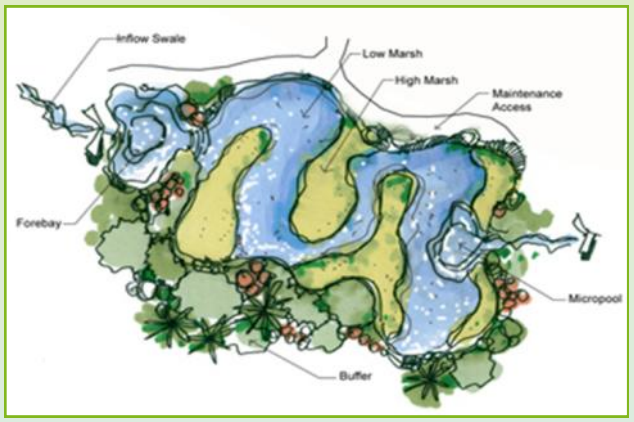
However, in 1970 a decision was taken to develop it as a science park on the lines pioneered by the USA's Stanford University. The first company arrived in 1973 and a period of strong growth followed. The Trinity Centre was opened in 1984 to provide communal facilities, including conference rooms, while 'starter units' for the establishment of new 'hi-tech' firms and the Cambridge Innovation Centre expanded the range of accommodation available.

By the 1990s, internet & telecommunications related companies had become well represented. More recently, however, the life sciences sector has started to grow to become the dominant technology centre, and by the turn of the century the Science Park was employing some 4000 people. There have since been further changes which will complete the development. These include a new conference centre, together with a fitness centre and childcare nursery. The latest research sectors to be represented include photonics, nanotechnology and materials science. Today the Cambridge Science Park remains one of the foremost concentrations of R&D in respect of the industries of the future, as well as a good example of university led spin off.

2) Biological Wetlands Restoration Program

The Biological Wetlands Restoration Program is a phased project that involves siting numerous constructed wetlands throughout the East Lake. There are numerous benefits to this program including:

- **Protection and extension of the existing water supply**. Constructed wetlands designed to treat secondary effluent can directly improve water quality potentially enabling the recharge of groundwater aquifers;
- **Wildlife conservation**. These wetlands provide vital habitat for migratory and resident waterfowl



在1970年，决策者决定效仿美国斯坦福大学所开创的模式，在地块上建设科学园区。1973年，园区迎来了第一家进驻的企业，随后各类公司纷至沓来。1984年Trinity中心正式开放，其中提供包括会议室等的各种社区公共服务设施，，还设置“企业孵化区”，为新成立的“高科技”公司提供场地；另外还设置“剑桥创新中心”，这些为企业的设置提供了各种选择。

到1990年代，互联网和通讯企业大量进入园区。而在近期，生命科学行业开始迅猛发展并成为园区的主力；到2000年前后，园区的员工总人数达4000人。园区进行了其它的建设和发展，来完善其总体的开发。包括新建的会议中心、健身中心和托儿所。最新进驻的企业包括光电子、纳米技术和材料科学等行业。当前，剑桥科学公园仍然是世界未来产业发展的最重要的研发聚集地之一，也是大学主导的衍生产业发展的优秀案例。

2）生态湿地恢复项目

生态湿地恢复项目分期进行，在整个东湖区域设置多个人工湿地，此项目的效益在于：

- **对于现有水源供应的保护和拓展**。人工湿地的设计强调对于雨水和污水进行净化，可以直接提升水体的质量，并可以对于地下水含水层进行回充。
- **保护野生生物**。人工湿地可以为候鸟和本地水

and shorebirds. Opportunities for wildlife enhancement should be considered in the arrangement of wetlands components and environmental features specifically designed to increase habitat diversity and wildlife propagation.

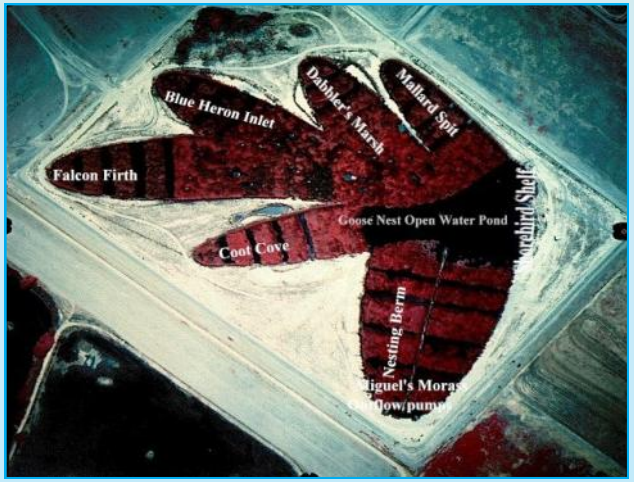
- **Research and Education**. Colleges and universities could use these sites for research, and as outdoor classrooms and laboratories; they could be used by schools for teaching and for ecological field trips; and there would be significant public and tourism interest, for example, in respect of bird watching.

Case Studies

Hemet/San Jacinto Multi-Purpose Constructed Wetlands Project, California USA

The Hemet/San Jacinto Multipurpose Constructed Wetlands was designed to focus on reclaimed water treatment, migratory and resident waterfowl and shorebird habitat enhancement, wildlife diversity, and public education and recreation opportunities. A cooperative effort by the US Bureau of Reclamation, the National Biologic Service, and the Eastern Municipal Water District, the one million gallons/day system occupies about 26 acres of the 50 acre site. The design is a three phase (marsh/pond/marsh) integrated system consisting of five separate wetlands treatment units, a combined open water and marsh habitat area, and a final polishing wetlands. Secondary reclaimed water is distributed to the five wetland treatment units, then is recombined in the central area to flow thorough the open pond prior to flowing through the final wetland which combines all flows to remove biological input produced in the open water area. From the air, the system is "amoeba-shaped" and, on the ground the curved lines give the appearance of a natural system.

Hemet/San Jacinto Wetlands, California USA



生禽类、滨水鸟类等提供重要的、其赖以生存的栖居地。人工湿地的规划设计中应考虑提升野生动物栖居地和环境，进行专门的设计从而提升栖居地的多样性和野生生物的繁殖。

- **科研与教育** 大学可以将人工湿地地块用作研究、室外课堂和实验室；他们可以用作学校日常教学的内容和生态现场踏勘的目的地；还可以通过观鸟等活动的设置，吸引大众和旅游者的兴趣。

案例研究

美国加利福利亚Hemet/San Jacinto多功能人工湿地项目

Hemet/San Jacinto多功能人工湿地项目的规划设计意图是对于回收的污水进行处理，为候鸟和本地水生禽类、滨水鸟类等提供栖居地，提升野生动物的多样性，为公众提供教育和休闲机会等等。这一项目是由美国垦务局（US Bureau of Reclamation）、国家生物服务局（National Biologic Service）和城市东部滨水区域（Eastern Municipal Water District）共同合作的项目。项目的系统处理能力为100万加仑/天，占据了总面积为50公顷的地块中的26公顷。设计分为三期（沼泽/池塘/沼泽）进行，是一个包含5个独立的湿地处理单元、沼泽栖居地区域和最终净化湿地系统的整合系统。二级回收污水输入到5个湿地处理单元中进行净化，然后在中心区域进行重新汇合，流经开敞的池塘，随后流经最终的湿地系统，在其中所有的水流进行汇合，并除去开放水

BREEAM - Assessing the Environmental Performance of Buildings

BREEAM is the world's foremost environmental assessment method and rating systems for buildings, with 200,000 buildings having certified BREEAM assessment ratings and over a million registered for assessment print since it was first launched in 1990. The method sets the standard of best practice in sustainable building design, construction and operation and it has become widely recognized across the world. For the most common types of building, a BREEAM assessment in the UK and in several other countries scores its performance across a broad range of categories, from energy to ecology, and employs measures related to energy and water use, pollution, transport, materials, waste, ecology and management processes. A certified assessment is delivered by a licensed organisation and properly accredited trainers who provide those assessments at various stages in a building's life cycle. The purpose is to provide clients, developers, designers and others with market recognition for low environmental impact buildings, confidence in a building's good environmental performance, savings in running costs and an improved working and living environment.

For classes of buildings outside the types covered by the standard BREEAM scheme, UK buildings are covered by a BREEAM UK Bespoke Assessment and special criteria and a scoring tool are developed, themselves being subjected to quality checks and eventual certification. The BREEAM International Bespoke Assessment operates in the same way and would be applicable in many countries outside Europe, for example, China.

To cite one UK example of a BREEAM UK Bespoke Assessment, the design for Bletchley Leisure Centre in Milton Keynes achieved a BREEAM rating of 79.6% which is 'Excellent'. This building was central to Milton Keynes Council's aspiration to regenerate one of its

Bletchley Leisure Centre, Milton Keynes UK
米尔顿凯恩斯的Bletchley休闲中心

域中所产生的所有生物输入。从空中鸟瞰，整个系统呈"阿米巴虫"的形状，而在地面高度，湿地的曲线边界给人自然的视觉观感。

BREEAM建筑环境性能评估

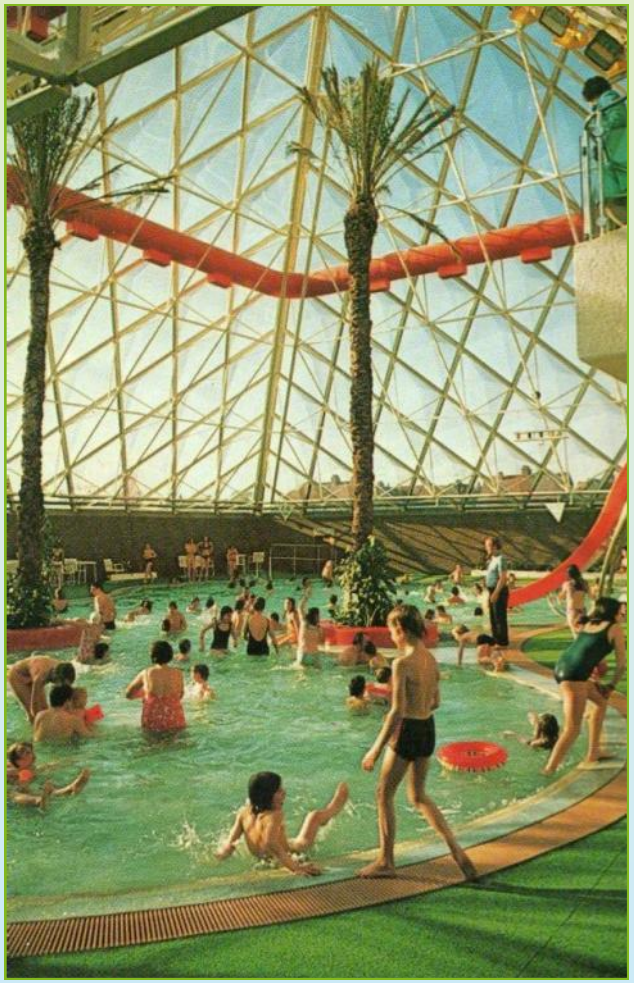
BREEAM（英国建筑研究院环境评估方法）是世界上最权威的建筑环境评估方法与评分认证体系。在1990年提出之后，全世界已有超过20万栋建筑得到了BREEAM认证，超过100万栋建筑进行了评估。这一方法为可持续建筑设计、建设和运营制定了标准，并在世界范围内得到广泛的认可。对于大部分的普通建筑类型，在英国和许多其他国家的BREEAM评估包含对于一系列很广泛的项目的评分，包括能源与水的使用、污染、交通、材料、废物、生态和管理过程。评估认证由具有执照的组织和经过认证的评估师来进行，对于建筑生命周期的各个不同的过程进行评估。评估的目的是为顾客、开发商、设计师或其他群体证明建筑的较低的环境影响、优异的环境表现、较低的运营成本和对于工作和生活环境的改善。

英国针对BREEAM所覆盖的类别之外的建筑类型制定了"BREEAM英国Bespoke评估方法"和特殊标准，并基于此开发了评分工具；这些方法本身也正在接受评估，并需要最后的认证。"BREEAM国际Bespoke评估方法"也应用于类似的情况，但其范围主要是用于欧洲之外的许多国家，例如中国。以BREEAM英国Bespoke评估为例，英国米尔顿凯恩斯（Milton Keynes）的Bletchley休闲中心的设计得

5.3 Ecology—A Water LifeScape　5.3 生态—具有生命活力的水景

older centres and the Council was anxious to pursue a sustainable approach in this key leisure facility with its 25m swimming pool, its sports hall, and its many other functions. To that end, the development incorporated a biomass boiler, increased insulation, and many other environmental measures. The assessor found that it scored well through its:

- Excellent construction management,
- Good access to public transport,
- Good consideration of health and wellbeing,
- Good consideration of energy use and energy management,
- Consideration of materials, including responsible sourcing.



到了79.6%的BREEAM评分，为“优秀”级别。

休闲中心这一建筑是米尔顿凯恩斯市议会为实现其旧城中心的城市更新的重点项目，项目中包括25米的游泳池，体育运动厅和许多其他的功能，市议会希望在这一重点休闲建筑项目中体现可持续的原则；为体现这一原则，项目的建设中使用沼气池燃料的锅炉、强化的隔热措施以及其他许多的环境措施。评估人员认为这一项目在以下的方面得到了很高的评分：

- 优良的建设管理；
- 与公共交通的良好衔接；
- 对于健康和卫生的考虑；
- 对于能源使用和能源管理的强调；
- 对于材料的考虑，包括强调材料选择和使用的责任感。

5.4 An Intermodal Transport Strategy

Introduction

Defined as a “respiration island” of slow-speed rhythms in the heart of a metropolis of 10 million people, our vision for transport management links eco-friendly preservation of a unique scenic site and balanced tourism oriented economic development. Through low carbon mobility “on the lake” and multimodal transport hubs around the perimeter of the lake, we seek the harmonious integration between urban transport and the ecological, economic and social components of this area.

Overall Strategy

Our strategy seeks to:

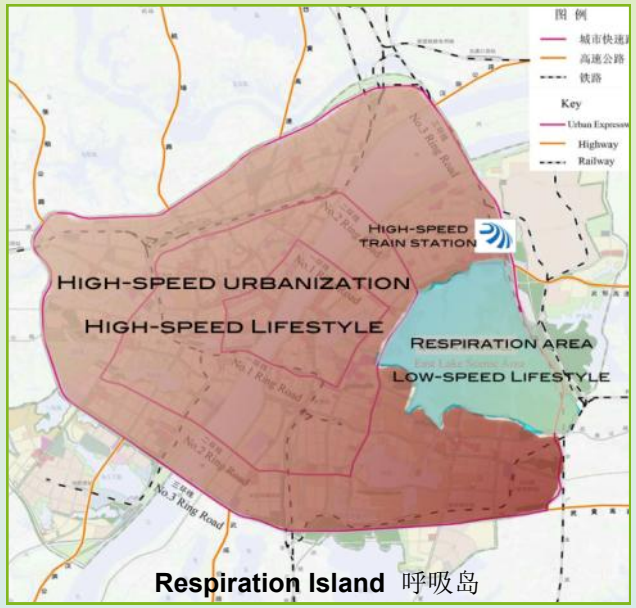
- build within the Scenic Area a comprehensive **slow-speed transport network** as an innovative national demonstration case of **low carbon mobility** and eco-friendly transport;
- create several **multimodal transport hubs** (designed as ‘**urban windows on the Lake’**) around the perimeter of the East Lake, connecting smartly subways, buses, cars, water shuttles, bicycles and pedestrians in a complementary way;
- **combine the transport functions** of multimodal stations **with ecology, tourism development, culture and education**.

Transport strategies by mode:

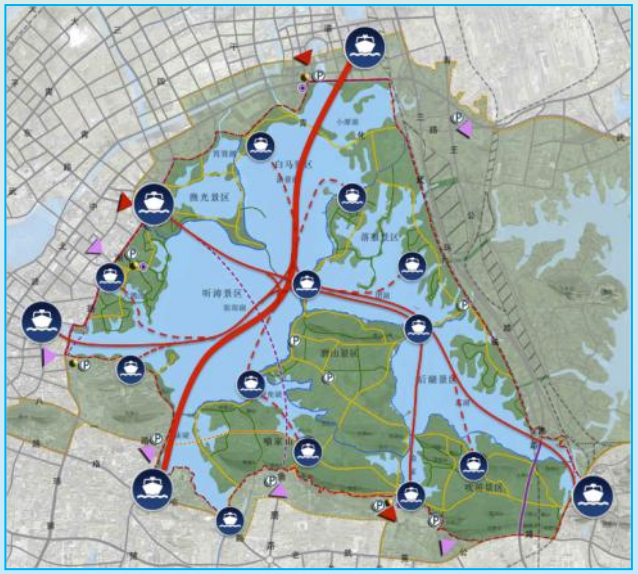
Water Transport Strategy

Six major ambitions define the Water Transport Strategy:

1. Manage the traffic generated by tourism and urban functions within the lake area through the use of eco-friendly (low to zero carbon) water transport;
2. Provide a flexible transport mode, both for visitors and commuters, that redefines the Lake Area as a connection between neighbourhoods, more than a physical barrier;
3. Limit the capacity and the size of the “water shuttles” (boats) to 30-40 seats;



Respiration Island 呼吸岛



Water Shuttle Stations and Main Routes
呼吸岛

5.4 多模式交通战略

简介

东湖生态风景区的交通规划将其定义为一个1000万人的大都市核心地区中的一个慢速、慢节奏的“呼吸岛”。其愿景是将交通管理与风景区的生态保护相联系，达到平衡的旅游业导向的经济发展。通过“湖面上”的低碳出行方式和东湖周边的多模式的交通枢纽的建立，规划希望达到这个区域内城市交通和生态、经济和社会元素的和谐的整合。

整体策略

规划的策略希望：

- 在风景区内建立一个大规模的整体**低速交通网络**，成为国家级的创新型**低碳出行**、生态友好的交通；
- 在东湖周边建设多个**多模式交通枢纽**（设计成为“**湖上城市之窗**”），很好地联系起地铁、公交、小汽车、水上穿梭巴士、自行车和人行交通等，进行互补和衔接；
- 多模式站点将**交通功能与生态、旅游业的发展、文化和教育等进行整合**。

交通战略的各种模式

水上交通战略

水上交通战略有六个主要的目标：

1. 使用生态友好（低碳甚至零碳）的水上交通方式来管理东湖风景区的旅游交通与城市交通；
2. 为游客和通勤者提供灵活的交通方式，让风景区成为社区之间的联系，而不是空间上的分割与障碍；

4. Use renewable energies for this transport mode, i.e. electric and solar power;
5. Create a strategic connection between the High-Speed Train station and the university campuses;
6. Combine the transport functions of water shuttles with leisure and amusement.

Case Study

Bristol Ferry Boat Company, UK

Bristol is both an ancient and a modern city located in the south west of England. A former port, it has a rich maritime history, its most famous personality being the Victorian engineer Isambard Kingdom Brunel whose pioneering iron steam ship the 'Great Britain' was launched here in 1843. Today, this legacy feeds a substantial tourism industry and the Bristol Ferry Boat Company serves many historic sites along Bristol's colourful waterways. In addition to providing a vital function for tourism this company also provides a useful function for business travel, by-passing congested roads.

The re-establishment of the old waterways was quite a story in itself. The old harbours had been decaying and were heavily polluted. By the 1960s, however, there emerged a public mood that the old harbour area should be saved despite no longer being the centre of trade in the city; and that it was a precious resource worth fighting for. From that time, the waterways were retained rather than being built over, new housing occupied the waterfronts and boating enjoyed a renaissance. The present company emerged from that movement. First established in 1977 under another name, it now operates a fleet of eight ferry boats and is available for private hire as well as scheduled services. Those boats form an important part of the tourism experience and the Bristol scene.

Cycling and Walking Strategy

A complete network of cycling and walking routes can

Bristol Ferry Boat Company, UK

英国Bristol轮渡公司

3. 将“水上巴士”（船只）的运量和规模限制为30-40座；
4. 水上交通模式使用可再生的能源，例如电力和太阳能；
5. 通过水面交通建立起高铁站和大学校园之间的联系；
6. 将水上巴士的交通功能与休闲、娱乐功能进行结合。

案例研究

英国Bristol轮渡

Bristol是位于英格兰西南部的一座既古老又现代的城市。这个城市以前是一个港口城市，有着悠久的与大海的联系，其最著名的人物是维多利亚时期的工程师Isambard Kingdom Brunel，其具有开创意义的蒸汽船“大不列颠”正是在1843年在这个城市起航的。今天，这个城市的文化传统培育了具有活力的旅游产业，Bristol轮渡公司的航线联系起了Bristol丰富多彩的水系上的多个历史地块。除了服务于旅游业之外，Bristol轮渡公司同样提供交通服务，成为易拥堵路段的另一种替代式交通方式。

原有水系的恢复本身就是一个很吸引人的故事。老的港口面临衰落，污染严重。到1960年代，公众认为尽管老的港口地区已经不再是城市的贸易中心，但应该对其进行更新与恢复；它是一个值得珍视的资源。之后，城市对于水系进行了保护，而不是在其上进行建设；滨水区出现了大量的住宅建设，而游船等活动再次兴起。在这一时期的这种发展背景下，新的轮渡公司成立。新的公司在1977年建立并

5.4 An Intermodal Transport Strategy

5.4 多模式交通战略

be readily implemented within or alongside the existing traffic and other routes, following the ecological principles of the Lifescape concept. The new network will be for pollution free, zero carbon users (bicyles, e-bikes, pedestrians, electric shuttles) to preserve water quality and limit visual and sound impacts.
Defined as a slow-speed network, the project comprises several complementary components :

- Each route is equipped with suitable signs which indicate the various destinations and the time to be allowed to reach them (by bike or by foot);
- The cycling network has a number of 'cycling stations', nodes for cycle parking, 'bike and ride' (interfaces with the use of public transport) and public bicycles points;
- Separate space would be designated for the pedestrians and cyclists to limit conflicts between these users; we suggest visually different surfaces for the two modes.

The Intermodal strategy

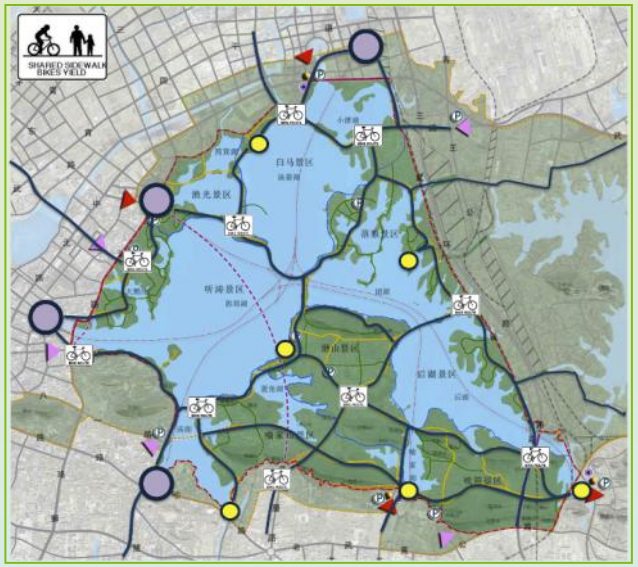
To materialize our visions of sustainable mobility in the East Lake area, we need to place it in its urban context and focus on its interface with the city. Complementary to the usual urban transport modes, we envisage several priority modes and routes for the lake area, within an integrated intermodal approach:

- Public water shuttles
- Pedestrian paths and signs
- Public and private bicycles
- Public bus shuttles

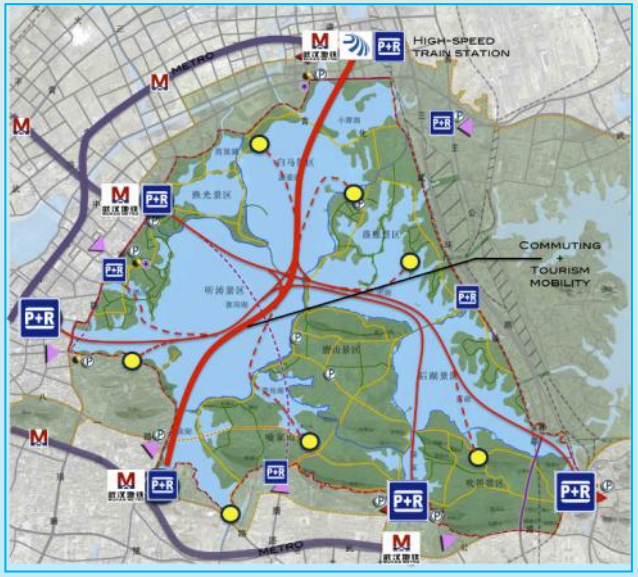
1. Intermodal Approach

Following the considerations of the East Lake Masterplan, transport has to be managed at the interface with the city, providing for collective and individual solutions for transport on one hand, and for parking facilities on the other.

Our intermodal strategy provides several multimodal hubs defined as 'transfer stations' between subway,



Main Bicycle and Pedestrian Greenways
主要的自行车与步行绿道



Intermodal Plan 1. 多模式交通规划

更名，当前公司有8艘轮渡船只，除了提供定时的公共交通服务之外，也对私人客户开放。这些船只成为旅游体验和Bristol城市特色的重要部分。

自行车与人行交通战略

在生态原则和生命景观的概念之下，在现有的交通道路和其他线路以内和周边可以较好的建设完整的自行车和步行系统网络。新的道路网路应该使用无污染、零碳的交通方式（自行车、电动自行车、步行、电动水上巴士）等等来保护水体的质量并减小视觉和噪音的影响。
规划项目的概念是一个低速的交通网络，包含几个互补的组成元素：

- 每一条线路中都进行适当的标识设计，标明各个目的地和到达时间（自行车和步行）；
- 自行车网络中有一系列的"自行车站"，自行车停车的节点，"骑车与搭车"（与公共交通的使用进行衔接）以及公共自行车站点；
- 为步行者和自行车使用者提供独立的空间从而减少两个群体之间的冲突；建议在两种模式的设计中使用不同的视觉形式。

多模式战略

要将可持续交通的愿景在东湖景区中进行物质化的实现，规划将其在放置在城市环境之中，并关注其与城市的交界面。与一般的城市交通模式互补，规划中提出了东湖景区的一系列的优先交通模式和路线，整合成为多模式的系统：

- 公共水上交通

5.4 An Intermodal Transport Strategy

public buses, private cars, water shuttles, bicycles and pedestrians, mainly located at planned or existing metro stations. This intermodality between transport modes seeks to connect different kinds of facilities:

- Metro stations
- Bus station stops
- Park and Ride (P+R)
- Bike and Ride (B+R) and Park and Bike (P+B)

Furthermore, the parking facilities and pedestrian routes will be linked to landing piers serving the water shuttles.

We propose five transfer stations, designed as 'urban windows on the lake', as follows:

1. **Donghu Multimodal Harbour Station**
2. **Xudong Floating Marina**
3. **Fruit Lake Multimodal Station**
4. **Luoyu Road Multimodal Station**
5. **Yujia Lake Multimodal Station**

2. Ecology and Education

Every route or path for each mode is planned as a green corridor and every multimodal station is associated with a local ecosystem in harmony with the Lake.

These ecological paths are an integral component of the Lifescape network.

Green Streets

All the associated roadway is proposed to be designed as green streets with bio-filtering swales. A "green" street:

- Is one component of a larger watershed approach to improving the region's water quality
- Is designed to incorporate a system of stormwater treatment within its right of way
- Minimizes the quantity of water that is piped directly to the lake
- Makes visible a system of "green" infrastructure

Transfer Stations

Green Street Bio-Swale

5.4 多模式交通战略

- 步行路线和标识
- 公共和私人自行车
- 公共巴士

1. 多模式方法

根据《东湖风景区总体规划》，交通规划中应考虑与城市的交界面，一方面满足公共和私人的交通出行去求，一方面满足停车等静态交通需求。

多模式的交通规划战略中提供给了多种模式的交通枢纽，即地铁、公共汽车、私人小汽车、水上巴士、自行车和步行之间的"换乘站"，主要结合现有和规划的地铁站点进行布置。这种跨交通模式的方式希望联系起不同设施：

- 地铁站
- 公共汽车站
- 停车与搭车（P+R）
- 骑车与搭车（B+R）和停车与骑车（P+B）

另外，停车设施和步行道应该与水上公交码头进行联系。

规划中布置了5个换乘站点，设计成为"东湖城市窗口"，各站点如下：

1. 东湖多模式港湾站点
2. 徐东浮动码头
3. 水果湖多模式站点
4. 珞瑜路多模式站点
5. 喻家湖多模式站点

- Incorporates the stormwater system into the aesthetics of the community
- Maximizes the use of street tree coverage for stormwater interception as well as temperature mitigation and air quality improvement
- Requires a more broad-based alliance for its planning, funding, maintenance and monitoring [Metro, Oregon USA]

Case Study

Green Streets, Metro, Oregon USA

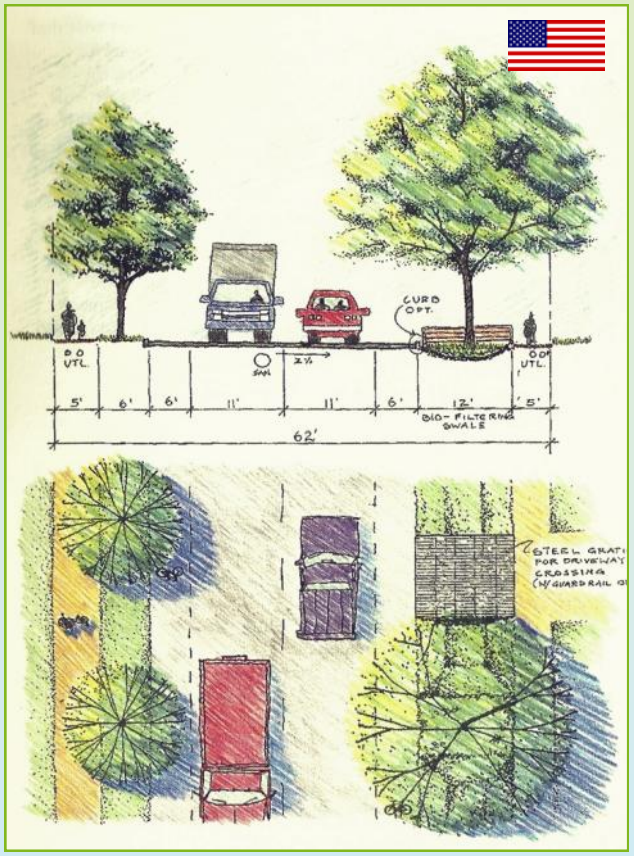
Metro is a regional government serving 1.3 million people in the Portland Metropolitan Area of Oregon in the United States. Metro prepared a ***Green Streets Handbook*** that communicates basic stormwater management concepts, cases study examples of how this approach has been successful elsewhere, practical design solutions and methodologies, and a strategy for implementation of “green” streets.

The multimodal transfer stations along the water would integrate habitat islands supporting local ecosystems. These landscaped components, to be surrounded by public spaces, would be designed to provide educational awareness of the lake and its environment for tourists and other visitors, including children.

3. Economic Integration

To achieve economic sustainability for these multimodal transfer stations, a multifunctional approach must underly each local project. To succeed, transport stations have to be identified as destinations and not solely as transfer points. Usually, urban transport hubs are combined with real estate development to generate income for the investor (e.g. Hong Kong transport authority.)

In the case of the East Lake, the economic strategy aims to implement some combined tourism functions like marina, museum, restaurant, greenhouse. Tourism and transport functions nourish each other in terms of



Green Street

2. 生态与教育

每一种模式的线路和每一个节点都应该规划为绿色走廊，而每一个多模式的站点都应该与东湖的本地生态系统进行整合。

这些生态廊道都是生命景观网络的有机组成部分。

绿色街道

景区的所有道路都设计成为结合人工生态湿地过滤系统的绿色街道。绿色街道的特征包括：

- 是更大范围的流域的组成部分，从而提升区域的水体质量
- 其设计中包含雨水处理系统
- 最小化直接通过管道排入东湖的水量
- 揭示“绿色”基础设施
- 将雨水系统整合到社区的景观审美之中
- 最大化街道行道树的使用进行雨水的截取、温度调节以及空气质量的提升
- 在其规划、经济支持、维护和监管方面需要建立更为广泛的协作

案例

美国俄勒冈Metro的绿色街道

Metro地区是美国俄勒冈波特兰大都市区的一个本地地区政府，下辖130万人口。Metro地区制定了《绿色街道手册》，其中提出了基本的雨水管理概念，以及此方法在其它地区应用的成功案例，实际的设计解决方案和设计方法，“绿色”街道的实施战略等等。

incomes and trips.

This combined approach provides the impetus to create and sustain our proposed "urban windows to the Lake", as metropolitan landmarks.

4. Phasing

The phasing of implementation of the P+R, B+R and water shuttles stations is dependent upon the construction phasing of metro stations. However, Donghu Station, Xudong Marina and Yujia Lake station can be developed in the first phase, combined with tourism oriented commercial development. Three scenarios of route networks (short-term, mid-term and long-term) are to be proposed to follow the progressive development and of tourism spots.

Green Street Planters 绿色街道的植物种植

Circulation Plan 道路交通规划

滨水的多模式交通站点纳入了促进本地生态系统的栖居地岛屿。这些景观构成元素周边结合公共空间，其设计还强调发挥教育功能，提升游客、居民尤其是儿童对于东湖生态环境的意识。

3. 经济的整合

为达到多模式换乘站的经济可持续性，每一个本地项目中都强调采用多功能的方式。每一个交通站点都应被看作目的地而不仅仅被看作换乘点。通常，城市交通枢纽往往与房地产项目开发进行结合从而为投资者提供收入（例如香港交通署所采用的方式）。

在东湖景区规划项目之中，经济战略的目标是结合多种旅游功能，例如水上游乐场、博物馆、餐馆、植物温室等。旅游和交通功能在出行和经济创收方面都互相促进。

多功能结合的方式可以创造和支持规划所提出的"东湖城市之窗"的概念，并成为城市地标之一。

4. 分期

P+R，B+R和水上巴士站点等的分期实施依赖于地铁站点的建设进度。然而，东湖站、徐东码头站和喻家湖站等站点可以在第一期中进行建设，并与旅游导向的商业开发进行结合。随着地铁的逐步建设和各旅游景点开发，规划对交通线路网络进行了短期、中期和长期的情境规划。

5.5 Planning and Design

Planning and design for the Wuhan East Lake Scenic Area has 3 major elements corresponding to the themes and main insights:

- **Experiential**—Tourism Development
- **Sense of Place**—Environmental Preservation & Enhancement
- **Connected**—Intermodal Transportation

These themes are integrated with an overarching emphasis on ecological values and principles. In addition to these themes, planning follows 3 parallel strategies:

1. Concept-Driven Design
2. Imagery, Identity and Branding
3. Polycentric Development

Concept-Driven Planning and Design

The East Lake Story

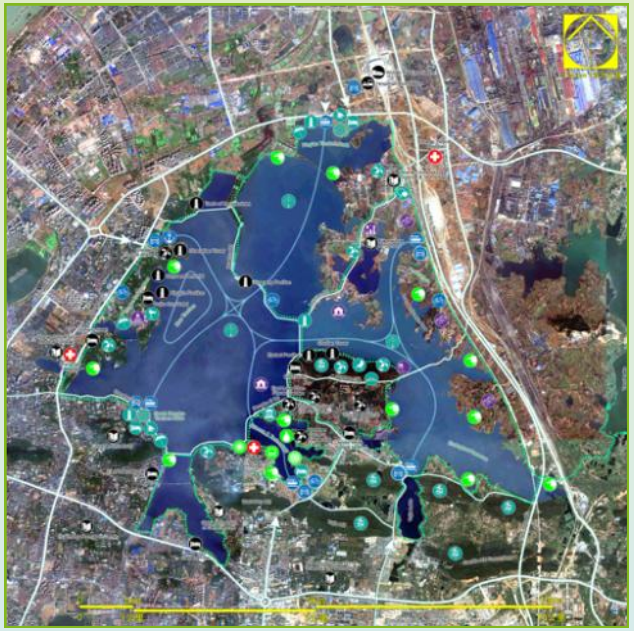
The East Lake must have a cohesive and compelling concept that is easily understood and shared—a story. This story must be meaningful and—for residents and visitors—memorable. As the largest lake within a city, the East Lake story is about balance between man and nature, and the story should be about harmony.

East Lake Themes

The East Lake may have a number of themes such as Chu culture, heritage farming, aquatic scenery, and these should enhance the overall story. The themes must be complementary and integrated through spatial planning and urban design.

East Lake Setting and Characters

The setting for the story must support and enhance the themes. Specifically, urban design, architecture and landscape architecture must follow the thematic nature of the specific place. For example, all architecture within a cultural tourism site must reflect the appropriate styles to that era.



Concept Plan 概念规划

Sword of Gou Jian, Chu Culture
楚文化中的越王剑

5.5 规划与设计

东湖风景区的规划与设计包含3个主要的元素，对应规划的各个主体与要点：

- **旅游体验**——旅游发展
- **场所感**——环境保护与提升
- **联系性**——多模式交通

这些要点都在生态价值和生态原则的框架之下展开。除了这些主体之外，规划遵循以下三个平行的策略：

1. 概念推动的设计方式
2. 意象、个性与品牌
3. 多中心发展

概念推动的设计方式

东湖的故事

东湖风景区规划应该具有统一和有力的概念，易于让人们理解和分享。它应该是一个故事——富有意义的故事，让居民和游客记得住的故事。作为最大的城市内湖，东湖讲述的是达到人与自然的平衡、达到和谐的故事。

东湖的主题关键词

东湖有着多个主题与关键词，例如楚文化、传统农业、水景观等，这些都可以对东湖的故事进行补充完善。这些关键词应该通过空间规划和城市设计相互补充与整合。

东湖的环境与特征

东湖的故事所在的背景与设定应该能够提升和突出其各个不同的关键词。确切而言，城市设计、建筑

Imagery, Identity and Branding

This approach—story, theme, design—must create a unique sense of place that makes the East Lake a significant regional and international tourist destination.

Imagery

East Lake imagery is a combination of natural scenic views, dispersed landmarks, and random tourism attractors. Individual vistas and sites are extraordinary, but there is not a collective image for the entire East Lake. This is partially due to its expansiveness, but also to the lack of a single “story”. Concept-driven planning and design must preserve and create imagery that is complements and enhances the overall image of the East Lake.

Identity

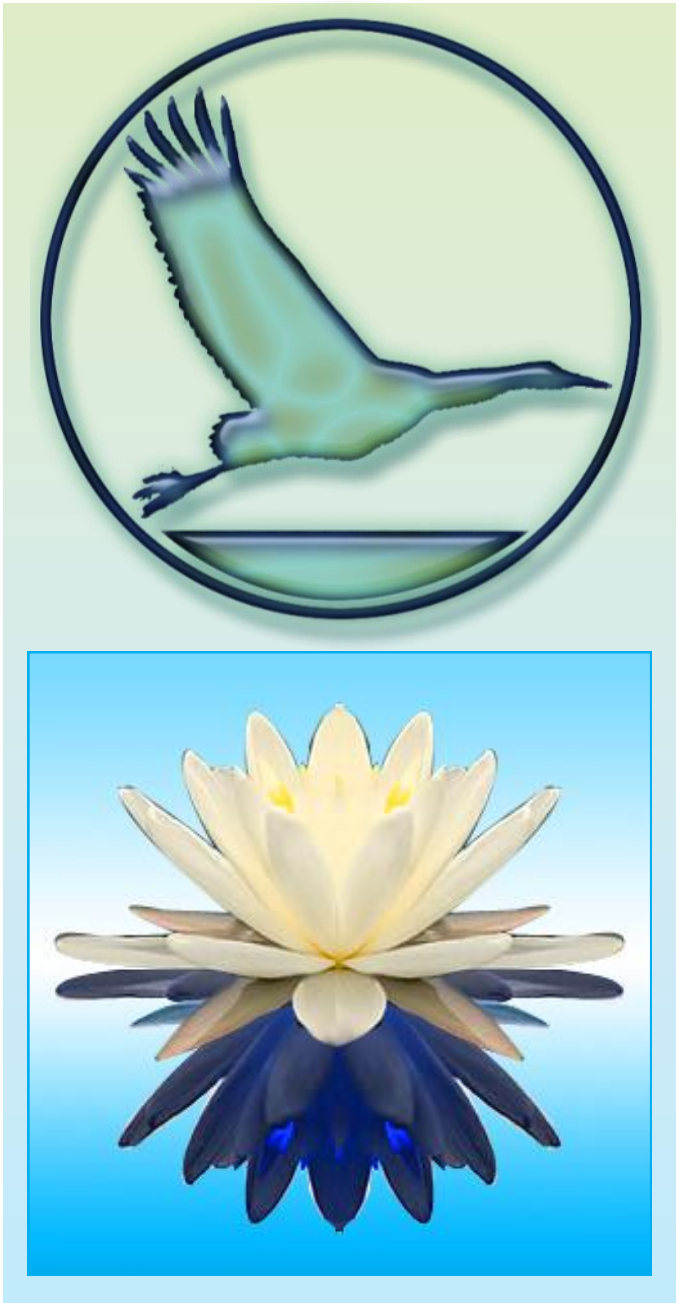
The East Lake must establish a unique and valuable identity based on its sense of place. The identity of East Lake is what distinguishes it from other tourism destinations and is critical for tourism development and investment.

Branding

To understand branding, it is important to know what brands are. A brand is the idea, image or “story” of the East Lake that tourists connect with, by identifying the name, logo, slogan, or design. Branding is when the idea or image of the East Lake is marketed so that it is recognizable by more and more people, and identified with a certain sense of place when there are many other destinations offering the same experiences. An essential element of branding is a symbol, logo or “mark” that can be used for consistent information and promotion for the East Lake.

East Lake Mark

The East Lake Scenic Area would benefit from a logo or “mark” that is easily recognized as a symbol for the area. This mark would be used for all lake-related



与景观建筑等都应该突出特定场所的特征。例如，一个文化旅游地块中所有的建筑都应该反映出地块中特定时代的建筑风格。

意象、个性与品牌

由故事提取主题与关键词，进而反映为设计手法，从而创造出独特的场所感，让东湖成为一个重要的区域与国际旅游胜地。

意象

东湖的意象是由自然景观、布置于景区的各种地标和随机分布的各种旅游景点结合构成。东湖景区内现有多个优美的景点与地块，但是整个东湖景区缺乏一个总体的形象。其主要原因是因为景区规模巨大，同样也是因为景区没有一个总体的“故事”。概念推动的规划和设计应该保护和创建东湖的新意象，对东湖的总体形象进行提升和补充。

个性

东湖应该基于其场所感建立起一个独特和有价值的身份与个性特征。东湖的个性是其区别于其他旅游景点的特征，对于旅游发展和投资十分重要。

品牌

要进行品牌化，首先我们要理解什么是品牌。东湖的品牌是游客用以与东湖相联系的理念、形象和“故事”，其表现手法可以是名称、Logo、标语口号或设计。品牌化意味着对于东湖的理念和形象进行市场化，让更多的人认识和理解，从而将其与其它的“千人一面”的景区区别开来，赋予其独特的

publications, products and promotions and become part of the branding strategy. The mark should incorporate an iconic symbol representing a natural or cultural feature that is unique to the area; that is easily replicated in various media; and is easily recognized by international as well as local visitors. Typical marks include local landmarks, charismatic megafauna, cultural icons, and other items associated with the sense of place.
Some examples include:

- cherry blossom by lake
- crane over lake
- lotus blossom on lake
- plum blossom by lake
- tower by lake
- village on lake
- wooden boat on lake

The name itself may be part of the design contest. “East Lake” is a generic rather than specific site description, and “Lake Wuhan” or another site-specific name would be more ideal for identity and branding.

Case Study

Logo Contests, Branding & Design Competitions

“The Big Boat of Humour” Lodz, Poland
The **Big Boat of Humour** is an international design contest by the City of Lodz, Poland. The contest is held annually with a different theme each year and receives entries from around the world.

Polycentric Development

The East Lake contains almost 70 square kilometers of lake, shoreline, natural and urbanised areas. A polycentric strategy provides an ideal approach to balancing preservation with development. This technique allows for concentrated tourism that will provide the funding for conservation and enhancement of natural areas. In keeping with the principles of

场所感。品牌化的核心要素之一是设计一个标志、logo或者“符号”，在东湖的信息传达和景区宣传中进行统一的使用。

东湖的符号

东湖景区应设计一个易于辨识的logo或符号。这一符号应该用于所有与景区相关的出版物、产品和宣传之中，从而成为品牌化战略的一部分。东湖的符号中应该纳入一个标志性的图案，代表东湖地区独特的自然与文化特征；可以在不同的媒介中进行使用；对于国内外游客而言都容易辨识。典型的符号包括本地的地标、代表性动植物、文化标志和其他与场所感紧密相关的事物：
典型的案例包括：

- 湖畔樱花
- 鹤舞东湖
- 湖上莲开
- 湖滨梅花
- 湖映高塔
- 湖依村落
- 湖面泛舟

景区的命名本身也可以作为设计竞赛的一部分。“东湖”这一名称是一个笼统的而非对于具体地点的描述，而“武汉之湖”等更强调所在地点的名称对于景点的个性化与品牌化而言更为理想。

案例研究

Logo设计，品牌化与设计竞赛

ecotourism, this approach also supports the local economy.

Important Areas & Nodes

The East Lake is comprised of four general tourism areas:

- Northern Urban Tourism
  This is are is highly urbanized and adjacent the high speed rail and transit station.
- Southern Institutional and Cultural Tourism
  This area has numerous educational and research institutions as well as the Moshan tourism area.
- Eastern Ecotourism
  The eastern edge of the lake is primarily agricultural and natural ecosystems.
- Western Commercial Tourism
  This western edge of the lake has numerous recreational, entertainment and conferencing facilities.

Within these areas, five planning areas have been identified for focused development programmes with corresponding proposed multimodal transportation nodes:

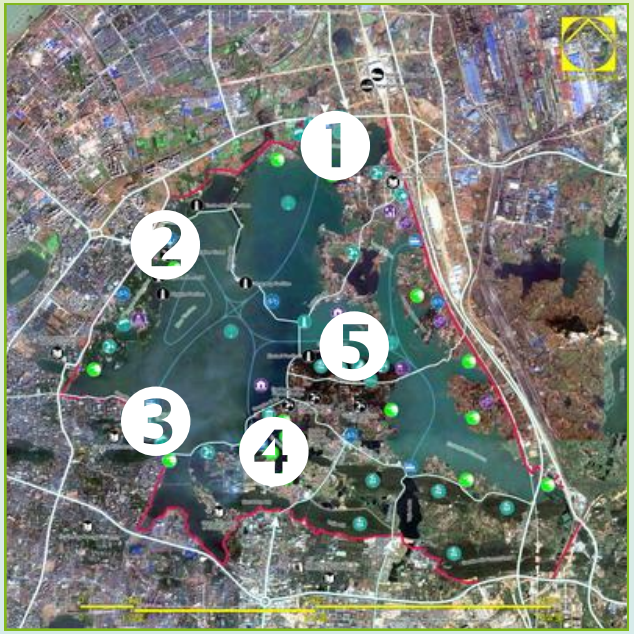
1. **Baima Tourism Area**
2. **Tingtao Culture and Sports Area**
3. **South Donghu Tourism Area**
4. **Science and Technology Area**
5. **Moshan Tourism Area**

Each node has a specific theme and associated design contributing to the overall image, identity and brand for the East Lake.

1. Baima Tourism Area

Baima—White Horse

The Baima Tourism Area is located at the northern most edge of the East Lake Scenic Area next to the proposed Donghu Multimodal Harbour Station connecting with the High-Speed Rail



Planning Areas

Water Feature, Geneva Switzerland

波兰Lodz“幽默的大船”设计竞赛

“幽默的大船”设计竞赛由波兰的Lodz市组织，每一年举办一次并有不同的主题，从全世界征集设计作品。

多中心发展

东湖有着70平方公里的湖面、岸线、自然和城市化地区。多中心的策略是平衡保护与开发的理想方式。这种方式既可以实现高强度的旅游开发，其产生的经济效益又反过头来可以提升对于自然区域的保护与提升。在生态旅游原则的框架之下，这种开发方式可以改善本地经济。

重要地区与节点

东湖景区规划中包含四个主要的旅游地区：

北部城市旅游区

这一区域高度城市化，邻近高铁站与公共交通站点

南部科研机构与文化旅游区

本区域有着多个教育与研究机构以及磨山风景区。

东部生态旅游区

景区的东部边缘地区主要为农业与自然生态系统。

西部商业旅游区

景区的西部边缘地区有着大量的休闲、娱乐和会议设施。

在这些区域内，5个规划片区强调与多模式的交通节点进行整合发展，包括：

1. 白马景区
2. 听涛文化与体育景区

Station. The Baima Tourism Area theme is urban recreation and would be organised around the following urban amenities:

- **Donghu Multimodal Harbour Station**
  This tourism area is directly connected with the High-Speed Railway and Transit Station, and provides an ideal centre for park and ride facilities. The site is also one of the major water transportation nodes with a marina for water shuttle service.
- **Baima Festival Street**
  This urbanised area is ideal for a festival street for major celebrations and municipal events. The festival street can link the transportation stations with a public square and recreation areas.
- **Great Maze Public Square**
  In conjunction with a festival street, a public square creates a distinctive focal point for seasonal, holiday and programmed events. The surface pattern of the square could be designed as a huge maze which would be entertaining for children and have applications for specific events.
- **Public Recreation Area**
  This would be one of several sites that is appropriate to create a public beach with imported sand and landscape features.
- **Baima Area Gateway Landmark**
  Each of the tourism areas should have a clearly defined identity with complementary urban design elements. This tourism area would be ideal for a significant water feature such as fountains within the lake. The Lake Geneva Fountain is an example of this kind of water feature.

2. Tingtao Culture and Sports Area

Tingtao—Listening to Surging Waves

The Tingtao Culture and Sports Area has a number of significant cultural heritage sites, recreation areas and meetings, incentives, conferences and

3. 东湖南部景区
4. 科技景区
5. 磨山景区

每一个节点都有特定的主题及相应地设计手法，从而促进东湖总体的意象、个性与品牌化的建立。

1. 白马景区

白马景区位于东湖景区的最北端，毗邻规划的东湖多模式港湾站，联系起杨春湖高铁站。白马景区的主题是城市休闲，其中提供如下城市服务设施，并围绕其展开建设：

- **东湖多模式港湾站**
  这一片区与高铁站和换乘站直接联系，成为停车场和公共交通设施的理想中心。此地块也是主要的水上交通节点之一，建设重要的水上巴士服务码头。
- **白马欢庆街**
  这一片区高度城市化，适于建设节庆活动街道，作为主要的庆祝与城市活动场所。欢庆街可以将交通站点与公共广场及休闲场所相互联系。
- **大迷宫公共广场**
  公共广场与欢庆街相结合，成为节假日与其他庆祝活动的独特场所。广场的铺地图案设计为一个巨大的迷宫，从而吸引儿童的游玩，同时在特定的时间作为活动场所。
- **公共休闲区域**

events (MICE) facilities. This area corresponds with the proposed Xudong Floating Marina intermodal facility. This theme of culture and sports would be organised around the following urban amenities:

- **Tingtao Internodal Transportation Station & Xudong Floating Marina**
  This tourism area has numerous cultural and MICE features, and provides an ideal centre for park and ride facilities. The site is also one of the five proposal major water transportation nodes with a floating marina for water shuttle service and organised “blue tourism”. An example of this would be a proposed annual International Dragon Boat Race.

Case Study

Soul Flora, Seoul Korea

Seoul has laid the fondation of the world’s first artificial floating islands and marina. Named Soul Flora, the project is a group of three interconnecting islets conceived as Marina and hubs for culture, entertainment and sports, based on the Hangang Riverfront. Open to the public since September 2011, the project is estimated to have cost $84 million. With their combined area of ten thousand square metres, each islet is nchored to concrete blocks on the bottom of the river.

The project combines several metropolitan functions to become one of the most relevant landmarks of the city. Beside their Marina and water transport function, the three islands and their pedestrian connections are designed to surround and protect ecological areas on the water.

These three separate islands feature a convention hall, an entertainment hall, sports facilities, including a marina, restaurants, shops and a floating stage called Media Art Gallery designed with a massive LED screen against beautiful Hangang backdrop for multimedia shows and other events.

Dragon Boat Race
赛龙舟

Soul Flora, Seoul Korea
韩国首尔灵魂之花

这一区域建设公共沙滩，使用引进的砂子和营造异地的景观特征。

- **白马区域景观地标**
  每一个旅游区都应该有一个明确定义的个性特征，同时使用城市设计元素进行表现和突出。东湖旅游区是理想的水景观区域，例如在湖面上建设大型的喷泉，例如日内瓦湖的喷泉就是这种水景观的代表作品。

2. 听涛文化与体育区

听涛文化与体育景区之中有数个重要的文化遗产地块、休闲区域和会展设施。这一景区与规划的徐东浮动码头呼应和互补。文化和体育的主题围绕如下城市公共服务设施而展开：

听涛多模式交通站与徐东浮动码头
这一片区内有着多种文化与会议设施，同时是停车设施与公交设施的理想中心。这一地块同时也是规划中5个主要的水上交通节点之一，其中设置浮动码头、水上巴士和“蓝色旅游”项目。典型的蓝色旅游案例是规划中每年举办的国际龙舟节。

案例

韩国灵魂之花

韩国首尔建设了世界上的第一个人工浮岛与码头，名为“灵魂之花”。项目位于汉江之滨，由三个相互连接的小岛组成，形成码头和文化、娱乐和体育

- **Tingtao Meetings, Incentives, Conferences, Expositions (MICE) Centre**
  This planning area already has extensive conferencing facilities and may be expanded to integrate with the cultural and sports programs proposed in this report.
- **Tingtao MultiMedia Centre and Movie & Television Park**
  In coordination with the MICE Centre, a Multimedia Centre, Movie and Television Park could be established. Enhance and upgrade the mixed function of existed traditional Chinese architecture groups, like Chutian Tower, Rope Bridge and Fishing Boat, etc., in Luoyan Scenic Area close to the Happy Valley Amusement Park. Connect the scattered attraction spots in the form of pavilions, balcony and cabinet. Build some photograph studios based on southern China characteristics, traditionally Chu culture. These studios could be used for the daily visit and self-photographing for local citizens.

  Promoting scenic films about the East Lake via internet media, like Youku, Douban and Youtube, inviting citizens to participate in the reconstruction of East Lake Park, holding “Visual East Lake” film festival, creating a sense of psychologically spatial connectivity through the witness of the transformation process of the big East Lake area.

  Reconstruct and reuse the residential buildings in the scenic villages and put them into the functions of post-production of film and television, tourism service, which could not only bring certain amount of economic benefit to the local residents, but also elevate the ecological pressure caused by over construction in scenic areas.
- **Public Recreation Area**
  This would be one of several sites that is appropriate to create a public beach with imported

Soul Flora, Seoul Korea

中心。项目预计总投资8400万美元，从2011年9月对公众开放。人工岛总面积1万平方米，每一个小岛的基础都建设于河床的混凝土基础之上。
项目整合了诸多城市功能，从而成为城市最显著的地标之一。除了其城市休闲码头和水上交通功能之外，三个岛屿及其之间的联系步道的设计是为了围合和保护水体上的生态区域。
这三个岛屿中包含一个会议中心，一个娱乐中心和体育设施，包括城市休闲码头、参观、商店和浮动舞台，称为“媒体艺术中心”，设有大型的LED屏幕，映衬在美丽的汉江风光与背景之下，进行多媒体的展映和其他活动的举行。

听涛会议中心

听涛景区中已有大量的会议设施，可以与本规划中提出的文化与体育设施进行扩建和整合

听涛多媒体中心与电影电视公园

作为会议中心的补充，规划建设听涛多媒体中心与电影电视公园。与现有的中国传统风格建筑群的功能进行结合和提升，包括楚天台，悬索桥和垂钓船，紧邻欢乐谷的落雁景区等。用亭台楼阁等联系起各独立的景点。以中国南方的建筑风格或传统的楚文化风格建设照相亭等建筑。照相亭可以用作游客日常游览和自助拍照服务等功能使用。
使用优酷网、豆瓣和Youtube等网站对东湖景区进行风光片视频等形式的宣传，邀请市民参与东湖公园重新建设过程；举办“视觉东湖”电影节，通过对于大东湖地区变革过程的见证建立起空间心理联系性。
对景区内城中村的住宅进行重建、改造或置换利

sand and landscape features.

- **Tingtao Gateway Landmark**
  Each of the tourism areas should have a clearly defined identity with complementary urban design elements. This tourism area would be ideal for a significant water feature landmark to be used in conjunction with regattas, boat races and other aquatourism programmes.
- **Tingtao Island Traditional Shoreline Market**
  The Tingtao Island would be an ideal location for a traditional shoreline market with specialty shops and restaurants that correspond to Wuhan crafts and cuisine.

Case Study

Suzhou Market Street, Beijing, China

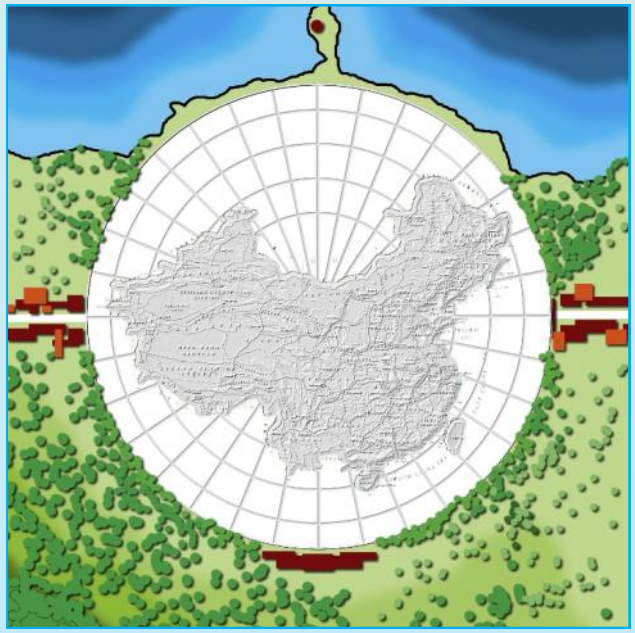
The Suzhou Market Street is a reproduction of a traditional Chinese riverfront market in Suzhou City during the Qing Dynasty. Today the site is a tourist attraction within the Forbidden City and includes more than 60 shops extending about 300 metres.

3. South Donghu Tourism Area

The South Donghu Tourism Area is in close proximity to several universities and research institutions. This area would be organised around the following urban amenities:

- **Luoyo Road and Fruit Lake Multimodal Transportation Stations**
  This planning area is in between two significant proposed multimodal transportation stations, and may focus on transit and water shuttle services.
- **South Donghu Festival Street**
  As with the Baima Tourism Area, this urbanised area is ideal for a festival street for major celebrations and municipal events. The festival street can link the transportation stations with a public square and recreation areas.
- **Great China Map Public Square**

Suzhou Market Street, Beijing, China



用，作为定影和电视的后期制作基地、旅游服务等功能，这些不仅会为本地居民带来经济效益，还可以缓解景区过度开发所造成的生态压力。

公共休闲区

这一区域也是适合建设公共沙滩的片区之一，使用引进的砂子和营造异地的景观特征。

听涛景观地标

每一个旅游片区都应该有一个明确定义的个性特征，同时使用城市设计元素进行表现和突出。听涛景区是理想的结合划船比赛和其他水上旅游项目营造水景观的区域。

听涛岛传统湖岸市场

听涛岛是用来开发出售武汉传统工艺品的商场和供应武汉当地菜的餐馆的理想地址。

案例分析

北京苏州街市

北京苏州街市是于清朝年间仿造苏州市传统的中国河边市场而建成的。如今，这个有60多家店铺长约300米的街市已成为故宫内的一个重要景点。

3. 东湖南部旅游区

东湖南部旅游片区邻近大量的大学校园和科研机构。这一片区应该围绕如下城市公共服务设施组织和展开：

珞瑜路与水果湖多模式交通站点

这一规划区域位于两个重要的多模式交通站点之间，主要关注的是提供公共交通与水上巴士服务。

In conjunction with a festival street, a public square creates a distinctive focal point for seasonal, holiday and programmed events. The south shore of the East Lake is an ideal location for a public open space with scenic views of the lake and hills. This concept uses the plaza surface as a map of China with rivers in backlit blue glass; cities in backlit clear glass; and text with embedded brass. Wuhan will be the center of the plaza which could be designed convex, concave, multi-level or relief. Programmed events could be either centered in the plaza or to the north side with the lake as a backdrop. Landscaping around the perimeter of the circular plaza could be programmed for seasonal color; reflect Feng Shui themes; create view corridors or other effects. A view tower or platform on the south side of the plaza could provide an overview of the map and also be used for plaza events and performances. The scale of the plaza will allow a wide spectrum of future environmental art installations.

Case Studies

Grand Square, Krakow, Poland

The largest square in Europe also happens to be the best. Rynek Glowny ("Grand Square") is so dynamic, it pulls you in from anywhere in the city. All roads in Krakow lead you here, and the closer you get, the livelier the streetlife becomes. There is so much going on in this square–at least twenty different attractions at any given time… Project for Public Spaces

Williams Square, Colinas, Texas, USA

The Mustangs of Colinas is one of the most extraordinary examples of collaborative design combining a public open space with public art, water features, architecture and landscaping.

- **Public Recreation Area**
  This would be one of several sites that is

东湖南部欢庆街

如同白马旅游景区，这一片区也是高度城市化的，适合建设节庆街道场所，庆祝主要的节假日与城市活动。欢庆街联系起交通站点、公共广场与休闲区域。

大中国版图公共广场

结合欢庆街，规划中提出建设一个公共广场，作为节假日、重要庆祝活动的场所。东湖景区的南部地区是建设此广场的理想位置，同时还可以提供有山有水的景观。设计中将广场的铺地图案设计为中国地图，河流水体使用背光蓝色玻璃制作；城市使用背光透明玻璃制作；文字使用黄铜镶嵌制作。武汉位于广场的图案构图中心，使用下限、凸出、多种高度或浮雕等方式进行设计。各种活动可以在广场的中心进行或在广场的北部进行，将湖面作为背景。圆形广场周边的景观处理方式应该考虑不同的季相与色彩；借鉴风水的概念；创建视觉廊道或其他视觉效果。广场南部规划建设观景塔或观景平台从而可以从较高处全景观赏地图广场，同时也可以用作广场活动和表演活动。广场的较大规模也为未来布置环境艺术小品提供空间。

案例研究

波兰Krakow大广场

波兰Krakow大广场是欧洲最大也是最优秀的广场之一。此广场充满活力，不管游客在城市哪个地方，都会被吸引到广场中来。Krakow的所有道路都通往大广场，越靠近广场，街道生活越具有活力。城市广场上充满了各种活动，任一时段都有至少二十种

appropriate to create a public beach with imported sand and landscape features.

- **South Donghu Gateway Landmark**
  Each of the tourism areas should have a clearly defined identity with complementary urban design elements. This tourism area would be ideal for a significant water feature such as fountains within the lake. This site is the southern complementary site to the Baima Tourism Area, and a matching gateway landmark could unify the two areas.

4. Science and Technology Area

The Science and Technology Area is centered on the small lagoon in south central East Lake [Eastern Yujia Hill]. This area is proposed to be themed on advanced ecological science and technology specifically related to lakes. There are a number of proposed research institutions, administrative centres and tourism venues proposed for this area:

- **Luoyo Road and Yujia Lake Multimodal Transportation Stations**
  This planning area is in between two significant proposed transportation stations and may adopt transit-oriented development principles.
- **Green Technology Centre**
  The Green Technology Centre is a proposed facility for coordinating research, education and administration aspects of the East Lake. This project is described in more detail in section 5.2 Ecology.
- **Water Quality Centre**
  In conjunction with the Green Technology Centre, a Water Quality Centre would have responsibility for monitoring water quality and developing programs for lake restoration.
- **World Climate Greenhouse**
  This proposal envisions a glasshouse that encompasses a variety of ecosystems related to the East Lake and Wuhan region. The World

Royal Greenhouses of Laeken, Brussels Belgium

比利时布鲁塞尔Laeken皇家温室

不同的活动在进行。

美国德克萨斯Colinas威廉姆斯广场

美国德克萨斯Colinas威廉姆斯广场上的野马雕塑景观是最成功的合作式设计的案例之一，其中结合了公共开放空间、公共艺术、水景观、建筑与植物景观处理手法等。

公共休闲区

这一区域也是适合建设公共沙滩的片区之一，使用引进的砂子和营造异地的景观特征。

东湖南部景区景观地标

每一个旅游区都应该有一个明确定义的个性特征，同时使用城市设计元素进行表现和突出。南部景区是理想的水景观区域，例如在湖面上建设大型的喷泉。这一地块是白马景区在南部的呼应和补充，可使用呼应的景观地标来统一两个景区。

4. 科技景区

科技景区围绕东湖中心南部 （喻家山东面）的小水面展开。这一片区的主题是先进的与湖泊相关的生态科学与技术。规划中建议设立一系列的研究机构、管理中心和旅游景点：

珞瑜路与喻家湖多模式交通站点

这一规划片区位于两个重要的规划多模式交通站点之间，并可采用公共交通导向的开发原则。

绿色技术中心

规划中的绿色技术中心是协调东湖研究、教育与管理等各因素的设施。这一项目在5.2节生态部分有较

Climate Greenhouse is a research, education and tourism development that complements the theme of the Science and Technology Area.

Case Study

Royal Greenhouses of Laeken, Brussels Belgium

The Royal Greenhouses of Laeken (in Dutch: Koninklijke Serres van Laken, in French: Serres Royales de Laeken), are a vast complex of monumental heated greenhouses in the park of the Royal Castle of Laeken in Brussels and one of the major tourist attractions of the city.

- **East Lake Regenerative Centre**
  The East Lake Regenerative Centre is a focal point for energy and resource management of the East Lake Scenic Area. Innovative technologies for energy (i.e. solar, biomass), recycling, water reclamation, temperature moderator (urban heat island cooling), and many others are integrated and administered by this facility. The Regenerative Centre focuses on East Lake Scenic Area infrastructure and coordinates with the Green Technology Centre for innovative technology and practices.

5. Moshan Tourism Area

Moshan—Millstone Hill

The Moshan Tourism Area has a wealth of cultural and ecological resources that can collectively form a theme of “city and nature harmony” as discussed in Section 5.3 Ecology. In addition to the existing cultural heritage development and natural resources, this area accommodates the following proposed ecotourism amenities:

- **Ecosystems Museum**
  The proposed Ecosystems Museum includes

Hong Kong Park Aviary
香港公园观鸟园

Auerworld Palace
德国Auerworld树宫

详细阐述。

水体质量中心

结合绿色技术中心，规划中提出建设水体质量中心，用以监管水体质量和研究制定湖泊生态恢复项目。

世界气候温室

规划中提出一个温室项目，其中包含一系列与东湖与武汉区域相关的生态系统。世界气候温室是一个结合研究、教育与旅游的项目，从而突出与提升科技景区的主题。

案例

比利时布鲁塞尔Laeken皇家温室

皇家温室是位于比利时布鲁塞尔的皇家Laeken城堡的公园之中的一个大型的温室集合体片区，也是城市中最重要的旅游景点之一。

东湖生态恢复中心

东湖生态恢复中心是东湖景区能源与资源管理的中心。使用创新性的技术手段并进行整合，如能源技术（例如太阳能、生物质能源）、循环利用技术、水资源回收技术、温度调节技术（城市热岛效应的降低）等等。东湖生态恢复中心所关注的重点是东湖景区的基础设施，并与绿色技术中心进行协调整合，开发创新技术并进行相关实践。

5. 磨山景区

磨山

磨山景区具有丰富的文化与生态资源，可以共同构

numerous interactive, educational activities for tourists and students. This project is described in more detail in Section 5.2 Ecotourism.

- **Aviary & Butterfly Pavilion**
  A large-scale aviary with a complete micro-ecosystem is proposed to be populated with numerous indigenous species. A portion of this structure would also house a seasonal butterfly pavilion to allow visitors to actually interact with them in a controlled setting.
- **Living Pavilion**
  The Living Pavilion is a structure made from living trees. Typically willow trees have been used, but other species including bamboo could be adapted to create large "buildings" and enclosures. This bio-architecture project will serve as a public attraction for special events, activities and other tourism programmes.

Case Studies

Bio-Architecture: Living Bridges, Tree Cathedrals, Willow Domes and Palaces

Auerworld Palace, Auerstedt, Germany

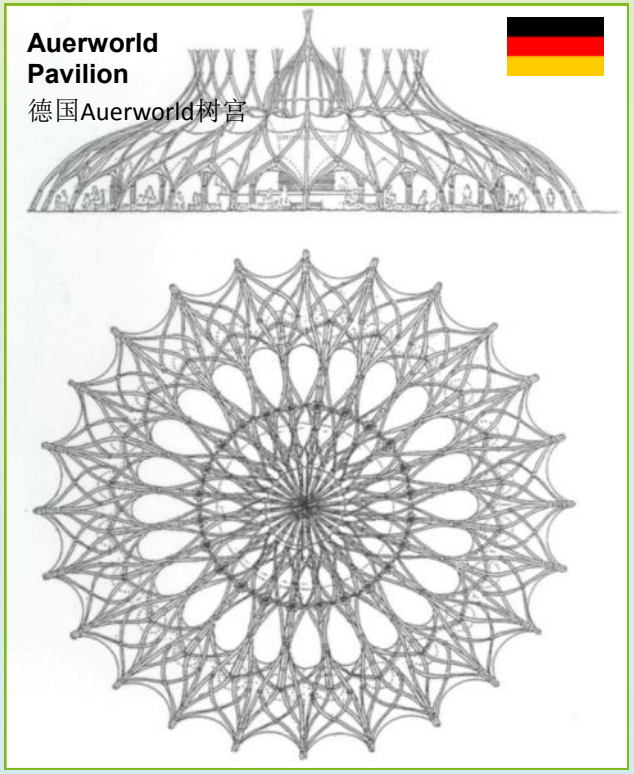
Auerworld Palace is an ecological plant-building design by **Marcel Kalberer** and his group Sanfte Strukturen ("soft structures") created a large "palace" by shaping willow trees into a geometric pattern that created an enclosed space.

Root Bridges, Cherrapunjee, India

The living bridges of Cherrapunji, India are made from the roots of the *Ficus elastica* tree. This tree produces a series of secondary roots from higher up its trunk and can comfortably perch atop huge boulders along the riverbanks, or even in the middle of the rivers themselves.

Whipsnade Tree Cathedral, Bedfordshire, United Kingdom

Whipsnade Tree Cathedral is a 9.5 acre (38,000 m²)



Auerworld Pavilion
德国Auerworld树宫

Whipsnade Tree Cathedral
英国Bedfordshire树木教堂

成5.3节生态问题讨论之中所提出的"城市与自然的和谐"。除了现有的文化遗产的开发和自然资源，这一景区中规划如下的生态旅游公共设施：

生态系统博物馆

生态系统博物馆面向游客和学生提供大量互动的教育活动。这一项目在5.2节生态旅游中有较详细阐述。

观鸟园与蝴蝶馆

规划建设大型的观鸟园，其中形成完整的微生态系统，包含大量的本地物种。另外，园内还规划设置一个季节性的蝴蝶馆，让游客能够在人工可控的环境中与蝴蝶进行直接互动。

生命景观馆

生命景观馆是用有生命的树建造而成的。通常使用柳树，也可以采用竹子等植物围合形成大规模的"建筑"。这一生物建筑可以成为特殊活动与事件的场地和其他旅游活动的景点。

案例研究

生物建筑：德国Auerstedt的生命桥、树木教堂、柳树宫与Auerworld宫

Auerworld树宫

Auerworld树宫是由Marcel Kalberer及其公司Sanfte Strukturen（德文，意为"柔软建筑"）所设计的生态植物建筑，使用柳树一个大型的"宫殿"——编织柳树枝条形成几何构图并形成围合的空间。

garden in the village of Whipsnade in Bedfordshire, England. It is planted in the approximate form of a cathedral, with grass avenues for nave, chancel, transepts, chapels and cloisters and "walls" of different species of trees.

- **Traditional Villages: Overwater Bungalows, Treetop Villages and Historic Waterfront Villages**
  The East Lake shoreline and forests offer numerous opportunities to design specialised developments that are harmonious with the natural and cultural heritage. Overwater bungalows, floating villages, treehouses and historic architecture could be combined with natural settings to create unique tourism development.

Case Studies

Giethoorn Waterfront Village, The Netherlands

Giethoorn used to be a carfree town known in the Netherlands as "Venice of the North" or "Venice of the Netherlands". In the old part of the village, there were no roads (nowadays there is a cycling path), and all transport was done by water over one of the many canals.

Landal Esonstad Holiday Park, The Netherlands

Esonstad consists of a bungalow park around an artificial lake and a quasi-historical town that was built between 2004 and 2007 in the Old Frisian style. The name is borrowed from a settlement called Ezonstad in the early Middle Ages.

Vertical Horizons Treehouse Paradise, Cave Junction, Oregon, USA

Vertical Horizons is a “bed and breakfast” hotel offering themed treehouse accommodations. The experience centers on nature and includes organic meals, outdoor

Root Bridges, Cherrapunjee, India

Giethoorn, The Netherlands

印度Cherrapunjee的根桥

印度Cherrapunjee的根桥是使用印度榕树的根系编织而成的悬桥。印度榕树从其树干上生长出大量的二级根系，悬挂于河岸甚至河中心处，因而加以利用成为根桥。

英国Bedfordshire树木教堂

树木教堂是一个占地9.5英亩（38,000平方米）的园林，位于英国Bedfordshire的Whipsnade村。其树木的平面种植形成一个类似于天主教堂的平面，使用草坪形成教堂的主厅、高坛、小教堂和走廊以及不同树种所构成的“树墙”。

树上与水上吊脚楼村庄

东湖沿岸及森林为设计与自然和文化相协调的专项发展提供了许多机会。将水上平房，浮动村庄，树上房和古建筑和自然环境融入一起可以形成独特的旅游景点。

案例分析

荷兰Giethoorn水边村庄

Giethoorn曾经是位于荷兰的一个无车村庄，被誉为“北方威尼斯”或“荷兰的威尼斯”。 在村庄的老城区没有任何马路（如今有一个自行车道），这里所有的交通都得依靠其中的一条运河。

荷兰Landal Esonstad 假日公园

Esonstad 包括沿一个人工湖建造的平房公园和一个建于2004到2007年之间的一个有古弗利然风格的类古历史小镇。这个公园的名字来源于中世纪早期一个叫做Ezonstad的地方。

美国俄勒冈“垂直地平线”树屋旅馆

recreation and seasonal events.

Aitutaki Lagoon Resort and Spa, Cook Islands

This resort has beachfront and overwater bungalows with panoramic vistas of the Pacific Ocean. Traditional activities and cuisine enhance the local sense of place.

- **Living Museum Village**
  The Moshan Tourism Area may be the ideal location for a Living Museum Village as it will have supporting infrastructure. [An alternative site would be the eastern periphery of the lake] . The Living Museum Village could be a combination of ancient Chu culture and/or current small-scale Wuhanese agriculture. The Cloppenburg case study is described in more detail in Section 5.2 Ecotourism.

Event Programming

A key to the success of the East Lake as a tourism destination and vital community is to coordinate, synchronize and integrate lake activities and events. This is critical to create a vibrant sense of place and community. National holidays, seasonal environmental programmes, university and school schedules, and a variety of planned events (i.e. annual International Dragon Boat Race, International Lake Cities Conference, Four Seasons Flower Economy, etc.) can be synthesized into a harmonious rhythm that defines the East Lake. This effort can exemplify the East Lake as a world-renown place of “city and nature harmony”.

Vertical Horizons, Oregon USA

Aitutaki Lagoon Resort, Cook Islands

“垂直地平线”是一个提供“住宿与早餐”的旅馆，其特色是设置于树屋内主题旅馆。其旅游体验强调对于自然的体验，包括有机的餐饮、室外休闲和季节性活动。

库克岛的Aitutaki滨水度假村

这一度假村中有沙滩景观和水上吊脚楼，可以全景欣赏太平洋的美丽景观。传统的活动与餐饮提升了场所的整体本地体验

村庄生活博物馆

磨山景区是建立村庄生活博物馆的理想位置，因为其有着良好的制成基础设施。（另一个可选的地块是东湖的东部）。村庄生活博物馆可以成为古代的楚文化与当前存在的小型武汉农业的结合。此项目在第5.2节生态旅游业中有更详细说明。

事件活动规划

要将东湖景区建设成为成功的旅游目的地和富有活力的社区，关键因素之一是纳入和整合一系列的活动与事件。这对于增强本地的具有活力的场所感和社区感都是非常重要的。国家节假日、季节性环境活动、大学与学校活动以及其他大量的活动规划（例如年度的国际龙舟赛，国家湖泊城市会议，四季鲜花经济等等）都可以进行协调和整合，提升整个景区的全面发展。通过事件和活动规划可以展示东湖作为一个世界知名的“城市与自然和谐发展”的场所。

Realising the Vision of the East Lake Scenic Area as an Inspirational Example of Sustainable Development

In the above sections we have set out our ideas for the advancement of tourism in the East Lake Scenic Area as well as for the safeguarding, repair and upgrading of this fine resource. Realising the initial vision set by the UPAT (Section 3) will require a combination of very sensitive planning (to secure an appropriate scale and quality of development) and very careful management (to achieve the environmental and cultural aims). Our findings and recommendations are indicative of what might be done and of the balance that might be struck; they set a possible path towards the achievement of that vision. However, our proposals represent just a start and they will require further elaboration.

Such an elaboration would require a more detailed knowledge of the WELSA than the UPAT was able to gain during the prescribed limited duration of our project. Moreover, measures going well beyond those that we have cited earlier in Section 5 would need to be taken, both at the 'strategic' WELSA level and at the level of the individual project to secure that vision of the East Lake as an 'inspirational example of sustainable development'. In terms of built development, that implies a suitably high standard of architecture and aesthetic design -, to provide that aesthetic inspiration. And beyond that it implies a high environmental performance—to address environmental sustainability aims. The natural environment—in all its aspects—requires a comparable level of care.

To secure the overall quality that is required on both fronts—tourism development and the achievement of environmental and cultural aims—we believe that the WELSA needs:

实现东湖景区的愿景——成为可持续发展的典范

以上的章节中已经提出了发展东湖风景区旅游业的方法以及保护、修复与提升这一珍贵资源的方式。实现UPAT（第三部分）的愿景需要结合精心的规划（保证开发的适当规模和良好质量）和良好的管理（实现环境与文化目标）。规划研究的成果和推荐意见也是对未来相关实施行为的表达和预期需要达到的平衡；它们是达成愿景的途径。然而，本报告提出的想法只是一个开始，还需要后续的进一步深入。

这种深入需要对于武汉东湖生态风景区的更为详细的了解，而这些深入的知识在UPAT较短的项目研究期间之内难以进行全面的搜集和获取。另外，除了第5部分中所提出的需要采取的规划方法之外，还需要在风景区的总体战略层面和个别项目的层面采取多种措施才能实现将东湖规划建设成为一个“可持续发展的示范性案例”的愿景。在建成环境方面，这意味着在建筑设计和美学设计中要采取较高的标准，既要达到设计的美学质量还要实现较高的环境保护特性，从而实现环境可持续的目标。自然环境的各个方面都需要进行精心的保护。
要保证旅游业发展和环境、文化目标的实现，东湖风景区需要做到：

5.6 Implementation

At the strategic level:

- within the context of Wuhan's green wedge strategy (Document 3), detailed land use plans that show the limits of the various built up areas for a particular time horizon, and the extent to which reliance can be placed on the recycling of already used (brown field) land.
- an Environmental Management Strategy that addresses the range of environmental challenges faced by the WELSA, ranging from water, air and soil quality to biodiversity, carbon emissions, the energy efficiency of buildings, etc.; sets suitably ambitious targets to secure improvements and commits the authorities to a programme of action to that end.

At the level of the individual project:

- the application of independent environmental impact assessment (EIA) to determine the acceptability of the project (see 5.3);
- an assessment of the design of the development, having regard to design guidance for the WELSA that has been drawn up for the authorities by suitably qualified persons;
- related to EIA an assessment of the overall environmental performance of the development and whether it meets the 'scores' judged as acceptable by the authorities (see 5.3).

Lake Burley Griffin, Australia
澳大利亚的波利格里芬湖

5.6 实施

在战略层面

- 根据武汉市绿楔规划（文件3），进行详细的土地利用规划，确定特定时间阶段内建成区的边界以及对于棕地的回收利用。
- 制定环境管理战略，处理东湖景区所面临的各种环境问题，如水、空气和土壤质量、生物多样性、碳排放、建筑的能源效率等等；制定适宜的环境改善目标，作为实施指导。

在个别项目的层面

- 进行项目的环境影响评估来确定项目环境可行性（见5.3）；
- 对于项目的设计进行环境影响评估，由专家制定风景区相关的设计导则；
- 根据项目的环境影响评估，对于东湖景区整体开发的环境影响进行评估，确定其是否满足官方制定的“评分”要求。（见5.3）

East Lake Foreshore Authority

We propose that a new body be established under the auspices of the Wuhan City Council. Its role would be to manage lakeside heritage and cultural sites, public parklands, pathway systems, and all public assets within the area covered by the Master Plan. It would be responsible for implementation of the Master Plan; assessment of all commercial development proposals to ensure compliance with Master Plan and relevant environmental controls. It would advise on all business development initiatives within the Master Plan area; and would have a lead role in establishing and implementing tourism policies/projects.

Creation of such an authority would ensure that there was a clearly defined *chain of command* to ensure that decisions are properly taken and competently implemented. The proposed body would carry responsibility for ensuring that the WELSA Master Plan is kept up to date by way of regular revision and amendment in the light of changing circumstances, new knowledge, and the changing expectations of government, community, and business stakeholders. The Authority would also be a single point of information and decision-making related to Lake development—taking over (where appropriate) from existing bodies.

Case Study

Lake Burley Griffin, Australia

The Lake Burley Griffin Water Quality Management Plan is prepared by the National Capital Authority (NCA) to help manage lake water quality and to inform interested parties about matters affecting the quality of water in the lake. This Plan will be used by the NCA, which has statutory responsibility for the Lake, to undertake specific management functions related to the protection of water quality.

Lake Burley Griffin, Australia

东湖岸线管理机构

规划建议武汉市政府成立新的下属单位，其主要功能是对于东湖景区总规范围内东湖周边的文化遗产地、公园、步道系统和其它公共资源进行管理。此机构对总规的实施负责；对所有的商业开发项目进行评估保证其符合总体规划和相关的环境管理规定。对总规范围内的所有商业开发规划项目提出建议；在建立和执行旅游政策与项目方面发挥主导作用。

这一机构的建立可以保证建立一个明晰的上下衔接良好的政策体系，保障良好的决策与有效的执行。新成立的机构负责保证的总体规划通过定期的修编和调整得到更新并适应具体发展与变化，如新的环境、新知识的出现和政府、社区、投资者需求的变化等。新成立的机构应该是负责东湖发展的信息与决策的单一机构，在适当的情况下替代现有部门的角色。

案例

澳大利亚的波利格里芬湖

澳大利亚国家首都委员会（NCA）制定了波利格里芬湖（Burley Griffin）水质管理委员会，用以帮助管理湖泊水质，同时告知相关方面影响湖泊水质的各种问题。规划由国家首都委员会所使用，其对于湖泊负有法定管理责任，使用特定的管理政策保护湖泊的水体质量。

5.7 Governance

The management objective is to protect the Lake as an important visual, recreational and environmental feature of the National Capital for current and future generations.

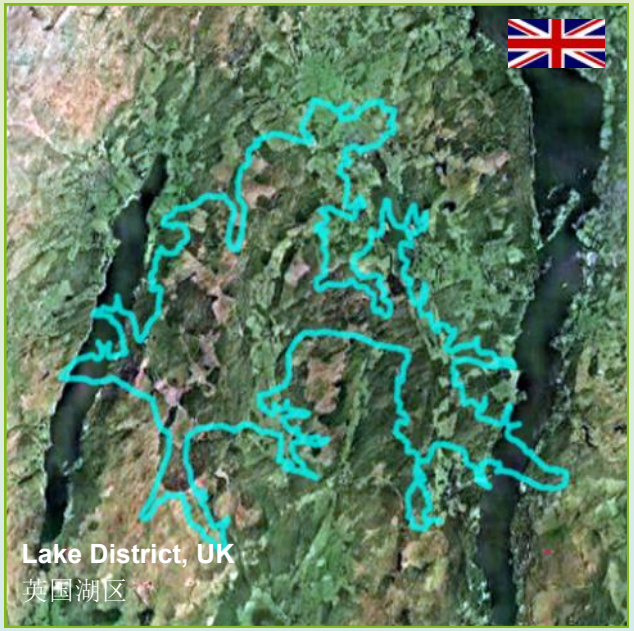
The Plan documents the current water quality status of the Lake, benchmark values for future monitoring, and management responses to address events that may affect water quality. [Lake Burley Griffin Water Management Plan]

Case Studies

The Lake District National Park, UK

With its varied scenery of mountains, large and small lakes, forests and open fells and its historic towns and villages, the Lake District is one of the most beautiful regions in the United Kingdom. Located in Cumbria north-west England, it is a very popular holiday destination which is valued not only for its scenery, but also its wildlife and its associations with famous poets. Because of these qualities, in 1951 most of its area was designated as the Lake District National Park. It is the second largest of the 13 national parks present in England and Wales.

This area is remarkable for its sheer variety of landscapes, and its complicated geology which is overlain by the work of man over thousands of years. Today, it is mostly a living landscape much used for the rearing of livestock, including traditional breeds of sheep; such activities have both shaped that landscape and traditionally underpinned the local economy. However, the main pillar of the economy today is that of tourism, which began in the 19th century with the coming of the railways and expanded enormously with the coming of the car and greater leisure. The formation of the Lake District National Park was a recognition of the need to protect the environment from excessive commercial exploitation, while preserving that which visitors come to see. Indeed tourism now attracts some 12 million visitors each year, including



Lake District, UK

5.7 治理

其管理目标是保护湖泊，是其成为国家首都重要的视觉、休闲和环境资源与特征，造福于当代人和子孙后代。

规划中说明了湖泊现状水质，未来水质监控中的重要门槛数值以及对于可能影响水质的事件的管理方式。（来源：波利格里芬湖水质管理规划）

案例

英国湖区国家公园

湖区拥有连绵的山系、大大小小的湖泊、森林、瀑布、古城和村庄等，这也使得它成为英国风景最优美的地区之一。湖区位于英格兰西北部的哥比亚（Cumbria），是很受欢迎的度假胜地，其魅力不仅来自于其自然风景，也来自于其野生动植物和作文著名的诗人故里等历史文化渊源。由于其丰富旅游资源，1951年这一区域的被划入了湖区国家公园。在英格兰和威尔士的13处国家公园中，湖区国家公园规模名列第二。

这一区域的特色不仅在于其丰富的景观类型，还在于其复杂的地质条件，再加上其上人类数千年创造的人工景观。今天这一区域仍然拥有具有生命活力的景观，很多区域被用作饲养牲畜例如放羊等活动；这些活动一方面形成了本地景观，另外也支撑了本地经济。然而，此地区当前的经济支柱产业仍为旅游业。旅游业在19世纪随着火车的到来而兴起，随着小汽车的普及和人们对休闲生活的追求而蓬勃发展。湖区国家公园建立的背景是过度的商业

many people from China, Japan and the USA. That tourism takes several forms, including walking and climbing, cultural tourism and general sightseeing.

As with the other National Parks, the Lake District authority has several statutory purposes including: conserving and enhancing the natural beauty, wildlife and cultural heritage; promoting opportunities for the understanding and enjoyment of the area's special qualities by the public; and fostering the economic and social wellbeing of local communities. The Lake District National Park Authority has a wide remit which includes making most planning decisions within its boundaries. In general, it shares its administrative responsibility with other bodies such as private landowners, communities and businesses, local authorities, tourism organisations, statutory environmental agencies and third sector bodies. However, it is expected to show overall leadership, championing the area's special qualities and acting as a catalyst in encouraging others to work towards a shared vision.

Urban Growth Boundary, Metro, Oregon USA

The **urban growth boundary** controls urban expansion onto farm and forest lands. Land inside the urban growth boundary supports urban services such as roads, water and sewer systems, parks, schools and fire and police protection that create thriving places to live, work and play. The urban growth boundary is one of the tools used to protect farms and forests from urban sprawl and to promote the efficient use of land, public facilities and services inside the boundary.

开发后环境保护意识的觉醒，对于游客期望看到的景观进行保护。此地区每年吸引1200万全世界的游客，包括来自中国、日本和美国的游客。人们进行各种形式的旅游，包括步行与爬山、文化旅游与一般的观光等。

与其他国家公园一样，湖区管理当局也制定了许多法定管理条款，包括：保护与提升自然风景、野生动植物与文化遗产；促进公众对于风景区特征的了解与欣赏；促进本地社区的经济社会发展。湖区国家公园管理机构肩负大量的责任，包括在其规划边界范围内进行主要的规划决策。总体而言，它与其他很多群体一起共同承担管理责任，包括私人土地所有者、社区与企业、本地政府、旅游机构、法定环境管理机构和第三产业机构等，其目的是利用和提升区域的特征，发挥催化剂的作用，协调各方利益实现共同的愿景。

美国俄勒冈州Metro城市增长边界

城市增长边界控制着城市向农业和林业用地的扩展程度。 城市增长边界内的土地为创造一个让居民居住，工作和娱乐的宜居环境而需要的城市服务提供了基础。这些城市服务包括在道路，供水和污水处理系统，公园，学校，消防，和公共安全方面提供的服务。 城市增长边界是用来保护农业和林业用地免受于城市扩张威胁并且鼓励对界内土地，公共设施和服务的更加有效利用的工具之一。

6. East Lake Eastward

The East Lake Eastward project encompasses (west to east) East Lake, Yanxi Lake and Yandong Lake. The total area contains approximately 200 square kilometres between the eastern and western banks of the Yangtze River as it arcs through the City of Wuhan.

Tourism

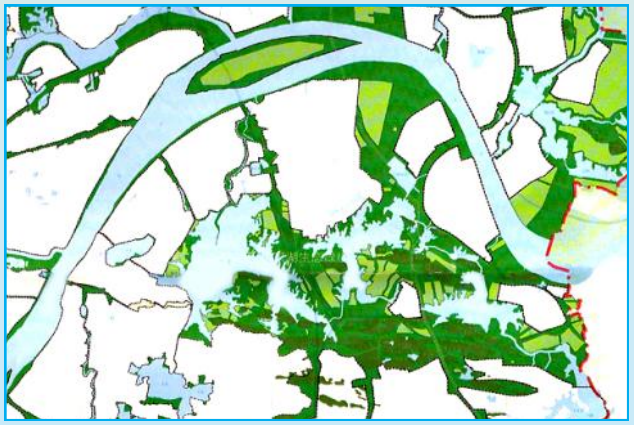
The previously proposed general policies for the East Lake Scenic Area are largely applicable to the East Lake Eastward project with a focus on ecotourism principles that balance conservation with economic development. The scale and diversity of features for the area provide both opportunities and challenges for tourism development. The following recommendations provide an overall framework:

- **Project Identity**
  Design a comprehensive project identity that includes an evocative site-specific name, mark (logo), signage, imagery, etc.
- **Attractors & Attractions**
  Preserve, enhance and construct natural and cultural attractors and attractions for tourism. These should be integrated into a tourism system of infrastructure, services, information and promotion.
- **Tourism Infrastructure**
  Develop an infrastructure that accommodates tourism including accommodations, transportation, amenities, etc.
- **Tourism Services**
  Provide services and personnel for tourism activities, venues, etc. This includes hospitality training and education for both employees and local residents.
- **Information & Promotion**
  Promote the project with target markets through appropriate print and digital media.

Ecology

“In the key period of establishing a new pattern of spatial development, Wuhan has advanced the idea of

Wuhan East Lake Eastward Location



Wuhan East Lake Eastward Green Wedge

6. 东湖东进

东湖东向工程包括（从西到东）东湖，严西湖以及严东湖。总面积包括位于弧形穿越武汉长江东西两岸的约200平方公里的区域

旅游业

前文所提到的有关东湖风景区的发展规划大体上适用于东湖东向工程，只是应该更加注重在环境保护和经济发展之间取得平衡这些生态旅游原则。该地区工程的规模和多样性为发展旅游业提供了机遇和挑战。下面的这些建议措施给出了一个大体框架：

- **工程标志**
  设计一个含义丰富、让人回味的，跟选址相关独特的名字，标识，图像等的综合工程标志。
- **景区和景点**
  保护、加强并建设自然和文化景区及景点，发展旅游业。这些措施应该融入到包含有基础设施、服务、信息和旅游业的推广这个系统之中。
- **旅游业设施**
  发展能够适应旅游业发展所需要的住宿、交通等其他基础设施。
- **旅游业服务**
  为旅游业的活动、场地等的发展提供必要的服务和专业人员培训。这些培训包括对当地居民以及员工宾馆服务的培训和教育。
- **信息 & 推广**
  通过适当的平面媒体和数字媒体向目标受众推广这个项目。

6. East Lake Eastward

building an eco-system covering its administrative boundary, characterized by 'two axes, two rings, six wedges and multiple corridors'. The City has identified construction-prohibited zones, controlled development zones and developable zones, formulated relevant management policies, and through a comprehensive range of urban function allocation such as eco-parks, scenic points, and leisure resorts, explored the path from the planning of the eco-spatial system protection to its practice".*

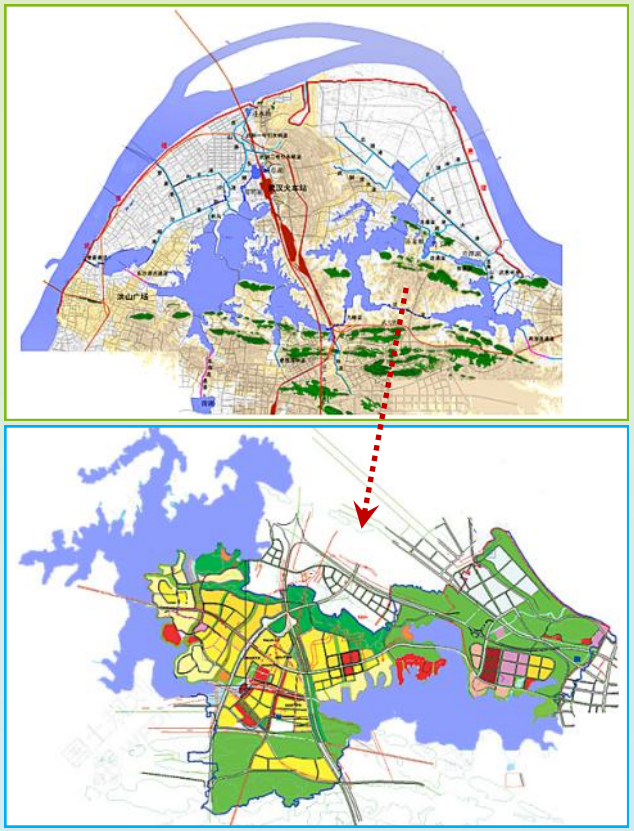
East Lake Green Wedge

The East Lake Eastward project area matches the "East Lake Wedge" and includes three primary lakes with parallel mountain ranges. The East Lake Wedge is a green space that extends from the peripheral suburban area to the central city.

Multi-Corridors

The multi-corridors, or green corridors, serve as channels between the ecological areas; barriers between new towns; wildlife connectivity and water transportation corridors. The following recommendations mirror the East Lake Scenic Area Water LifeScape:

- **Green Technology Centre**
  Create a Green Technology Centre to study and provide guidance for the East Lake Wedge. The Centre will focus on biology, hydrology, geology, energy, permaculture and technological innovation.
- **Great East Lake Water Network**
  Construct an area-wide system of wetlands to provide biological restoration of the lakes; habitat for marine life and water fowl; and nature / educational tourism.
- **Huashan Eco-City**
  Develop the Huashan Eco-City as a "world-class eco-town and a new urbanization demonstration area". The Huashan Eco-City includes a wetland park, eco-art gallery, New Port and R&D facilities.



Huashan Eco-City

6. 东湖东进

生态

"在建立一个新型的空间发展模式过程中，武汉市政府提出了以'两轴两环，六楔多廊'为特征的构想来建立一个覆盖其行政区域的城市生态空间体系。武汉市规定了禁建区、限建区、适建区三区，制定了相应的分区空间管制政策，通过了一个诸如对生态公园、景点、休闲区等分区的综合的城市功能分区政策，并且对从生态空间系统理论到实践这个途径进行了探索。"*

东湖绿楔

东湖东进工程区域和"东湖绿楔"区域吻合，区域内有三个有着平行于山脉的主要湖泊。东湖绿楔是一个从城市郊区周围一直延伸到中心城市的绿色地带。

多廊

多廊或绿色走廊是连接不同生态区、乡镇、野生动植物以及水上交通的纽带和桥梁。下面的几个建议措施体现东湖风景区水景生态系统景观的构想：

- **绿色科技中心**
  为研究东湖绿楔并对其进行指导建立一个绿色科技中心。该中心会专注于对生物学、水文学、地质学、能源、朴门学和科技创新的研究。
- **大东湖区水系网络**
  为了恢复湖泊的生态系统，给水生生物和水禽提供栖息地，并且创造自然和教育旅游机会而建立一个区域内的湿地系统。

6. East Lake Eastward

Transport & Mobility

Wuhan-Guangzhou High-Speed Railway

East Lake Eastward is bisected by the Wuhan-Guangzhou High-Speed Railway and directly adjacent the railway station. This new transportation system is a critical link for the East Lake Eastward project to China and international tourism markets. The East Lake Scenic Area is also a "gateway" to the City of Wuhan.

Great East Lake Water Network

Multi-corridors are proposed to connect East Lake, Yanxi Lake and Yandong Lake within the East Lake Eastward project. Additional corridors connect to the Yangtze River to the east and west to form the Great East Lake Water Network.

The following recommendations expand those provided for the East Lake Scenic Area:

- **Water Transport Strategy—East-West**
  Expand the water transportation network throughout the multi-corridors ultimately linking the Yangtze River through the East Lake Eastward project.
- **High-Speed Railway—North-South**
  Design a "gateway" program for the Wuhan-Guangzhou High-Speed Railway station to create a "sense of arrival" for East Lake Eastward.
- **Intermodal Transport Strategy**
  Develop an intermodal transport strategy that integrates the waterway, railway, roadway, bicycle path and pedestrian trail transportation networks.

Planning and Design

The spatial strategy for the East Lake Eastward project should adopt the four priorities identified in the ISOCARP report:

1. **Ecological Network System**
   Build an ecological network system on the basis of natural ecological elements, which is complete, multi-functional and distinguishes ecological character areas.

Wuhan East Lake Eastward Connectivity

Wuhan Railway Station

6. 东湖东进

交通 & 流动性

武汉-广州高速铁路

武汉-广州高速铁路横穿东湖东进区，紧邻阳春湖高铁站。这个新的交通系统是东湖东进项目连接中国和世界旅游市场的关键纽带。东湖风景区也是武汉市的门户。

大东湖区水系网络

规划提出了多个水系通道来连接在东湖东进区内的东湖，严西湖和严东湖。还可能通过进一步的水道建设将东湖从西面和东面接入长江以构建一个大东湖水系网络。

下面的建议措施是对东湖风景区相关规划的拓展延伸：

- **东西方向水路交通战略**
  通过东湖东进，拓展水上交通网络的各个通廊，最终打通东湖与长江的联系。
- **南北高速铁路**
  为武汉-广州高速铁路车站设计一个"城市门户"以给东湖东进区营造一种"到达感"。
- **多模式交通战略**
  制定一种为发展包括水路、铁路、公路、自行

6. East Lake Eastward

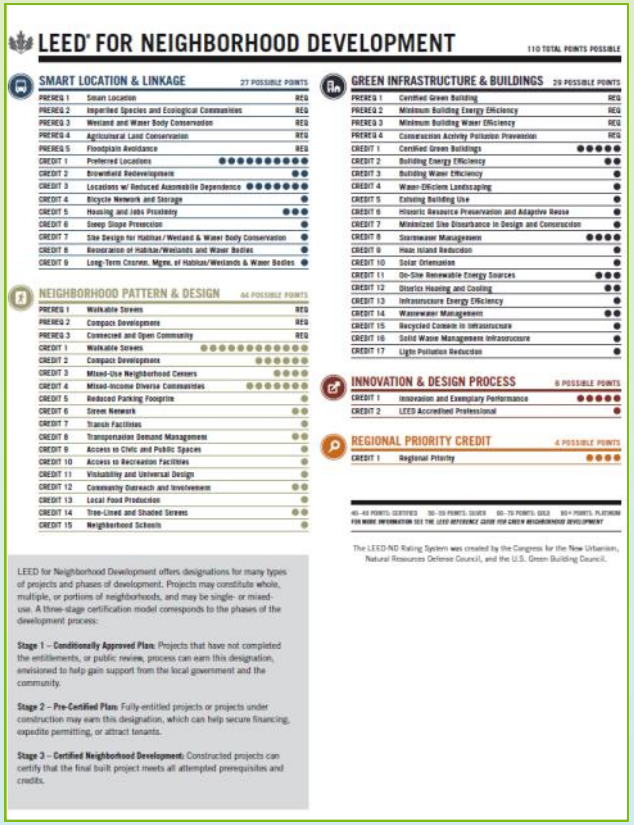
2. **Urban Growth Boundary**
   Delimit the City's ecological boundary, strengthen the control of the urban growth boundary, and establish a spatial pattern of urban ecological security.
3. **Multiple-function Ecology**
   Build upon the multiple functions of the ecological area to promote implementation initiatives for the planned ecological area.
4. **Low Carbon Development**
   Aim for low carbon urban development, promote intensive expansion along urban axes and push forward the strategy of "Develop while conserve" by protecting the planned ecological area.*

Case Study

Leadership in Energy and Environmental Design, Neighborhood Development

The Leadership in Energy and Environmental Design for Neighborhood Development (**LEED ND**) Rating System integrates the principles of smart growth, urbanism and green building into a national system for community design. The **LEED ND Checklist** rates Smart Location & Linkage; Neighborhood Pattern & Design; Green Infrastructure & Buildings; Innovation & Design Process; and Regional Priority.

*Planning the Ecological Spatial System of the Megacity of Wuhan, Liu Qizhi, He Mei, Wang Yun, *ISOCARP Review*, 2011.



LEED ND Checklist

车道和人行道在内的多模式交通网络战略。

规划与设计

东湖东向区的空间发展战略应遵循在ISOCARP报告中确定的四项重点领域：

1. **生态网络系统**
   发展一个建立在自然生态元素基础上的完整的、多功能的、有着独特生态特征的生态网络系统。
2. **城市增长边界**
   划定城市的生态界限，加强对城市增长边界的控制，并且建立起城区生态安全的空间格局。
3. **多功能生态区**
   在生态区的多功能的基础上继续推行有关对规划生态区的实施措施。
4. **低碳发展**
   向低碳城市的目标发展，基于城市各发展轴线进行集中开发，通过保护规划生态区来继续大力推进"发展与保护环境并行"的战略。*

案例分析

社区能源与环境设计评估体系

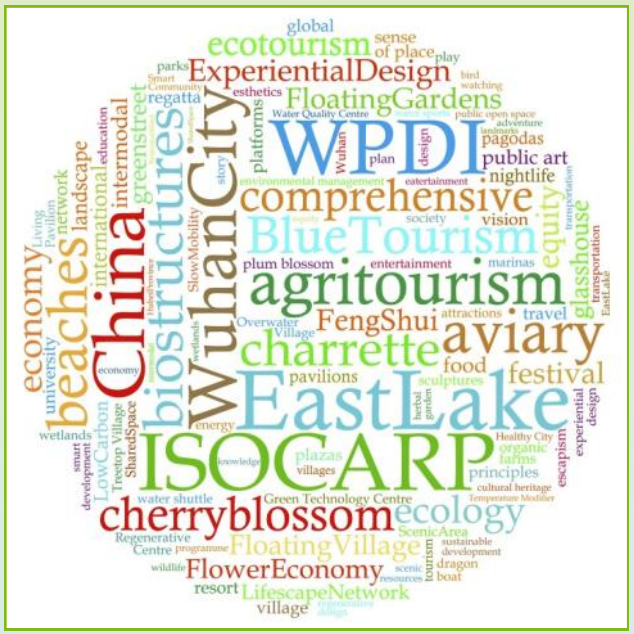
社区能源与环境设计（**LEED ND**）评估体系把精明增长原理，城市主义及绿色建筑原理综合到一个全国性的社区设计体系之中。**LEED ND 核对清单**对精明选址和联系、社区空间格局及设计、绿色设施和建筑、创新和设计过程以及本地重点问题等进行评价。

7. Conclusions

East Lake Scenic Area tourism development planning embodies ten major development principles:

1. Plan and design the East Lake Scenic Area as an **integrated system** considering environmental, economic and social factors.
2. Prepare a **comprehensive vision** that is based upon sustainable development principles.
3. Collectively restore, preserve and manage **natural and cultural resources**, both tangible and intangible.
4. Transition to a "**low carbon community**" through development standards and policies.
5. Transition to a "**smart community**" through institutional guidance and technology.
6. **Balance** ecological preservation with economic development so that both are complementary and interdependent.
7. Create and promote a unique **sense of place** that can be expressed as an international destination brand.
8. Make **transportation intermodal** with emphasis on public transit and low carbon mobility.
9. Develop **ecotourism** as "responsible travel to natural areas which conserves the environment and improves the welfare of local people". [Ecotourism Society]
10. Develop tourism with **experiential design** by combining esthetics, entertainment, education and escapism.

The East Lake Scenic Area is a beautiful place that Wuhan is rightly proud of and it deserves to become better known, both nationally in China, and internationally. We believe that the pursuit of a tourism strategy on the lines advanced by the UPAT would help establish the WELSA on the tourism map, particularly given Wuhan's new accessibility by high speed rail. Indeed, it is notable that Wuhan's magnificent new station for these 21st Century trains stands on the very doorstep of the East Lake.



Wuhan East Lake Word Cloud

Wuhan Botanical Garden

7. 结论

东湖景区的旅游发展规划包含十项主要的发展原则：

1. 将东湖景区规划与设计成为一个"**整合的系统**"，综合考虑环境、经济和社会因素。
2. 基于可持续发展的原则，提出**总体的愿景**。
3. 通过合作，恢复、保护与管理物质与非物质的**自然与文化资源**。
4. 通过标准与原则的建立、政策的制定实现向"**低碳社区**"的转变。
5. 通过政府引导和技术支持实现向"**精明社区**"的转变。
6. 达到生态保护与经济发展的**平衡**，实现两者既独立又互补的关系。
7. 形成独特的**场所感与特征**，形成东湖独特的国际旅游目的地品牌
8. 强调公共交通与低碳出行，建立**多模式交通**
9. 发展**生态旅游业**，使其成为"具有责任感的在自然环境中的旅游，既保护自然环境又提升本地人民的福祉"。（来源：生态旅游协会）
10. 使用**体验性设计**发展旅游业，结合美学、娱乐、教育与休闲。

东湖景区是武汉市引以自豪的风景胜地，应提升其全国甚至世界范围内的知名度。我们相信，根据UPAT所提出的原则进行东湖景区的旅游发展将帮助其提升其旅游地位，而高铁的建设也是景区发展的强大助推器。规划认为，高速铁路这一21世纪新型交通发展方式和武汉高铁站的建设将打开东湖景区发展的另一扇大门。

7. Conclusions

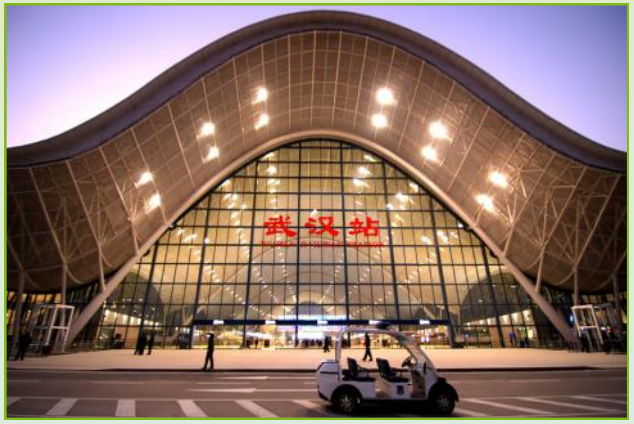
How fitting it would be if this latest facility could become one of the main gateways to the East Lake for tourists! Indeed, transport, and the necessary connections between the various modes is one of the main themes of our report. Under our proposals for a network of water buses, the East Lake changes from being a barrier to movement to a transport medium providing many possibilities for new routes and for direct connections not possible before.

We envisage these services as being run by electrically powered boats which would be both pollution free and extremely quiet, entirely in keeping with the tranquil character of the East Lake. And with suitable promotion and an appropriate East Lake design, they could themselves become striking symbols for a contemporary lakeside resort developed along eco-tourism principles.

Our proposals emphasise and promote zero or low carbon transport for both recreation and general travel within the WELSA; they include a network of carefully signed cycle and walking routes serving different parts of this extensive area. These 'green' transport forms are an integral part of the UPAT's overall vision and strategy for the WELSA which sees environment quality as of paramount importance.

That vision combines aesthetic and ecological factors, both elements of which need to be safeguarded and upgraded and we propose an overarching environmental management strategy to provide the necessary direction. Among other things, that strategy would address the vital need for continued improvements to the water quality and ecological health of the East Lake.

The enhanced tourism facilities that we envisage have the potential to create a distinctive lakeside resort that will attract many more visitors to WELSA and, indeed, Wuhan as a whole. They cater for more intensive forms



Wuhan Railway Station

Wuhan Garden Bridge

7. 结论

本报告中将交通，尤其是多种交通模式的整合与互联作为主题之一。报告中提出建立水上巴士网络，让东湖从交通障碍变成交通媒介，提出了以往所没有的、建立多种交通直接联系和新的交通线路的可能性。

规划预期使用无污染、噪音小的电力船只，从而维持东湖静谧美丽的景观特征。在生态旅游原则的框架下，通过适当的宣传和适宜的设计，东湖的水上交通本身较成为一个当代滨湖旅游胜地的显著象征。

规划强调在景区内的休闲和一般交通出行中使用低碳或零碳的交通方式；包括精心设计的自行车道与步道系统，联系景区的各个部分。这些“绿色”交通方式都是UPAT对于东湖景区总体愿景和策略的有机构成部分，将环境质量作为最重要的内容。
规划的愿景希望结合美学与生态的要素，这两个方面都是规划中要保护和提升的重要方面。规划提出总体的环境管理战略，来提供必要的引导。这一战略与其他因素共同结合来满足景区的核心需求，即水体质量的不断提升与东湖的生态健康的保障。

规划提出完善旅游服务设施的建设，从而形成独特的滨湖旅游胜地，为东湖风景区甚至为武汉整个城市吸引更多的旅游者。这些设施一方面可以满足现有的景点中更多游客的使用，另一方面，这些旅游设施的设置强调为游客提供远离城市喧嚣与压力的静态放松休闲的旅游方式。要达到对游客旅游体验

7. Conclusions

of tourism in some existing centres but, in tandem with this, our proposals place substantial emphasis on the more contemplative forms of recreation which provide opportunities to get away from the noise and stresses of everyday life.

These improvements for visitors will have to be achieved at the same time as the environmental problems of the past are being put right and new, higher standards put in place; that will concern both the built and the natural environment. In terms of new tourist development, and the necessary upgrading of the older facilities, this will demand an emphasis on the highest design quality and environmental performance. The challenge for the Wuhan authorities will be to foster the best development that is available and firmly to reject that which is bad or only mediocre. It will be through a firm emphasis on quality both in terms of the built and the natural environment that the East Lake Scenic Area will become established and known as Wuhan's premier lakeside resort. On that basis, the WELSA will be a place of distinctive character for Wuhan and its visitors in which tourism can co-exist harmoniously with an enhanced natural environment, existing communities and the cultural heritage.

7. 结论

的提升，一方面我们必须解决过去存在的环境问题，另一方面还应该实行新的、更高的环境标准；应用于自然环境和建成环境两者之中。在新的旅游设施的建设和老的旅游设施的改造方面，应强调使用最高的设计标准和环境表现。武汉市相关管理部门和机构所面临的挑战是应用最优秀的开发方式，避免平庸甚至负面的开发方式。这就要求开发中要强调自然和建成环境的质量，使东湖景区成为武汉最好的旅游胜地。在此基础之上，东湖景区将成为武汉市和游客心目中的具有独特个性的标志性景区，达到景区发展与自然环境提升、现有社区和文化遗产保护与弘扬的协调发展。

Appendix A: Briefing Note

附件A：参考内容简表

Clause or reference	aim / or title of clause	Comments
3.6	Animal and plant resources	Lists and briefly describes existing inventory of plant and animal resources (flora /fauna)
6	Scenic Spot resources	Lists key scenic attributes of EL. No reference to traditional villages or farmlands as scenic resources
9.1	Water environment	Recognition that EL water quality has been impaired by pollution – especially in western sector – close to area of large scale urban development; 10th 5 Year Plan has included actions to improve water quality – no 'dramatic increase in pollution index'; EL connections to nearby water bodies are described
Appendix 14	Water system	shows existing water system connections and water quality of main lakes
State Council Decree No474	Regulation on the management of tourist attractions	Chapter 1V sets out general measures for administering the protection of the landscape and natural environment
BRIEF INTRODUCTION TO WUHAN EL SCENIC AREA TOURISM DEVELOPMENT PLANNING		
P8 CL 2.1	Development vision	WELSA performs ecological functions (unspecified); it is planned to build the WELSA into a 'platform' for eco-protection and demonstration
P12	3.1 Development guidelines	Encourage eco-protection; strengthen eco-protection and restoration
P14	Sub.cl 2	Aim of plan is to establish an 'ecological scenic area' comprising lake landscapes; mountain landscapes; garden landscapes
BRIEF INTRODUCTION TO WELSA TOURISM DEV PLANNING 2011 – 2025		
2.1	Overall objective	To build an international eco-scenic area… national demonstration base for wetland ecosystem protection…new image for EL (protecting the ecosystem)

参考内容或条款	条款名称或目标	说明
3.6	动植物资源	现有动植物资源的简表与描述
6	景点资源	对东湖主要景观特点的列表。其中未将城中村及农业用地作为景观资源
9.1	水体环境	谈及了东湖水质尤其在西面邻近城市片区的污染情况；第十个五年计划中制定了提升水质的行动规划，即“主要污染物指标不出现显著上升”；提出了东湖与邻近水体的连通
附件14	水体系统	说明了现有水体系统的联系及主要湖泊的水质情况
国务院474号条例	风景名胜区管理条例	第四章提出了景观与自然资源保护与管理的总体措施
武汉东湖风景名胜区旅游规划简介		
P8 CL2.1	开发愿景	东湖景区应发挥生态功能（未详细说明）；将东湖景区建设成为生态保护与示范的平台与窗口
P12	3.1 开发导则	促进生态保护；提升生态保护与恢复
P14	第2小点	规划的目标是建立一个“生态风景区”，结合湖景、山景与园景。
武汉东湖生态风景旅游区发展规划2011-2025		
2.1	总体目标	建设国际级的生态风景区；国家级湿地生态系统波保护区与示范基地；建立东湖的新形象（保护生态系统）

Appendix B: Research Projects 附件B：相关研究项目

Item	Name of project	Aims, purpose
1	Mapping	To create an accurate atlas of terrestrial and hydrological attributes of the lake and its tributaries as a reliable resource for all ongoing planning and design work
1	Water quality analysis	To measure water quality, silt levels and content in each of the WELSAs so as to determine suitability of lake waters for various human purposes and activities
2	mapping	To create accurate large-scale maps of sensitive foreshore locations and habitats showing existing plant communities; bird nesting and breeding areas; areas of subsidence or bank erosion; location of acid sulphate soils; rubbish accumulation; chemical or stormwater discharge point; hazardous waste deposits; contaminated sites; etc.
3	Public exhibition	To improve public and community understanding of the lake and its environs; create lake-side exhibition displays in popular public locations – using replicas of models and mapping from the existing exhibition materials in the WPDI building in downtown Wuhan
4	Scientific literature review	Undertake a comprehensive audit / literature review of international scientific research related to lake environments and management arrangements in support of the objective of creating a centre of scientific excellence within the WELSA
5	“Friends of the Lake”	Assist in the establishment of this community-based organisation by providing information and educational material
6	Environmental Management Plan (EMP)	Create and promote an EMP to be used as a base for encouraging improved standards of lake-side development; the establishment of mandatory design controls; and rigid protocols for assessing applications for lake side development
7	Tourism inventory	Create a comprehensive data base of all existing tourism facilities and attractions – with an objective assessment of their existing physical condition, usage, patronage levels, popularity, etc.; to be used as a benchmark for evaluating new proposals
8	Lake-side trail	Commission a pre-feasibility study of the concept of a continuous public trail linked to existing foot and cycle paths and public transport nodes (existing and possible future).
9	Wetlands	Inventory and Mapping of all lake-related wetlands.

条目	项目名称	目标
1	测绘	绘制准确景区的地形与水文地图，作为规划与设计的基础
1	水体质量分析	分析水体质量、泥沙沉积情况和每个景区水环境质量，评估其用作不同的用途和活动时的适宜性和可持续性
2	测绘	绘制准确的、大尺度的地图，标示敏感的滨水位置和栖居地；现有的植物群落；鸟类筑巢和繁殖地；沉陷或岸线侵蚀区；酸雨侵蚀土壤；垃圾堆积区；化学污染与雨水排水口；固体污染物堆积区；污染地块等等
3	公共展览	提升公众与社区对于湖泊及其环境的了解；在受公众欢迎的地段进行湖畔展览活动——可使用城市规划展览馆中展品与图件的复制品
4	科学文献综述	对湖泊环境相关的国际科学研究和管理方法进行综述，作为东湖景区科技中心创建的理论基础与支持
5	“东湖之友”	通过信息和教育材料的提供协助进行基于社区的组织的建设
6	环境管理规划	提出和完善环境管理规划，作为提升滨湖开发标准的基础；建立强制性的设计控制标准；建立相应的严格的实施评估标准
7	旅游资源统计	为现有旅游设施和旅游景点建立全面的数据库，对其现有的实体状况、使用情况、资金支持、受欢迎程度等等进行客观的评价；作为新规划项目评价的基础
8	湖边步道	进行前期可行性研究，是否能在湖岸沿线建立连续的步道系统，与现有的步道、自行车道和公共交通站点（现有的和规划的）进行衔接整合
9	湿地	对所有东湖相关的湿地进行统计和测绘

Glossary

Agritourism Any agriculturally-based operation or activity that brings visitors to a farm or ranch.
bio-architecture Structures made from living trees and plants.
Brand The idea or image of a specific product or service that consumers connect with, by identifying the name, logo, slogan, or design of the company who owns the idea or image. Branding is when that idea or image is marketed so that it is recognizable by more and more people, and identified with a certain service or product when there are many other companies offering the same service or product.
Ecotourism Responsible travel to natural areas which conserves the environment and improves the welfare of local people. [Ecotourism Society]
Feng Shui A system of laws considered to govern spatial arrangement and orientation in relation to the flow of energy
Green Street Design that incorporates transportation functions with water quality and esthetics, as a "green infrastructure"
MICE Meetings, Incentives, Conferences, Events
Permaculture The development of agricultural ecosystems intended to be sustainable and self-sufficient.
sense of place A characteristic that some geographic places have and some do not, while to others it is a feeling or perception held by people. It is often used in relation to those characteristics that make a place special or unique, as well as to those that foster a sense of authentic human attachment and belonging.
urban trilogy The sustainable balance of environment, economy and society. (also "triple bottom line")
WELSA Wuhan East Lake Scenic Area
Wetlands Lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface

词汇表

农业旅游：广义上定义为所有吸引旅游者参与农业相关活动的旅游形式
生物建筑：使用有活着的树木等植物建造的建筑
品牌：消费者借以与某个特殊的产品或服务相联系的理念或图像，包括可辨识的名称、logo、广告语或拥有品牌的公司的标志。品牌营造即对于品牌的理念或形象进行的营销推广，使得更多的人能够辨识品牌，并在面临其他公司提供的多种相似服务或产品的情况下仍然对特定的服务或产品具有认同感。
生态旅游：具有责任感的在自然环境中的旅游，既保护自然环境又提升本地人民的福祉。（来源：生态旅游协会）
风水：根据能量的流动进行的朝向等空间安排的一套系统原则
绿色街道：在街道设计中整合交通功能、水质量提升与美学视觉效果，使其成为"绿色基础设施"
MICE：聚会，活动，会议，事件
朴门学：旨在达到可持续发展与自我维持性的农业生态系统的建立
场所感：是特定的地理位置所具有的个性特征，也可用以描述人对于某一个地点的感情与认知。通常用以描述使得某个地点特殊或独特的特征，以及可以让人产生特定的感情认同与归属感的特征。
城市可持续三角形：即环境、经济与社会的可持续性平衡。（也称作"三重底线"）
WELSA：武汉东湖景区
湿地：以水饱和为主要特征的土地，因而决定其土壤生成的特征、其土壤内部及表面的动植物群落

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