

Institutional Change in China's Sustainable Urban Development

A Case Study on Urban Renewal and Water Environmental Management

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ABSTRACT: Over the past decade, the concept of sustainable development has gained increasing importance within China's urban development. Urban(ising) China not only catalyses many of the country's sustainability issues, but also constitutes the locus where novel institutional arrangements for sustainable development are tested and implemented. This paper explores new paradigms of integrated territorial management unfolding in areas where concerns of water pollution intersect with objectives of urban renewal. The analysis focuses on the case of the Lihu Lake basin, located in the city of Wuxi (Jiangsu Province), considered by many observers to be at the forefront in China's quest for sustainable urban development. In Lihu the integration of environmental management with urban planning has led to the creation of a new organisational field, revolving around the issue of sustainable development of urban areas, with distinctive regulatory, normative, and cognitive aspects. While epitomising a case of integrated territorial management, the experience of Lihu Lake basin highlights the challenge of fostering inclusive social development in urban areas.

KEYWORDS: integrated territorial management, institutional change, water environmental management, urban planning, sustainability, China.

Introduction

In 1992, the Rio Conference heralded a departure from traditional approaches to the management of natural resources, calling for the establishment of planning and management policies harmonising environmental, economic, and social goals.⁽¹⁾ During the last quarter century, a wide consensus has emerged over this approach, leading in many countries to extensive processes of spatial, legislative, and administrative integration, as well as to greater engagement of societal actors in decision-making. These processes have been largely inspired by a logic of integrated territorial management, whereby synergies are sought to meet different demands, interests, and development scenarios related to a spatially defined area, resulting in the harmonisation of different jurisdictions based on its natural characteristics.⁽²⁾

The management of water bodies in densely inhabited regions has been one of the major fields of development in this respect. Water exemplifies the complexity of integrated territorial management: it is a limited and yet vital resource, subject to competing demands, and exposed to multiple sources of pollution. Moreover, despite the unity of the water cycle, water bodies almost invariably fall under different legislative and administrative jurisdictions. Internationally, recent years have witnessed a robust trend towards the establishment of watershed management systems, in order to overcome jurisdictional barriers hampering sustainable management of water resources.⁽³⁾ One of the main examples is provided by Europe, where transboundary watersheds have long been an important policy concern. In 2000, the EU adopted the Water Framework Directive (WFD), establishing a Community unified system of water man-

agement, based on watersheds and on the principle of the unity of the water cycle.⁽⁴⁾

In China, complexities inherent in water management are even more pronounced than in countries of old industrialisation. Due to the tumultuous, multifaceted, and uneven process of growth of its industry and economy, in China several issues related to water pollution have emerged almost simultaneously. Fragmentation of state authorities, overlapping of jurisdic-

1. United Nations Division for Sustainable Development (UNSD), "United Nations Conference on Environment & Development, Rio De Janeiro, 3-14 June. Agenda 21," 1992, <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf> (accessed on 11 June 2016); On the application of principles of integrated territorial management in the EU regional and urban policy, see European Commission (EC), "Scenarios for Integrated Territorial Investments," 2015, http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/pdf/iti_en.pdf (accessed on 11 June 2016).
2. For a collection of case studies on integrated territorial management, see Daniel Galland Garcia de Quevedo, "Integrated Territorial Management and Governance," Aalborg University, 2014, http://vbn.aau.dk/files/197611203/ENECON_Report_Postgraduate_Workshop_Aalborg.pdf (accessed on 27 October 2016). On integrated water management, spatial planning, and institutional integration, see Sue Kidd, "Integrated Water Resource Management and Institutional Integration: Realising the Potential of Spatial Planning in England," *The Geographical Journal*, Vol. 173, No. 4, 2007, pp. 321-329.
3. Ken'ichi Nakagami, "New Perspectives: Reconsideration of IWRM from the Viewpoint of Design Science," in Ken'ichi Nakagami, Jumpei Kubota, and Budi Indra Setiawan (eds.), *Sustainable Water Management: New Perspectives, Design, and Practices*, Heidelberg and New York, Springer, 2014, pp. 3-26.
4. European Commission, "Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy," *Official Journal L 327*, 22 December 2000. The WFD is considered by Chinese policy makers to be a successful model of regulatory framework for water management. On the topic, see Martin Griffiths, "Oumeng shuikuangjia zhiling yu zhongguo 2011 nian zhongyang yihao wenjian xiangguan neirong de duibi fenxi" (Comparison of the EU Water Framework Directive with the relative contents in the NO.1 Document of the Central Government in 2011), *Water Resources Development Research*, Vol. 6, 2012, pp. 82-85.

tional attributions, and conflicts of interest among government bodies have so far jeopardised the country's efforts towards a coordinated and effective governance of the sector.⁽⁵⁾ In fact, at least 13 central government agencies have responsibilities in China's water management.⁽⁶⁾ Against such background, urbanisation is seen both as a possible threat – due to the increasing demand for water and point-source pollution – as well as a positive driver of change, thanks to its potential in promoting new visions for sustainable development, fostering institutional integration, and attracting investment for technological innovation.

The development of environmental management strategies coupled with urban renewal processes has gained increasing attention worldwide, as a response to environmental and socio-economic issues affecting urban regions. This trend has been particularly notable in the case of water management.⁽⁷⁾ China is no exception in this regard.⁽⁸⁾ Over the last decade, the concept of sustainable development has gained momentum within China's urban planning.⁽⁹⁾ This has occurred as a by-product of several issues brought about by urbanisation, including environmental degradation, socio-economic disparities, and marginalisation of vulnerable groups.⁽¹⁰⁾ Cities where pressing concerns of water pollution control and remediation intersect with wider objectives of urban renewal have been at the forefront in testing institutional innovations for integrated territorial management.⁽¹¹⁾ The rationale informing these experimentations has been the integration of environment and development in decision-making, based on the recognition that a clean and healthy environment is a precondition to durable economic growth.

Since the early 2000s, the pursue of a development model in tune with the needs of urban(ising) community(ies) has been subject to special political attention, being framed ideologically through the concept of *yiren weiben*, generally translated as a "human-centred" approach or "putting people first." This concept is repeatedly emphasised in the "National New Type Urbanisation Plan" (2014–2020), enacted by the State Council in 2014.⁽¹²⁾ In this context, cities have been experimenting with new approaches to sustainability. Traditionally, the Chinese authorities have relied on ad interim bureaucratic bodies as brokers between different interests and visions for development.⁽¹³⁾ In recent years, these arrangements are leaving space to deeper processes of institutional innovation. In a volume published in 2015, Chung et al. claim that urban planning itself is becoming a new apparatus for environmental governance.⁽¹⁴⁾ According to the authors, in their competition to attract investment, high-income residents, and tourists, cities act as quasi-autonomous entrepreneurial units, where local governments and key stakeholders have robust incentives to couple environmental actions with economic competitiveness.

In another recent book, titled *Planning for Growth: Urban and Regional Planning in China* (2015), Fulong Wu stresses the linkage existing between policies for urban sustainability and real estate investment, whereby the role of public authorities is being partially replaced by market mechanisms.⁽¹⁵⁾ Based on these assumptions, new experiments in integrated territorial management can be considered to a large extent the result of negotiating interests of institutional entrepreneurs, who exploit "windows of opportunity" provided by a favourable ideological, political, and economic context.⁽¹⁶⁾ Albeit unevenly distributed, new experiments in integrated territorial management appear to be producing a distinctive set of rules, norms, and beliefs, with far-reaching implications for China's pursuit of a sustainable pattern of growth.

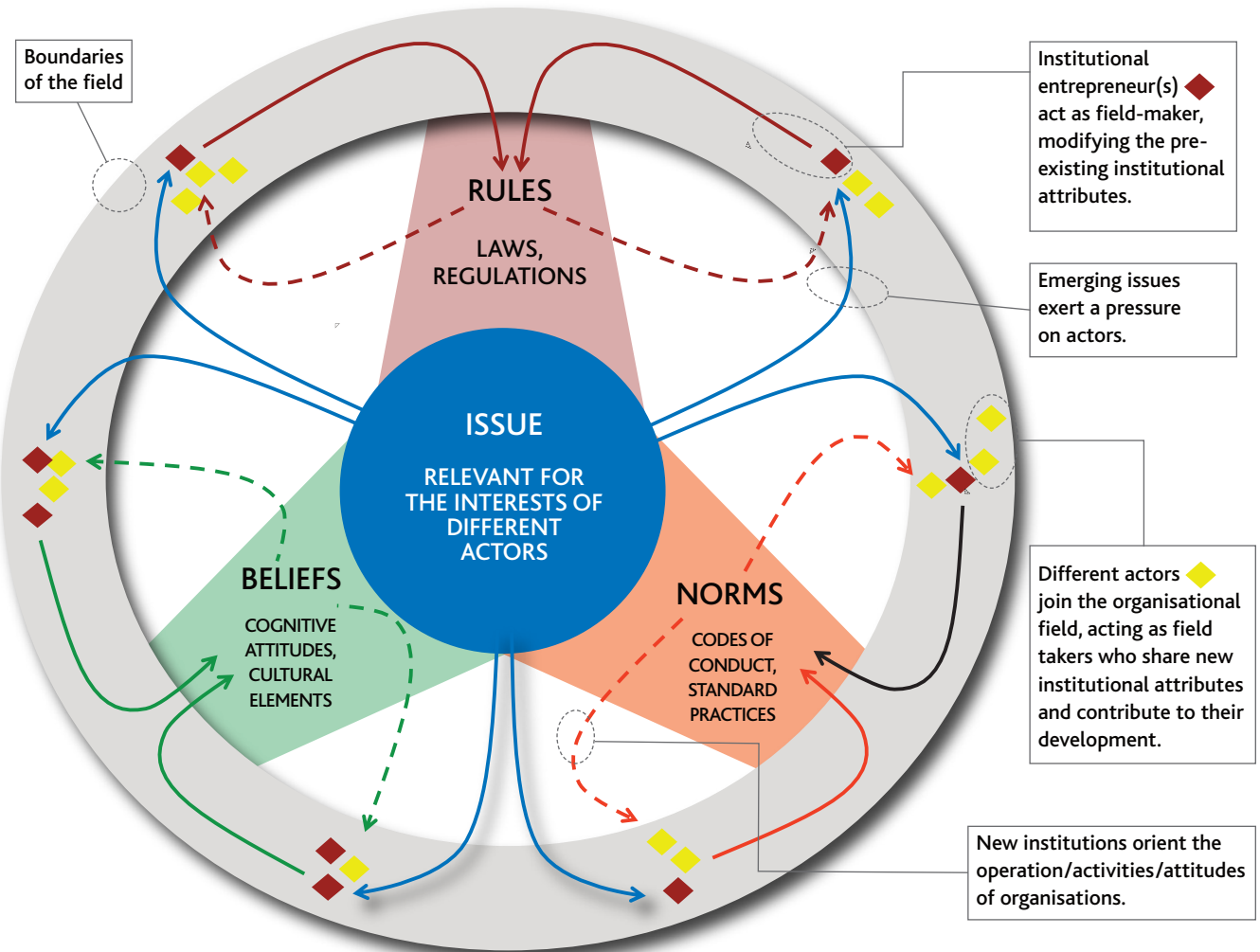
The aim of this article is to shed light on such processes of institutional transformation by analysing integrated territorial management as a new or-

ganisational field, unfolding from the integration of environmental management and urban planning. In the first section, we introduce the theoretical background and methods of our research, drawn from institutional theory and sustainability studies. In the second section, we describe the case study analysed in this paper and introduce the features that make it a case representative of the latest innovations in urban sustainability policies in China. The third section introduces the findings of our research: an ex-post analysis of institutional development pursuant to the management of Lihu Lake basin (Jiangsu Province) between the late 1990s and 2015 is provided by identifying critical events, trajectory activities, and key stakeholders involved in the process of institutional change. The concluding part of this section focuses on the capacity of new institutions created in Lihu for the purpose of territorial management to meet demands for socially inclusive development. In the fourth section, we discuss our findings vis-à-vis the theoretical framework of our research and the wider context of China's policies for sustainable development. This section illustrates as well the influence of China's political peculiarities on the process of institutional transformation.

Theoretical background and analytical framework

This article aims at analysing the domain of integrated territorial management as a new organisational field, unfolding from the integration of environmental management and urban planning. By "organisational field,"

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- Ibidem*.
- For an informative example in the European context, see Rutger De Graaf and Rutger Van Der Brugge, "Transforming water infrastructure by linking water management and urban renewal in Rotterdam," *Technological Forecasting and Social Change*, Vol. 77, 2010, pp. 1282–1291.
- Calvin King-Lang Chung, "Upscaling in Progress: The Reinvention of Urban Planning as an Apparatus of Environmental Governance in China," in Tai-Chee Wong, Sun Sheng Han, and Hongmei Zhang (eds.), *Population Mobility, Urban Planning and Management in China*, Heidelberg and New York, Springer, 2015, pp. 171–187.
- Definitions of urban planning vary based on different institutional settings and historical periods. For the purpose of this paper, we define urban planning as the set of political, regulatory, and technical processes concerned with the development of cities and urban regions, through the control over the allocation of land and physical design. Such processes, traditionally centred on the role of the state, increasingly engage a wide range of different public, private, and societal actors. On urban planning and its definitions, see: UN Habitat, *Global Report on Human Settlements 2009: Planning Sustainable Cities*, London, Earthscan, 2009. Available online at: <http://unhabitat.org/books/global-report-on-human-settlements-2009-planning-sustainable-cities/> (accessed 31 October 2016).
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- Xuemei Bai, Peijun Shi, and Yansui Liu, "Society: Realizing China's Urban Dream," *Nature*, 7 May 2014, <http://www.nature.com/news/society-realizing-china-s-urban-dream-1.15151> (accessed on May 2 2015).
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- Calvin King-Lang Chung, "Upscaling in Progress: The Reinvention of Urban Planning as an Apparatus of Environmental Governance in China," *art. cit.*
- Fulong Wu, *Planning for Growth: Urban and Regional Planning in China*, New York and Abingdon, Routledge, 2015. See in particular chapters 4 (Planning Under Urban Entrepreneurialism) and 6 (New Practices: New Town and Eco-City Planning). A review of the volume by Nicolas Douay is available in *China Perspectives*, Vol. 4, 2015, pp. 71–72.
- "Windows of opportunity" were conceptualised by political scientists within the theory of social movements. See Donatella Della Porta, and Mario Diani, *Social Movements: An Introduction*, Oxford, Blackwell Publishers, 1999.

Figure 1 – Organisational fields formation and institutional pillars⁽¹⁷⁾

we refer to the set of "organisations that (...) constitute a recognizable area of institutional life."⁽¹⁸⁾ The boundaries of an organisational field are essentially formed around "the issues that become important to interests and objectives of a specific collective of organisations."⁽¹⁹⁾ Fields are based on a distinctive set of institutional rules (laws, regulations), norms (standard procedures and practices), and beliefs (cognitive attitudes, cultural elements)⁽²⁰⁾ (see figure 1).

In mapping processes of institutional transformation, institutional theory employs two key concepts: the one of critical events and the one of trajectory activities. The introduction of institutional innovation is generally triggered or facilitated by critical events, including disasters, the enactment of major policies or legislation, or other major events exerting pressure upon existing institutions.⁽²¹⁾ Identifying critical events allows the observer to define the boundaries of different stages in field formation. On the other hand, trajectory activities refer to activities carried out and/or engaging the proponents of institutional change, which substantiate and reinforce the path of institutional development within each stage. They may include the drafting and enactment of regulations, the formulation and implementation of policies, programs, and plans, the generation of specialised knowledge, and the engagement of the public through popular campaigns and the media.⁽²²⁾ Individuals and organisations that bring about institutional change are referred to as institutional entrepreneurs. The major characteristic attributed to institutional entrepreneurs is the capacity to effectively mobilise re-

sources (political, economic, and social) in order to redefine the boundaries of the field in which they are embedded.⁽²³⁾ Literature on institutional transformation depicts processes of change as evolving through subsequent stages. In their model of institutional change, Greenwood et al.⁽²⁴⁾ propose a general framework composed of six stages, from "I. Precipitating Jolts" to "VI. Reinstitutionalisation" (see figure 2).

17. Figure by the authors.

18. Paul J. Di Maggio and Walter W. Powell, "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields," *American Sociological Review*, Vol. 48, 1983, pp. 147-160, p. 148.

19. Andrew J. Hoffman, "Institutional Evolution and Change: Environmentalism and the US Chemical Industry," *Academy of Management Journal*, Vol. 42, 1999, pp. 351-371, p. 352.

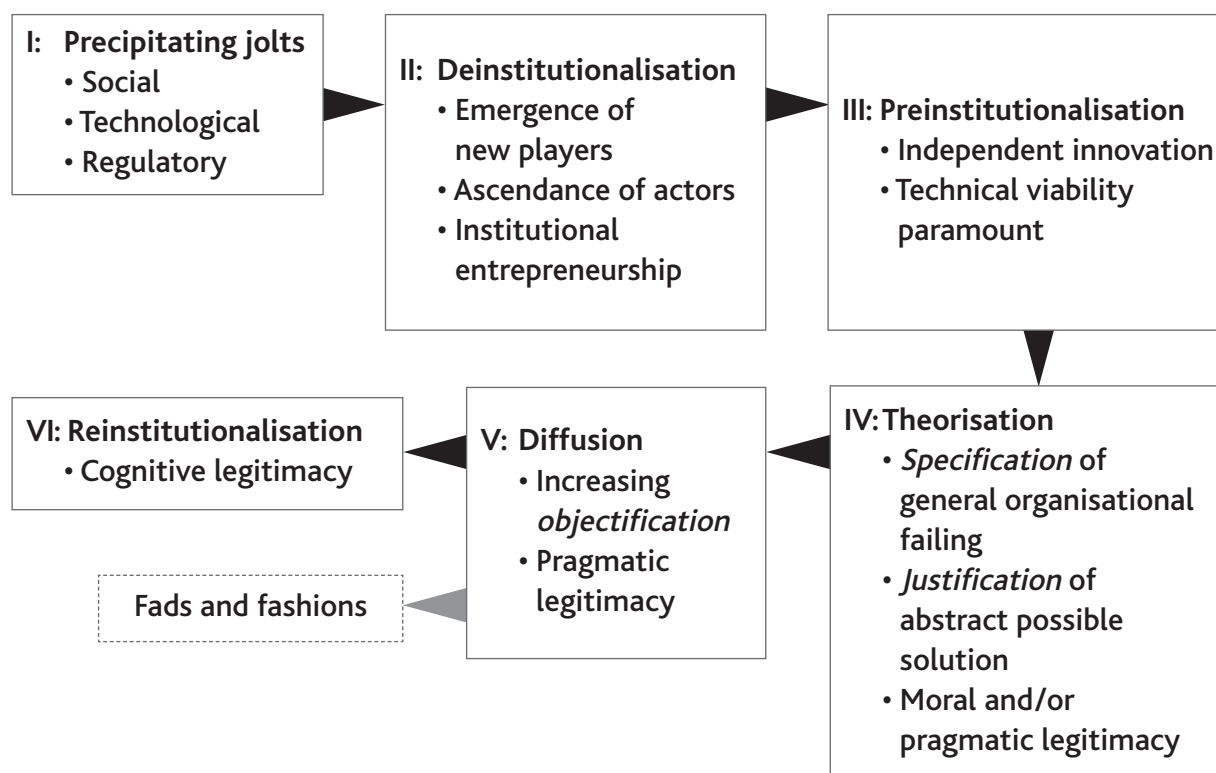
20. John Child, Yuan Lu, and Terence Tsai, "Institutional Entrepreneurship in Building an Environmental Protection System for the People's Republic of China," *Organization Studies*, Vol. 28, 2007, pp. 1013-1034; William Richard Scott, "Institutional theory," in George Ritzer (ed.), *Encyclopedia of Social Theory*, Thousand Oaks (CA), Sage, 2004, pp. 408-14.

21. John Child et al., "Institutional Entrepreneurship in Building an Environmental Protection System for the People's Republic of China," *art. cit.*, pp. 1017-8.

22. *Ibidem*, p. 1017.

23. Raghu Garud, Cynthia Hardy, and Steve Maguire, "Institutional Entrepreneurship as Embedded Agency: An Introduction to the Special Issue," *Organization Studies*, Vol. 28, 2007, pp. 1013-1034, pp. 957-969, pp. 964-966.

24. Royston Greenwood, Roy Suddaby, and Christopher Robin Hinings, "Theorizing Change: The Role of Professional Associations in the Transformation of Institutionalized Fields," *The Academy of Management Journal*, Vol. 45, No. 1, 2002, pp. 58-80; See also: Christopher Robin Hinings, Royston Greenwood, Trish Reay, and Roy Suddaby, "Dynamics of Change in Organizational Fields," in Marshall Scott Poole and Andrew H. Van de Ven, *Handbook of Organizational Change and Innovation*, Oxford, Oxford University Press, 2004, pp. 304-23.

Figure 2 – Stages of institutional change, according to Greenwood et al. (2002) ⁽²⁵⁾

The work of Greenwood et al. is commonly endorsed in institutional theory literature, and can indeed be employed for the purpose of guiding empirical research. ⁽²⁶⁾ Patterns of institutional development are nevertheless difficult to generalise with accuracy, since they are subject to variations in the broader social, cultural, and political context in which they occur. John Child et al., in a paper on the institutional development of China's environmental protection system, provide evidence of the "cyclical repetition (...) of the Greenwood et al. stages within each of the stage[s]" of institutional change empirically analysed by their work. ⁽²⁷⁾ The process should not be seen merely as a linear evolution from one stage to the other, but rather as an iterative process, with more complex movements back and forth among different stages. Based on these premises, in this article we hypothesise that integrated territorial management is emerging in China as a new organisational field, resulting from the entrepreneurship of city bureaucracies and emerging actors in the private and public-private sector. We seek confirmation of this hypothesis through an ex-post analysis of the evolution of institutional features of the territorial management system in an urban/peri-urban lake basin under the jurisdiction of Wuxi City (Jiangsu Province).

The study focuses on the period between the mid-1990s and 2015, taking as entry point the development of the local water environmental management system. Based on the analysis of critical events, trajectory activities, and of the role played by different actors in field formation, we produce a temporal classification of different stages of institutional development leading to the formation of the field of integrated territorial management. This is done by means of a qualitative analysis of empirical evidence, including scientific literature, government reports, national and local regulations and planning documents, project reporting, media reports, and material collected during fieldwork conducted

in 2014 and 2015. The latter includes the results of participant observation carried out at a Chinese government environmental research institute entrusted with monitoring environmental remediation work implemented in the lake basin, ⁽²⁸⁾ ten in-depth key informant interviews, and two half-day Focus Group Discussions (FGDs) involving a total of 14 local stakeholders. ⁽²⁹⁾ Key informants were government officials, company representatives, and environmental management experts. As for the FGDs, the first one engaged seven residents of the lake basin, while the second involved two representatives from government entities responsible for the management of the lake basin, one former government official in the field of agriculture, two representatives from companies involved in remediation work and physical design of water-fronts, and two experts on water management. Identification of stakeholders was carried out based on the results of stakeholder analysis

25. Royston Greenwood et al., "Theorizing Change: The Role of Professional Associations in the Transformation of Institutionalized Fields," *art. cit.*, p. 60.

26. See e.g. Francis Etheridge, Yves Couturier, Helene Trouvé, Olivier Saint-Jean, and Dominique Somme, "Is the PRISMA-France Glass Half-full or Half-empty? The Emergence and Management of Polarized Views Regarding an Integrative Change Process," *International Journal of Integrated Care*, Vol. 9, No. 4, 2009.

27. John Child et al., "Institutional Entrepreneurship in Building an Environmental Protection System for the People's Republic of China," *art. cit.*, p. 1026.

28. The authors took part in a wider activity funded under the EU FP-7 Marie Curie Project GLOCOM. The activity was aimed at evaluating the sustainability of integrated territorial management in the lake basin targeted by the present study. This granted them the possibility to engage for extended periods of time with stakeholders directly involved in planning, monitoring, and evaluation of work in the lake basin.

29. We endorse the definition of stakeholders provided by the World Bank, as follows: "A stakeholder is any entity with a declared or conceivable interest or stake in a policy concern (...) [Stakeholders] can be individuals, organisations, or unorganised groups." Cf. World Bank, *Stakeholder Analysis*, accessible at: <http://www1.worldbank.org/publicsector/anticorrupt/PoliticalEconomy/stakeholderanalysis.htm> (Accessed on 2 May 2016).

Figure 3 – Lihu Lake in 2000 and 2015 ⁽³⁰⁾

(SA) conducted according to the approach devised by Mason and Mitroff. ⁽³¹⁾

The case study

The case selected for our analysis is the Lihu Lake basin, located in Wuxi, a medium-sized city in Eastern China's Jiangsu Province. The case was identified based on its capacity to represent recent trends in the integration of environmental management and urban planning in China. More specifically, the case had to meet the following prerequisites: (a) to be characterised by a well-defined, manageable spatial scale; (b) to be located in an urban and/or peri-urban area; (c) to illustrate the integration of measures for water environmental remediation and urban renewal; and (d) to be located in an area widely considered in China as a virtuous example of sustainable urban development. An additional prerequisite was the accessibility of relevant data and information. To identify the case, authors triangulated Chinese and international media reports, scientific literature, and the results of key-informant interviews and participant observation. Results concurred in indicating that the Lihu Lake basin met the prerequisites mentioned above. ⁽³²⁾

It is a fairly small basin (35 km²), whose western and south-western sections are part of downtown Wuxi. Lihu Lake (also known as Wuli Lake) is essentially a small bay formed by Taihu Lake. Like Taihu, ⁽³³⁾ Lihu has been affected since the 1990s by eutrophication, largely due to non-point source pollution originating from aquaculture and agricultural activities. ⁽³⁴⁾ In 2002, the government of Wuxi embarked on an ambitious remediation project to cope with the issue. ⁽³⁵⁾ In less than a decade, Lihu's water quality greatly improved, ⁽³⁶⁾ the water surface reached a coverage of 8.6 km² (instead of 5.6 km² preceding the adoption of the remediation project), and "a fragrant cool breeze" replaced the "unpleasant fishy smell" of the early 2000s. ⁽³⁷⁾ The remediation project proceeded hand-in-hand with extensive urban renewal and development in the lake basin.

In rapidly urbanising contexts, water environments are generally known for their great value in terms of environmental, aesthetic, and recreational resources, and hence are important community assets. ⁽³⁸⁾ Lihu is no exception: already in 2001, the Wuxi City master plan designated Lihu as a key spot for touristic development. The plan also envisaged the construction of a new urban area in the Lihu Lake basin, to become home to 300,000 people. ⁽³⁹⁾ One of the key projects in this respect was the construction of the Lihu New Town (*Lihu*

xincheng), which according to official documents should embody harmony between humanity and nature. ⁽⁴⁰⁾ In recent years, urban development in the Lihu basin has been widely praised as a virtuous example of accessibility to public green space, combining natural characteristics and contemporary, Western-style infrastructure. ⁽⁴¹⁾ Lihu's urban renewal and development projects con-

30. Elaboration of the authors. Historical satellite images retrieved from Google Earth.
31. Richard O. Mason and Ian I. Mitroff, *Challenging Strategic Planning Assumptions*, New York, John Wiley and Sons, 1981. A checklist for stakeholders' identification based on the work by Mason and Mitroff is accessible at: https://www.mycoted.com/Stakeholder_Analysis (accessed on 15 May 2016).
32. Initially, we had identified another case complying with our prerequisites: the Qionghai Lake basin, located in the Liangshan Yi Ethnic Autonomous Prefecture (Sichuan Province). However, due to limited access to the field, the case was deemed unsuitable for the present research. For an overview of the Qionghai case, see Yong Chen and Yiqian Wang, "Qionghai Lake, Sichuan, China: Environmental Degradation and the Need for Multidimensional Management," *Mountain Research and Development*, Vol. 23, No. 1, 2003, pp. 65-72.
33. On pollution issues of Taihu Lake, see Jun Ma, "Disaster in Taihu Lake," *China dialogue*, 8 June 2007, <https://www.chinadialogue.net/article/1082-Disaster-in-Taihu-Lake> (accessed on May 12, 2016).
34. Xia Jiang, Shuhang Wang, Xiaofei Yang, Wenwen Wang, and Jialu Li, "Change in Water Quality and Ecosystem of Lihu lake Before and After Comprehensive Water Environmental Improvement Measures," *Research of Environmental Sciences*, Vol. 27, No. 6, 2014, pp. 595-601 (in Chinese).
35. *Ibidem*. For a description of remediation works, cfr. the section "Results," subsection "Stage II (2001-2004)."
36. *Ibidem*.
37. Zhongguo huanjing yingxiang wang (China Environmental Impact Assessment Net), "Zhongguo shidi. Baohu liyong tong fazhan" (China wetlands: Protect, use, and develop), 14 November 2011, <http://www.china-eia.com/xwzx/1598.htm> (accessed on June 2, 2016).
38. David Frey, Simon Gleave, and Richard Dawson, "China's Urban Future: Financing a New Era of Urbanization," *KPMG International Cooperative*, Issue 1, May 2014, <http://www.kpmg.com/IM/en/IssuesAndInsights/ArticlesPublications/china-live/Documents/China-urban-future-201405-Financing-a-new-era-of-urbanization.pdf> (accessed on 12 January 2016).
39. Jiangsu Wuxi Basin Urban Environment Project Office, "Resettlement Action Plan of Wuxi Urban Environment Project," 2003, http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2004/04/20/000012009_20040420140943/Rendered/PDF/RP1810vol1011Orev0.tif.pdf (accessed on 11 June 2016). Chinese original version available at: http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2008/08/20/000333037_20080820011120/Rendered/PDF/RP1810CHINESE010301Public10wuxi1rap.pdf (accessed on 11 June 2016).
40. Wuxi shi chengli lihu diqu guiha jianshe lingdao xiaozu (Wuxi City Small Leading Group for the Planning and Construction of Lihu City), "Lihu xincheng jianshe liunian huimou – er ling ling er nian shi yue – er ling ling ba nian shi yi yue" (Looking back at six years of construction of Lihu New Town – From November 2002 to November 2008).
41. Wu Jihua and Li Xiang, "Chengshi gongyuan shiyong zhuangkuang pingjia moxing goucheng yu shizheng yanjiu – yi Wuxi Lihu gongyuan weilie" (Empirical research and modelling for evaluating the utilisation of city parks – Taking Lihu Park as an example), *Heilongjiang duiwai jingmao* (Heilongjiang external trade), July 12, 2014, <http://www.scimao.com/read/616299> (accessed on 2 December 2015).

tributed to the achievement of several official recognitions during the Eleventh Five-Year Plan (2006–2010), when Wuxi was awarded the titles of Global Green City (*quanqiu lvse chengshi*), International Garden City (*guoji huayuan chengshi*), and National Forest City (*guojia senlin chengshi*). In 2011, Wuxi's urban development was included among Asia's best practices endorsed by the United Nations Environmental Programme (UNEP).⁽⁴²⁾

Lihu has also attracted attention as a model of wetland protection and restoration, yielding both ecological and economic gains. It is worth noting in this regard that the protection of Chinese wetlands, covering a total surface of 384,800 km², has been gaining importance in the national environmental policy agenda. Currently on the brink of environmental destruction, wetlands are seen as having enormous potential in terms of ecotourism and recreational business.⁽⁴³⁾ The Lihu Lake Scenic Area epitomises this trend.⁽⁴⁴⁾

Designed to become a high-level leisure destination, it combines open green space with tourist attractions and a cultural exhibition centre displaying the process of local ecological restoration. Official sources describe the Lihu Lake Scenic Area as a door to Taihu New City⁽⁴⁵⁾ and an ideal place for cultural activities, artistic performances, and sports.⁽⁴⁶⁾ In the last decade, the Lihu basin has become a hotspot for real estate development, and high-end residential complexes have been sprouting next to the lake.⁽⁴⁷⁾ Land prices close to the restored wetlands have skyrocketed: while previously 1 *mu* of land (0.0666 hectares) was worth less than 200,000 RMB, the price has now risen to 8,000,000 RMB.⁽⁴⁸⁾ A similar trend has been observed in other Chinese cities. With particular reference to Beijing, research shows that proximity to green spaces and water raises property prices by 7.1% and 13.2% respectively.⁽⁴⁹⁾ It goes without saying that processes of environmental remediation and urban renewal in Lihu have meant the displacement of the low-income residents previously living and working in the basin.

Results

Overview

Overall, we have identified four distinctive phases of field formation. During the first phase, from 1993 to 2000, due to the emergence of extensive pollution, the previous norms and practices of lake management were put into discussion. During the second stage (2001–2004), normative change proceeded, also through the implementation of technical projects of lake remediation. Significant regulatory changes relevant to planning and administration of the lake basin, most notably the new Wuxi City Master Plan (2001–2020), occurred at this stage, laying the groundwork for subsequent transformations. In the period 2005–2012 (stage III), regulatory provisions were strengthened through the enactment of the Lihu Lake Protection Plan (2005–2020) and the establishment of ad-hoc bureaucratic bodies responsible for integrated management of part of the lake basin. The cognitive pillar was greatly developed through scientific dissemination and public information activities aimed at enhancing awareness of urban sustainability issues. The fourth and last stage (2013–2015) was characterised by the introduction of market mechanisms in the management of the lake basin. The critical event in this phase was the establishment of the Wuxi Cultural Development Group Ltd., entrusted with duties of integrated territorial management previously in the hands of bureaucratic structures controlled by the local government.⁽⁵⁰⁾

Stage I (1993–2000)

The establishment of a new field of integrated territorial management of the Lihu Lake basin began in the 1990s, when the emergence of water pollution signalled the crisis of the pre-existing management model. Since the

1960s and 1970s, the function of the lake basin had been that of supporting the development of primary industry. The lake basin was predominantly used for agricultural purposes and pond fish farming. The growth of both sectors caused extensive non-point source pollution due to the inflow of nutrients in the lake. Concentration of total nitrogen (TN) and total phosphorus (TP) peaked in 1992 and 1996. In the second half of the 1990s, the quality of the lake was graded at grade V (i.e., unfit for any utilisation), on a scale ranging from grade I to grade V+.⁽⁵¹⁾ The debate on how to manage and remediate Lihu essentially involved experts and practitioners in the field of environmental management.

In 1993, Wuxi hosted a conference on water environmental management, featuring contributions from both domestic and international experts.⁽⁵²⁾ The debate on the management of the lake revolved around three main issues: (a) pollution control, i.e., limiting the inflow of pollutants in the lake; (b) remediation of existing pollution; and (c) functional zoning, with the need to change the lake's destination of use by limiting activities of primary industry.⁽⁵³⁾ The debate on Lihu was not merely local, but rather tied to the environmental crisis occurring in the wider Taihu Lake basin, the third largest freshwater lake in China, which had been experiencing severe environmental degradation.⁽⁵⁴⁾ In 1998, the central government included Taihu Lake among key watersheds, laying the basis for its inclusion (and hence that of Lihu Lake) among the basins prioritised for environ-

42. United Nations Environmental Programme – Sustainable Buildings and Climate Initiative (UNEP-SBCI), *World Best Practices Asia-Pacific Edition*, Vol. 10, No. 3, 2011.
43. Zhongguo huanjing yingxiang wang (China Environmental Impact Assessment Net), "Zhongguo shidi. Baohu liyong tong fazhan" (China wetlands: Protect, use, and develop), *art. cit.*
44. The website of the Lihu Lake Scenic Area is accessible at: <http://www.wxlihu.com/English/Eng-Main.aspx>.
45. Taihu New City hosts the Sino-Sweden Low-Carbon Eco-City. Covering an area of 2.4 km², it was among the first eight eco-cities recognised by the Ministry of Housing and Urban-Rural Development (MoHURD), in 2012. Cfr. Ying Yin, "Environmental Integration in China's Eco-City Development – From an Institutional Perspective," in Volker Mauerhofer (ed.), *Legal Aspects of Sustainable Development*, Heidelberg and New York, Springer, 2016, pp. 471–495.
46. Wuxi jianshe xinxi wang (Wuxi Construction Information Net), "Lihu diqu er ling ling si nian lian yuan lian dao san lu ji lianghua gongcheng jianjie" (A brief summary of the 2004 project of two parks, two islands, three streets and lighting installation in Lihu District), 15 January 2004, <http://xy.ewf.cn/news/n1101.html> (accessed on 2 January 2016).
47. Sou fang wang tianxia (Searching Housing in China Net), "Wuxi fangjia zui kui bankuai Lihu xincheng, wo yao shang toutiao!!" (The highest prices of housing in Wuxi are in Lihu Newtown. This must be lead story!!), 29 June 2015, http://news.wuxi.fang.com/2015-06-29/16400928_all.html (accessed on 13 May 2016); The project "Landscape Resort Community Park" planned for construction in the Lihu area in 2012 can be seen at Alison Furuto, "Wuxi Masterplan: Mixed Used Building Complex Proposal/ATENASTUDIO," *Archdaily*, 24 April 2013, <http://www.archdaily.com/363136/wuxi-masterplan-mixed-use-building-complex-proposal-atenastudio> (accessed on 5 April 2016).
48. Zhongguo huanjing yingxiang wang (China Environmental Impact Assessment Net), "Zhongguo shidi. Baohu liyong tong fazhan" (China wetlands: Protect, use, and develop), *art. cit.*
49. China Development Bank Capital, "12 Green Guidelines. Green and Smart Urban Development Guidelines. Draft for Comment," October 2015, <http://energyinnovation.org/wp-content/uploads/2015/12/12-Green-Guidelines.pdf> (accessed on 2 January 2016).
50. Wuxi shi zhengfu (Wuxi City Government), "Shi zhengfu guanyu zujian wuxishi wenhua liyou fazhan jituan youxian gongsi," *op. cit.*, *art. cit.*, 4.1–4.3.
51. Jiang Xia et al., "Change in Water Quality and Ecosystem of Lihu Lake Before and After Comprehensive Water Environmental Improvement Measures," *art. cit.*, p. 597.
52. Sund Horst, Hans-Henning Stabel, Walter Geller, Xiaogan Yu, Kechang Yuan, and Fening She (eds), *Environmental Protection and Lake Ecosystems. Proceedings of an International Symposium Held in Wuxi from March 27 to April 1 1993*, Nanjing, Science and Technology Press, 1993.
53. On the environmental management measures, see Gang Gu, Genfa Lu, "On Integrated Control of Water Environment of Wuli lake, Lake Taihu," *Journal of Lake Sciences*, Vol. 16, No. 1, 2004, pp. 56–60 (in Chinese).
54. Guo Mengpo, "Taihu shui huanjing baohu gongneng qu huafen de chubu tantao" (Preliminary study on environmental protection water functional zoning of Taihu lake), *Huanjing wuran yu fangzhi* (Environmental pollution prevention and control), Vol. 2, 1991.

mental management interventions in the Tenth Five Year Plan (2000-2005).⁽⁵⁵⁾

Stage II (2001-2004)

This stage heralded a departure from the previous functions attributed to the Lihu Lake basin, from an area predominantly destined for primary industry to an area designed for recreational functions, serving urban development and tourism. The major critical event in this period was the enactment of the Wuxi City Master Plan (2001-2020), which foresaw 300,000 new urban residents in the Lihu Lake basin by 2020.⁽⁵⁶⁾ In 2002, Jiangsu Province and Wuxi City launched an ambitious "Urban Environmental Project," envisaging a wide range of pollution remediation and control interventions in the Lihu area (mostly in Binhu, Huishan, and Xishan districts).⁽⁵⁷⁾ Lihu Lake proper was targeted by the Lihu Comprehensive Remediation Project. Interventions included the construction of sewage infrastructure, hydraulic works to control the inflow of water from rivers and from Taihu Lake, ecological restoration (planting of trees, reintroduction of local fish species, restoration of wetlands), dredging of lake sediment and reconverting to water areas previously reclaimed for agriculture.⁽⁵⁸⁾ More importantly, the project introduced a substantial rezoning of lake basin functions, with an almost complete ban on pond fish farming and limits to agricultural activity. The project's sources of funding were public, including revenues accrued from the land leased to developers by the local government.⁽⁵⁹⁾ Ad-hoc bureaucratic structures were created to coordinate the remediation work: The Wuxi City Small Leading Group for the Planning and Construction of Lihu City (*Wuxi shi chengli lihu diqu guiha jianshe lingdao xiaozu*) was established for this purpose in November 2002.⁽⁶⁰⁾ The Small Group was chaired by the vice-mayor of Wuxi, and comprised 16 government departments and eight designing units (*danwei*).⁽⁶¹⁾ Technical design and execution of the projects were entrusted to a number of companies, including the Wuxi Urban Development Group Co., Ltd., and the Wuxi Public Utilities Industrial Group Co., Ltd., established respectively in 2001 and 2003, which would gradually emerge as important actors in the institutional setting of Lihu Lake integrated management.⁽⁶²⁾ This stage was characterised by an emerging pattern of inter-sectorial and intergovernmental integration at the administrative level to ensure the smooth implementation of technical measures devised to solve pollution issues. At the same time, new actors emerged, most notably public-private companies entrusted with remediation works, including the identification, design, and implementation of technically and economically viable solutions for remediation, ensuring long-term environmental quality, in spite of the planned expansion in human settlements in the basin.

Stage III (2005-2012)

The year 2005 constituted a turning point in the process of institutional change. Environmental works foreseen in the Lihu Comprehensive Remediation Project were essentially completed by the end of the year, and their effectiveness in ameliorating water environmental quality was demonstrated by the good performance of some key water quality indicators (total phosphorus and chemical oxygen demand, TP and COD).⁽⁶³⁾ Lihu Central Park, Bogongdao Shengtai Park, and Chang Guangxi Wetland Park – located in areas reclaimed from pond fish farming and agricultural activities – were open to the public.⁽⁶⁴⁾ Most importantly, the city government enacted the Wuxi City Lihu Protection Plan, the first attempt to set development priorities and streamline administrative responsibilities for the Lihu Lake basin.

The plan has jurisdiction over the entire lake basin (35.4 km²) for the period 2005-2020.⁽⁶⁵⁾ The document makes explicit reference to the need for pursuing comprehensive sustainability across the environmental, economic, and social dimensions.⁽⁶⁶⁾ The following functions are defined as priorities for Lihu Lake: flood prevention, water provision, ecological preservation, and economic development (i.e., recreational function).⁽⁶⁷⁾ In terms of water quality, the plan sets the achievement of water quality Grade III within 2020 as an indicative target.⁽⁶⁸⁾ In this respect, the plan endorses the technical solutions implemented since 2002, calling as well for the strengthening of point-source and non-point source pollution control.⁽⁶⁹⁾ With reference to the recreational function, the plan calls for the development of "ecological" tourism, with a limited impact on the environment.⁽⁷⁰⁾ In Art. 26-27, the plan foresees the establishment of a Wuxi City Lake Management Committee, to be put under the jurisdiction of the city Department for Water Resources (*shuili ju*) and composed of representatives of the Wuxi Development and Reform Commission (*wuxi fazhan gaige weiyuanhui*), and the city departments of water resources (*shuili ju*), environmental protection (*huanjing baohu ju*), construction (*jianshe ju*), traffic (*jiaotong ju*), planning (*guihua ju*), land resources (*guotu ju*), agriculture and forestry (*nonglin ju*), parks (*yuanlin ju*), and tourism (*lvyou ju*).⁽⁷¹⁾ There is no evidence that such a committee was established. Instead, in December 2005, a new body was created as an independent legal entity, namely the Wuxi City Lihu Scenic Area Management Committee. Its functions were later extended to also cover the Huishan Scenic Area. The body was therefore renamed Wuxi City

55. Guojia huanjing baohu zongju (State Environmental Protection Administration, SEPA), "Taihu shui wuran fangzhi 'shi wu' jihu" (Tenth Five Year Plan for the water pollution prevention and control of Taihu), 1998, <http://www.caep.org.cn/uploadfile/11-5/taihu.pdf> (accessed on 20 May 2016).
56. Jiangsu Wuxi Basin Urban Environment Project Office, "Resettlement Action Plan of Wuxi Urban Environment Project," *op. cit.*, p. 2.
57. *Ibidem*.
58. Xia Jiang et al., "Change in Water Quality and Ecosystem of Lihu Lake Before and After Comprehensive Water Environmental Improvement Measures," *art. cit.*
59. Wuxi shi zhengfu (Wuxi City Government), "2006 nian 'Zhongguo renju huanjing jiang' (shui huanjing zhili youxiu fanli chengshi)" (2006 Chinese Award for Environmental Settlements - Water Environment Remediation Outstanding Model City), 2006, <http://www.xuyi.gov.cn/n9622c231.shtml> (accessed on 10 April 2016). The project was partially financed by a World Bank loan.
60. *Renmin Ribao* (People's Daily), "Wuxi yi zhuangshi daunwan de qipo zhengzhi lihu" (Wuxi's great determination in remediating Lihu lake), 7 September 2012, p. 7; Xu Gu, "Shi nian zhi yi hu. Lihu zhengzhi, shengtai wenming jianshe dianfan" (Ten years restoring a lake: The remediation of Lihu Lake, model for the construction of ecological civilisation), *Shengming Shijie*, Vol. 0, No. 12, 2013, pp. 4-11.
61. Wuxi shi zhengfu (Wuxi City Government), "2006 nian 'Zhongguo renju huanjing jiang' (shui huanjing zhili youxiu fanli chengshi)" (2006 Chinese Award for Environmental Settlements - Water Environment Remediation Outstanding Model City), *op. cit.*; Lihu Guihua Jianshe Wang (Lihu Planning and Construction Net), "Lihu diqu jianshe shi xin san nian chengshi jianshe chongzhong zhizhong" (Lihu area construction is the core of city construction for three years), 5 April 2013, <http://house.wxrb.com/news/195/05413/18934.shtml> (accessed 11 June 2016).
62. See company websites at: <http://www.wxsfjt.com/cy1.asp>, <http://www.wxszt.com/about.asp>. With reference to the role played by companies that are part of the Wuxi Urban Development Group Co., Ltd., see Interviews # 140818 a, b, c.
63. Xia Jiang et al., "Change in Water Quality and Ecosystem of Lihu Lake Before and After Comprehensive Water Environmental Improvement Measures," *art. cit.*, p. 597.
64. Wuxi lihu fengjingqu guanli chu (Wuxi Lihu Lake Scenic Area Administration), "Wuxi shi lihu fengjing qu da shiji - 2005 nian" (Major events of the Lihu scenic area of Wuxi City - 2005), 2012, <http://www.wxlihu.com/ShowInfo/MoreInfo.aspx?categoryNum=005> (accessed on 10 May 2016).
65. Wuxi shi zhengfu (Wuxi City Government), "Wuxi shi wulihu (lihu) baohu guiha" (Wuxi City Lihu Lake Protection Plan), 2005, Art. 5, 6.
66. *Ibidem*, Art. 3.
67. *Ibidem*, Art. 31.
68. *Ibidem*, Art. 24.
69. *Ibidem*, Art. 20.
70. *Ibidem*, Art. 23.
71. *Ibidem*, Art. 26-7.

Lihu and Huishan Scenic Areas Management Committee (2008).⁽⁷²⁾ Although not extending its jurisdiction over the entire lake basin area, the Committee became the main institutional entity entrusted by the city government with inter-sectorial duties of integrated management in the lake area. Its functions included the enforcement of regulations on construction and commerce. It was responsible as well for environmental monitoring – traditionally in the hands of environmental protection and water resources departments/bureaus – the preservation of touristic assets, including landscape and cultural heritage, and the surveillance and enforcement of environmental regulations, with reference to littering and any other activity (including fishing) that may harm the environment and landscape. Finally, it was entrusted with a key role in terms of cultural and touristic promotion.⁽⁷³⁾

After the constitution of the Committee, official documents released by the Wuxi Reform and Development Commission began making explicit reference to the need for developing market mechanisms and generating revenues through the operations of the scenic areas, albeit within the framework of the paramount goals of sustainable urbanisation and ecological civilisation.⁽⁷⁴⁾ The Lihu and Huishan Scenic Areas Management Committee and the Wuxi City Scenic Park Management Centre⁽⁷⁵⁾ were identified as the key players in fostering commercial exploitation of the scenic areas.⁽⁷⁶⁾ According to the party secretary of a government body controlled by the Lihu and Huishan Scenic Areas Management Committee:

At the beginning, the entire range of activities related to Lihu was funded by the government (...). Since 2008 the plan has been that of progressively reducing the part of government financing. Starting from 2008, we have been funding approximately 1/3 of our operations (maintenance of the parks, remediation work, environmental monitoring) through the exploitation of park areas, by renting out properties expropriated after 2002, commerce in fisheries and wood, and touristic activities. In more recent years, pressure to become financially viable has become stronger.⁽⁷⁷⁾

Regulatory and administrative streamlining proceeded in this phase along with extensive cultural activities engaging the local population, in the form of both traditional entertainment activities and environmental awareness-raising campaigns, framed through the concepts of sustainable urbanisation, harmonious coexistence between man, nature, and culture, and through the ideological concept of “*yiren weiben*.”⁽⁷⁸⁾ These activities were to a large extent instrumental in establishing cognitive common ground and providing legitimacy to the objectives of environmental remediation and urban renewal in the basin.⁽⁷⁹⁾ They appear to have also resulted in raising environmental awareness, also by echoing the growing debate on environmental issues at the national level. When asked to express a judgement on the relative importance of economic development versus environmental quality, local residents involved in our FDG did not show any doubt in attributing priority to the environment as a precondition for growth.⁽⁸⁰⁾ In discussing the issue, one of the participants stated:

Once the environment is not good, even if the economy develops, eventually it will come down again. If the environment is not good, then people will not come [to Wuxi] anymore, and investment will suffer. Those who would like to enjoy themselves would not come

anymore. It is like the Three Kingdoms City [a theme park on Taihu's shores]: after the environmental situation improved, people started going there. This is very clear.⁽⁸¹⁾

Besides organising education campaigns targeting local residents, city authorities boosted Lihu's visibility by hosting international experts and high-level international forums. In 2006, during a visit to Wuxi, the UNEP Asia-Pacific Office Regional Director Surendra Shrestha officially endorsed Lihu's sustainable urbanisation and eco-tourism projects.⁽⁸²⁾ In 2011, the city hosted the Asian Wetland Symposium, held in Changguangxi Wetland Park.⁽⁸³⁾

Stage IV (2013-2015)

The fourth and last stage has been characterised by the institutionalisation of different dominating interests pursuant to the Lihu Lake basin, in the framework of urban sustainability and market development goals. The critical event at this stage has been the establishment of the Wuxi Cultural Development Group Ltd.,⁽⁸⁴⁾ whose shareholders are the Wuxi Taihu New Town Development Group Co., Ltd. (part of the larger Wuxi Urban Development Group Co., Ltd., established in 2001)⁽⁸⁵⁾ and the Wuxi Public Utilities Industrial Group Co., Ltd. (established in 2003).⁽⁸⁶⁾ Established in 2013 with an initial investment of 1 billion RMB, Wuxi Cultural Development Group Ltd. has been entrusted with duties of integrated territorial management previously in the hands of bureaucratic structures directly controlled by the gov-

72. Wuxi shi zhengfu (Wuxi City Government), “Wuxi shi lihu fengjing qu guanli banfa” (Measures for the management of Wuxi City Lihu scenic area), No. 78, 2006; Wuxi shi zhengfu (Wuxi City Government), “Wuxi shi lihu huishan fengjing qu guanli banfa” (Measures for the management of Wuxi City Lihu and Huishan scenic areas), No. 100, 2008.

73. *Ibidem*, Art. 5-28.

74. Wuxi shi fazhan gaige weiyuanhui (Wuxi City Development and Reform Commission), “Wuxi shi zhishu gongyuan jingqu tizhi jizhi gaige shishi fang'an” (Wuxi City implementation plan for the structural reform of the city's park and scenic areas), 10 April 2009, Art. 2.

75. The Wuxi City Scenic Part Management Centre is part of the Wuxi City Gardens Bureau (*Wuxi shi yuanyin ju*). On the latter, see the bureau's website (in English) at: <http://wap.en.wuxi.gov.cn/wrap/wx/pages/subPages/newsDetail.cmsAction?pagel=333949>.

76. Wuxi shi fazhan gaige weiyuanhui (Wuxi City Development and Reform Commission), “Wuxi shi zhishu gongyuan jingqu tizhi jizhi gaige shishi fang'an” (Wuxi City implementation plan for the structural reform of the city's park and scenic areas), *op. cit.*, Art. 3.

77. Interview #150917.

78. Wuxi lihu fengjingqu guanlichu (Wuxi Lihu Lake Scenic Area Administration), “Wuxi shi lihu fengjing qu da shiji – 2005, 2008, 2009, 2010, 2011 nian” (Major events of the Lihu scenic area of Wuxi City – 2005, 2008, 2009, 2010, 2011), 2012, <http://www.wxlihu.com/ShowInfo/Moreinfo.aspx?categoryNum=005> (accessed on 10 May 2016).

79. FGD Transcript # 150916, p. 12.

80. FGD Transcript # 150915, p. 16.

81. FGD Transcript # 150915, p. 16.

82. Wuxi City Small Leading Group for the Planning and Construction of Lihu City, “Unveiling the Beauty of Lihu lake: Wuxi Well on Its Way Towards Ecological Wellbeing,” *op. cit.*, preface.

83. Integrate Coastal Zone Management Project (ICZMP), “ICZMP Project Director Attended Asian Wetland Symposium (AWS-2011) at Wuxi in China,” 17 October 2011, <http://www.iczm-podisha.org/Publication/Consultation%20Report%20on%20PD%20ICZMP%20attended%20AWS%202011%20at%20Wuxi%20China.pdf> (accessed on 14 June 2016).

84. Wuxi shi zhengfu (Wuxi City Government), “(Implementing suggestions of the city government on the establishment of Wuxi Culture and Tourism Development Group Ltd.), Wuxi City Government 2013, No. 175, http://www.wuxi.gov.cn/web101/wxqk/gazette/gov_file/6644223.shtml (accessed on 1 June 2016).

85. On the Wuxi Urban Development Group Co., Ltd. and companies affiliated to it, see the company's website at: <http://www.wxqjt.com/cy1.asp>, <http://www.wxqjt.com/cy1.asp?id=7> (accessed on 10 June 2016).

86. On the Wuxi Public Utilities Industrial Group Co., Ltd., see the company's website at: <http://www.wxqjt.com/about.asp>, <http://www.wxqjt.com/about1.asp> (accessed on 10 June 2016).

ernment.⁽⁸⁷⁾ Besides being responsible for branding Lihu Lake, the company is responsible for functions that between 2008 and 2012 were carried out by the Lihu and Huishan Scenic Areas Management Committee and the Wuxi City Scenic Part Management Centre, whose personnel have been transferred to the newly-created company. It is worth mentioning, in this regard, that the core business of both companies controlling the Wuxi Cultural Development Group Ltd. is the construction sector. Not surprisingly, in discussing with the authors the rationale of recent institutional developments, a senior employee of one of the shareholders of Wuxi Cultural Development Group Ltd. commented:

What has been done in Lihu so far is a clear example of how environmental planning can influence and promote real estate development. Sustainable development is made possible by this.⁽⁸⁸⁾

According to another manager of the same company:

Of course remediation works and new parks are linked to real estate development. The prices of properties have increased more than ten times since we started!⁽⁸⁹⁾

Consistent with these developments, the tone of the debate and information concerning Lihu Lake has shifted to include forms of territorial branding, in order to position the city as a worthy competitor to other cities in the region (in particular Suzhou) in attracting tourists and high-end residents.⁽⁹⁰⁾ The transition towards a market-oriented logic in the management of the Lihu basin appears to have occurred also as a consequence of the scepticism aired by parts of the local bureaucracy and academia over the efficiency of expensive remediation work in promoting economic development in the lake basin.⁽⁹¹⁾ The lack of disaggregated data on economic development in the lake basin makes it difficult to ascertain the veridicity of these claims.⁽⁹²⁾ However, they might have exerted political pressure and facilitated the transition towards market mechanisms. Although some degree of criticism has been present in the case of Lihu, there is no evidence of overt conflict.⁽⁹³⁾

Institutional Development and Social Sustainability

The institutional change in Lihu was essentially based on considerations of environmental and economic sustainability. However, as mentioned in the introduction, integrated territorial management entails also taking into account the social dimension of sustainability, especially public participation. In Lihu, this would have been particularly relevant in the framework of the Lihu Comprehensive Remediation Project, the tool to radically re-zone lake functions with extensive changes in water and land use (ban on pond fish farming, reduction of cultivated areas). In fact, there is no evidence that formal public consultation was sought during the design of the remediation plan.⁽⁹⁴⁾ This being said, implementing authorities were well aware of possible conflicts⁽⁹⁵⁾ arising from the process of relocation, and thus provided for a certain degree of public engagement during the process of land acquisition and resettlement. An Action Plan for the Resettlement and Rehabilitation of Project-Affected Persons (PAPs)⁽⁹⁶⁾ was set out in accordance with the relevant laws and regulations of the PRC and Jiangsu Province, and following the Operational Directive for Involuntary Resettlement provided by the World Bank, which funded part of the remediation work through a

loan program.⁽⁹⁷⁾ The Resettlement Action Plan (hereafter RAP) estimated a total number of 2,801 impacted people, including 167 households (734 PAPs), seven enterprises, and one institution (1,703 PAPs).⁽⁹⁸⁾

From April to May 2003, surveys were carried out in the affected areas. Suggestions on resettlement compensation and rehabilitation raised during the survey investigation were included in the RAP. Survey activities targeted 130 households. Further involvement of local community representatives was pursued to ease the negotiation process with the impacted parties, and to ensure transparency in the resettlement process. Discussion meetings were organised six months and three months before land acquisition and demolition. In parallel, formal announcements regarding the resettlement plan were made through media outlets, and handbooks were distributed among the affected communities.

The whole consultation process put particular attention on informing the public of their legal rights to redress and appeal. Land acquisition, demolition, and resettlement were planned to begin in November 2003 and end in December 2006.⁽⁹⁹⁾ Although noteworthy, these efforts can hardly be indicative of substantial public participation in decision-making. Involvement of the public only targeted a limited number of people and was pursued only once the restoration plan for Lihu and the related relocation and resettlement objectives had already been defined. Engagement of local communities was essentially meant to avoid disagreements that could have hampered the smooth implementation of the plan, posing the risk of social instability. Indeed, it appears that the public was not asked to provide feedback or possible alternatives to inform the decision-making process, but only to negotiate over the resettlement allowances (*anzhi buzhufer*). This is consistent with the general trend in China, where approximately 52 million peasants were displaced between 1987 and 2010, particularly due to the urbanisation drive and the tendency of local governments to augment fiscal

87. Wuxi shi zhengfu (Wuxi City Government), "Shi zhengfu guanyu zujian wuxishi wenhua lvyou fazhan jituan youxian gongsi" (Implementing suggestions of the city government on the establishment of Wuxi Culture and Tourism Development Group Ltd.), *op. cit.*, art. 4.1-4.3.

88. Interview #140818b.

89. Interview #140818a.

90. Visit Wuxi Cultural Development Group Ltd. website at: <http://wxgyjq.wuxi.gov.cn>; Interview #150917.

91. FGD Transcript # 150916 p. 4-5.

92. A study on the impacts of the integrated management measures across the three dimensions of sustainability has been conducted by the authors of this paper in the framework of the GLOCOM project. Its results will be released in 2017.

93. Conversely, during the planning stage of the Sino-Swedish Eco-City hosted by Taihu New City, disagreements among governmental sectors occurred, and certain departments showed "resistance (...) [to] high environmental requirements." See Ying Yin, "Environmental Integration in China's Eco-city Development—From an Institutional Perspective," in Volker Mauerhofer (ed.), *Legal aspects of sustainable development*, Heidelberg and New York, Springer, 2016.

94. This is also likely to have occurred since the new EIA law, with more stringent requirements for public consultation, entered into force only in 2003.

95. Official documents explicitly state that relocation and compensation were carefully enforced so as to avoid possible "contradictions" (*maodun*). See for example: Wuxi shi chengli lihu diqu guiha jianshe lingdao xiaozu (Wuxi City Small Leading Group for the Planning and Construction of Lihu City), "Lihu xinzheng jianshe liunian huimou – er ling ling er nian shi yi yue – er ling ling ba nian shi yi yue" (Looking back at six years of construction of Lihu New Town – From November 2002 to November 2008), *op. cit.*

96. Jiangsu Wuxi Basin Urban Environment Project Office, "Resettlement Action Plan of Wuxi Urban Environment Project," *op. cit.*

97. The Lihu lake Comprehensive Remediation Project was partially financed by a World Bank loan.

98. Official documents are not consistent in the estimates of relocated people. Another report states that 289 companies and 1,860 households were relocated. See Jiangsu sheng huanjing baohu ting (Jiangsu Province Environmental Protection Department), "Wuxi lihu shui huanjing zhili de chengxiao yu qishi" (Success and enlightenment of Wuxi Lihu Lake remediation), 10 October 2008.

99. *Ibidem*.

revenues through land leasing. Though this is often presented by local governments through the mantra "land in exchange for social welfare" (*tudi huan baozhang*), resettlement has been the cause of considerable public grievances, and has sparked a large number of mass incidents every year since.⁽¹⁰⁰⁾ There is no evidence of such events occurring in the Lihu basin after the relocation of peasants. In fact, anecdotal evidence collected in the field by interviewing relocated peasants in the Changguangxi wetland area confirms official claims that relocation was dealt with in an orderly fashion, providing expropriated peasants with social housing.⁽¹⁰¹⁾ However, local peasants involved in our FDGs confirmed that public participation was not significant. According to one of the participants:

The government doesn't allow us to participate; it's not like you can participate if you want.⁽¹⁰²⁾

According to another participant:

What people say doesn't really count; it's what the government says that counts.⁽¹⁰³⁾

When asked to comment on the same issue, representatives of local authorities and of a company under the Wuxi Cultural Development Group Ltd. rather stressed the fact that relocation was carried out with the utmost care, giving priority to the interests and welfare of the affected people, so that farmers' integration as "urbanised citizens" could be accelerated. Moreover, they tended to emphasise the adoption of a people-oriented (*yiren weiben*) approach and fostering environmental awareness activities, echoing the official rhetoric on people's quality self-cultivation (*suyang*).⁽¹⁰⁴⁾ Throughout the planning and implementation stages of remediation and urban renewal we found no trace of substantial engagement of civil society. It is worth noting in this regard that much of the related decision-making process was carried out before 2005, when environmental activism in China was not yet as mature as it is today. It would nevertheless be a mistake to dismiss the role of civil society as entirely trascurable. In 2012, the government-sponsored NGO All-China Environment Federation (ACEF) sued the Lihu and Huishan Scenic Areas Management Committee. According to ACEF, the defendant had illegally changed the designated use of two hectares of land from forestry to construction, thus creating environmental damage. The People's Court of Binhu District ruled that restoring the land to forest would not be economically efficient. However, it recognised the existence of environmental damage and ordered the defendant to carry out reforestation elsewhere (*ex situ*).⁽¹⁰⁵⁾ The case has not influenced institutional developments in Lihu, but it might signal a first shift away from the scarce political inclusiveness that has characterised institutional development in Lihu thus far.

Conclusion

Our results confirm the hypothesis modelled on institutional theory: integrated territorial management in Lihu is emerging as a distinctive organisational field as a result of the institutional entrepreneurship of the city's authorities and of public-private actors, who sustain institutional change in view of tangible economic benefit. In general terms, the pattern of institutional evolution is consistent with the model theorised by Greenwood et al.:⁽¹⁰⁶⁾ the first stage of institutional change (1993-2000) is in line with the

description of "precipitating jolts," when the extensive pollution in Lihu Lake attracted the attention of both practitioners and policy-makers, highlighting the need to radically restructure the model of exploitation and management of water and land resources in the lake basin. The second stage we identified (2001-2004) is consistent with the phases of "deinstitutionalisation" and "pre-institutionalisation." This stage is characterised by the institutional entrepreneurship of the Wuxi City authorities and emerging actors, who introduced new ideas related to a model of lake basin management integrating environmental quality and urban development, and seeking confirmation of their technical viability through extensive remediation work.

The third stage (2005-2011) corresponds to phases IV and V of Greenwood's model, "theorisation" and "diffusion." In this period, the new model of urban development in the Lihu area gained pragmatic legitimacy, largely thanks to the positive results of remediation work in the lake. Regulatory developments endorsed the new norm(s) in terms of integrated management of the lake basin, pushing for intersectoral integration with urban policies and tourism development. Elements perceived as potentially detrimental in the long run to the financial viability of integrated territorial management, in particular the over-reliance on government funding, were partially addressed by promoting the establishment of market mechanisms, as well as the engagement of actors of the private sector. Lihu's experience was naturalised as the solution to long-standing issues in China's development, most notably the conflict between environmental protection and economic growth. Finally, the last stage (2013-2015) heralds a departure from the pre-existing model of territorial management, fully endorsing the function of public-private partnerships in the framework of intersectoral coordination.

While the general pattern of Lihu's institutional change fits the model by Greenwood et al., its peculiarities should not be overlooked. Indeed, while Greenwood et al. stress the importance of normative and cognitive changes in developing a new field, in the case analysed regulatory development was equally important in fostering innovation, and regulatory changes occurred already at an early stage in the process of institutional change. This is probably the result of institutional entrepreneurship on the part of government authorities, which constitutes a distinctive trait of China's institutions for environmental management and urban planning.⁽¹⁰⁷⁾ In this respect, our results are consistent with earlier literature. In their work on the institutionalisation of the environmental protection field, Child et al. highlight that while in the US civil society contributed to developing cognitive and normative pillars, in China the process was top-down and rather fast in unfolding.⁽¹⁰⁸⁾ In fact, if compared with processes

100. Lynette Ong, "State-Led Urbanization in China: Skyscrapers, Land Revenue and 'Concentrated Villages,'" *The China Quarterly*, No. 217, 2014, pp. 162-179.

101. Interviews #150918 a, b.

102. FGD Transcript # 150915, p. 4.

103. FGD Transcript # 150915, p. 21.

104. FGD Transcript # 150915, p. 16.

105. Yun Ma, *Conservation and Recreation in Protected Areas: A Comparative Legal Analysis on Environmental Conflict Resolution in the United States and China*, New York and London, Routledge, 2016 (Case 19, p. 232).

106. Royston Greenwood, Roy Suddaby, and C. R. Hinings, "Theorizing Change: The Role of Professional Associations in the Transformation of Institutionalized Fields," *The Academy of Management Journal*, Vol. 45, No. 1, 2002, pp. 58-80.

107. Calvin King-Lang Chung, "Upscaling in Progress: The Reinvention of Urban Planning as an Apparatus of Environmental Governance in China," *art. cit.*

108. John Child, Yuan Lu, and Terence Tsai, "Institutional Entrepreneurship in Building an Environmental Protection System for the People's Republic of China," *art. cit.*

Figure 4 – Lihu integrated territorial management: Field formation

	1993-2000	2001-2004	2005-2012	2013-2015
Critical events	Severe water pollution in Lihu lake	Enactment of Wuxi Master Plan Establishment of intersectoral coordination mechanisms	Enactment of Lihu lake protection plan Establishment of independent intersectoral bureaucratic bodies responsible for integrated management	Responsibilities of integrated management transferred to a public-private company
Main trajectory activities	Scientific and technical debate engaging experts, practitioners, and environmental protection authorities	Lihu lake remediation works	Regulatory production to streamline administrative responsibilities Introduction of market mechanisms to fund maintenance of remediation works Awareness and information campaigns	Regulatory production to streamline administrative responsibilities Awareness and information campaigns Lihu lake branding
Institutional entrepreneurs	Environmental protection authorities	City government Construction companies	City government Construction companies Scenic areas management bodies	City government Construction companies
Main innovations related to	Norms	Norms Rules	Rules Beliefs	Rules Beliefs
Field characteristics	Identification of technical solutions for pollution control and remediation	Technical options for lake remediation coupled with new functions for the Lihu lake, in line with urbanisation trends	Integrated management as precondition for sustainable development, coupling environmental protection and economic growth	Integrated management as a tool to attract investments and tourism, branding Lihu as hotspot for urban environmental sustainability
Corresponding stage in theory	Precipitating jolts	Deinstitutionalisation Preinstitutionalisation	Theorisation Diffusion	Reinstitutionalisation

of institutional change in the same field occurring in other political settings, the Lihu case appears scarcely inclusive from a social and political perspective, and is characterised by rapid transformation. Both features (scarce inclusiveness, speed) ⁽¹⁰⁹⁾ might be due to the preeminent political role and socio-economic position of institutional entrepreneurs. In this respect, Lihu's experience differs from best practices developed in Europe and the US.

In discussing the integration of water management and urban renewal in Rotterdam (the Netherlands), De Graaf and Van Der Brugge stress the importance of inclusive, iterative, and prolonged processes of stakeholder engagement, producing shared visions of the city. ⁽¹¹⁰⁾ In their study on the remediation and redevelopment of Greenpoint in Brooklyn (NY), Curran and Hamilton (2012) go a step further by placing local communities at the core of territorial management practices, thus advocating social justice and responsible management of the environment. ⁽¹¹¹⁾ The trajectory of institutional development in Lihu might seem closer to approaches commonly seen in Western countries when it comes to its major tangible outcome, i.e., the establishment of pub-

lic-private partnerships. However, while in the West the need to reconcile the logic of public-private interventions and sustainability is widely debated, ⁽¹¹²⁾ in Lihu this has not been the case: as a matter of fact, this sort of intervention appears to have reiterated a pro-development bias rooted among local élites, albeit mitigated by the concept of viable development (i.e., coupling environmental protection and economic growth).

Our results yield significant implications for policy and research. First, despite progress made, challenges still lie ahead for China to establish models

109. Speed often implies "less community input." See: Ting Tian, and Longbin Zhu, "Experiences of Citizen Participation in Old City Regeneration in Yangzhou, China," in Tai-Chee Wong, Sunsheng Han, and Hongmei Zhang (eds), *Population Mobility, Urban Planning and Management in China*, Heidelberg and New York, Springer, 2015, pp. 329-347.

110. Rutger De Graaf and Rutger Van Der Brugge, "Transforming Water Infrastructure by Linking Water Management and Urban Renewal in Rotterdam," *art. cit.*

111. Winifred Curran and Trina Hamilton, "Just Green Enough: Contesting Environmental Gentrification in Greenpoint, Brooklyn," *Local Environment*, Vol. 7, No. 9, 2012, pp. 2017-2042.

112. On the topic, see: Joop Koppenjan and Bert Enserink, "Public-Private Partnerships in Urban Infrastructure: Reconciling Private Sector Participation and Sustainability," *Public Administration Review*, Vol. 69, No. 2, 2009, pp. 284-296.

of integrated territorial management fostering comprehensive sustainability in urban settings. Given the nature of China's polity, how to put in place decisions shared and owned by the involved communities, rather than just imposed by dominating elites, will likely remain an issue difficult to address for years to come. In terms of research, efforts should be made to uncover bottom-up processes of institutional innovation for sustainable urban development, particularly in relation to institutionalised forms of public participation.

Acknowledgments: The research leading to these results has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement No. 269233-GLOCOM (Global Partners for Contaminated Land Management), Coordinated by University Ca' Foscari Venice, Department of Environmental Sciences, Informatics and Statistics. The authors' list is defined based on a Sequence Determines Credit

(SDC) approach. Contributions made by each of the two authors can be quantified as follows: DB 65%; AM 35%.

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Manuscript received on 17 June 2016. Accepted on 8 December 2016.