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主编导读

Editor's Introduction

In March 2018, the Central Committee of the Communist Party of China (CCCPC) promulgated the *Decision on Deepening the Reform of the Party and the State Institutions*, established the Ministry of Natural Resources, and requested “strengthening the role of territorial and spatial planning in guiding and constraining various special plans, promoting multi-plan integration, and realizing the organic integration of land use planning, urban and rural planning, etc.” In September 2018, the Fourth Meeting of the Commission of the CCCPC for Comprehensively Deepening the Reform reviewed and approved the *Opinions on Unifying the Planning System to Better Play the Role of Strategic Guide for National Development Planning*, and clearly pointed out the need to establish a national planning system that took the national development planning as the lead, spatial planning as the basis, and special planning and regional planning as support. This national planning system should be composed of the planning at state, province, city, and county levels, and be characterized by accurate positioning, clear boundaries, complementary functions, and unity and connection. At present, the specific composition and compilation methods of China’s territorial and spatial planning have not yet been fully clarified. In “A Discussion on the Construction of Territorial and Spatial Planning System” written by WU Tinghai et al., the paper proposes establishing a territorial and spatial planning system characterized by multi-level and multi-category, city-county integration, administrative coordination, and spatio-temporal combination in line with the

2018年3月，中共中央颁布了《深化党和国家机构改革方案》，组建了自然资源部并要求“强化国土空间规划对各专项规划的指导约束作用，推进多规合一，实现土地利用规划、城乡规划等有机融合”。2018年9月，中央全面深化改革委员会第四次会议审议通过了《关于统一规划体系更好发挥国家发展规划战略导向作用的意见》，明确了要建立以国家发展规划为统领，以空间规划为基础，以专项规划、区域规划为支撑，由国家、省、市、县各级规划共同组成，定位准确、边界清晰、功能互补、统一衔接的国家规划体系。目前，我国国土空间规划具体构成和编制办法尚未完全明晰，“特约专稿”武廷海等“论国土空间规划体系之构建”按照国家关于统一规划体系的要求，基于国土空间与人居环境为一体之两面的基本认识，提出多级多类、市县综合、条块整合、时空结合的国土空间规划体系建议，特别是建构包含生态空间和文化保护控制线的

requirements of the state on integrating planning systems and based on the fundamental understanding of taking territorial space and human settlements as two sides of one item. In particular, it suggests building a key control system consisting of “four areas and four lines” that include the historic and cultural areas and the cultural protection control lines, in the hope of providing reference for the establishment of a spatial planning system. This issue focuses on the theme of “Territorial and Spatial Planning: Methodological Research and German Cases”, aiming to explore a technical system that can support China’s territorial and spatial planning from a methodological perspective, and to analyze the spatial planning system of Germany from a number of different angles.

There are many methods for territorial and spatial planning. Based on the pilot work of multi-plan integration and spatial planning, these methods can be divided into several types: top-down and bottom-up methods (input-output model/multi-agent model), spatial and non-spatial methods (space growth simulation/system dynamics model), data driven and system model-driven approaches (big data analysis/planning support system), status assessment and future forecasting methods (spatial analysis/spatial simulation and scenario analysis), traditional data support and new data support methods (mid- and low-resolution remote sensing data/mobile phone signaling data), traditional methods and newly-developed methods (quantitative analysis/deep learning), simple direct methods and comprehensive methods (rule-based modeling/spatial equilibrium model), and so on.

In the “Territorial and Spatial Planning Methods” of this issue, eight papers are published, which focus on the key aspects of territorial and spatial planning and elaborate on the technical method system. The delimitation of urban plots and the urban built-up areas is the key part and premise for the formulation of territorial and spatial planning. LONG Ying et al. published “Mapping Block-Level Urban Areas for All Chinese Cities” in the *Annals of the*

“四区四线”重点管控体系，可资建立空间规划体系提供参考；本刊特别推出“国土空间规划：方法研究和德国案例”，旨在从方法角度探索用以支持我国国土空间规划的技术体系，并对德国的空间规划体系进行多角度立体解读。

国土空间规划方法十分丰富，基于“多规合一”和空间规划试点工作，这些方法可以分为自上而下与自下而上方法（投入产出模型/多智能体模型）、空间与非空间方法（空间增长模拟/系统动力学模型）、数据驱动与系统模型驱动方法（大数据分析/规划支持系统）、现状评价与未来预测方法（空间分析/空间模拟和情景分析）、传统数据支持与新数据支持方法（中低分辨率遥感数据/手机信令数据）、传统方法与新兴方法（计量分析/深度学习）、简单直接方法与综合方法（基于规则建模/空间均衡模型），等等。

本期“国土空间规划方法”栏目刊登八篇文章，紧密围绕国土空间规划的关键环节，对技术方法体系进行详细阐述。划定城市地块和城市建成区范围是开展国土空间规划的关键环节与前提，龙瀛等2016年在《美国地理学会会刊》(AAAG)发表“中国城市地区的识别：街区尺度的探索”，利用常见的路网和兴趣点数据对城市地块进行划定与

Association of American Geographers (AAAG) in 2016, using the data of road networks and POIs to delimit and identify urban plots, and then define the scope of urban built-up areas. This method can provide data support and reference for the territorial and spatial planning in China, which is thus specially published in this issue. It is a basic problem in the territorial and spatial planning about how to identify the territorial scope of a city. In “Identifying Spatial Cities in China at the Community Scale” by MA Shuang and LONG Ying, the paper uses remote sensing interpretation to identify the boundary of urban construction land and that of community/administrative village, and redefines China’s urban system from the perspective of physical territory, proposing that there are a total of 1 227 cities in China. The “production-living-ecological” space is the core content emphasized by the territorial and spatial planning. In “Identification and Evaluation of Production-Living-Ecological Functions of Territorial Space in Hunan Province” by PENG Jiajie and CAI Yumei, the paper explores the theoretical framework and technical method for the quantitative identification of territorial spatial functions through a case study on Hunan province, which can provide reference for guiding the territorial spatial zoning and optimizing the use of it. Urban development boundary is one of the “three lines” defined by the territorial and spatial planning. In “Empirical Research on the Delimitation of Urban Development Boundary in the Background of ‘Dual-Evaluation’: A Case Study of Zhongshan City” by LUO Weiling et al. and “Application of GeoSOS in the Delineation of Development Boundary for Urban Agglomerations” by MA Shifa and LI Xia, the papers demonstrate how to use the technical methods such as cellular automata model, system dynamics method, and space optimization algorithms to delimit the urban development boundary. In the era of territorial and spatial planning, the measurement of urban non-construction land as well as the resource and environmental carrying capacity is of great significance. The paper “Study on Planning Methods of Ecological

识别, 进而划定城市建成区范围, 这种方法可以为我国开展国土空间规划提供一种数据支持和参考, 本期特别加以刊载。城市实体地域范围界定是国土空间规划中的一个基本问题, 马爽和龙瀛“中国城市实体地域识别: 社区尺度的探索”利用遥感解译识别的城镇建设用地的中国社区/行政村的边界数据, 从实体地域的角度对中国城市系统进行重新定义, 提出中国共有 1 227 个实体城市。“三生”空间是国土空间规划强调的核心内容, 彭佳捷和蔡玉梅“国土空间生产—生活—生态功能识别与评价——以湖南省为例”从生产—生活—生态功能的视角, 结合湖南省案例探索国土空间功能定量识别的理论框架与技术方法, 可以为国土空间分区引导与优化利用提供参考依据。城市开发边界是国土空间规划的“三线”之一, 罗伟玲等“基于‘双评价’的城镇开发边界划定实证研究——以中山市为例”、马世发和黎夏“地理模拟优化系统(GeoSOS)在城市群开发边界识别中的应用”, 展示了利用元胞自动机模型、系统动力学方法和空间优化算法等技术划定城市开发边界的方法。在国土空间规划时代, 城市非建设用地和资源环境承载力测算具有重要意义, 傅强“非建设用地生态保护规划方法研究”提出了基于生态网络概念的城市非

Protection for Non-Construction Land” by FU Qiang puts forward a method framework for the ecological protection planning of urban non-construction land based on the concept of ecological network. And the paper “Measurement of Resource and Environment Bearing Capacity and Optimization Strategy for Territorial Space Based on Patch Scale: A Case Study of Xiamen City” by LI Yuan et al., by using the remote sensing technology and the basic theory and method of ecological footprint, analyzes the spatial measurement and pattern of ecological bearing capacity of Xiamen city from the perspective of land use patch unit scale and then puts forward corresponding territorial spatial optimization strategies. In “Study on the New Spatial Planning Oriented Technical Method System” by DANG Anrong et al., the paper summarizes from the perspective of territorial and spatial planning system the GIS, remote sensing, big data, and other basic techniques that support the territorial and spatial planning, and puts forward a technical method system that is composed of techniques, methods, and services.

The spatial planning of Germany is a model in the field of spatial planning practice. In the “German Territorial and Spatial Planning” of this issue, five papers from the Department of Urban Planning of Tsinghua University are published, which conduct systematic and in-depth introduction to and analysis on the spatial planning of Germany from different perspectives including system introduction, urban system and metropolitan area demarcation, content and compilation method of planning at different levels, implementation process, etc. These papers can provide reference for the establishment of a territorial and spatial planning system in China. On the basis of introducing the national conditions of Germany as well as the urbanization process and its features, WU Weijia et al. mainly analyze the national planning system of Germany, including the basic relationship between administrative structure and planning system, the evolution of urban planning regulations, the basic principles of German planning system, and its

建设用地生态保护规划方法框架；李渊等“基于斑块尺度的资源环境承载力测算与国土空间优化策略——以厦门市为例”利用遥感技术与生态足迹的基本理论和方法，从土地利用斑块单元尺度对厦门市的资源环境承载力进行空间测度与格局分析，并提出相应国土空间优化策略。党安荣等“面向新型空间规划的技术方法体系研究”从国土空间规划体系角度梳理了支持国土空间规划的地理信息系统、遥感、大数据等基础技术，并提出了由技术、方法和服务构成的国土空间规划的技术方法体系。

德国空间规划是空间规划实践领域的范例，本期“德国国土空间规划”栏目刊登五篇来自清华大学城市规划系的文章，从体系介绍、城市体系和都市区划定、不同层次规划的内容和编制方法以及实施过程等多角度，对德国空间规划进行系统而深入的介绍和剖析，可以为我国建立国土空间规划体系提供借鉴。吴唯佳等在介绍德国国情和城市化历程与特征的基础上，重点解读了德国国家规划体系，涵盖了行政架构与规划体系的基本关系、城市规划法规的演变、德国规划体系的基本原则及其构成（国家空间秩序、州域规划和跨区域规划、城市及基层行政区规划），并重点解读了德国国家规划体系面临的挑战。

composition (national spatial order, state planning and cross-regional planning, urban and basic-level administrative area planning), and then discuss the challenges faced by the national planning system of Germany. CHEN Yulin focuses on the systematic work of the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR), a planning research institution of German Federal Ministry, in delimiting the metropolitan regions at both European and German levels. ZHOU Zhengxu and SUN Shimeng mainly introduce the system and content of German federal and state spatial planning, while GUO Lu and GU Chaolin focus on the main contents, planning process, and implementation of regional planning of Germany. These two papers together demonstrate the three levels of the national spatial planning system of Germany. LIANG Sisi introduces the five cooperation types in the implementation of German spatial planning.

The “Classic Articles by New Authors” of this issue continues to publish the works of well-known scholars in China and abroad related to the urban and regional planning discipline to promote the disciplinary development. The issue will introduce Professor HE Shenjing from the Department of Urban Planning and Design, the University of Hong Kong, whose research areas are urban renewal and gentrification, low-income housing, urban poverty and property right change, urban governance and policy flow, healthy geography, etc. She has undertaken more than 20 fund projects from the Hong Kong University Grants Committee (UGC), the National Natural Science Foundation of China, the Ministry of Education, the German Science Foundation (DFG), the German Technical Cooperation (GTZ), the Lincoln Institute of Land Policy, etc., devoting herself to understanding the rapid transformation of Chinese cities from different angles, then trying to establish urban theories based on China’s reality, and finally providing policy support for solving practical problems. This issue publishes her paper entitled “China’s Evolving Enclave Urbanism and Its Socio-Spatial Implications”,

陈宇琳聚焦德国联邦建筑、城市与空间研究所 (BBSR) 这一德国联邦政府的规划研究机构, 及其在欧洲和德国两个层面系统而深入开展的大都市区划定工作。周政旭和孙诗萌重点介绍了德国联邦和州空间规划的体系与内容, 郭璐和顾朝林对德国地区规划的主要内容、编程程序和实施进行阐述, 两篇文章堪称姊妹篇, 展示了国家规划体系的三个层次。梁思思介绍了德国空间规划实施过程的五种协作类型。

本期“新人名篇”继续刊载城市与区域规划相关学科的海内外华人名家, 以推动学科发展。这一期推介的是来自香港大学城市规划及设计系的何深静教授, 她的主要研究方向为城市更新与绅士化、低收入住房、城市贫困与产权变化、城市治理与政策流动、健康地理等。她承担了包括香港高校教育资助委员会 (UGC)、中国国家自然科学基金以及教育部、德国科学基金会 (DFG) 和德国技术合作公司、林肯土地政策研究院在内的 20 多项基金项目, 致力于从不同角度理解中国城市的快速转型, 然后尝试建立基于中国现实的城市理论探讨, 最终为解决现实问题提供政策支持。本刊刊登了她的“中国飞地城市主义及其社会空间影响”一文, 介绍了主要体现为当代中国单位大院、门禁商品房住区和流动人口聚

which introduces the development process and dynamic mechanism of contemporary enclaves in Guangzhou which comprise danwei (work unit) compounds, gated commodity housing estates, and migrant enclaves. The paper analyzes the influence of such enclaves on urban society and space, and emphasizes the complex socio-spatial outcomes they have produced, including the encroachment of public space, the restructuring of urban physical and social spaces, and the shifting emphases and challenges of urban governance.

The “Book Reviews” of this issue publishes a paper by Professor SHEN Zhenjiang from Kanazawa University of Japan, who is also a foreign member in the Engineering Academy of Japan. The book he has reviewed is *Theory and Method of Big Data in Urban Planning*, which is the first textbook of urban big data in the field of urban planning in China. The reviewer holds that this book has made a lot of efforts in analyzing the current situation of urban planning and design, land use and functional status, social network and human activities, traffic track and travel, as well as urban and architectural environment. Meanwhile, the book also analyzes the background in which big data was generated from the epistemological perspective and explores the changes of urban space under the influence of the Fourth Industrial Revolution.

The next issue will focus on the theme of “Territorial and Spatial Planning: Methodological Research and Japanese Cases”. Please continue to pay attention to this journal.

居地这样的飞地 (enclave) 在广州的发展过程、动力机制及其对城市社会空间的影响, 并强调了它们所产生的较为复杂的社会空间后果, 如城市公共空间的挪用、城市物质空间结构和社会结构的改变以及城市治理策略的调整和挑战。

“书评”栏目收录日本工程院外籍院士、日本金泽大学沈振江“评《城市规划大数据理论与方法》”, 这是国内城市规划领域第一本城市大数据方面的教材, 书评人认为在城市规划与设计的现状分析上, 从土地利用与功能业态、社交网络与人的活动、交通轨迹与出行乃至城市与建筑环境等方面做了大量的努力, 同时还在认识论层面上认识到大数据产生的背景和城市空间在第四次工业革命影响下产生的变化。

本刊下期主题为“国土空间规划: 方法研究和日本案例”, 敬请关注。