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以全域全要素视角 推进绿色低碳小城镇建设 Promote the construction of green and low-carbon small towns from an all-for-one perspective

《绿色小城镇建设导则》简介 "Green small town construction guide"

China Architecture Design & Research Group 中国建筑设计研究院 Mingtian Wang 王明田 21/10/2021 2021年10月21日

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时代背景 Times Background

新发展阶段、新发展理念、新发展格局

The new development stage, the new development concept, the new development pattern

2015年10月,党的十八届五中全会明确提出了"创新、协调、绿色、开放、共享"的新发展理念。

党的十九届五中全会提出,我们 要乘势而上开启**全面建设社会主 义现代化国家新征程、向第二个** 百年奋斗目标进军。 "十四五"规划《纲要》提出加快构建"**以国内大循环为主体、国内国际双循环相互促进**"的新发展格局。

In October 2015, the 5th Plenary Session of the 18th CPC clearly put forward the new development concept of "innovation, coordination, green, openness, and sharing".

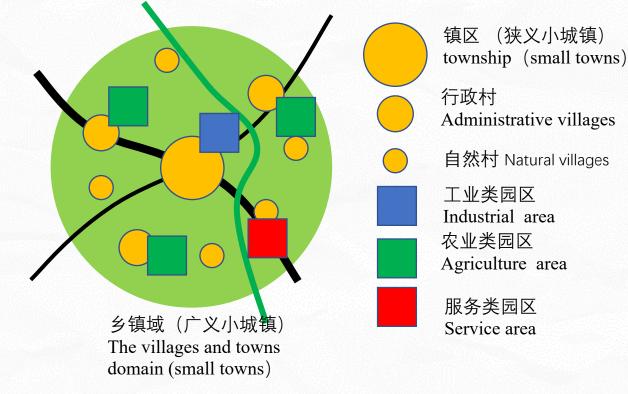
The 5th Plenary Session of the 19th Central Committee of the Communist Party of China proposed that we should take advantage of the momentum to embark on a new journey of building a modern socialist country in an all-round way and march towards the second centenary goal.

The "Outline" of the "14th Five-Year Plan" proposes to accelerate the establishment of a new development pattern of "domestic cycle as the main body and domestic and international dual cycles mutually promoting each 4 other".

新时代小城镇被赋予新的历史使命

Small towns are endowed with new historical mission in the new era

- 小城镇(乡镇)是践行生态文 明,统筹推进乡村"绿色发展" 的最小空间单元。
- 小城镇(乡镇)是统筹推进 乡村振兴和新型城镇化两大 战略的基本空间单元。
- 小城镇(乡镇)是落实国土 空间规划,优化生态、生产、 生活三大空间的基本空间单 元。
 - ecological civilization and coordinating the rural revitalization and new urbanization. promotion of rural "green development".
 - 1. Small towns (villages and towns) are the 2. Small towns (villages and towns) are the basic smallest spatial units for practicing spatial units for coordinating the promotion of



3. Small towns (villages and towns) are the basic spatial units for implementing the territorial spatial planning and optimizing the three major spaces of ecology, production and living. 5

全域全要素推进绿色小城镇建设的政策环境已经形成 enabling environment

- □ 行政管理体系的优化——组建农业农村部,作为国务院组成部门。农业农村部统筹推动发展农村社会事业、农村公共服务、农村文化、农村基础设施和乡村治理。 The optimization of administrative management system——Establish Ministry of Agriculture and Rural Affairs, as the composition department of the State Council。 Ministry of Agriculture and Rural Affairs overall promote the development of rural social undertakings, rural public services, rural culture, rural infrastructure and rural governance.
- □ 法律法规体系的健全——2021年6月1日起施行《中华人民共和国乡村振兴促进法》,统筹推进农村经济建设、政治建设、文化建设、社会建设、生态文明建设和党的建设。 Sound legal and regulatory system—— "Law of the People's Republic of China on the Promotion of Revitalization of Rural Areas" was taken effect on June 1, 2021, to promote rural economic construction, political construction, cultural construction, social construction, and ecological civilization construction and the construction of the party.
- □ 国土空间治理体系的统一——国土空间规划分为五级,乡镇级国土空间规划是五级国土空间总体规划的最后一级,按照全域全要素统筹全域生态、生产、生活空间布局。 The unity of the national spatial governance system——Territorial and spatial planning is divided into five levels. Township-level territorial and spatial planning is the last level of the five-level territorial and spatial master plan, and the overall ecological, production, and living space layout is coordinated in accordance with the entire region and the elements.
- **研究**,全方位推动小城镇绿色低碳发展。Construction synergies in technical standards—To serve the rural revitalization and the national "dual-carbon" goal, it is urgent to conduct research on guidelines/standards for the construction of green small towns with all elements in the whole region to promote the green and low-carbon development of small towns in an all-round way.

工作基础 Fundamental work

理论研究 / 社会实践 / 相关标准 Theoretical Study / Social Practice / Relevant Standard

理论研究——20世纪80年代以后,绿色小城镇开始得到国内学者的关注 Theoretical Study——Since the 1980 s, the green small towns began to get the attention of domestic scholars

生态 小城镇 Ecological Small towns

从生态系统论出发,强调运用生态学和生态经济学原理来指导小城镇发展,促进社会、经济、环境效益相统一。
From the perspective of ecological system theory, emphasizing the use of ecology and ecological economics principle to guide the development of small towns, promote the social, economic and environmental benefits unifies.

小城镇 Low Carbon Small Towns

着重于**能源体系重构**,在小城镇建立资源节约型、环境友好型的低碳经济模式。

Focuses on the energy system reconstruction, building a resource-conserving and environmentally friendly mode of low carbon economy in the small towns.

绿色 小城镇 Green Small Towns

与政府公共政策结合更紧密,是生态文明背景下小城镇未来发展方向和模式的一种政策导向,落实"生态文明" 理念。
Combine more closely with the government's public policy, it is the ecological civilization small towns under the background of the future development direction and pattern of a kind of policy guidance, the implementation of the concept of "ecological civilization".

相关标准——由国家生态环境部、住房和城乡建设部、自然资源部、农业农村部、科技部等部门开展 了绿色小城镇相关实践活动

Relevant Standard——Practical activities related to green small towns were carried out by Ministry of Ecology and Environment, Ministry of Housing and Urban-Rural Development, Ministry of Natural Resources, Ministry of Agriculture and Rural Affairs, Ministry of Science and **Technology and other departments**

国家级生态乡镇

National eco-township

2010年将全国环境优美乡镇更名为国家级生态乡镇

Renamed the National Environmentally Beautiful Township to National Eco-Township in 2010

绿色低碳重点小城镇

Green and low carbon key small towns

2011年住建部制定了《绿色低碳重点小城镇建设评价标准(试行)》

In 2011, the Ministry of Housing and Construction formulated the "Green Low-carbon Key Small Towns Construction Evaluation Criteria

(for Trial Implementation)"

美丽乡村

Beautiful countryside

2013年农业部《关于开展"美丽乡村"创建活动的意见》

Opinions of the Ministry of Agriculture on the Creation of "Beautiful

Villages" in 2013

绿色宜居村镇技术创新

Green liveable rural technological innovation 2018年科技部十四五重点专项 2018 Ministry of Science and Technology 14th Five-Year Key Special

全域土地综合整治

of the whole land field

The comprehensive improvement 2019年自然资源部《关于开展全域土地综合整治试点工作的通知》 2019 Ministry of Natural Resources "Notice on the Piloting of 9 Comprehensive Land Management in the Whole Area"

相关标准

申报标准——《国家级生态乡镇申报及管理规定》

Application criteria——
Application and Management Regulations of National Ecological Towns

- 2010年6月23日环保部印发了《国家级生态 乡镇申报及管理规定(试行)》,其中三 个大类为:环境质量、环境污染防治、生 态保护与建设。
- Ministry of Environmental Protection published
 "Application and Management Regulations of
 National Ecological Towns (trial)" on June 23,
 2010, include three broad categories:
 environmental quality, environmental pollution
 control, ecological protection and construction.

类别	序号		指标名称		指标要求		
大加	沙豆	11 17 名 17		东部	中部	西部	
环境质量	1	集中式馆	欠用水水源地水质达标率 (%)	100			
		农村	寸饮用水卫生合格率 (%)	100			
	2		地表水环境质量	达到环境功能区或环境规划要 求			
			空气环境质量				
			声环境质量	*			
	3	建原	成区生活污水处理率 (%)	80	75	70	
		开展生活	舌污水处理的行政村比例 (%)	70	60	50	
	4	建成区	生活垃圾无害化处理率 (%)		≥95		
		开展生活	舌垃圾资源化利用的行政村比例	90	80	70	
环境污染	5	重点	[业污染源达标排放率 (%)	100			
防治	6	饮食	业油烟达标排放率 (%) **	≥95			
N)III	7	规模化畜	禽养殖场粪便综合利用率 (%)	95	90	85	
	8	农	乍物秸秆综合利用率 (%)	≥95			
	9	农	村卫生厕所普及率 (%)	≥95			
	10	农用化肥施用强度 (折纯, 公斤/公顷.年)		< 250			
		农药施用强度 (折纯,公斤/公顷.年)		< 3.0			
	11	使用清	洁能源的居民户数比例(%)	≥50			
	12	大人	匀公共绿地面积 (m2/人)	≥12			
	13	主	要道路绿化普及率 (%)	≥95			
生态保护与建设	14	森林覆盖	山区、高寒区或草原区		≥75		
		率 (%,	丘陵区		≥45		
		高寒区或					
		草原区考	平原区	≥18			
		核林草覆	TIMES				
		盖率) *					
	15		品中有机、绿色及无公害产品种		≥60		
		植	(养殖) 面积的比重 (%)			*****************	

评价标准——《绿色低碳重点小城镇建设评价指标》

Evaluation standard——"construction of green low carbon towns evaluation index (trial)"

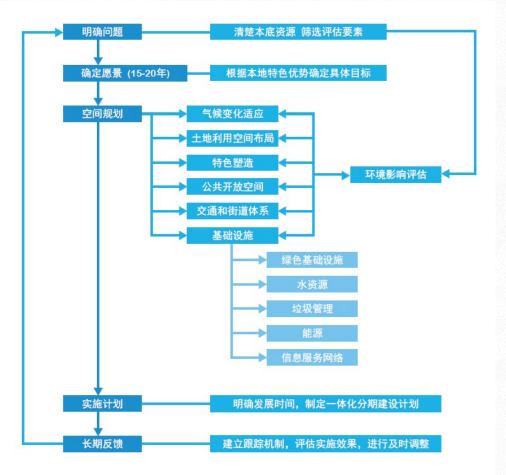
- 2011年住房和城乡建设部发布了《绿色低碳重点小城镇建设评价指标(试行)》,七个大类分别为:社会经济发展水平、规划建设管理水平、建设用地集约性、资源环境保护与节能减排、基础设施与园林绿化、公共服务水平、历史文化保护与特色建设。
- In 2011, Ministry of Housing and Urban-Development published rural "construction of green low carbon towns evaluation index (trial)", seven major categories are: social and economic development level, planning construction management, intensive land, construction resources and environment protection and energy conservation and emissions reduction, infrastructure and landscape, and public service level features, history and culture protection and construction.

绿色低碳重点小城镇建设评价指标 (试行)

类型	項目	指标	总分	评分方法				
一、社会 经济发展	1、公共财政能力	(1) 人均可支配财政收入水平(%)	2	与所在市(县、区)平均值比较: <110%, 0 分, 每高 10% 加 0.5 分, 直至满分 2 分				
	2、能耗情况	(2) 单位 GDP 能耗	2	与所在省(区、市)平均值比较:比值>1时0分,比值 为1时0.5分,比值每减0.1加0.5分,直至满分2分				
	3、吸纳就业能力	(3) 吸纳外来务工人员的能力(%)	2	暂住人口与镇区户籍人口相比,比值为1时,2分,比值 每减0.1扣减0.5分,扣完为止				
水平 (10分)	4、社会保障	(4)社会保障覆盖率(%)	2	100%时 2 分, 每降低 10%和 0.5 分, 扣完为止				
	5、特色产业	(5) 本地主导产业有特色、有较强竞争力的 企业集群,并符合循环经济发展理念	2	优良,2分	一般,1分	較差,0分		
二、規划 建设管理 水平 (20分)	6、规划编制完善度	(6)镇总体规划在有效期内,并得到较好落 实,规划编制与实施有良好的公众参与机制	2	优良, 2分	一般, 1分	有总体规划,但其他 方面较差,0分;无 总体规划,一聚否决		
		(7) 鎮区控制性详细规划覆盖率	2	≥100%, 2分	60-80%,1分	<60%, 0分		
		(8) 绿色低碳重点镇建设整体实施方案	1	有,1分		无,0分		
	7、管理机构与效能	(9)设立规划建设管理办公室、站(所),并配备专职规划建设管理人员,基本无违章建筑	2	机构人员齐全 且基本无连章 建筑,2分	机构或人员不齐 全,1分	既无机构也无人员 或明显存在选章建 筑,0分		
	8、建设管理制度	(10)制订规划建设管理办法,城建档案、 物业管理、环境卫生、绿化、镇容秩序、造 路管理、防灾等管理制度健全	2	7 项具备, 2分	4 项具备, 1 分	3 项以下 0 分		

规划导则——《中国绿色低碳小城镇试点导则》 Planning guideline——guidelines for pilot China green low carbon small towns

- 2016年中国城市科学研究会等单位联合编写了《中国绿色低碳小城镇试点导则》,从明确问题、确定愿景、空间规划、实施计划、长期反馈五个方面制定了绿色小城镇空间规划导则。
- In 2016, Chinese Society For Urban Studies (CSUS) and other organizations jointly compiled "guidelines for the pilot China green low carbon small towns", which formulated a green small town spatial plan from five aspects: clarification of problems, determination of vision, spatial planning, implementation plan, and long-term feedback.



3

主要内容 Main Contents

总体框架 / 内容概要 Overall Framework / Contents Summary

1.基本规定——坚持发展规划和国土空间规划统领,坚持问题导向和实施导向

Basic rules——adhere to the overall development planning and land and space planning, problem-oriented and implementation-oriented

1. 规划引领 Planning lead

对接地方发展规划,确定资源利用上限和环境质量底线;对接国土空间规划,落实基本农田、生态红线、城镇开发边界等空间边界Align with local development plans, clarify the upper limit of resource utilization and the bottom line of environmental quality; align with land and space planning, and implement spatial boundaries such as basic farmland, ecological red lines, urban development boundaries, etc.

2. 问题导向 Problem oriented

结合住房和城乡建设部乡村建设评价,同步开展"小城镇绿色建设评价",梳理小城镇绿色建设方面存在的主要问题和需求In conjunction with the evaluation of rural construction by the Ministry of Housing and Urban-Rural Development, the "Small Town Green Construction Evaluation" was carried out simultaneously to sort out the main problems and needs in the green construction of small

3. 面向实施 Implementation

确定小城镇绿色建设的阶段性任务和工程,并纳入地方五年发展规划,为后期建设提供项目审批和投资保障Determine the phased tasks and projects for the green construction of small towns and incorporate them into the local five-year development plan to provide project approval and investment guarantee for later construction





案例:上海市郊野单元规划

Case: Shanghai suburban unit planning

2.生态环境保护与修复——落实规划要求,坚守生态底线,推进综合整治



落实规划要求

落实省、市、县级规划确定的重大生 态修复和国土整治工程。

The implementation of the planning requirements

Carry out the provincial, city and county planning determine major ecological restoration and land renovation project.



坚守生态底线

加强自然保护地保护,建设项目选址 应避让生态红线和基本农田。

Stick to the ecological base line

Strengthening the protection of natural protected area, construction project site selection should avoid the ecological red line and the basic farmland.



推进综合整治

以全域土地综合整治为手段,统筹推 进生态修复、国土整治工程。

Promoting integrated management

Take comprehensive land remediation as a means to coordinate the promotion of ecological restoration and land remediation projects.

3.绿色生产——淘汰"两高"产业,建设绿色园区,构建绿色产业体系

Green production ——Phase-out "two high" industries, build green parks, and build a green industrial system

1. "两高"产业

建立产业正负面清单,逐步淘汰镇域内的高污染和高耗能产业。 Establish a positive and negative list of industries to phase out high-pollution and high-energy-consuming industries in the township

2. 建立绿色园区

加快镇域内农业类、工业类、服务类等园区绿色化转型。 Accelerate the green transformation of agricultural, industrial, and service parks within the town.

3.构建绿色产业体系

以循环经济为导向,推动一二三产业融合发展,加快绿色产业体系构建。Guided by the circular economy, promote the integrated development of primary, secondary and tertiary industries, and accelerate the construction of a green industrial system.



案例:江苏特色田园乡村试点

Case: Characteristic rural countryside pilot in Jiangsu 16

4. 绿色人居——加强村镇绿化,统筹设施建设,营造绿色住区

Green living—strengthen greening of the villages and towns, integrated facility construction, building green residential area

1.加强村镇绿化 Greening of villages and towns

□开展镇村绿化工程建设,提高镇域绿化覆盖率,改善环境、增加碳汇The county-rural greening engineering construction, improve town domain green rate, improve the environment, and increasing carbon sink

2.统筹公共服务 Coordinating public services

□按照城乡融合发展理念,统筹各级邻里服务中心建设,构建生活圈体系 According to the concept of urban and rural integration development, coordinate the construction of neighbourhood service centres at all levels to build a system of living circles

3. 营造绿色住区 Building green residential

■参照国家《绿色住区标准》,建立适应乡镇需求的绿色住区标准。 According to "Standard of sustainable green residential areas", establish standard of sustainable residential areas to meet the needs of the villages and towns.







案例:安徽美丽宜居小镇建设

Case: Beautiful livable town construction in Anhui

5. 资源利用——优化资源配置,节约集约利用,推进废弃物资源化

Resource utilization—optimize resource allocation, economical and intensive use, promote waste recycling

1.优化资源配置optimize resource allocation

- □推进退耕还林、退牧还草、减水退地工程,优化保障生态用地 和生态用水
- ☐ Promoting returning farmland to forest and grazing grassland, less cultivated to ensure the reduction of underground water extraction, optimizing the ecological land use and ecological water use

2.节约集约利用Economical and intensive use

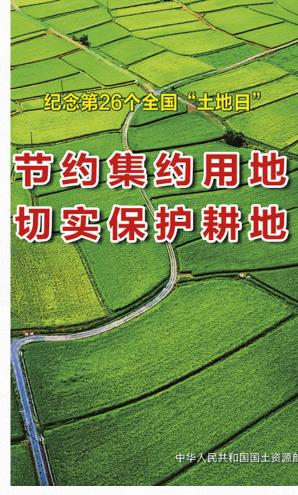
- □开展资源节约集约利用评价,有针对性开展水、土、矿等低效 利用资源提升改造工程
- □ Carry out evaluation of resource conservation and intensive utilization, and carry out targeted improvement projects for inefficient utilization of water, soil, and mining resources

3.废弃物资源化promote waste recycling

- □ 提高生产和生活废弃物资源化利用水平,实现废弃物就地消纳、循环利用
- ☐ Improve the level of resource utilization of production and domestic waste, and realize waste disposal and recycling on the spot







案例:新疆减水退地改善生态环境

Case: Water reducing back to improve the ecological environment in ximinang

6.清洁能源——推行能耗双控,发展可再生能源,开展节能改造

Clean energy—Promote dual control of energy consumption, develop renewable energy, and carry out energy-saving transformation

1.推行能耗双控 Adopt dual control of energy

□落实 "双碳" 目标,推行能源消耗总量和强度双控制度,严控乡镇域高耗能项目建设Implement the "carbon peak and carbon neutrality" goal, implement dual control systems for total energy consumption and intensity, and strictly control the construction of high energy-consuming projects in towns and villages

2.发展可再生能源The development of renewable energy

- □大力发展水力发电、风力发电、太阳能、生物能等可再生能源,优化能源利用结构
- □ Vigorously develop hydropower, wind power, solar, biomass and other renewable energy, optimize energy structure

3、开展节能改造Carry out the energy conservation transformation

- □推行节能工艺和设备,加大生产、生活节能改造,进一步提高能源利 用效率
- □Implementation of energy saving technology and equipment, increase production, energy saving renovation of life to further improve energy efficiency







案例:河北张家口光伏扶贫新模式

Case: Photovoltaic new model for poverty alleviation in Hebei province Zhangjiakou

内容概要

7.绿色建筑——严控建设标准,提高绿建比例,鼓励乡土建造

Green building—strict construction, improve the proportion of green building, encourage vernacular building

1.严控建设标准Strict construction standards

- □严控公共建筑建设标准,合理设置镇村居住、工业、农业建设标准
- ☐ Strictly control the construction standards of public buildings, and reasonably set the standards for residential, industrial, and agricultural construction in towns and villages

2.提高绿建比例Improve the proportion of green building

- □鼓励镇、村发展节水、节地、节材、节能、环保型绿色建筑,提高覆盖比例
- Encourage towns and villages to develop water-saving, land-saving, material-saving, energy-saving, and environmentally-friendly green buildings, and increase coverage

3、鼓励乡土建造Encourage vernacular building

- □鼓励现代乡土建筑,推广可再生建筑材料,推行建筑垃圾资源化利 用
- Encourage modern vernacular buildings, promote renewable building materials, and promote the utilization of construction waste as resources







案例:甘肃庆阳现代生土建筑模式建设的小学

Case: Primary school built on a modern raw earth building model in Gansu province Qingyang

8.基础设施——鼓励设施共建共享,建设绿色基础设施,推行设施绿色化改造

Infrastructure—encourage infrastructure co-construction and sharing, the construction of green infrastructure, implementation of green facilities

1.鼓励设施共建共享Encourage infrastructure co-construction and sharing

- □按照镇村基础设施一体化建设要求,鼓励镇村基础设施共建共享
- Encourage the co-construction and sharing of infrastructure in towns and villages in accordance with the requirements for the integrated construction of infrastructure in towns and villages

2.建设绿色基础设施The construction of green infrastructure

- □建设绿色基础设施,保护生物栖息地、涵养水源、减少镇村洪水危害
- □ Green infrastructure construction, protection of habitats, water conservation, reduce floods damage in towns and villages

3.推行设施绿色化改造 Implementation of green facilities

- □对交通、水利、城乡市政等基础设施进行绿色化改造
- □ Green transformation of infrastructure such as transportation, water conservancy, urban and rural municipalities, etc.







案例:成都乡村绿道和湿地公园建设

Case: Countryside greenway and wetland park construction in Chengdu

9.智慧管理——完善乡村新基建,建设数字平台,推行网格化管理

Smart management——new rural infrastructure improvement, the construction of digital platform, implement grid management

1.完善乡村新基建New rural infrastructure improvement

- □结合数字乡村建设,推进新基建项目建设,完善乡村信息基础设施
- □ Combined with digital rural construction, promoting the construction of new infrastructure projects, improving the rural information infrastructure

2.建设数字平台The construction of digital platform

- □推进智慧乡镇建设,建立绿色数字化管理平台,全过程监测绿色项目建设
- ☐ Promote the construction of smart towns, establish a green digital management platform, and monitor the construction of green projects throughout the process

3.推行网格化管理Grid management model

- □借鉴城市网格化管理模式,构建镇村联动、资源共享的绿色管理网络
- □ Learn from the urban grid management model, constructing a green management network for town-village linkage and resource sharing



案例:浙江安吉乡村智理平台

10.公众宣传——鼓励多方参与,畅通合作渠道,开启绿色行动

Public promotion—multi-party participation, unblock cooperation channels, and initiate green actions

1.鼓励多方参与 multi-party participation

- □ 鼓励政府、企业、社会组织和公众共同参与绿色小城镇建设
- Encourage the government, enterprises, social organizations and the public participation of green construction of small towns

2. 畅通合作渠道 unblock cooperation channels

- □ 建立线上线下一体化的工作平台,畅通合作渠道
- Establish an integrated online and offline work platform and smooth cooperation channels

3.开启绿色行动 Implement green action

- □ 确定年度工作目标和重点任务,持续推进绿色小城镇建设
- Set annual work goals and key tasks, and continue to promote the construction of green small towns



案例:浙江安吉乡村智理平台

THANKS

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