

Huzhou SDGs Monitoring and Practical Path with "Two Mountains" Concept



Moganshan Geospatial Information Lab.
National Geomatics Center of China
Capital Normal University
Hunan University of Science and Technology
Guangzhou Alpha Software IT Ltd.

Implementing UN 2030 Agenda in China (中国大力践行联合国2030年可持续发展议程)



In the past ten years, tremendous efforts has been spent in China to implement UN 2030 Agenda and its 17 SDGs at national, regional, city and community levels. Several actions were taken:



Supported the establishment of UN-GGKIC
 (支持在浙江德清成立了"联合国全球地理信息知识与创新中心"

 Established 11 Innovation Demonstration Zones for implementing the 2030 Agenda

(设立了11个可持续发展创新示范区)

Innovation Demonstration Zones--Huzhou City, Zhejiang (浙江湖州可持续发展创新示范区)



green innovation-driven approach for SD in ecological resource-intensive areas (以绿色创新引领生态资源富集型地 区可持续发展为示范主题)

- increase innovation (创新能力提升)
- upgrade green industries (绿色产业升级)
- intensify resource factors (资源要素集约)
- improve the living environment



Spatio-temporal Monitoring and Assessment of High-quality Sustainable Development

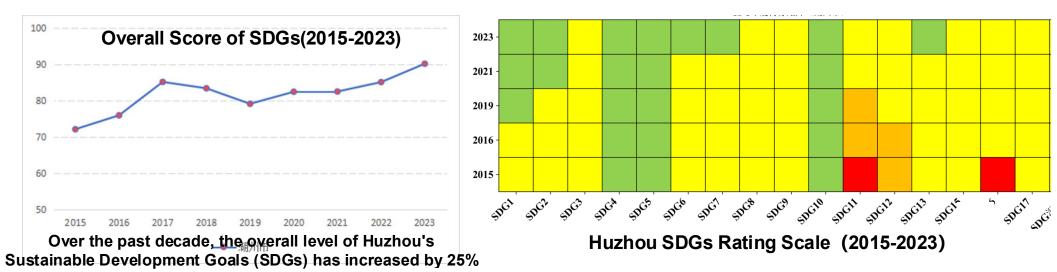


Explore "Lucid Waters and Lush Mountains Are Invaluable Assets (Green is Gold)" Pathways

SDGs Assessment and Monitoring (湖州SDGs评估监测)



With the spatio-temporal data from 2015 to 2023 and 117 SDG indicators, the implementation of all SDGs has generally shown a positive trend.



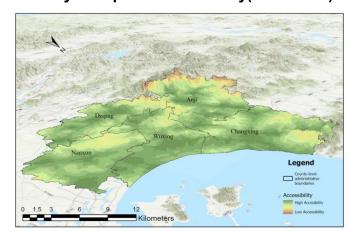
Economy: GDP(2005-2020)

Legend GDP High

Environment: Waterbody Quality(2015-2023)



Society: Hospital Accessibility(2015-2023)



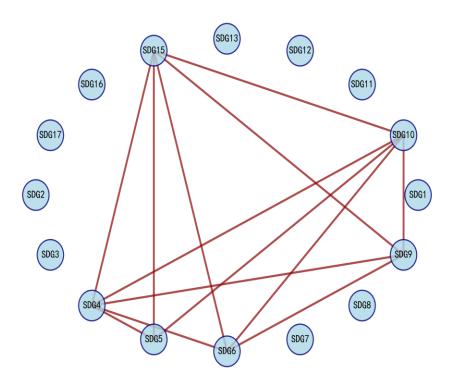
Improvement of SDGs Coordination

(湖州SDGs协同性持续改进)

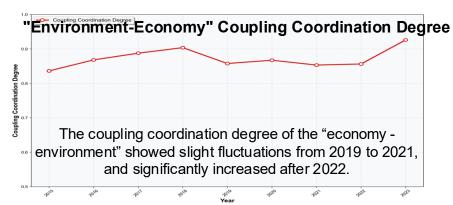


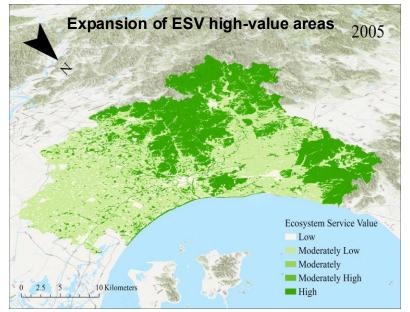
The "economy-environment-society" coupling coordination degree in Huzhou generally presents a fluctuating upward trend, with more strong coupling among SDGs and gradual transformation to

"systematic synergy".

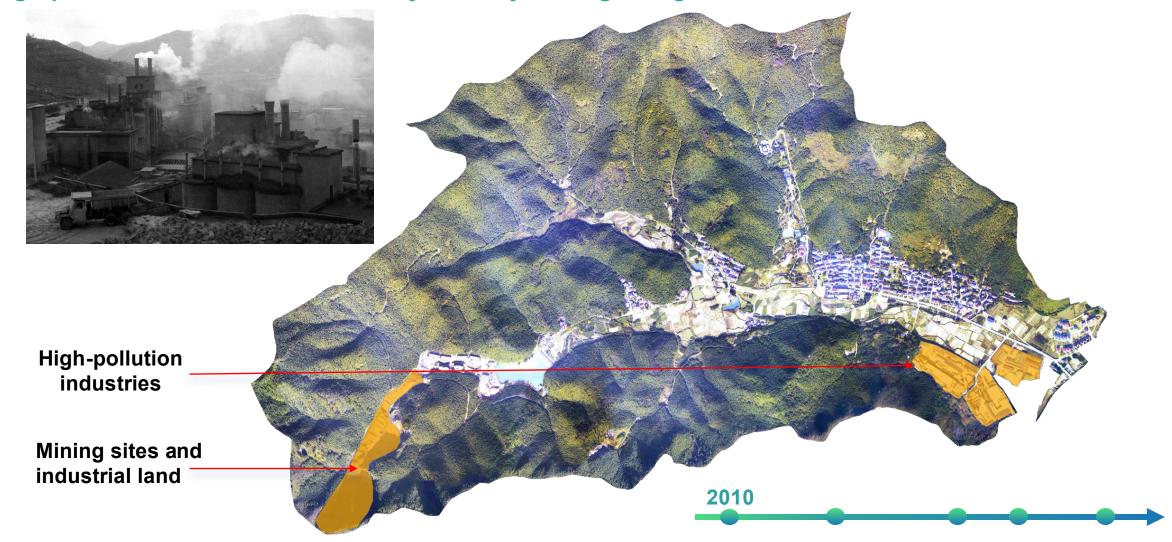


The number of extremely strong coupling coordination relationships among various SDGs continues to increase

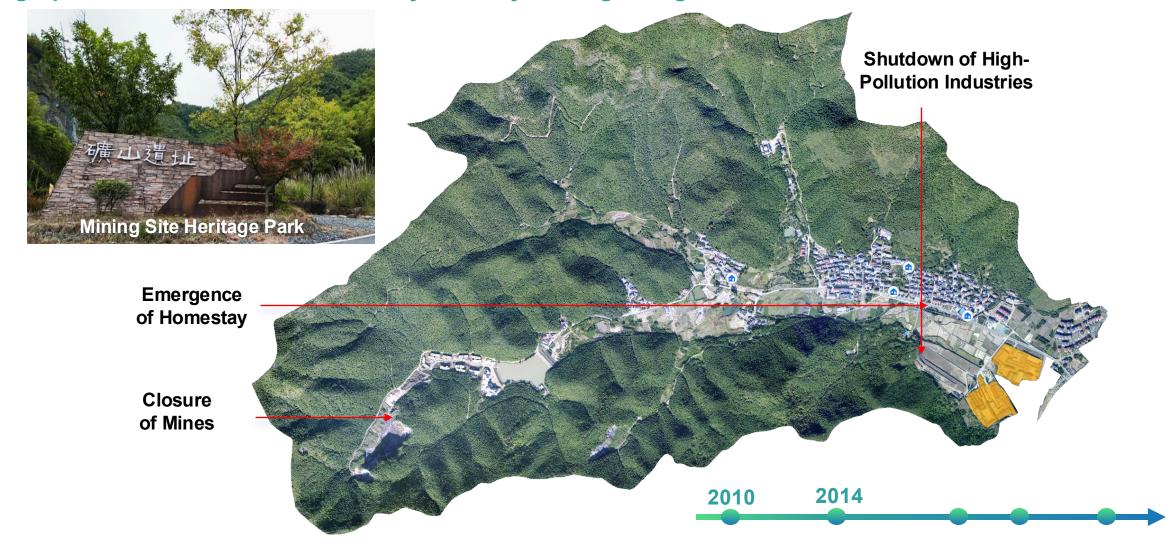




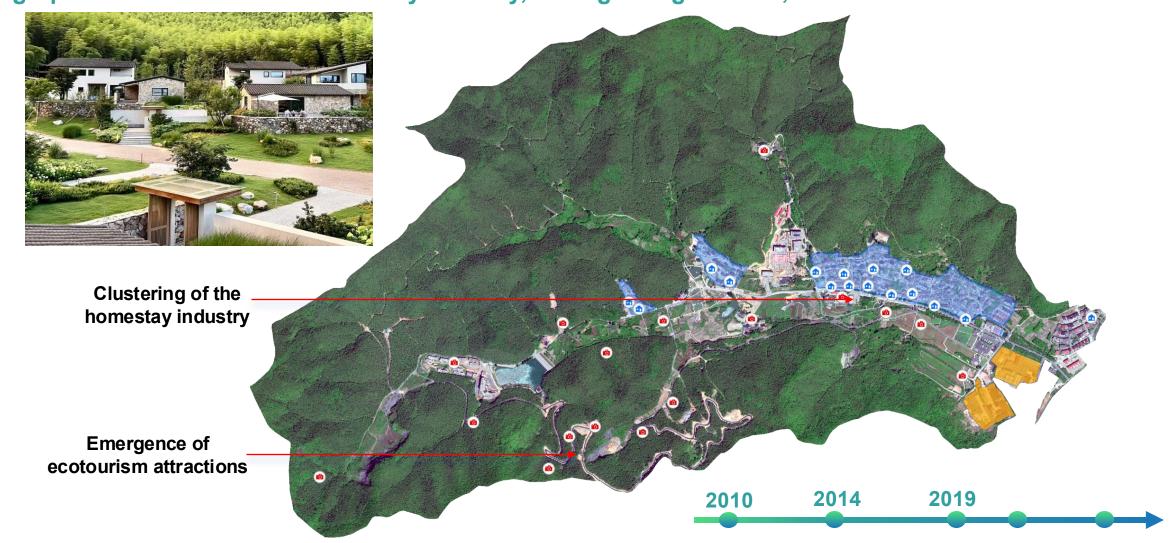




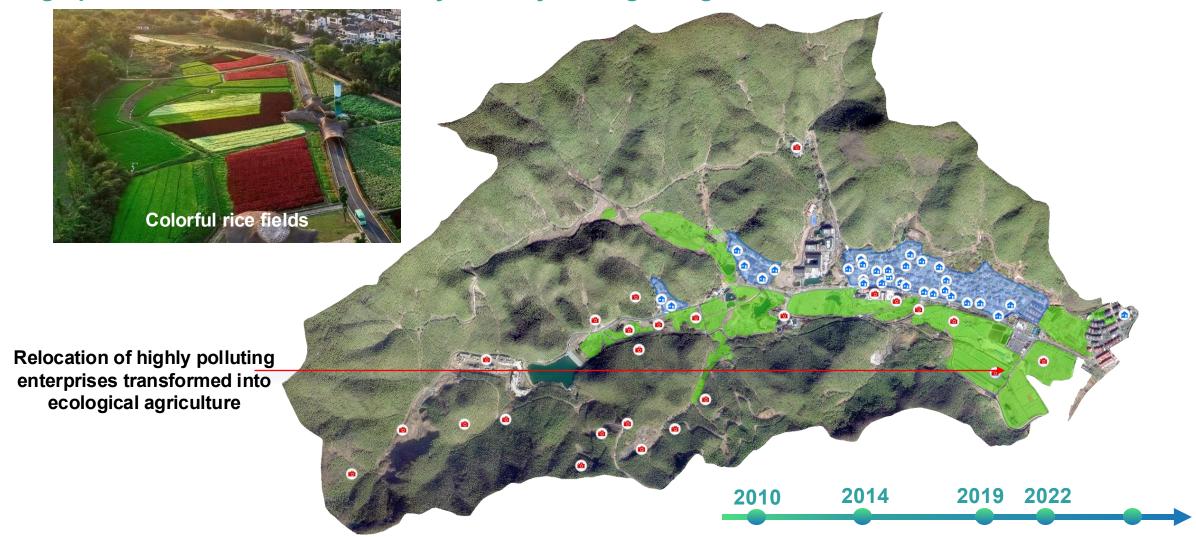




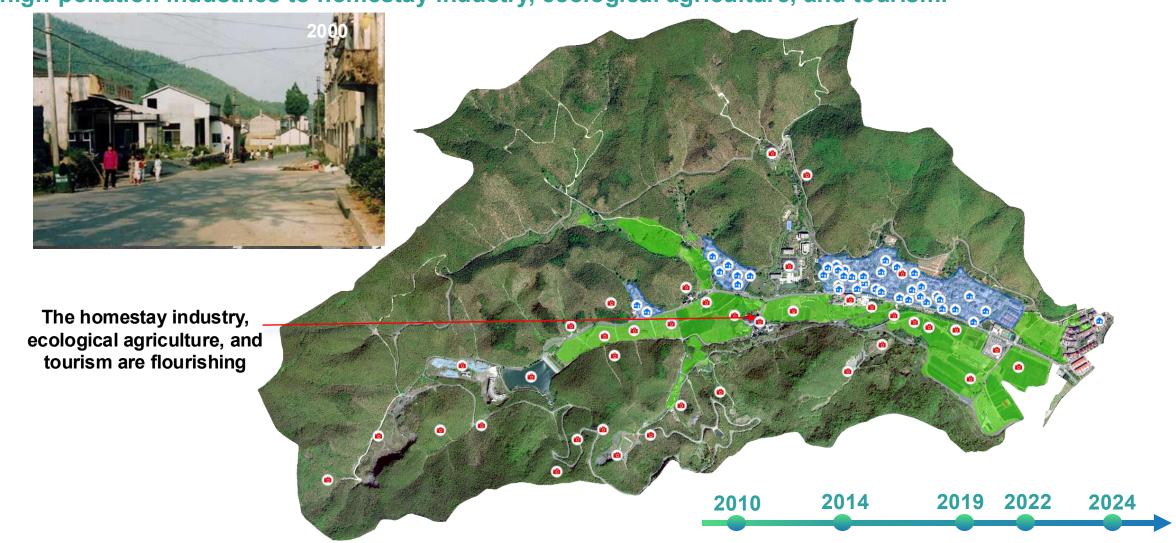












Monitoring the "Two Mountains" Transformation Using Localized Indicator Composition

UN GEONOW 2025 第二届联合国地信周

(构建本地化指标实现两山转化监测)

Green Index (Lucid Waters and Lush Mountains)

Lucid Mountains Index

Clear Waters Index

Biodiversity Index

Land Stress Index

11.6.2城市大气污染物年平均浓度
Annual mean levels of the fine particulate matter (PM2.5) in cities



Huzhou's population exposure risk to air pollution has dropped significantly: down 10.19% in 2010-2015, with a larger drop of 37.76% in 2020-2023.

Monitoring the "Two Mountains" Transformation Using Localized Indicator Composition (构建本地化指标实现两山转化监测)



Green Index (Lucid Waters and Lush Mountains)

Lucid Mountains Index

Clear Waters Index

Biodiversity Index

Land Stress Index



Between 2005 and 2023, Huzhou City's forest coverage rate fluctuated slightly, but remained stably above 48% overall.

Monitoring the "Two Mountains" Transformation Using Localized Indicator Composition



(构建本地化指标实现两山转化监测)

Green Index (Lucid Waters and Lush Mountains)

Lucid Mountains Index

Clear Waters Index

Biodiversity Index

Land Stress Index

Comprehensive index of the "Two Mountains" Transformation

Gold Index (Invaluable Assets)

Economic

Development Index

Carbon Reduction Index

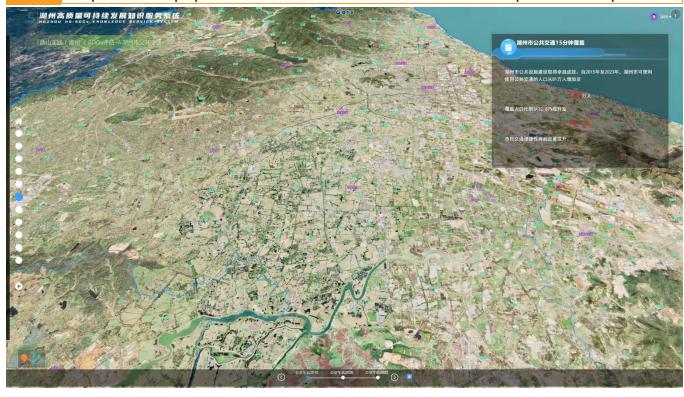
Social Welfare
Guarantee Index

Pollution Reduction Index

11 SUSTAINABLE CITIES AND COMMUNITIES

11.2.1可便利使用公共交通的人口比例

Proportion of population that has convenient access to public transport

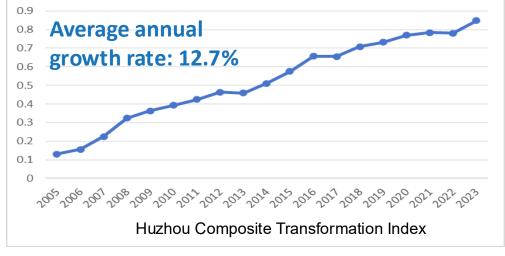


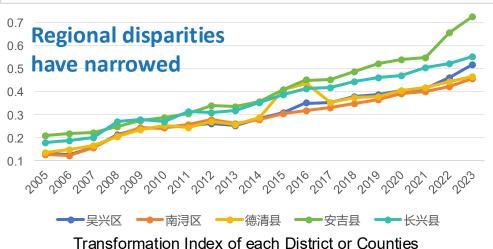
From 2015 to 2023, the population with convenient access to public transport within 15 minutes increased from 810,000 to 2.25 million, and the coverage ratio rose from 32.67% to 79.2%.

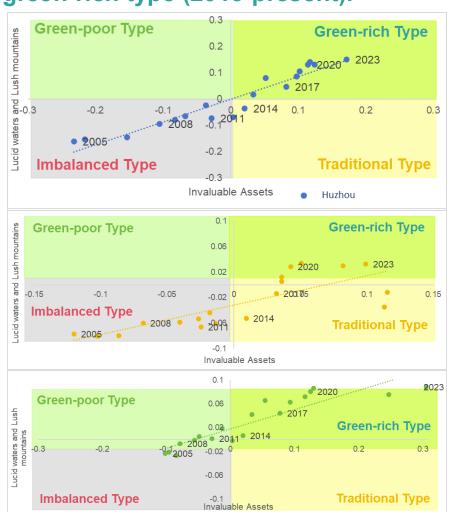
Effectiveness and Types of the "Two Mountains" Transformation (两山转化成效和类型)



Huzhou has demonstrated a positive transformation trend, from the imbalanced type (2005-2012) to the traditional type (2013-2014) and then to the green-rich type (2015-present).







Huzhou City: Three-stage Transformation

Deqing County:
Gradual
Progression

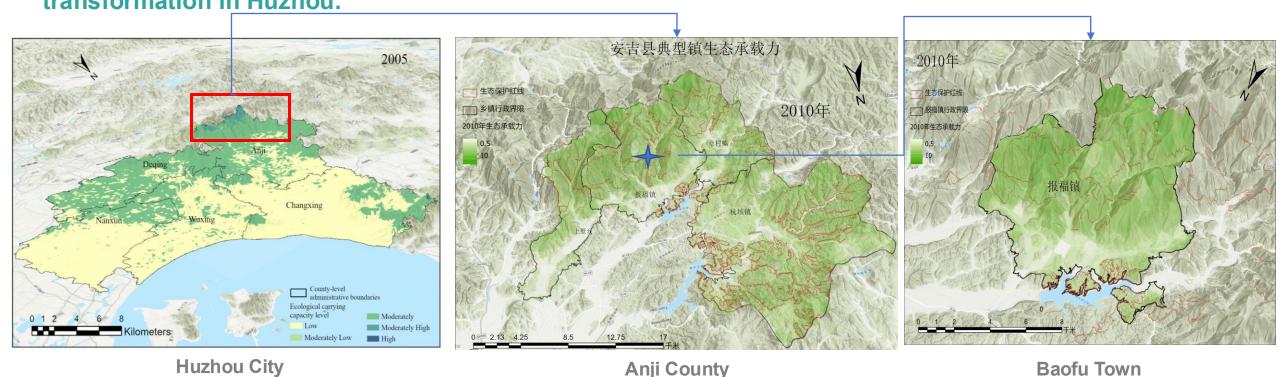
Anji County:
Pioneer of
Transformation

The green development model possesses sustainability

Sustainability of the "Two Mountains" Transformation (两山转化的可持续性)



Decoupling the economy from ecological pressure and achieving the sustainability of "Two Mountains" transformation in Huzhou.



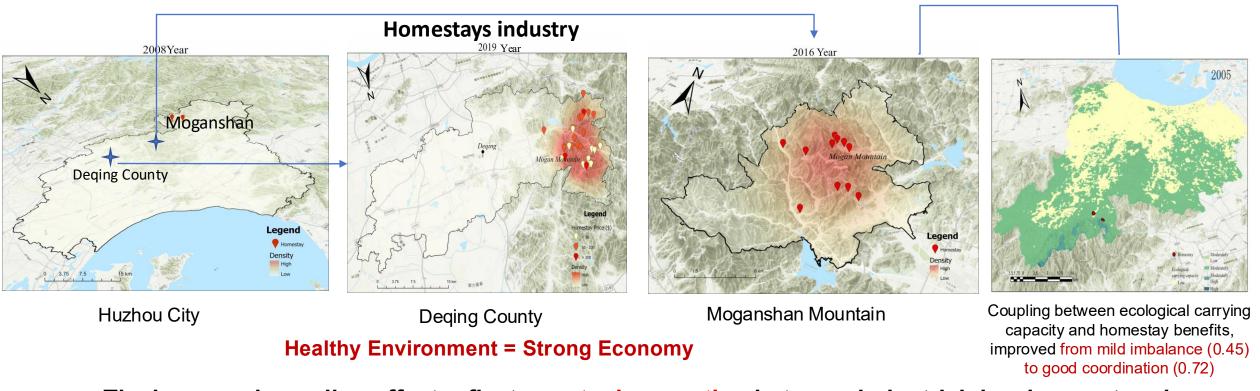
Ecological Carrying Capacity Dynamics in three regions during 2010-2023

- The ecological carrying capacity has increased by 32% in Huzhou.
- Economic growth no longer relies on ecological overdraft, achieving optimal spatial allocation of "development-protection".

Transformation Pathway Analysis: Homestay Development (转换路径分析-以民宿为例)



Homestays industry continue to grow, with their scale and profitability positively correlated with Moganshan's ecology.



The improved coupling effect reflects mutual promotion between industrial development and ecological improvement, and ecological feedback effect of ecotourism.

Preliminary Conclusion (初步结论)



Huzhou has initially explored a pathway to sustainable development, which is the Coordinated Upgrading of the Ecological Economy.





(Deging Geo-information Town)

Urban and Rual area in Huzhou

(Yucun Village)

Efficient Transformation of Ecological Value

Coordinated Advancement of Urban-Rural Integration and Green Transformation

Benefiting the People through Green Initiatives



THANK YOU