CoUREC Research Group, Xiamen University, China
Coastal Urbanization and Regional Eco-environmental Change
厦门大学海岸带城市化与区域生态环境变化研究组

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### Seascape Spatial Analysis Lab at Xiamen University

Research Interests：
- Coastal Resilience
- Ocean Cities and SDGs
- Integrated Ocean Management
- Remote Sensing of Environment and Spatial Planning

- **Seascape** Spatial Analysis Lab focuses on coastal resilience and integrated land-sea planning.
- Our research integrates **Environemtal Management, Ecology and Marine Affairs knowledge** of, and innovation in land-water-biodiversity nexus, and application of resilience theory in coastal areas to achieve **land-sea sustainable development goals**.
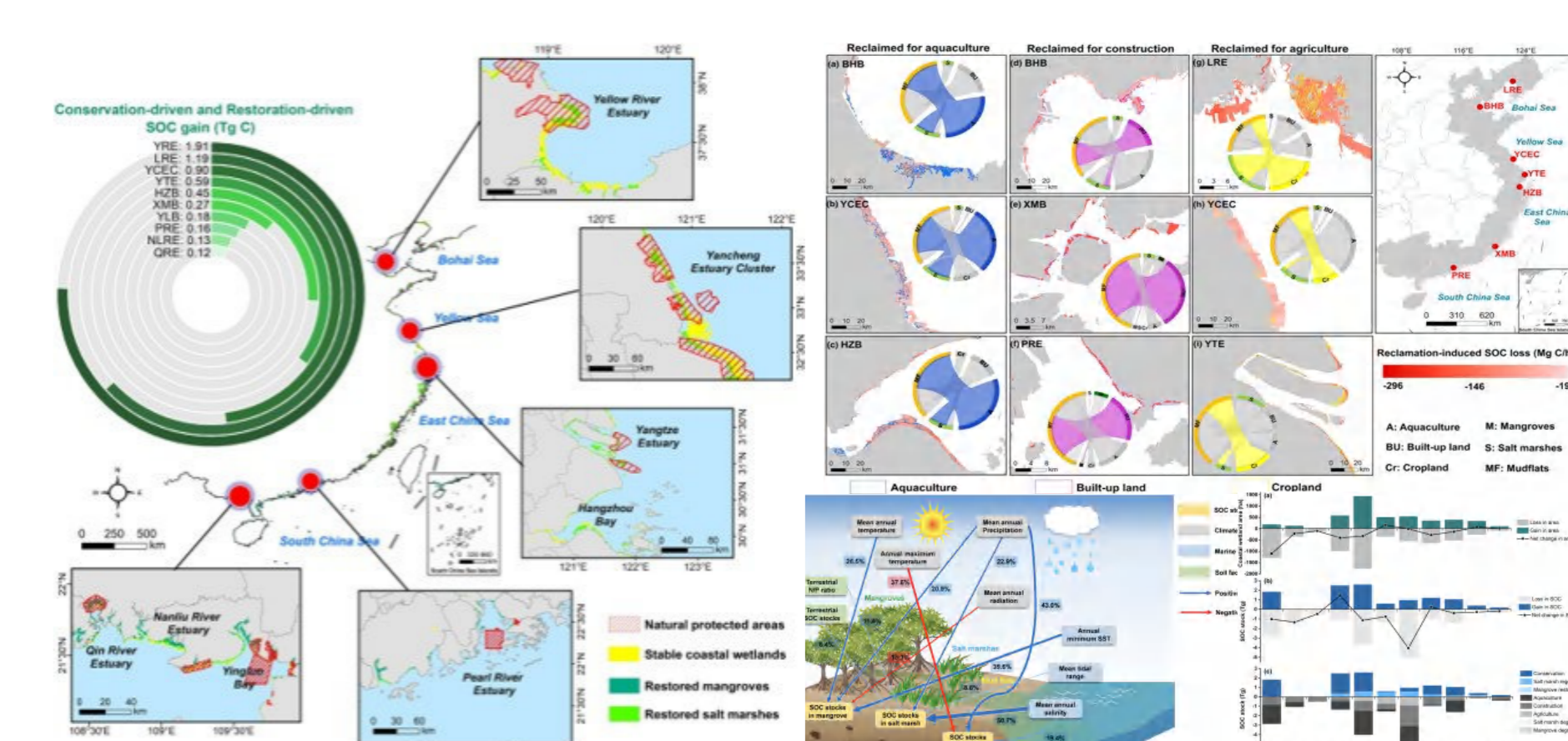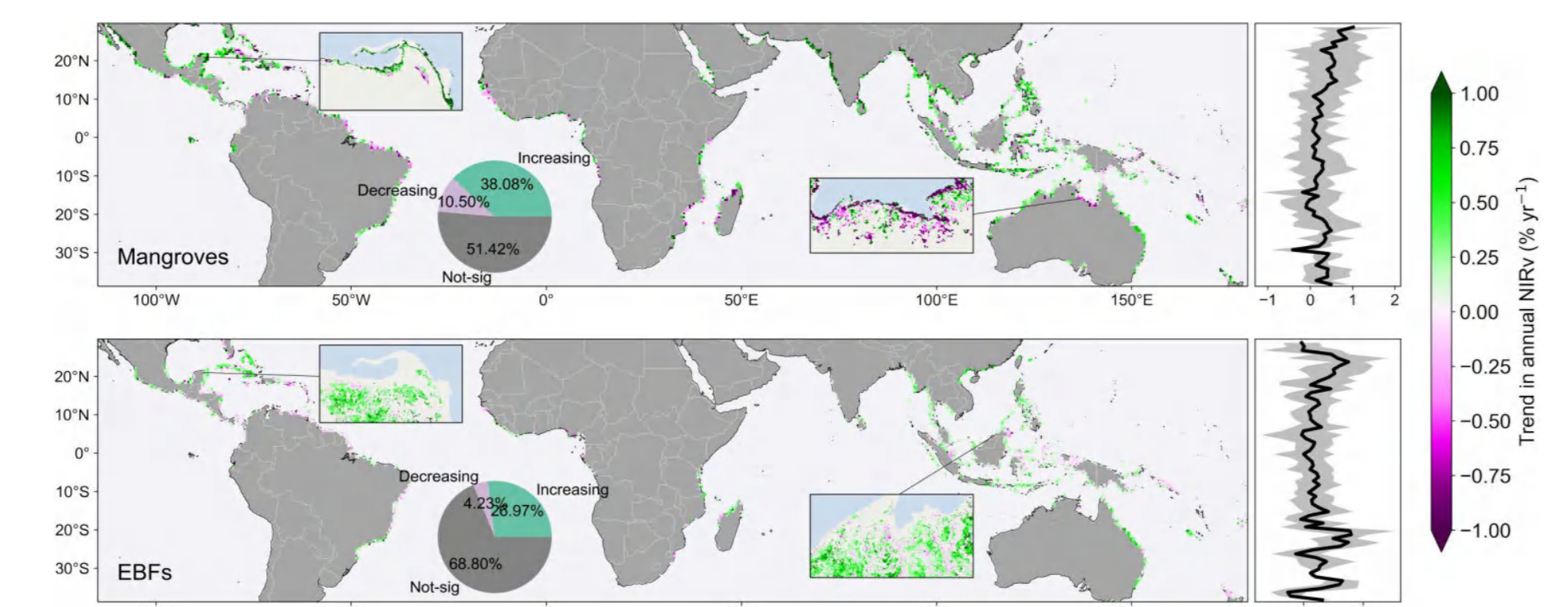
Highlights
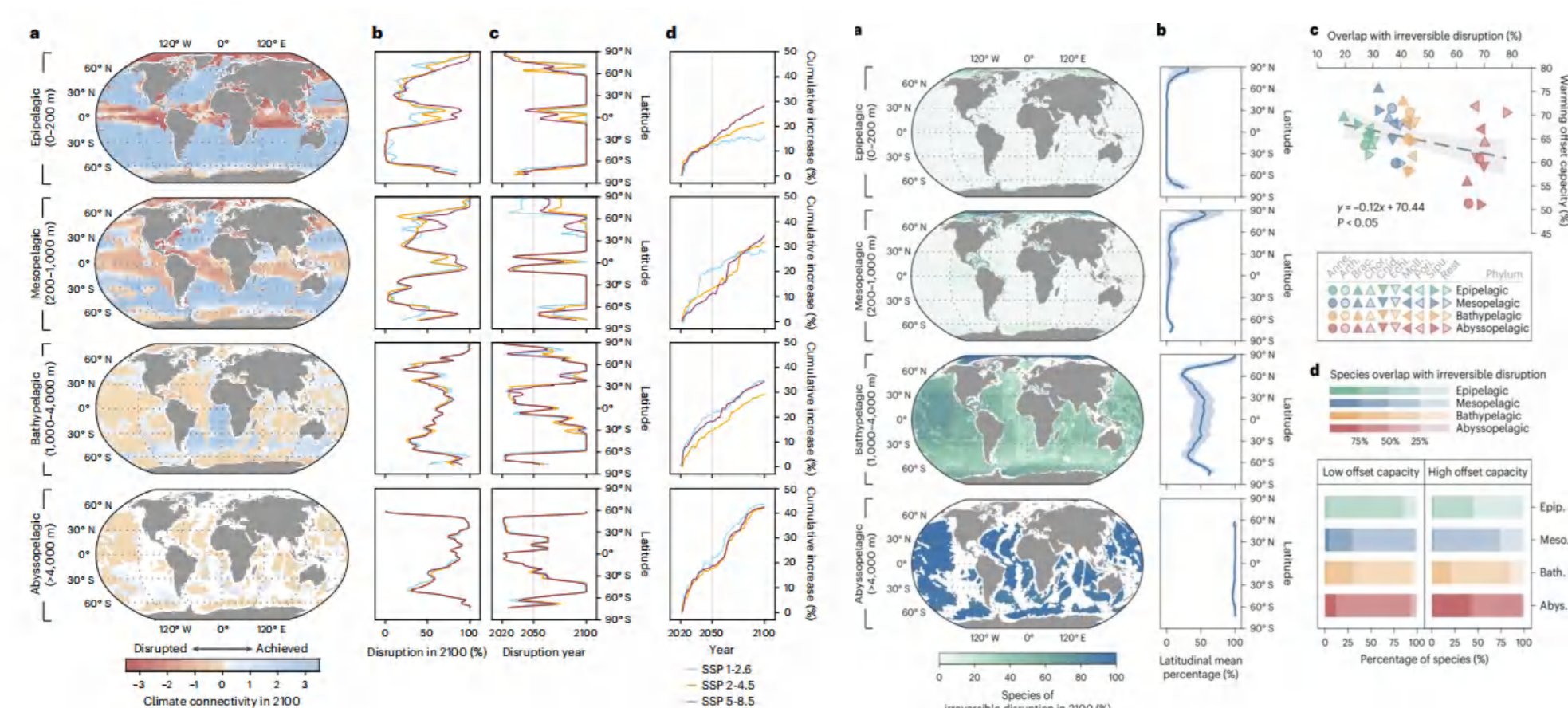
Climate-driven connectivity loss impedes species adaptation to warming in the deep ocean. (Nature Climate Change)
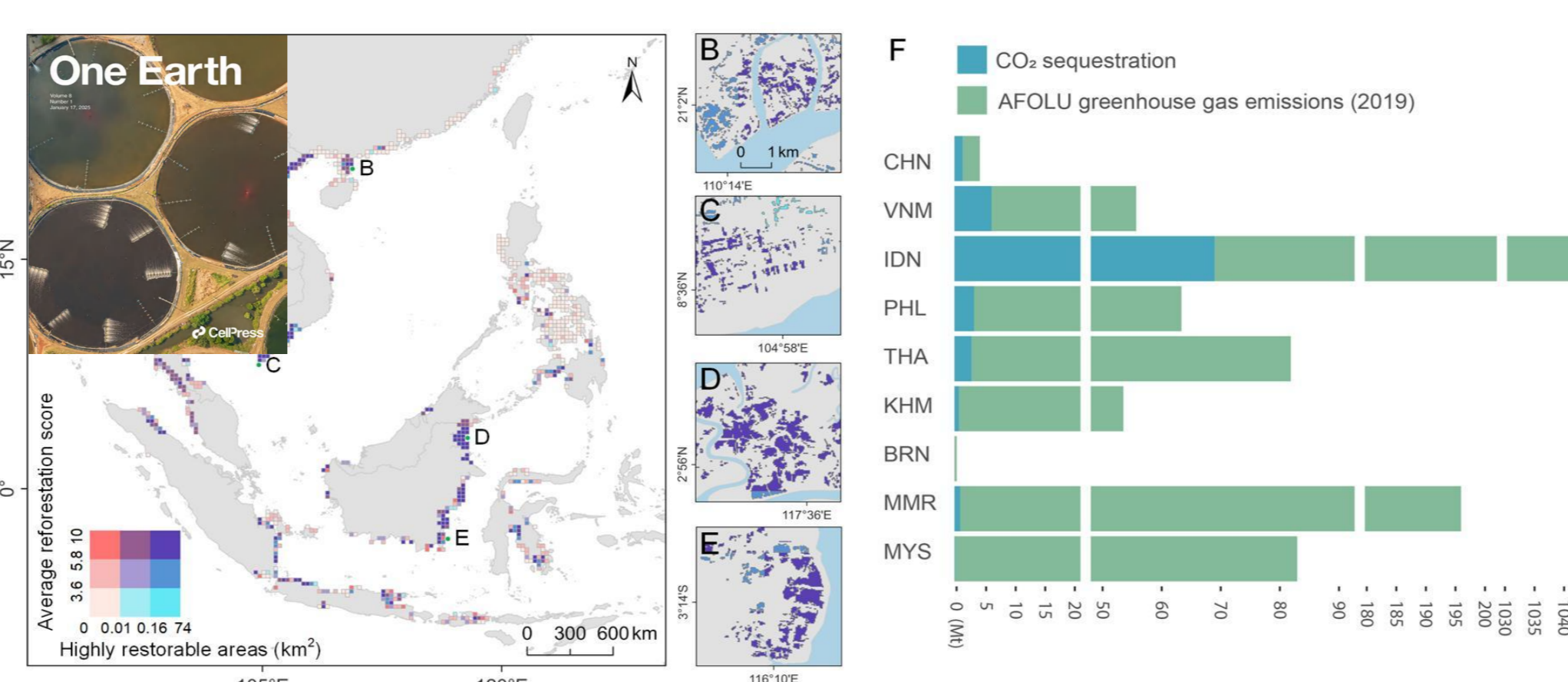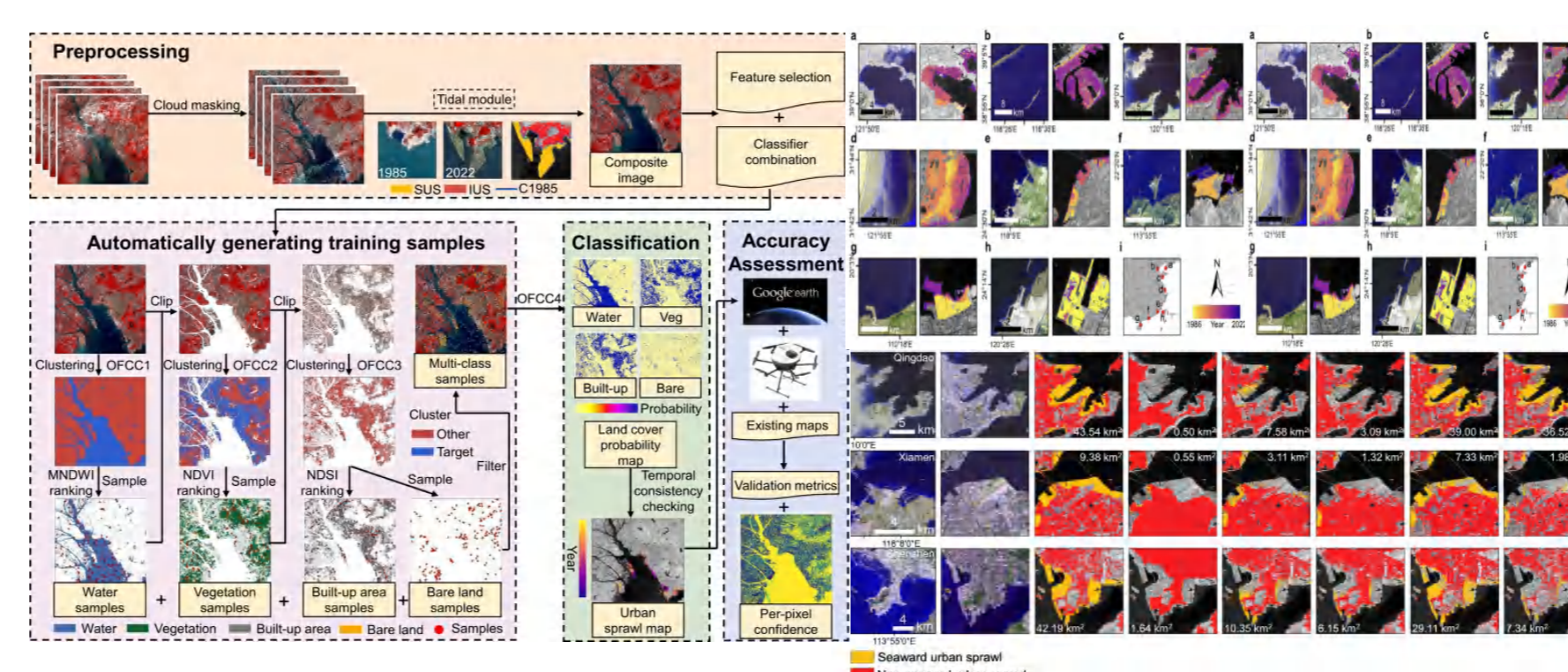

Restoring mangroves lost by aquaculture offers large blue carbon benefits. (One Earth, Cover Paper)
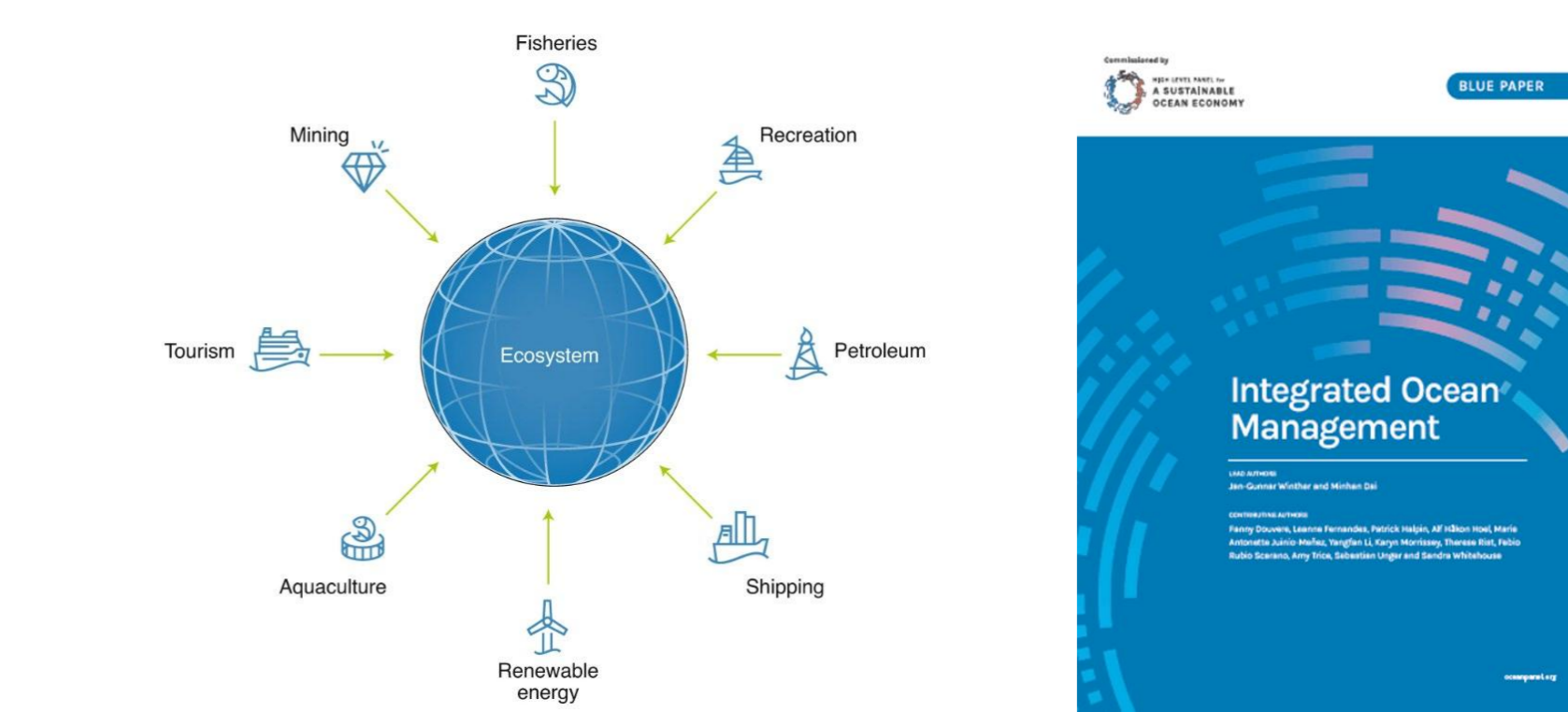

Spatial pattern of the reclamation-induced SOC loss in China's coastal wetlands. (Global Change Biology)

Differences in productivity trends between mangrove and broadleaf evergreen forest vegetation. (Nature Ecology&Evolution)

Urban Sprawl monitoring algorithms and application to reclamation studies. (Remote Sensing of Environment)

Integrated Ocean Mangement. (Nature Ecology & Evolution; Blue Paper)

Selected Publications

1. Lin, Y., Chen, Y., Liu, X., Lin, X., Laws, E. A., Zhou, Y., Xiang, Z., Zhang, X., Chen, Z., **Li, Y.***, Lu, Y., 2025. Climate-driven connectivity loss impedes species adaptation to warming in the deep ocean. **Nature Climate Change**, 15, 315-320.

2. Zhang, Z., Luo, X.*, Friess, D. A., Wang, S., **Li, Y.**, **Li, Y. F.***, 2024. Stronger increases but greater variability in global mangrove productivity compared to that of adjacent terrestrial forests. **Nature Ecology & Evolution**, 8, 239-250.

3. Jiang, Y., Zhang, Z., Friess, D.A., **Li, Y. F.***, Zhang, Z., Xin, R., Li, J., Zhang, Q., **Li, Y.*** , 2025. Restoring mangroves lost by aquaculture offers large blue carbon benefits. **One Earth**, 8, 101149.(Cover Paper)

4. Winther, J. G., Dai, M., Rist, T, Hoel, A. H., **Li, Y. F.**, Trice, A., Morrissey, K., Juinio-Meñez, M. A., Fernandes, L., Unger, S., Scarano, F. R., Halpin, P., Whitehouse, S., 2020. Integrated ocean management for a sustainable ocean economy. **Nature Ecology & Evolution**, 4,1451-1458.

5. Fan, B., **Li, Y. F.***, 2024. China's conservation and restoration of coastal wetlands offset much of the reclamation-induced blue carbon losses. **Global Change Biology**, e17039.

6. Zhang, Q., Zhang, Z., Xu, N., & **Li, Y. F.***, 2023. Fullyautomatic training sample collection for detecting multidecadal inland seaward urban sprawl. **Remote Sensing of Environment**, 298, 113801.

7. Zhang, Z., Xu, N., **Li, Y.**, **Li, Y. F.***, 2022. Subcontinental-scale mapping of tidal wetland composition for East Asia: A novel algorithm integrating satellite tide-level and phenological features. **Remote Sensing of Environment**, 269, 112799.

8. Fan, B., **Li, Y. F.***, 2022. Coupled land-sea warming dominates the net land carbon uptake variability in the Greater Bay Area of South China. **Earth's Future**, 10, e2021EF002556.

9. Sajjad, M., **Li, Y.**, **Li, Y. F.***, Chan, J. C. L., Khalid, S., 2019. Integrating typhoon destructive potential and social-ecological systems toward resilient coastal communities. **Earth's Future**, 7, 805-818.

10. **Li, Y.**, **Li, Y. F.***, Kappas M., Pavao-Zuckerman M., 2018. Identifying the key catastrophic variables of urban socialenvironmental resilience and early warning signal. **Environment International**, 113: 184-190.

Projects