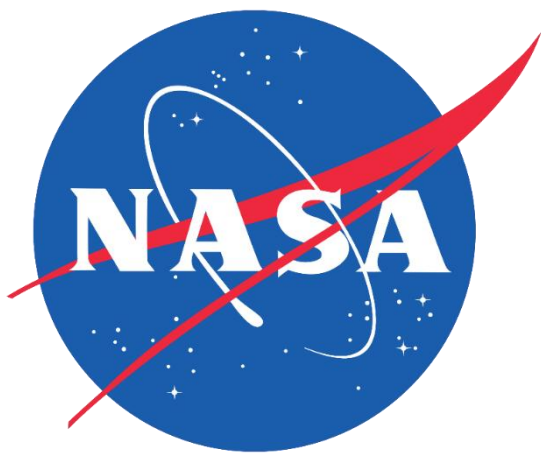


Coastal South Carolina Water Resources

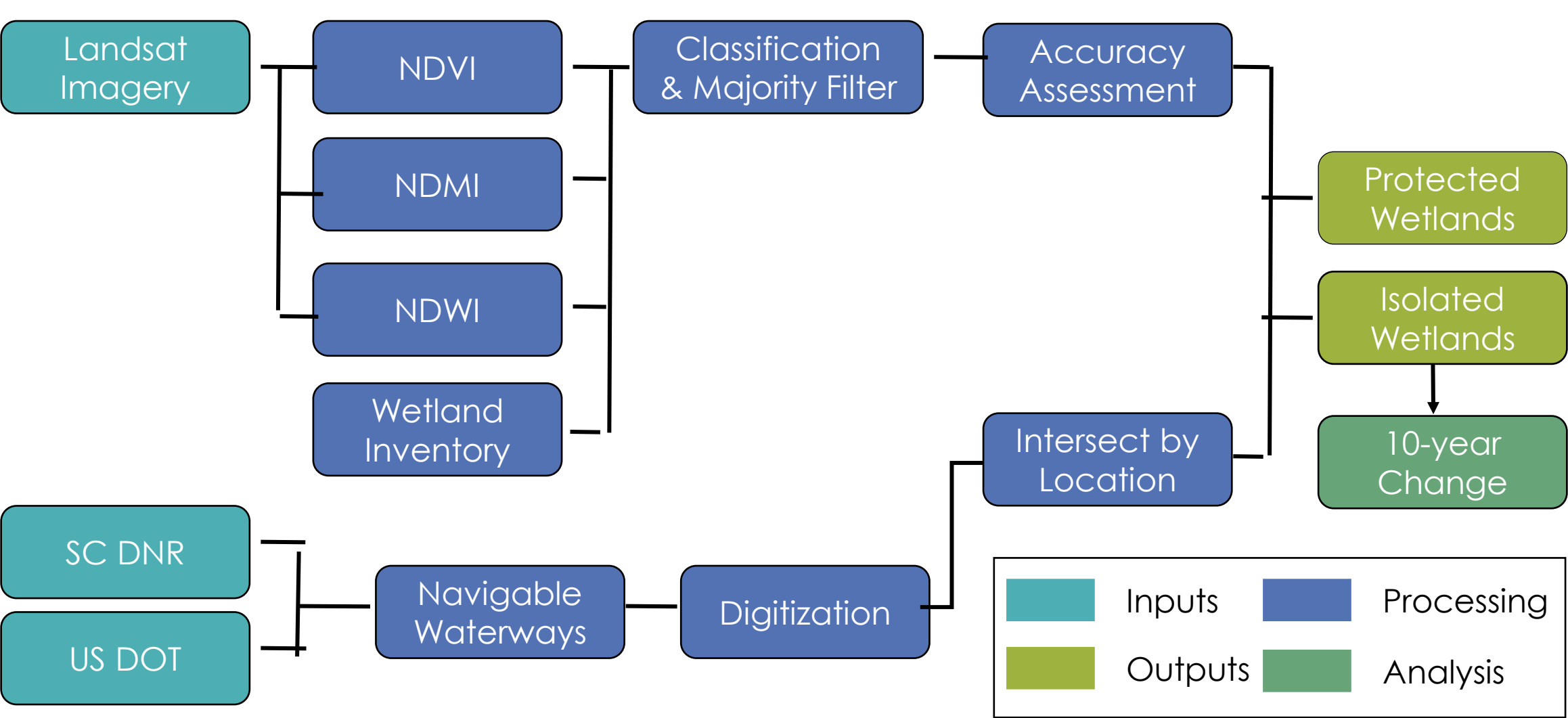


Isolated Wetlands Risk Assessment Using NASA Earth Observations to Support Further Wetland Protections in Coastal South Carolina

Project Synopsis

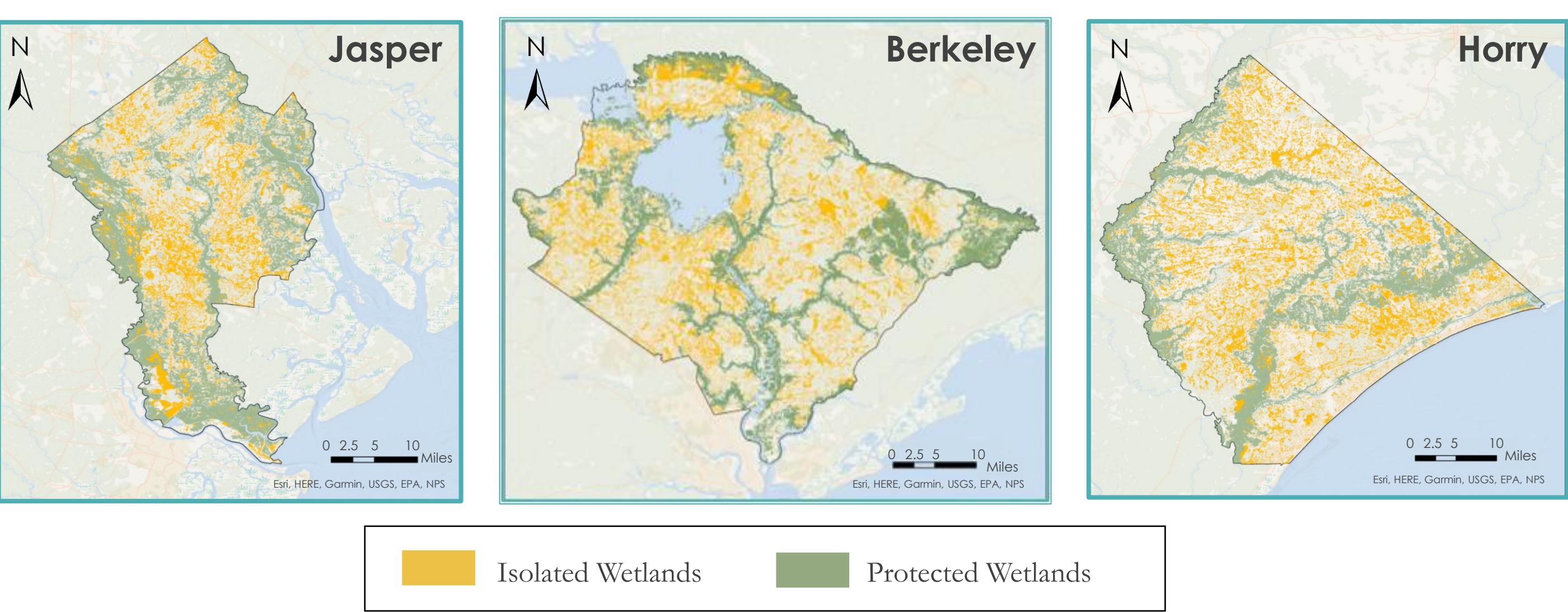
Partnering with the non-profit Coastal Conservation League (CCL), the DEVELOP Team identified isolated wetlands in three coastal counties in South Carolina (SC) – Horry, Berkeley, and Jasper, and detected a 10-year LULC change analysis between 2015 and 2025. While isolated wetlands provide vital ecosystem services, they are being threatened due to development and land use change, and the recent legislation excluded them from federal protection. The team aimed to help CCL manage and protect isolated wetlands.

Methodology

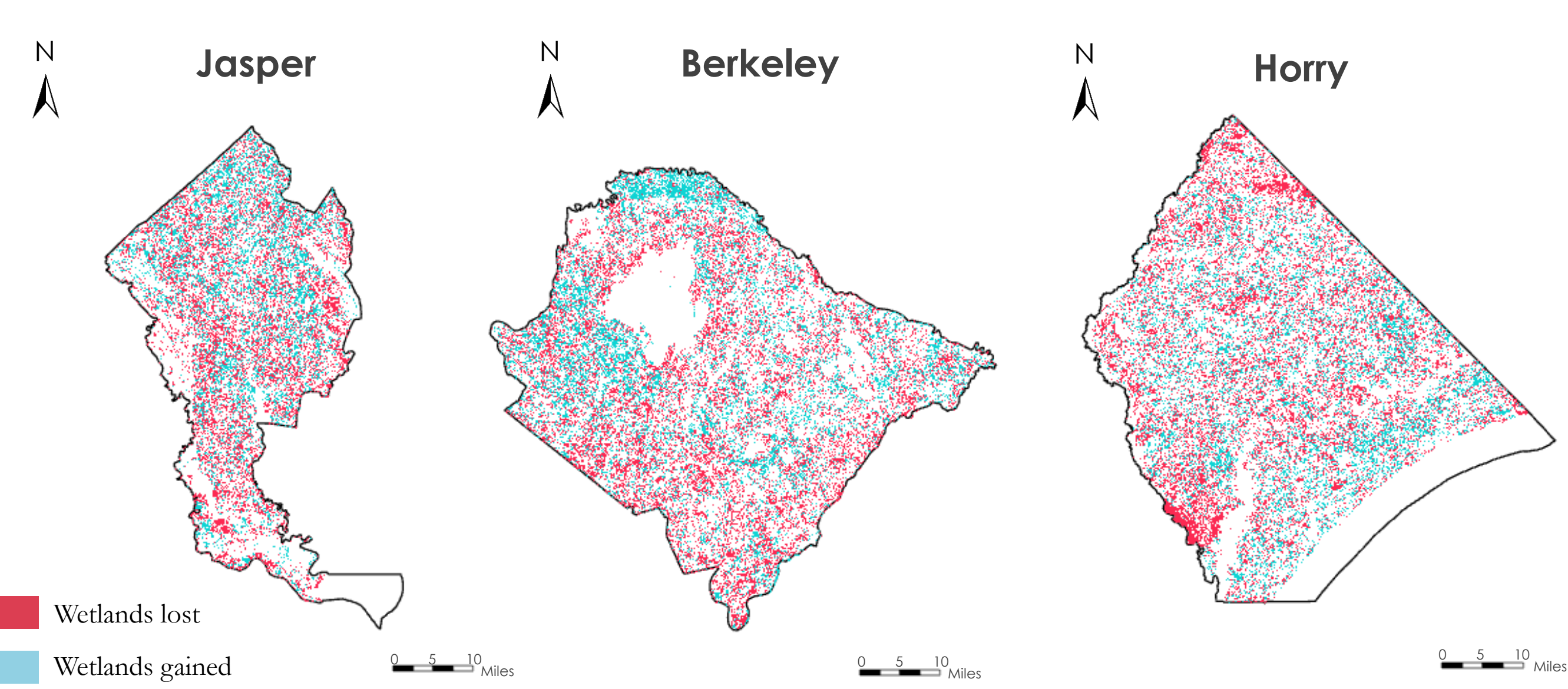


Results

Isolated Wetlands vs. Protected Wetlands Comparisons (2024-2025)



10-year Wetland Change Analysis (2015-2025)



Team Members



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Project Lead



Maisunath M. Amin



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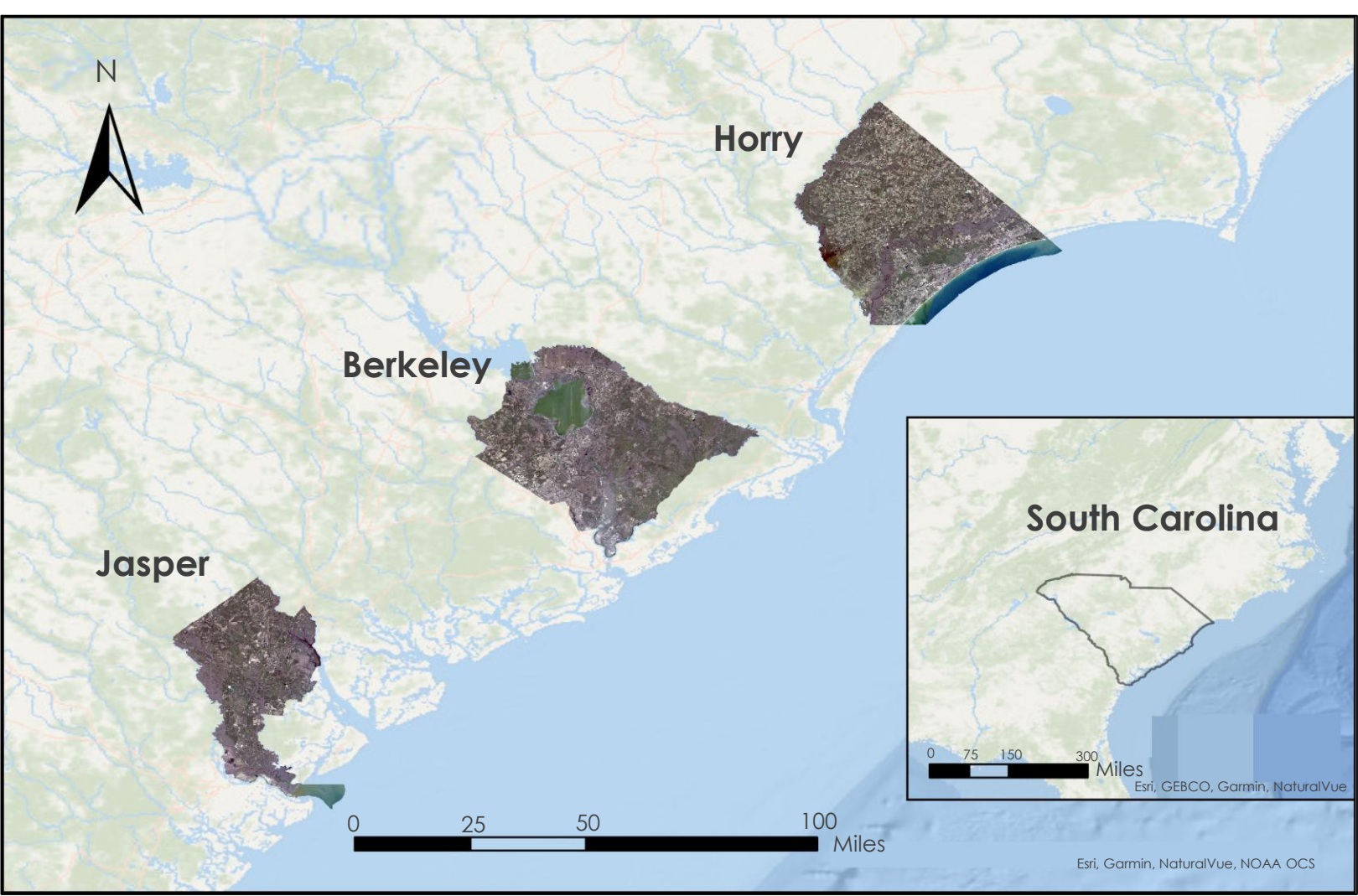


Sidney Eigeman

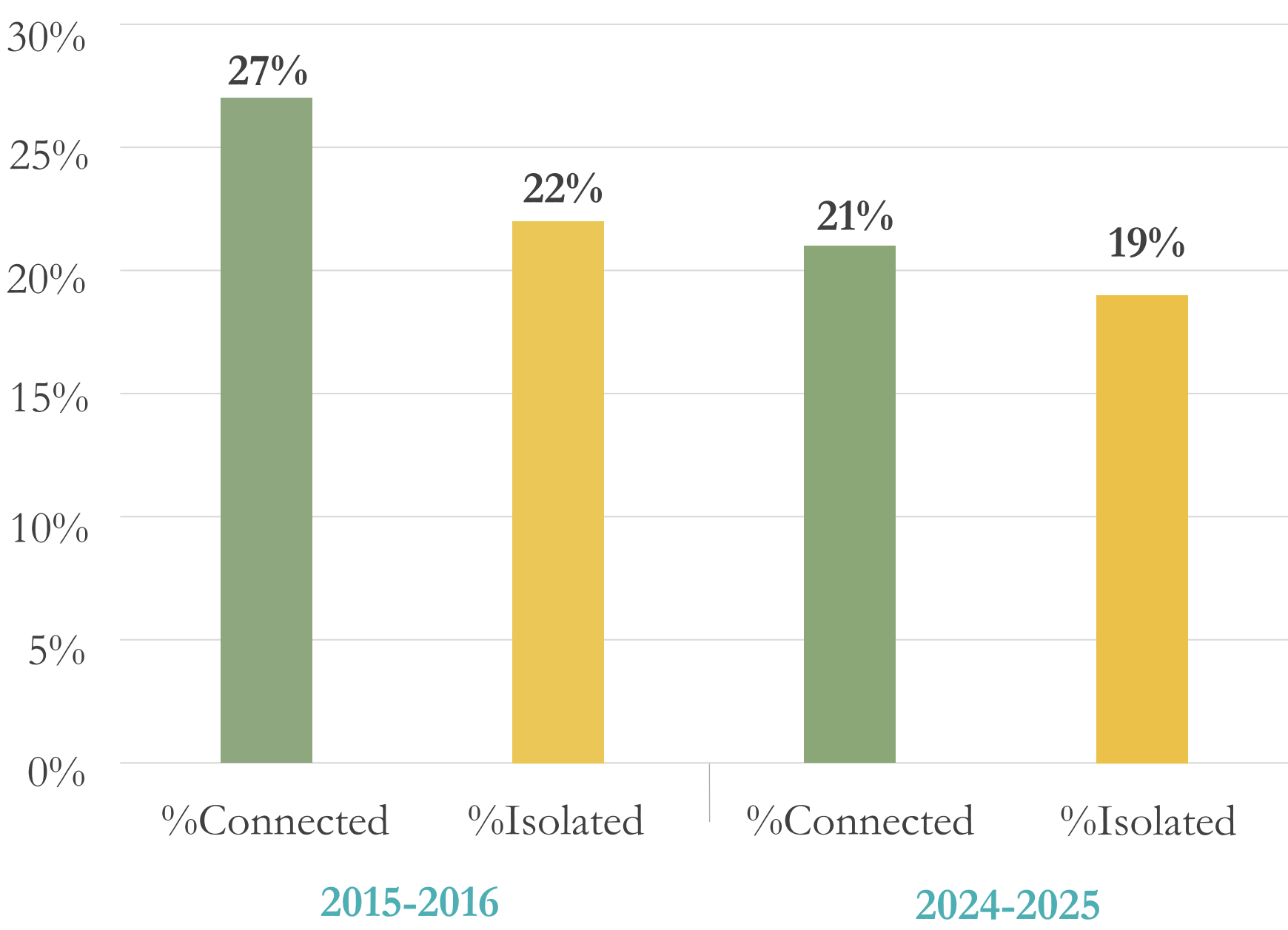
Objectives

- **Map** isolated wetlands within Horry, Berkeley, and Jasper Counties in SC
- **Assess** 10-year wetland and LULC changes between October to February 2015 to 2025
- **Support** partners with geospatial information for outreach and decision making

Study Area & Earth Observations



Wetlands Proportional to All Land Uses



Conclusions

- Wetland areas decreased overall in 2024-2025 compared to 2015-2016.
- Increased developed areas and agricultural lands may have led to decrease in wetlands over the 10 years.
- Increased fragmentation due to urban infrastructure leads to more isolated wetlands.
- Each county has shown different patterns of wetland change.

Project Partners

Coastal Conservation League
Becky Ryon, Grant McClure, Trapper Fowler, Anna Kimelblatt, Jessie White, Emma Berry

Acknowledgements

Center Lead: Dr. Jennifer E. Mathis (NASA DEVELOP)
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