



WEST VIRGINIA WATERSHED ASSESSMENT PILOT PROJECT

Gauley River ©Kent Mason

First Expert Workshop, Oct. 25 & 26, 2011

PRIORITY MODELS

Project Objectives

- Design and test a watershed assessment process, which includes analysis of cumulative watershed effects.
- **Establish priorities for protection and restoration of aquatic resources and evaluate/rank areas within watersheds accordingly.**
- Provide relevant information, strategies/actions, and a decision support tool to assist partners, stakeholders and regulatory staff with decisions affecting aquatic resources.

Establish Priorities

- Need to define priorities for Protection and Restoration
- Highest Quality Areas highest priorities for Protection Activities?
- Lower Quality Areas priority for Restoration Activities?
- Having appropriate thresholds defined for each metric would help inform priorities

GROUP DISCUSSION

Please split up into assigned Groups to discuss

Questions to consider:

- Should highest quality Areas be automatic priorities for Protection?
- What are the higher priorities:
 - High Condition/Function Score?
 - Low Threat Status?
 - Combination of both?

Monongahela Watershed

Preliminary Results

1 of 3 Models

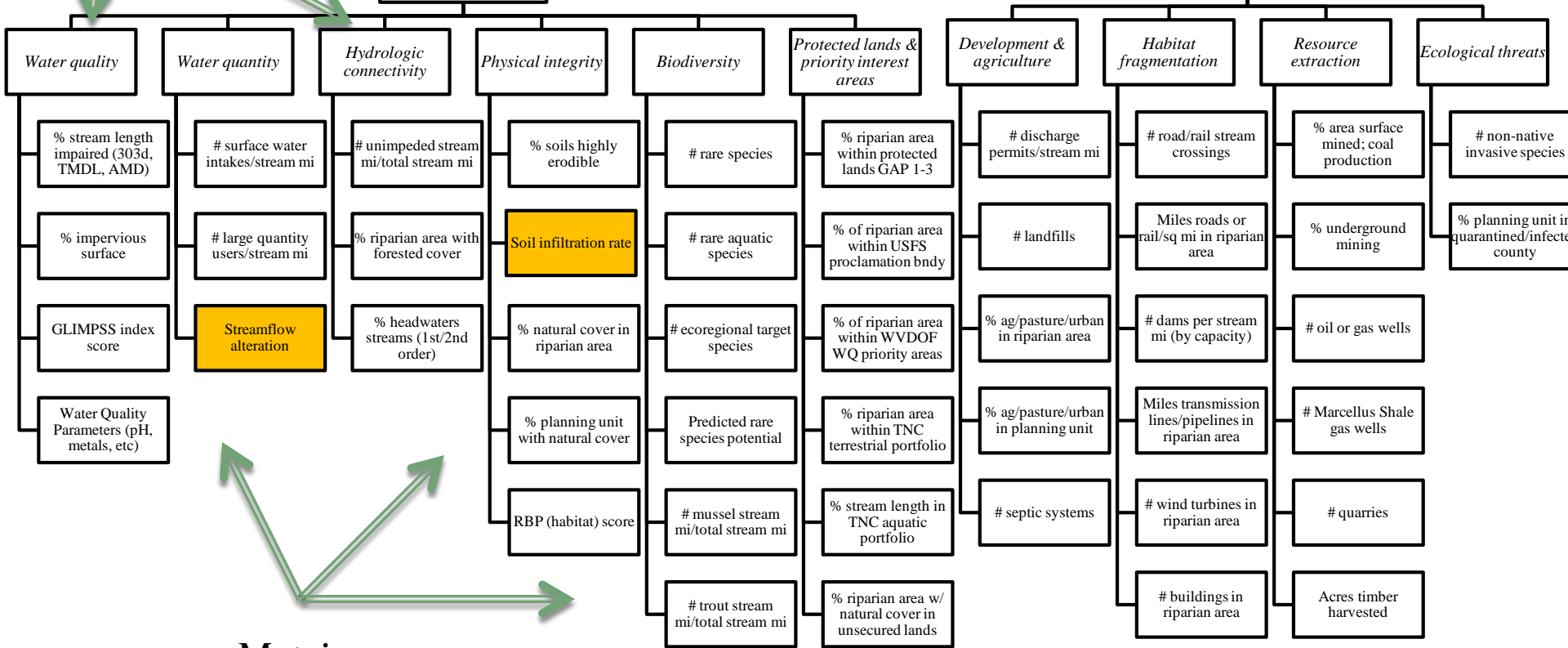
**STREAMS/RIPARIAN
PRIORITY
MODEL**

Category

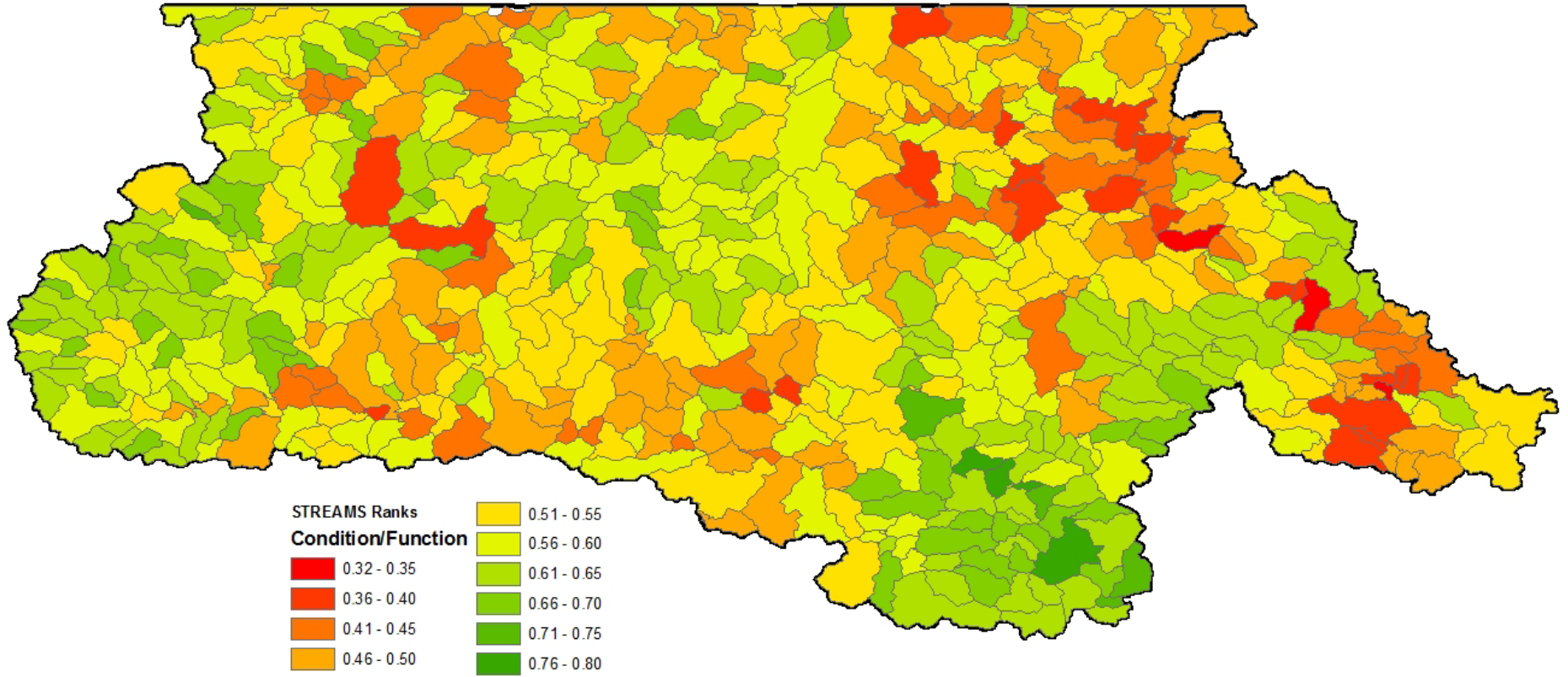
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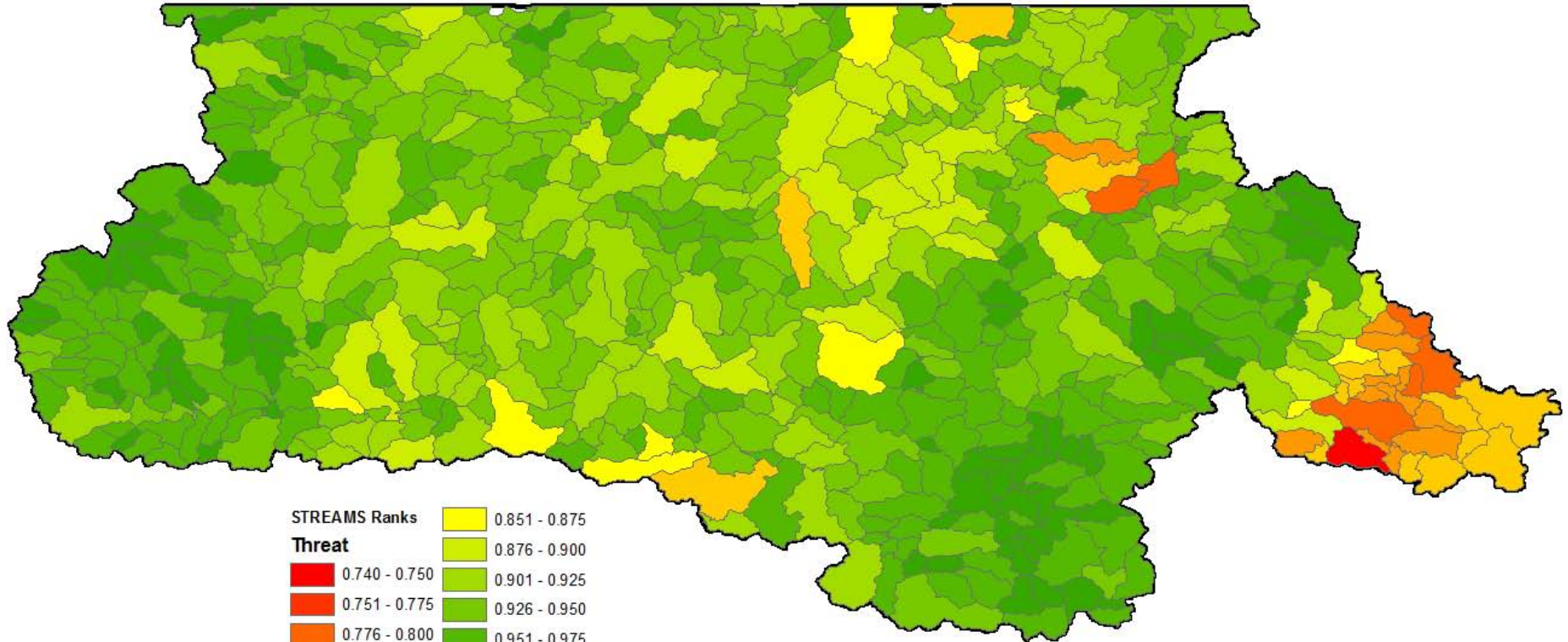
CONDITION/
FUNCTION

THREAT

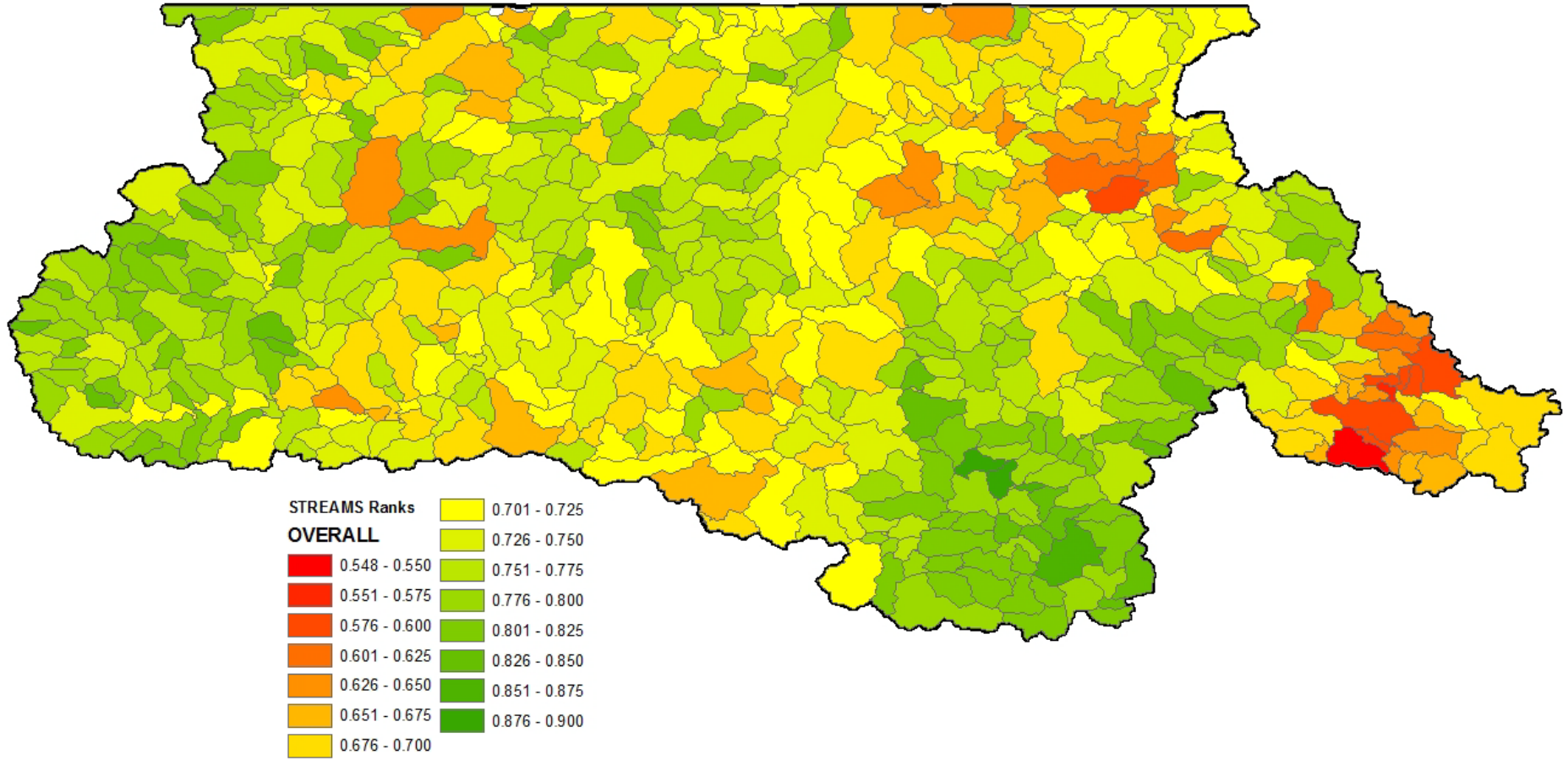


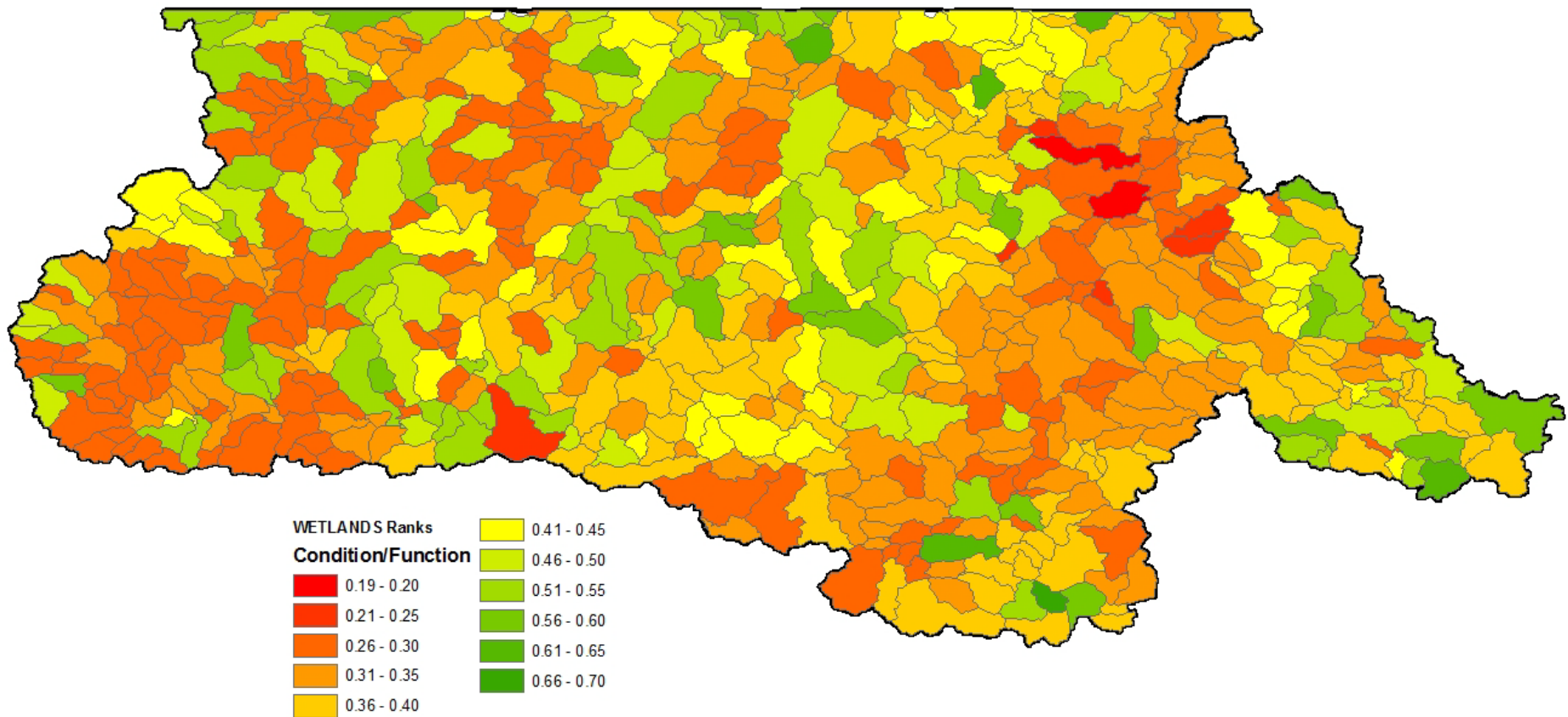
Metrics

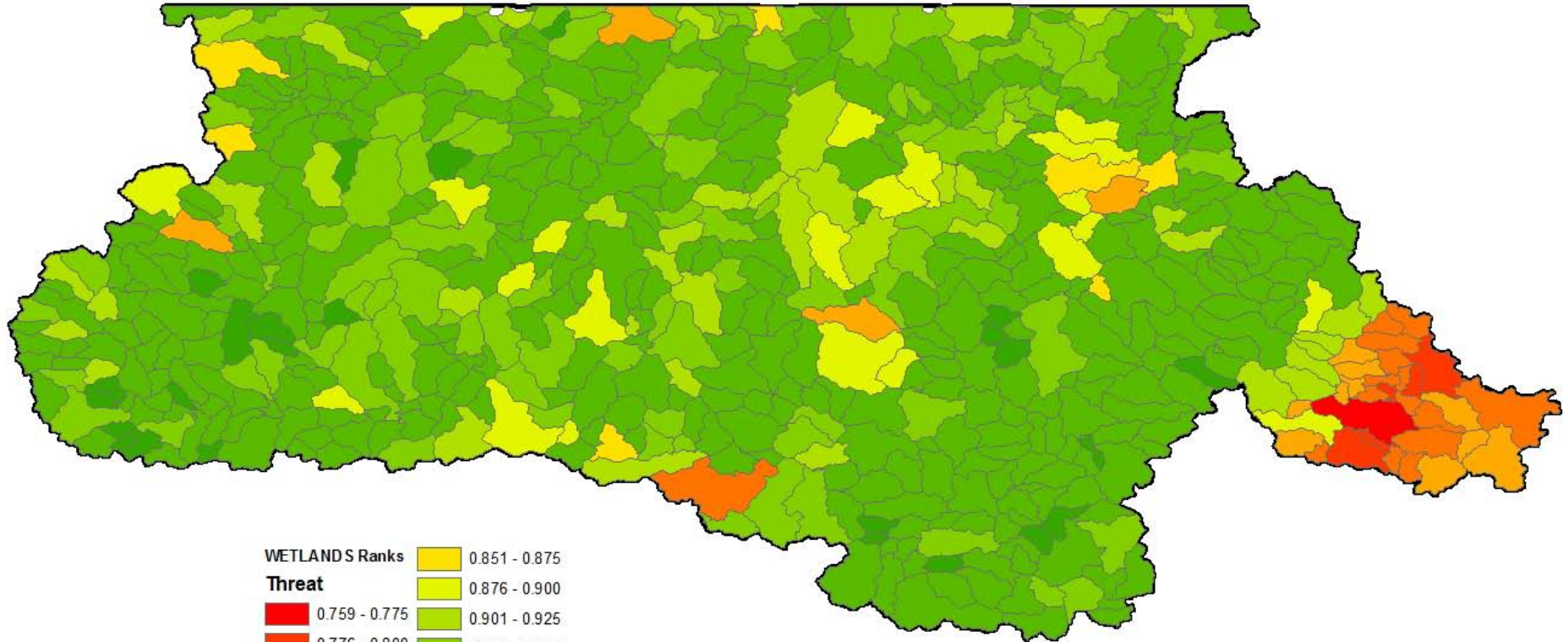




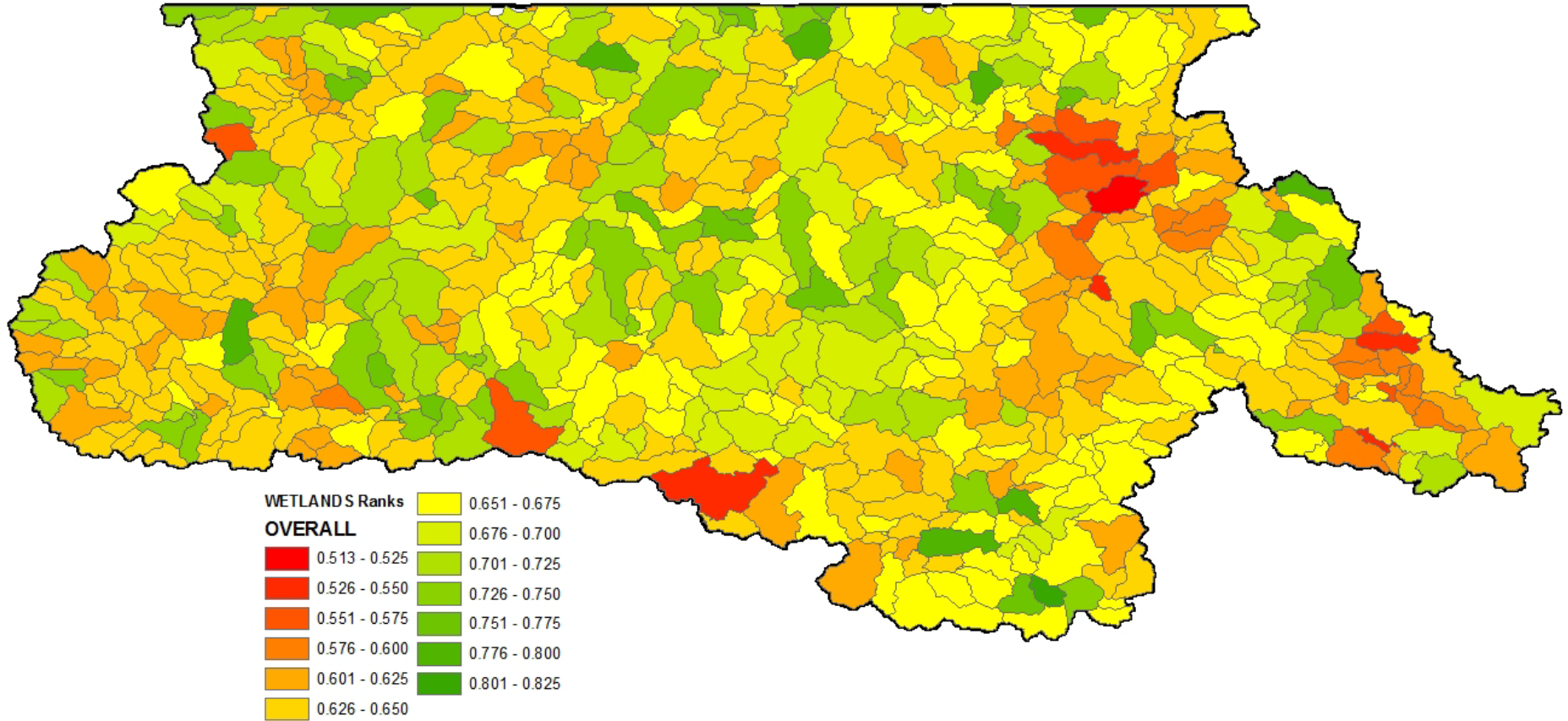
STREAMS Ranks	0.851 - 0.875
Threat	0.876 - 0.900
0.740 - 0.750	0.901 - 0.925
0.751 - 0.775	0.926 - 0.950
0.776 - 0.800	0.951 - 0.975
0.801 - 0.825	0.976 - 1.000
0.826 - 0.850	

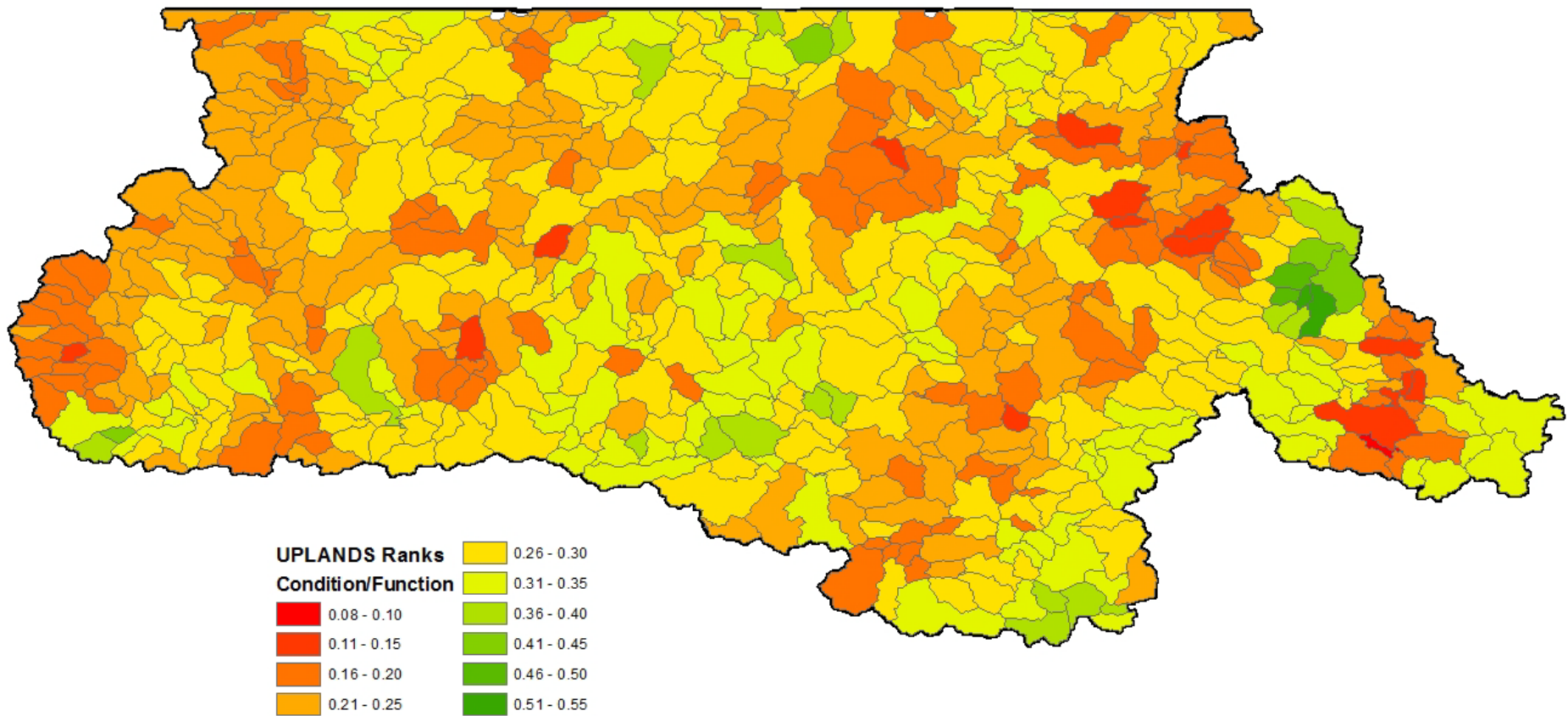


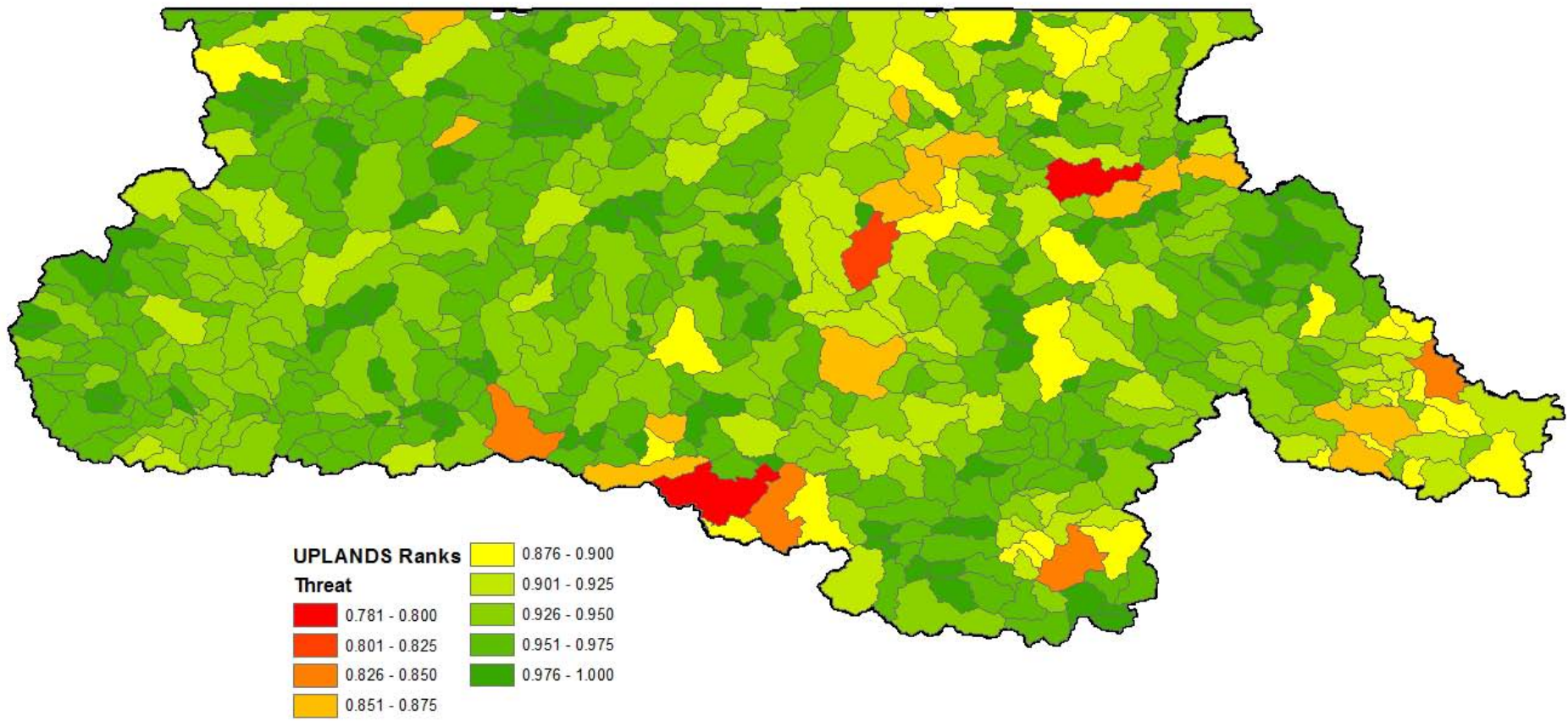


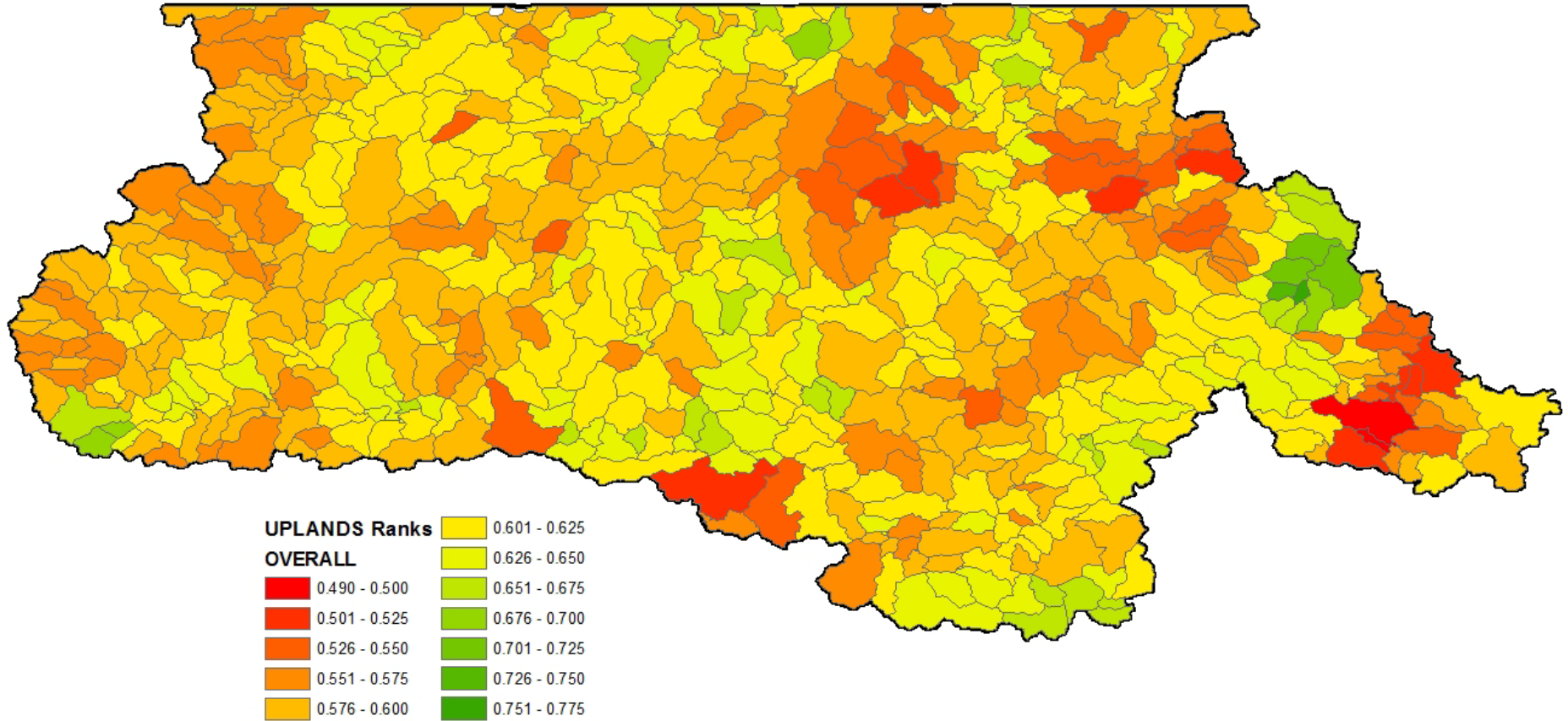


WETLANDS Ranks	0.851 - 0.875
Threat	0.876 - 0.900
0.759 - 0.775	0.901 - 0.925
0.776 - 0.800	0.926 - 0.950
0.801 - 0.825	0.951 - 0.975
0.826 - 0.850	0.976 - 1.000



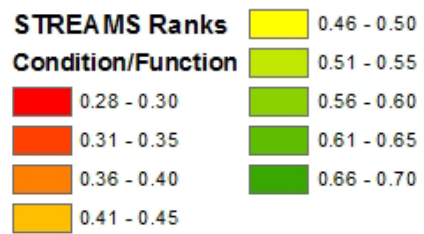
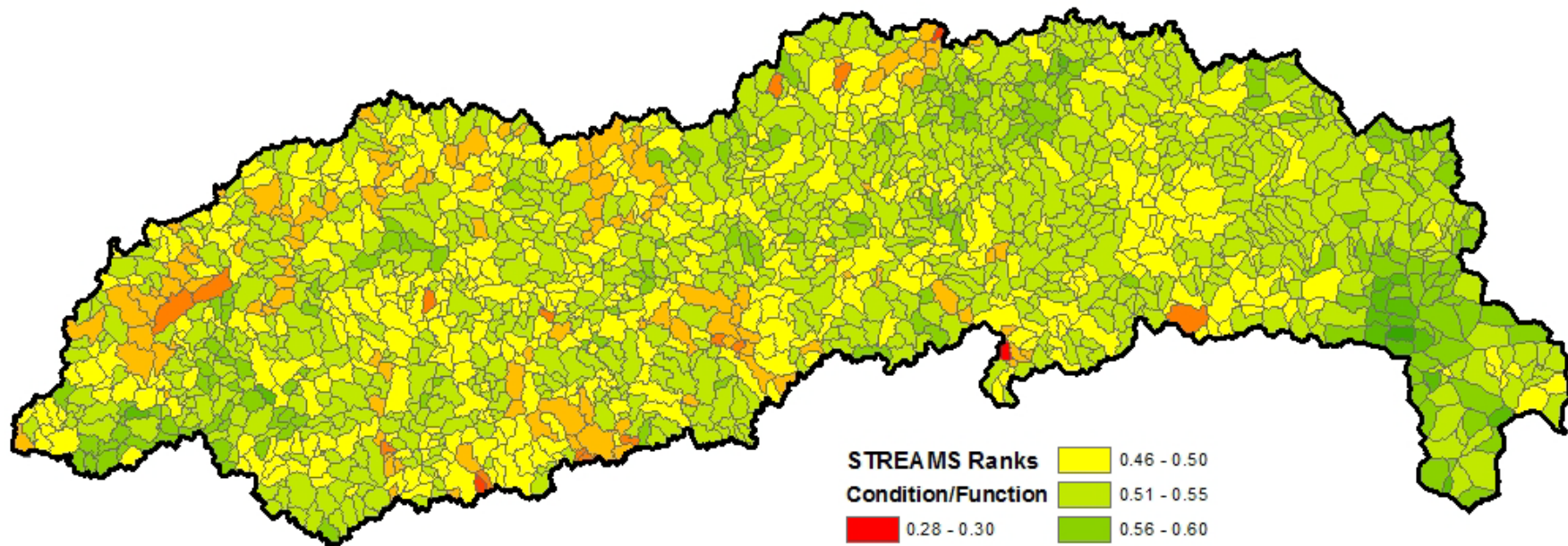


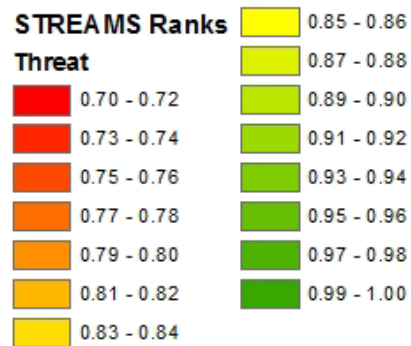
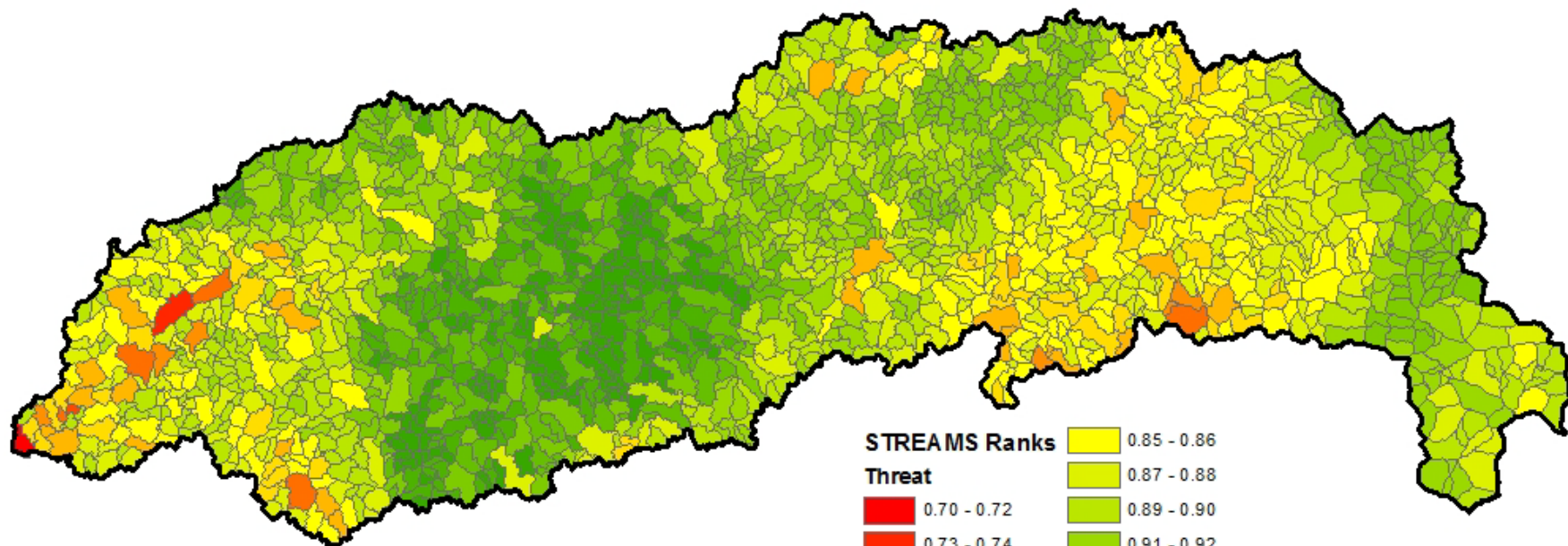


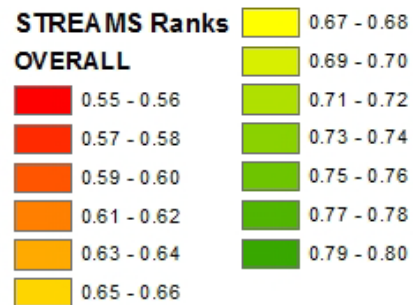
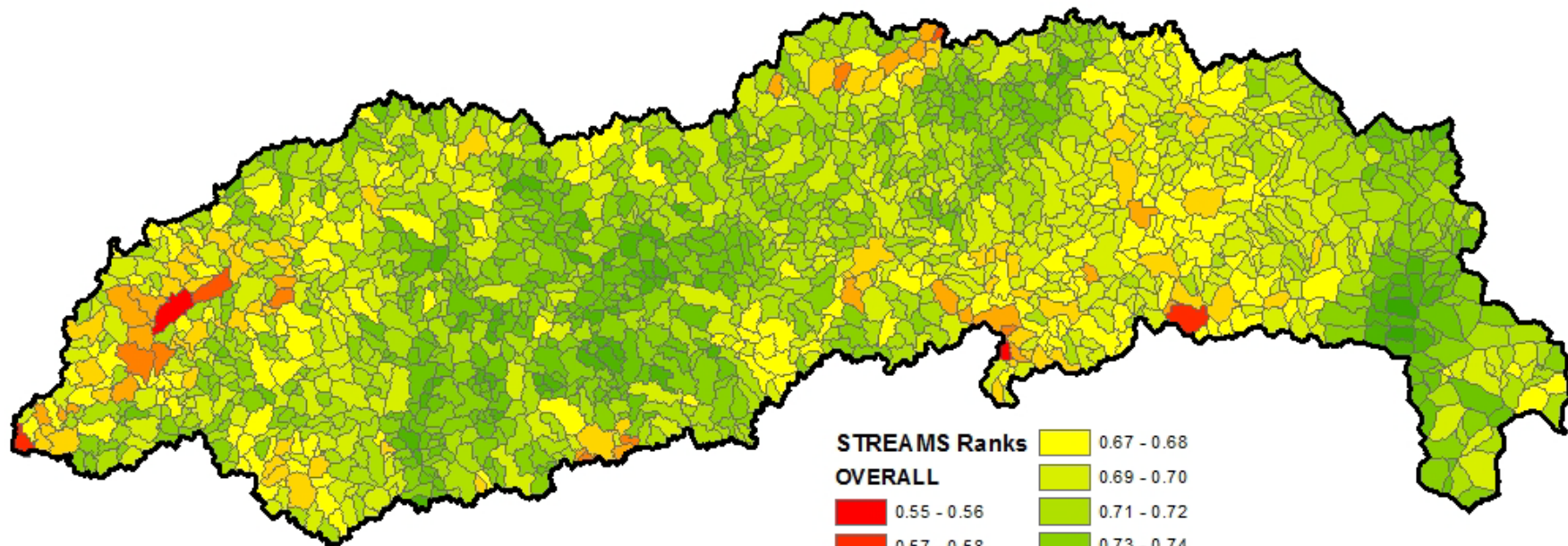


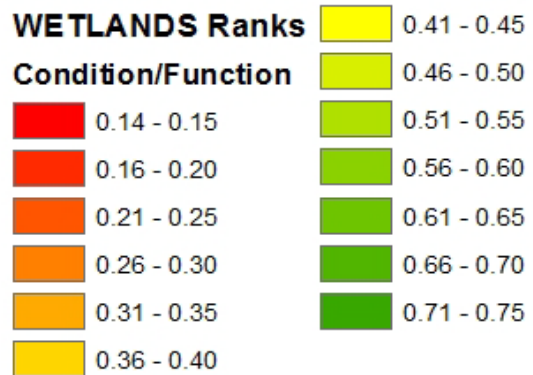
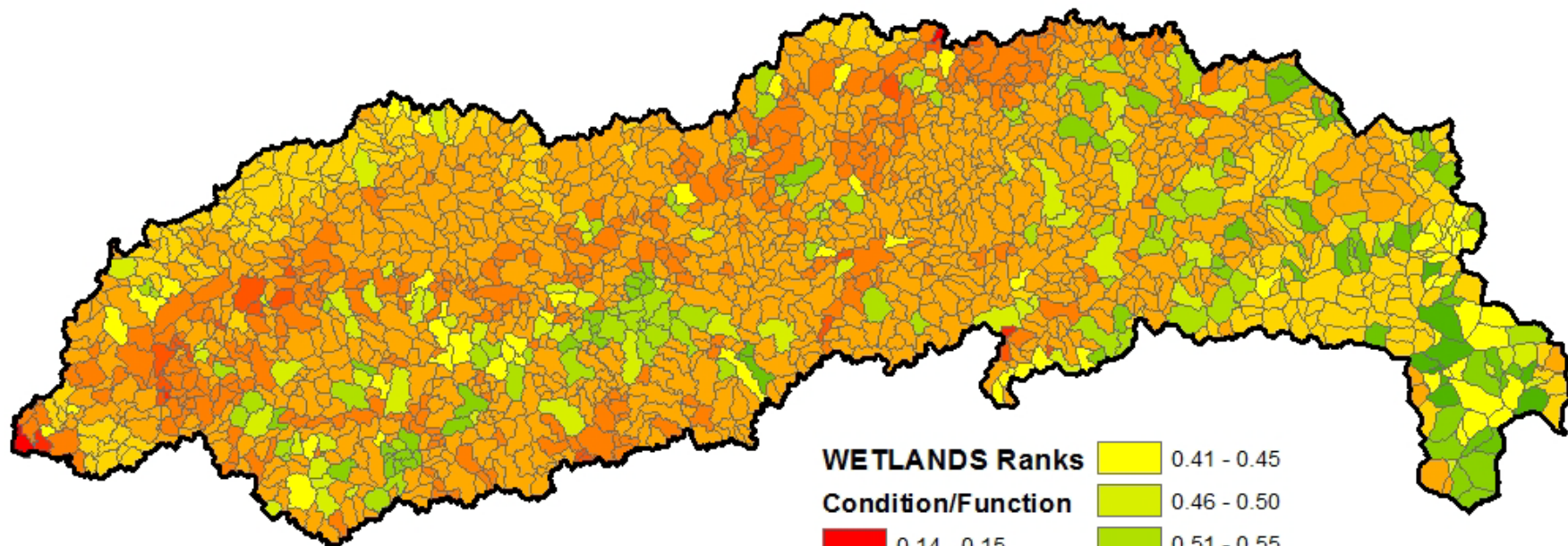
Elk River Watershed

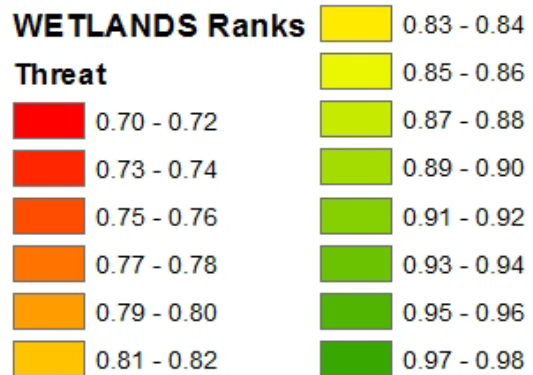
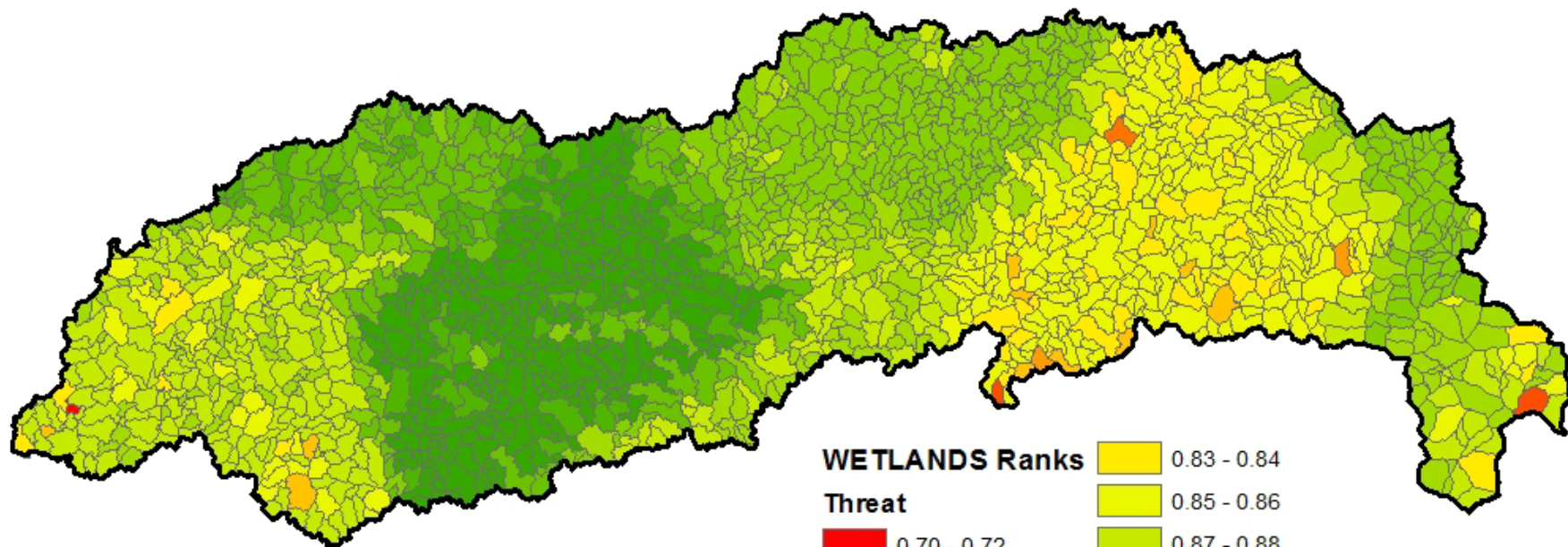
Preliminary Results

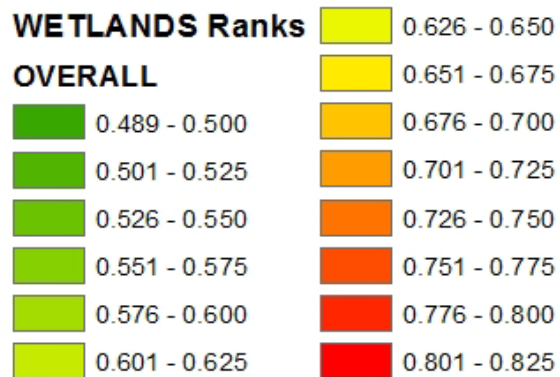
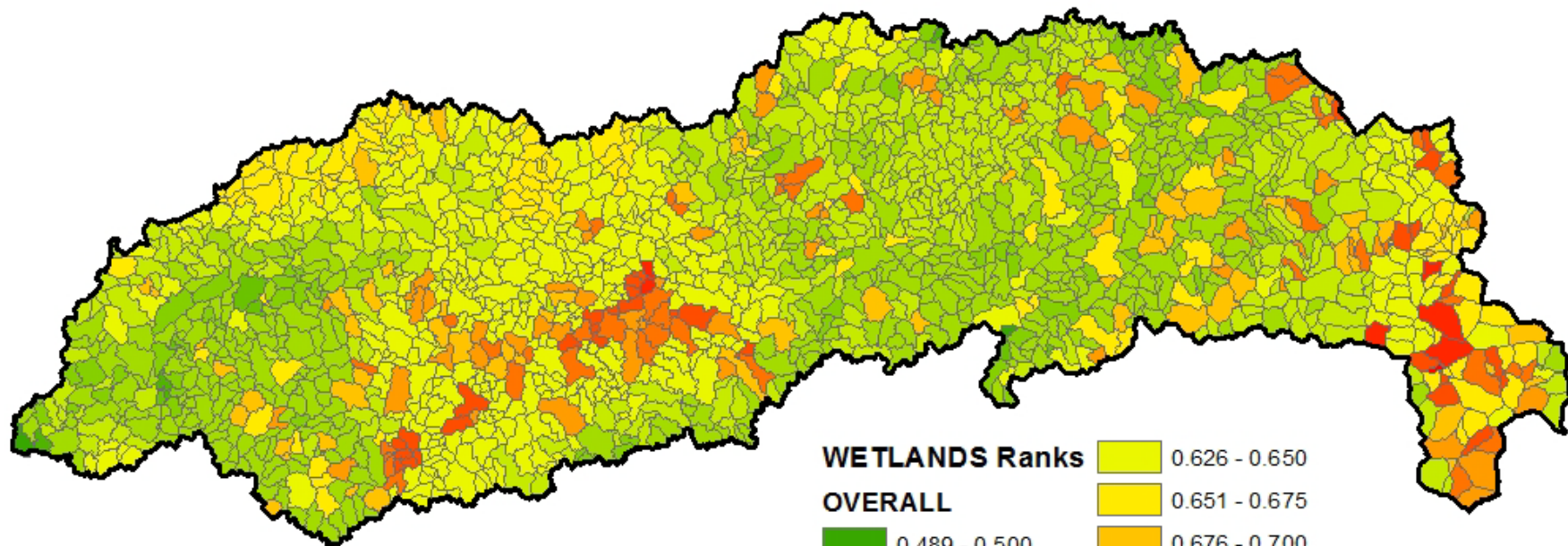


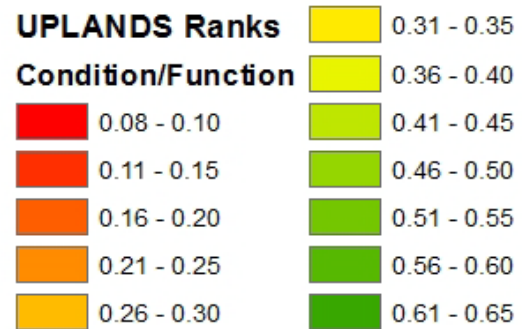
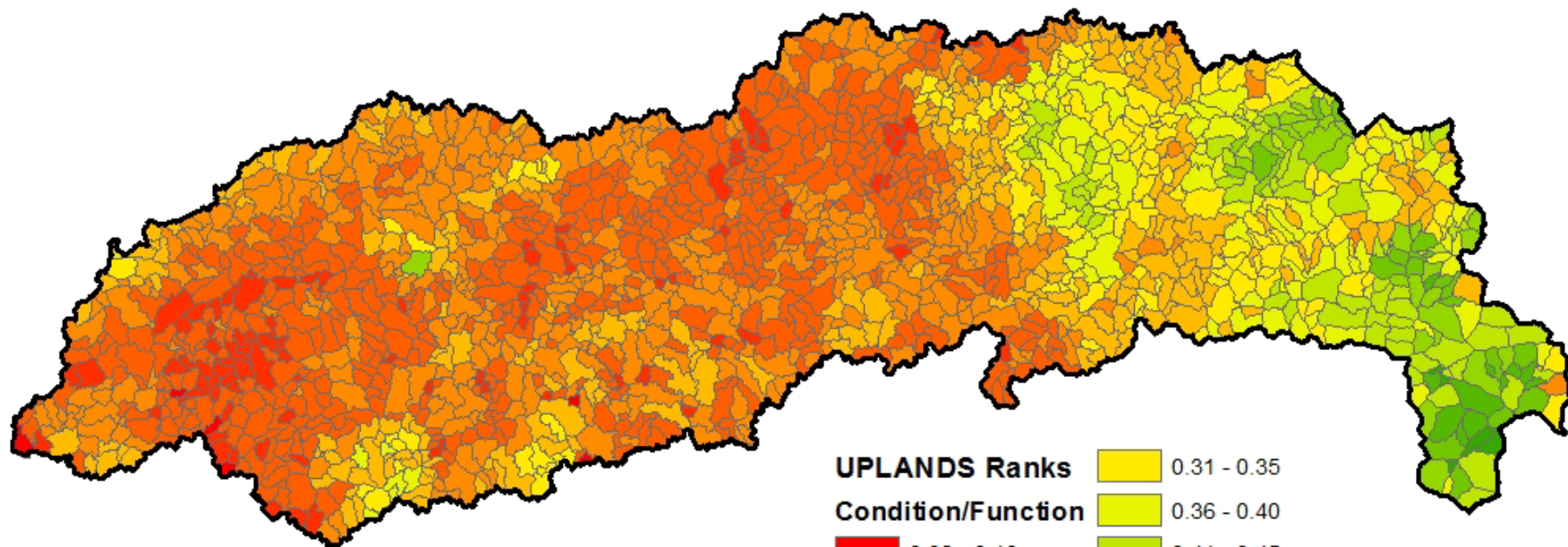


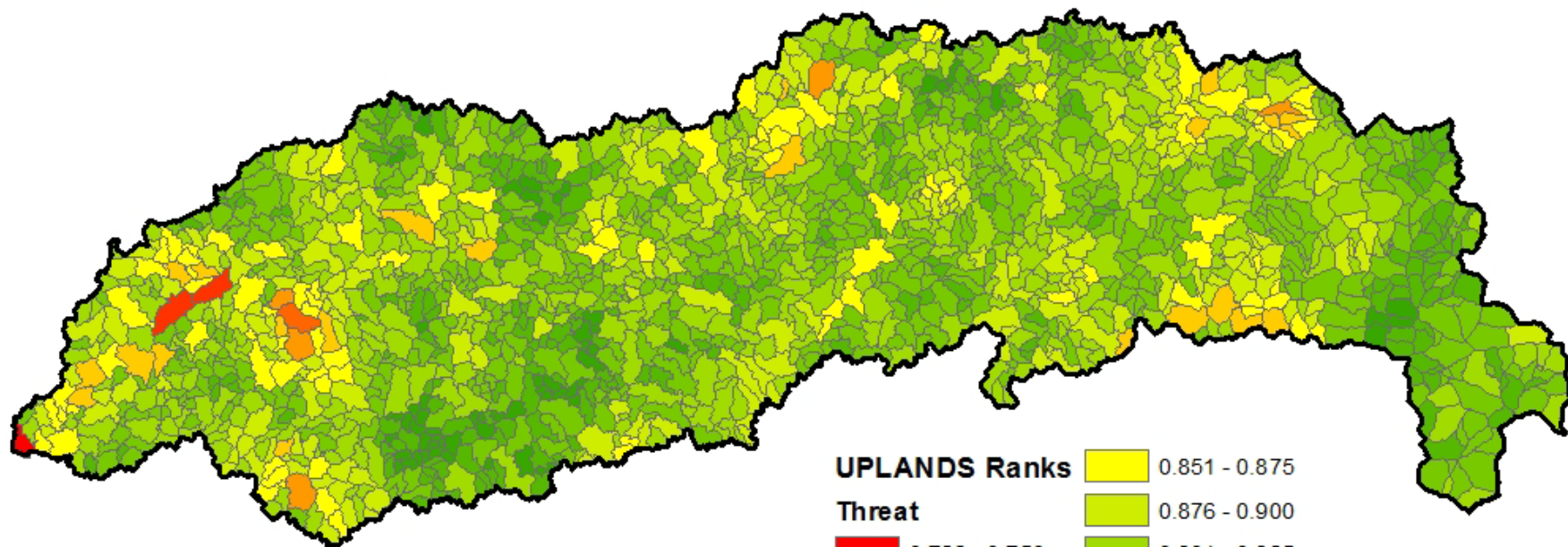












UPLANDS Ranks

Threat

0.726 - 0.750

0.751 - 0.775

0.776 - 0.800

0.801 - 0.825

0.826 - 0.850

0.851 - 0.875

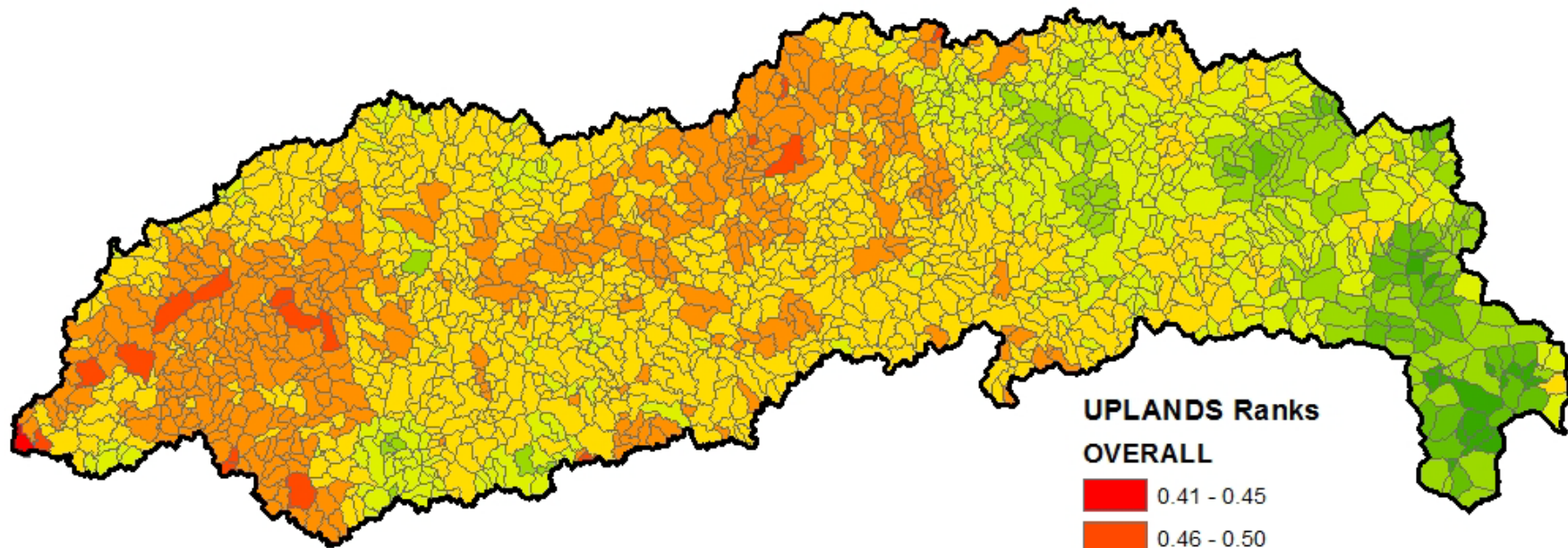
0.876 - 0.900

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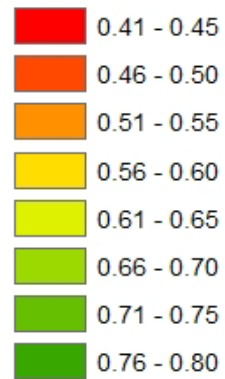
0.951 - 0.975

0.976 - 1.000



UPLANDS Ranks

OVERALL





Elk River at Birch Run, WV ©www.over-land.com

FEEDBACK/QUESTIONS?

NEXT STEPS

- ❑ Incorporate Workshop Feedback
- ❑ Complete HUC12 Prioritization
- ❑ Perform Correlation Analysis
- ❑ Regression Analysis to find particularly important metrics and help inform weightings
- ❑ Define Thresholds

Methodology

- I. Develop a **relative** ranking of planning units within a watershed
- II. Develop **non-relative** index of watershed condition and threat based on pre-defined quality scale (e.g., 1-4 scale where 1= poor, 2=fair, 3= good, 4= excellent)
 - **First phase:** comparison of planning units (prior to expert workshop one)
 - **Second phase/ consolidated analysis:** detailed analysis of target areas and strategies/actions within each planning unit

Consolidated Analysis

□ **Cumulative Watershed Effects**

Land use changes

Landscape losses

Ecosystem function/
service degradation

Cumulative impacts/
stresses

□ **Historical and Future Conditions**

Trends analysis (water use, permitting, population growth, climate change, etc.)

Future scenarios analysis (within targeted areas and for proposed strategies/actions)

Future Scenarios Analysis

Possible Focus Areas:

- Population change
- Future Development projections
- Energy projections
- Climate change projections
- Water use

Group Discussion

Please split into assigned groups to discuss

Key Questions to consider:

- What are the most important questions we need to answer about each watershed?
- What other data/metrics need to be incorporated?
- Are we on the right track to answer these questions?
- Is our methodology sufficient to answer these questions?



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THANK YOU FOR YOUR HELP!