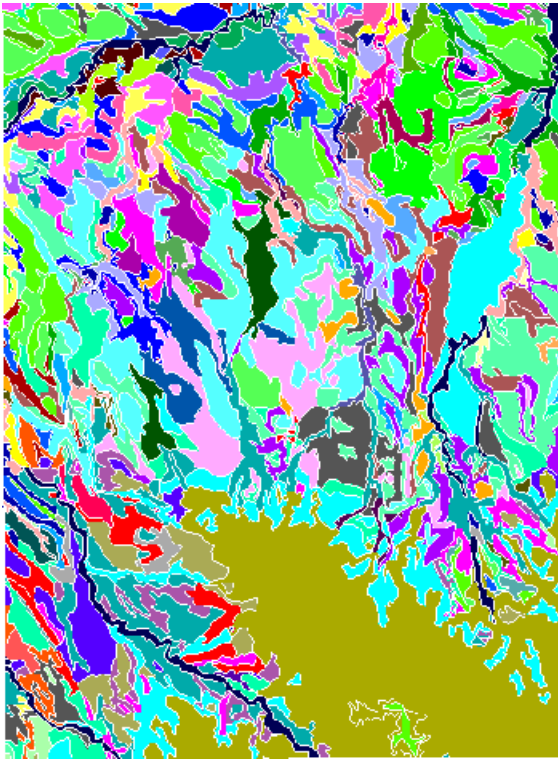# Vector Combinations

The **Vector Combination** process in TNTmips (Prepare / Vector / Combine) provides nine different operations for geographic combination of vector objects. These operations use both logical and mathematical combinations and include:

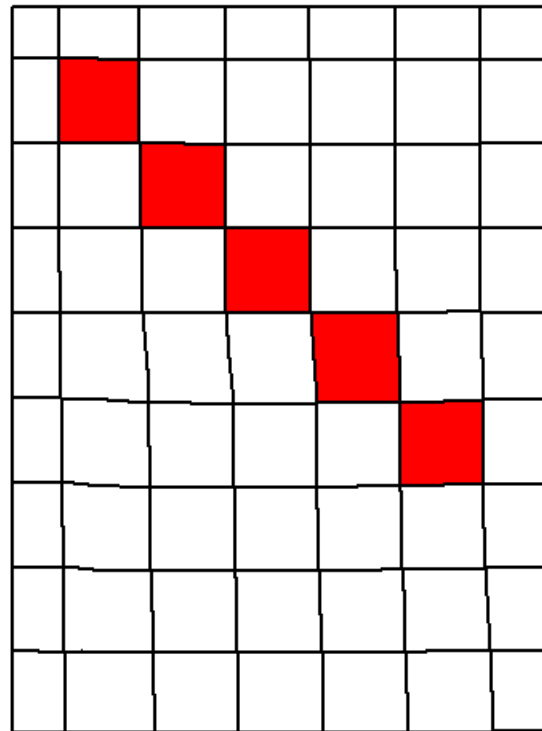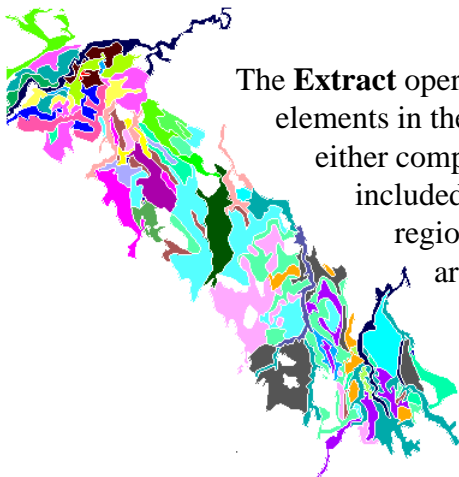|				
Add	Subtract	Logical-And	Logical-Or	Logical-Exclusive-Or
Extract	Extract and Clip	Inverse Extract	Extract and Add Boundary	

Source vector object

Operator vector object

The Vector Combine operations use a *Source* vector object and an *Operator* vector object. You can select elements for combination from both the Source and Operator using key field attributes, database queries, or on-screen mouse selections. In the illustration here, five highlighted polygons have been chosen from the Operator with the mouse.

The **Extract** operation identifies all elements in the Source object either completely or partially included in the Operator region. All such elements are included in the result without any clipping.

The **Extract and Clip** operation finds the elements in the Source object that overlap the region defined by the Operator, and clips those elements at the boundary of the Operator.

Vector combinations are used in many applications and are among the basic tools of GIS analysis.