

Mapping Tree Cover and Conservation Practices for the Resilience in the Sahel Enhanced (RISE) Programs: Some Initial Results

In order to support the U.S. Agency for International Development (USAID) RISE Program and help USAID geographically target investments, the U.S. Geological Survey's EROS Center is mapping and monitoring land use, tree cover, and soil, water, and vegetation conservation practices across two Sahel RISE Focus Zones in Burkina Faso and Niger. In July, the first maps of land use/land cover, agriculture conservation practices, and on-farm tree cover density were completed and presented to the USAID Sahel Regional Office (SRO) in Dakar.

First, the results based on our initial general scale mapping effort showed that the most common practices were related to livestock access control (corridors and fences), followed by the soil and water conservation practices (*banquettes*, rock lines, trenches, and *demi-lunes*). Somewhat less common and more local were intensive agricultural production practices (gardening, irrigated agriculture, and plantation/ arboriculture) and wind erosion control practices (dune stabilization systems and wind breaks). For each of the four groups, we mapped the density of the practices over the focus zones (figures at right). The density maps depict the probability of finding a practice (per square kilometer). If the practice is frequently used in an area, the probability of finding it is higher (*i.e.*, high density).

Second, we mapped the on-farm tree cover in the focus zones using six classes of density ranging from no tree cover (0%) to very high density tree cover (>25%). In both focus zones, 46 percent of the farmland is covered by trees, in which 27 percent is open with isolated trees, 15 percent is covered by a low density, and 4 percent by a medium density of trees.

In the coming months, we will look in more detail at the distribution and density of soil, water, and vegetation practices in order to understand the choice farmers make in the location and type of practices. We will show "cold spots" areas where practices need to be implemented to improve agricultural production in the RISE Focus Zones.

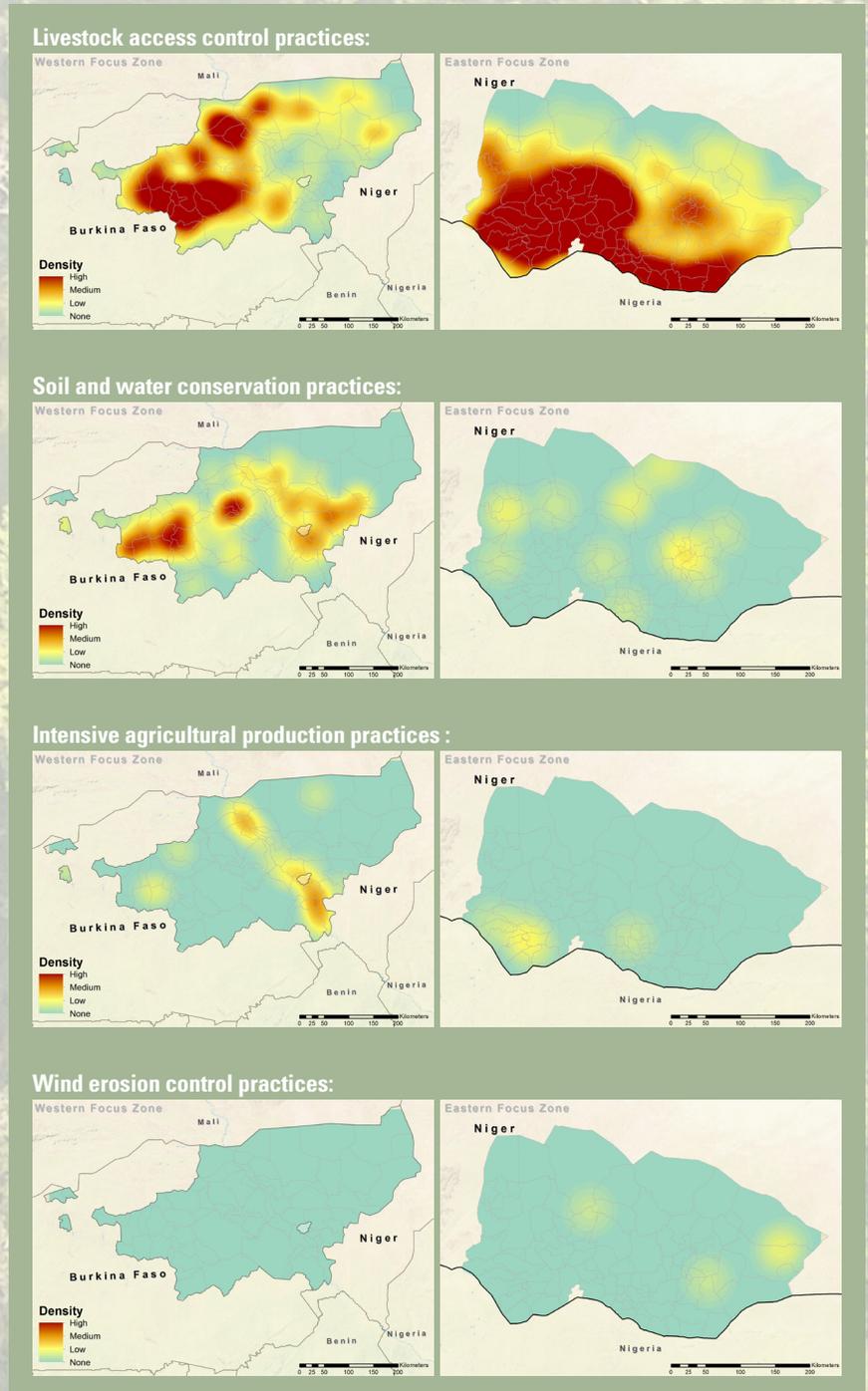


Figure 1. Density heat maps for each practices group within the RISE Focus Zones.