

Restoring Ecological Functions From Landscape-Scale to Site-Scale in the Embudo Valley, New Mexico

Jan-Willem Jansens

Ecotone Landscape Planning, LLC, Santa Fe, NM, USA

In the last decade, multi-party teams developed plans aimed at ecological health of the 200,000-acre Embudo watershed and its forests and wetlands. The landscape-scale plans direct actions across multiple jurisdictions to ensure steady future supplies of water suitable for irrigation. Therefore, forests must become more fire-adapted, watershed soils healthy and less erodible, and streams and wetlands ecologically functional and resilient. This will benefit the local, traditional and Native American communities, many of whom practice agriculture with gravity-fed irrigation systems and still use wood for heating and cooking.

In past decades, local livelihoods have suffered from drought and soil loss due to excessive erosion, sedimentation, water pollution, and severe wildfires. To reverse these trends, the landscape-scale plans now guide multiple partners in implementing site-specific restoration plans ranging from forest thinning, local wood harvesting cooperatives, woodland restoration, erosion control, and wetland stabilization. Commonly, woody byproducts and local rock are utilized in mulching the soil and building gully stabilization and sediment retention structures to spread, infiltrate, and store water in the soil. Soil health is gradually restored, and flash flooding, sedimentation, and wildfire risk reduced. The work generates jobs, on-the-job training, new income streams, and regional collaboration among public and private entities.

Word is spreading in electronic mail, newspapers, and hands-on workshops, and the approach, blended with success stories from elsewhere, is gradually being emulated in regional ecosystems ranging from high elevation forests to lower elevation drylands and riparian areas. The techniques applied are simple, mostly using local materials and basic natural principles, and adaptive to people's skills and creativity to ensure that the effects are appropriate for a diversity of site conditions. Strategically locating work sites in the landscape ensures effective upscaling with landscape-wide effects. Workshops with pocket-sized field guides in Spanish and English ensure inclusivity and ongoing replication and training.

Contact Information: Jan-Willem Jansens, Ecotone Landscape Planning, 1413 Second Street, Suite 5, Santa Fe, NM, USA 87505, Phone: 505-470-2531, Email: jwjansens@ecotonelandscapeplanning.com