13. Geospatial Indicators for Assessing Reuse Scenarios of Disused Railway Corridors: the 'Potenza Inferiore Scalo' - 'Laurenzana' Line in Southern Italy

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Disused railway corridors are complex spatial systems in which infrastructural continuity, railway assets, terrain topography and morphology, environmental values, settlement patterns and functional relations interact. However, early-stage assessment often addresses them as homogeneous linear infrastructures or focuses on a single reuse option. This paper proposes a segment-based geospatial screening framework for the preliminary assessment of alternative reuse scenarios along disused railway corridors. The framework integrates railway, morphological, environmental, socio-territorial and functional indicators and interprets them through a scenario-specific evidence-based approach. Four reuse scenarios are considered: (i) ordinary railway reactivation; (ii) tourist or heritage railway reuse; (iii) greenway and slow-mobility conversion; and (iv) distributed territorial reuse of railway assets. The method is applied to the former 'Potenza Inferiore Scalo' – 'Laurenzana' railway corridor in Basilicata, Southern Italy. Results show strong internal differentiation among the five railway sections: greenway and slow-mobility conversion provide the most continuous spatial support at corridor scale, while tourist/heritage and distributed asset-based reuse emerge selectively in sections with stronger landscape, cultural or asset-related evidence. Ordinary railway reactivation remains weak and highly conditional. The study demonstrates that geospatial indicators can support differentiated, section-based reuse strategies for disused railway infrastructures.