

Empowering Sustainable Forest Management in the European Context: The PRI.FOR.MAN Decision Support System

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Effective forest management is critical for balancing ecological, economic, and social objectives. This challenge is particularly pronounced in regions like Friuli Venezia Giulia in northeastern Italy, where fragmented forest ownership and diverse stakeholder needs complicate management efforts. The PRI.FOR.MAN project, supported by the EIP-AGRI Operational Group, represents an innovative approach to addressing these challenges. Its Decision Support System (DSS), a WebGIS-based tool, provides centralized, accessible, and actionable information, fostering sustainable forest management and addressing the specific difficulties of fragmented forest landscapes.

The Challenge: Fragmented Ownership and Underutilized Forests

In Italy, approximately 66% of forests are privately owned, often split into parcels smaller than 1 hectare. This fragmentation impedes effective management, as many owners live far from their properties and lack the knowledge or resources to manage their land sustainably. The resulting underutilization affects both the economic viability and ecological health of forests, with significant implications for biodiversity, carbon sequestration, and local economies.

PRI.FOR.MAN: A Digital Solution for Complex Problems

The PRI.FOR.MAN DSS is a user-friendly, open-access WebGIS platform designed to overcome these barriers. It integrates geospatial and tabular data into a comprehensive system tailored to the needs of forest managers. By leveraging state-of-the-art technology, this tool consolidates information previously scattered across multiple platforms into an accessible format. This facilitates informed decision-making for sustainable forest management.

Features of the PRI.FOR.MAN DSS

The system offers a range of functionalities that enable forest managers to address multi-objective planning, including:

1. **Forest Type and Volume Mapping:** Provides detailed insights into forest categories, standing volume, and annual growth rates, enabling precise resource planning.
2. **Accessibility Analysis:** Evaluates the feasibility of harvesting operations using data on forest road networks and topography.
3. **Environmental Constraints:** Integrates data on protected areas, Natura 2000 sites, and other ecological factors to guide conservation-focused management.
4. **Cost and Harvest Planning:** Includes tools for estimating harvesting costs and assessing potential yields based on sustainable practices.
5. **Policy and Strategic Support:** Aggregates data at regional and municipal levels to assist policymakers in long-term planning.

Bridging Knowledge Gaps Through Technology

Designed with input from local stakeholders, the PRI.FOR.MAN DSS ensures accessibility for both professionals and laypersons. Its intuitive interface supports non-technical users, and a comprehensive tutorial enhances usability. This inclusivity encourages broader engagement, helping to revitalize neglected forests and optimize their contributions to local economies and ecological stability.

Toward a Sustainable Future

The PRI.FOR.MAN project underscores the transformative potential of digital tools in forestry. By consolidating fragmented data and making it accessible, the DSS addresses the root causes of forest abandonment and underutilization. While currently in a research-oriented phase, the system's demonstrated utility highlights the importance of expanding its reach and fostering partnerships between regional forest services and private stakeholders.

In conclusion, the PRI.FOR.MAN DSS offers a model for sustainable forest management that can be adapted to other regions facing similar challenges. As the system evolves, it has the potential to redefine forest management practices, promoting ecological health, economic viability, and social cohesion across Europe's diverse forested landscapes.

Further information

[More information about PRI.FOR.MAN Operational Group](#)

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