G-01-2026			
Date of award: 7 August 2026			
Project	**Beneficiaries**	**Activity**	**Duration**
ForestMind	3Bee S.r.l.	The ForestWard Observatory aggregates critical forest data across Europe, yet accessing and analysing these heterogeneous datasets requires specialised GIS skills and programming knowledge, limiting uptake among the practitioners and policymakers who need them most. ForestMind addresses this gap with an orchestrated system of autonomous AI agents that enables natural language interaction with the Observatory. The solution rests on three pillars: (1) a Model Context Protocol (MCP) tool suite connecting a fleet of specialised agents to the Observatory's REST and STAC APIs, where each agent masters a specific data domain (species distributions, biomass, disturbance maps, ICOS super-sites, field inventories) and a coordinator agent routes queries to the appropriate specialist; (2) a task orchestration engine where the coordinator decomposes complex analytical questions into sub-tasks, delegates them to domain agents in parallel, and assembles their outputs into structured reports with maps, charts, and statistics; (3) a proactive monitoring scheduler that triggers recurring multi-agent analyses and delivers results via email or messaging APP without human intervention. The system integrates exclusively via public APIs, requires no modifications to the existing GeoDjango/PostGIS infrastructure, and runs on a single minimal cloud instance. ForestMind builds on a	Start: July/2026 10 Months

		geospatial AI agent already deployed in production on 3Bee's XNatura platform across 15 countries, substantially reducing technical risk. The interdisciplinary team of eight combines AI engineering, geospatial development, forest ecology, and European project management, AI-Ethics expert, with a track record of 15+ EU-funded projects. All deliverables will be released open-source under Apache 2.0 and FAIR principles.	
FORWARDS-3D	University of Freiburg	European forests face increasing pressure from climate change, yet traditional forest inventories have too sparse coverage in space and time to capture related structural forest dynamics, limiting both local monitoring and large-scale calibration and validation (cal/val) of Earth Observation (EO) applications. Closerange LiDAR (including terrestrial, mobile, and drone-based platforms), combined with artificial intelligence (AI), can provide detailed forest inventories and key ecological metrics such as structural diversity and crown interactions at scale. **FORWARDS-3D leverages 3Dtrees.earth, a newly emerging platform that combines crowd-sourced LiDAR data with AI-based analysis workflows, and integrates it with the ForestWard Observatory to deliver an AI-powered "intelligence layer" tailored to the needs of the FORWARDS consortium.** We will enrich ForestWard by deploying LiDAR-based analytical services, such as tree instance segmentation, species classification, and structural diversity metrics, directly within its data pipeline and API ecosystem. Leveraging Galaxy Europe's scalable compute infrastructure, these workflows enable non-expert users to process their own point clouds using state-of-the-art AI methods	Start: July/2026 10 Months

		without requiring prior expertise or local computational resources, thereby democratizing high-performance LiDAR analytics. A central contribution is the development of a tailored data auditing and feedback system, ensuring that all integrated datasets meet FORWARDS standards for analysis-ready and research-grade data. Data standardization, provenance tracking (RO-Crates), and FAIR-compliant workflows will ensure transparent, reproducible, and interoperable data use. **By mobilizing and crowd-sourcing European LiDAR datasets, FORWARDS-3D will create a critical "data treasure" for multi-scale forest monitoring and EO calibration/validation.** Ultimately, the project enhances ForestWard's capabilities, supporting climate-smart forest management with high-resolution, actionable intelligence.	