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SCENARIO 1

Paying for better forest biodiversity through the Common Agricultural Policy (CAP)

Scenario 1 represents the most policy-compatible and potentially scalable pathway where legal eligibility and national design permit for integrating forest biodiversity PES into existing EU funding structures.

Why this scenario?

Scenario 1 addresses a core and urgent policy challenge in European forests: biodiversity decline, while using the most scalable and administratively established EU funding route currently available across the European Union: CAP Pillar I eco-schemes.

Biodiversity in forests is a classic public good, with broad societal benefits but weak private market demand, making publicly financed PES the most realistic large-scale solution. By embedding **habitat-focused payments within the existing CAP architecture**, this scenario combines ecological priority with institutional feasibility, avoiding the need for a new instrument while ensuring EU-wide reach. It reflects both project evidence and European practice, which show that **action-based** or **hybrid biodiversity schemes** are more operationally viable at scale than purely results-based approaches.

Theme	Reccomended option
1. FORESTRY ECOSYSTEM SERVICES TARGETED	Biodiversity: Maintaining and enhancing habitats and gene pool protection *(CICES: Regulation & Maintenance → Lifecycle maintenance, habitat and gene pool protection).*
2. TEMPORAL FRAMEWORK	Medium-term commitments (5–7 years) aligned with CAP programming cycles, with periodic review and adjustment of compliance and ecological progress (e.g. every 1–2 years).
3. GEOGRAPHICAL SCOPE	Designated conservation areas and priority biodiversity zones (e.g. Natura 2000 sites and nationally mapped biodiversity hotspots) with management requirements tailored to regional ecological conditions.
4. FINANCIAL MECHANISM	Public: EU public funding only for CAP strategic plan interventions (e.g. eco-schemes under Pillar I), providing annual or multi-annual payments for biodiversity-enhancing forest management practices.
5. IMPLEMENTATION CONTROL SYSTEMS	Habitat-quality indicators (deadwood volume, age structure, habitat features (tree cavities, microhabitats), structural diversity index), measured through remote sensing (canopy cover patterns, gaps/structural complexity proxies, disturbance history) and on-site verification (deadwood volume, set-aside habitat trees, followed by management restrictions) and administrative checks using CAP monitoring systems.
6. TYPE OF FINANCIAL PROGRAMME	Hybrid: action-based funding + result-based ecological performance bonus, implemented through CAP Eco-scheme instrument.
7. PROMOTION AND FACILITATION MECHANISMS WITHIN FINANCIAL PROGRAMME	Integration into CAP Strategic Plans, supported by European Commission policy guidance combined with Member State implementation tools (e.g., scoring systems, administrative procedures), advisory services, intermediary support, and collective/coordinated participation options, to ensure coherent delivery.

*CICES: Common International Classification of Ecosystem Services

Who benefits?

Forest owners / land managers: predictable payments for biodiversity-friendly forest management, with manageable entry conditions.

Member States / managing authorities: progress toward biodiversity targets using existing Common Agricultural Policy mechanisms.

Environmental authorities: measurable habitat improvements using accepted indicators.

Citizen/Society: more resilient, diverse forests and associated ecosystem co-benefits.

Expected outcomes

Policy outcomes: measurable improvement in habitat-condition indicators in targeted priority areas; increased uptake of biodiversity-relevant practices within CAP Strategic Plans; improved coherence and comparability of biodiversity delivery across participating regions.

Implementation outcomes: functioning hybrid payment model at scale (action core + performance bonus) with feasible monitoring (remote sensing + checks), demonstrating an operational PES logic within CAP.

Environmental outcomes: increased deadwood retention, habitat trees, structural diversity and stand heterogeneity; strengthened ecological condition and resilience over time in priority zones.

Socio-economic outcomes: improved acceptance of biodiversity-oriented payments among forest owners via predictable support and clear compliance rules.

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SCENARIO 2

Paying for watershed protection through basin-scale forest management

Scenario 2 provides a credible and policy-compatible model for basin-scale forest PES that aligns ecological logic, governance structures, and financing feasibility within existing water management frameworks.

Why this scenario?

Scenario 2 addresses a structurally important but hydrologically complex policy challenge: improving water quality and flow regulation at watershed scale through upstream forest management.

Unlike source-specific utility models, this scenario reflects a **basin-wide public-good logic aligned with river basin governance frameworks**, where sediment control, nutrient retention and flood-risk mitigation are collective regional objectives. Because these benefits accrue to multiple downstream users and public authorities, a publicly anchored PES model with potential co-financing from utilities or basin actors is institutionally coherent and economically justified.

This scenario is also consistent with European experience, where **watershed-related PES mechanisms** are **among the most mature and durable PES configurations**, particularly when embedded in river basin planning and supported by actors with stable revenue streams. At the same time, the design acknowledges the well-documented attribution challenges in hydrological systems and therefore avoids relying on strict results-only payment structures.

Theme	Reccomended option
1. FORESTRY ECOSYSTEM SERVICES TARGETED	Regulation of water quality and flow through forest management *(CICES*: Regulation & Maintenance → Hydrological cycle regulation and water purification).*
2. TEMPORAL FRAMEWORK	Long-term contracts (10–20 years) aligned with river basin management planning cycles under the Water Framework Directive (WFD).
3. GEOGRAPHICAL SCOPE	Upstream forest areas within high-risk river basins with sediment, nutrient, or flow-regulation pressures (including, but not limited to, drinking-water relevance), including transboundary catchments where coordination is needed.
4. FINANCIAL MECHANISM	Public-private: National or regional State aid schemes + Co-financing from water utilities through regulated tariffs or water charges.
5. IMPLEMENTATION CONTROL SYSTEMS	Water quality measurements (e.g. turbidity, nutrient concentrations) + Hydrological indicators (e.g. flow variability, retention effects) + Monitoring at water abstraction points or downstream control stations + Model-supported interpretation of upstream management effects.
6. TYPE OF FINANCIAL PROGRAMME	Hybrid: Action-based payments for agreed management practices + Result-based bonus/component informed by monitoring and modelling.
7. PROMOTION AND FACILITATION MECHANISMS WITHIN FINANCIAL PROGRAMME	Incorporation into regional and cohesion funding programmes through: Priority axes for nature-based water protection measures + Incentives for participation of upstream land managers + Facilitation of partnerships between utilities and landowners.

*CICES: Common International Classification of Ecosystem Services

Who benefits?

Forest owners/land managers: long-term payments for watershed protection measures.

Regional and basin authorities: improved water regulation, sediment control, and flood-risk mitigation.

Water users / downstream communities: improved water quality and reduced flood-related risks.

Public programmes/infrastructure operators: lower long-term costs from erosion, sedimentation, and hydrological instability.

Expected outcomes

Policy outcomes: basin-level progress on WFD pressures (sediment, nutrients, hydromorphological stress) through targeted upstream interventions; stronger integration of PES-style contracts into basin planning instruments.

Implementation outcomes: workable hybrid design that uses monitoring and modelling to interpret "noisy" water indicators; improved coordination among multiple land managers and payers.

Environmental outcomes: reduced erosion risk, improved infiltration and buffer function, reduced peak runoff in treated sub-basins, improved long-term trends in key water-quality indicators (interpreted over multi-year windows).

Socio-economic outcomes: reduced long-term treatment/sedimentation costs where prevention is effective; increased resilience of water services under climate variability.

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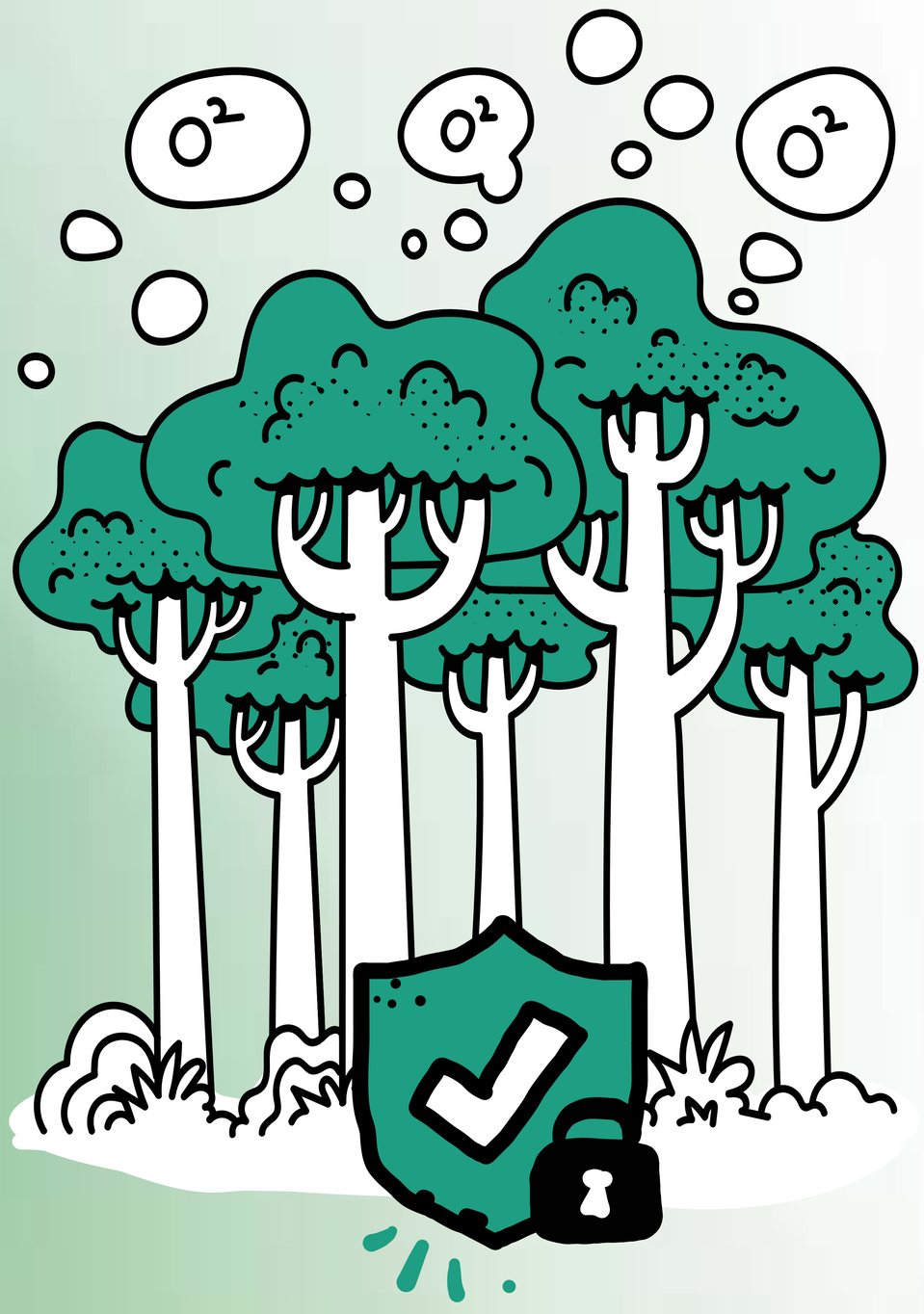
SCENARIO 3

Paying for verified forest carbon removals

Scenario 3 provides a high-integrity, policy-compatible pathway for integrating forest carbon PES into emerging European certification and climate-accounting frameworks, without compromising environmental credibility for the sake of rapid market growth.



Why this scenario?

Scenario 3 addresses a central and strategically sensitive policy challenge in European climate governance: how to scale forest-based carbon removals in a way that is credible, additional, and durable.

As the European Union moves toward climate neutrality, **increasing removals in the land sector** has become a clear policy objective, yet forest carbon schemes face persistent concerns regarding baselines, additionality, permanence, and monitoring integrity. In the European context, where forest area and carbon stocks have already been increasing in many regions, **establishing credible baselines** beyond expected business-as-usual trends is particularly critical. For this reason, the scenario is anchored in a **certification-based, policy-aligned framework** rather than relying on loosely regulated voluntary market expansion.

This scenario also reflects project evidence showing that **carbon-focused PES mechanisms are expanding but continue to struggle with trust, risk allocation, and long-term credibility**. By prioritising robust monitoring, permanence safeguards, and risk-buffer mechanisms, the design responds directly to these integrity challenges while allowing a structured mix of public and private financing.

Theme	Reccomended option
1. FORESTRY ECOSYSTEM SERVICES TARGETED	Climate regulation through long-term carbon sequestration and storage *(CICES*: Regulation & Maintenance → Global climate regulation by reduction of greenhouse gas concentrations).*
2. TEMPORAL FRAMEWORK	Long-term permanence commitments (20–50 years) with periodic verification of carbon storage and risk management over time.
3. GEOGRAPHICAL SCOPE	European Union-wide application, with region-specific mitigation practices reflecting ecological conditions and land-use suitability.
4. FINANCIAL MECHANISM	Public+private: European Union climate instrument (Innovation Fund) + Compliance/market demand from emissions trading system actors purchasing certified removals (compliance or regulated buyers include operators of energy-intensive digital-asset activities) + Risk buffer reserve for non-permanence (e.g., pooled buffer credits).
5. IMPLEMENTATION CONTROL SYSTEMS	Carbon accounting and verification aligned with the Carbon Removal Certification Framework, including: Standardised carbon accounting consistent with land-use reporting systems + Biomass estimation using remote sensing and ground data + Risk management mechanisms (e.g. buffer pools for reversals).
6. TYPE OF FINANCIAL PROGRAMME	Hybrid: Upfront or milestone-based payments to cover establishment and restoration costs + Results-based payments linked to verified tonnes of carbon dioxide removed and stored.
7. PROMOTION AND FACILITATION MECHANISMS WITHIN FINANCIAL PROGRAMME	Promotion through carbon-related funding instruments by: Recognition of certified carbon removals (CRCF) as eligible climate investments + Financial instruments facilitating upfront investment (e.g. loans or guarantees from European investment institutions) + Guidance for participation of regulated emitters and voluntary buyers.

*CICES: Common International Classification of Ecosystem Services

Who benefits?

Forest owners/land managers: long-term income from verified carbon removals and storage.

Private buyers / regulated emitters: access to certified, high-integrity carbon removals.

European Union and Member State climate policy: additional removals aligned with climate targets and accounting systems.

Citizen/society: lower net greenhouse gas emissions and more climate-resilient landscapes.

Expected outcomes

Policy outcomes: increased deployment of certified removal activities consistent with emerging EU certification requirements; improved integrity/credibility of forest carbon claims through baseline-setting, verification, and permanence safeguards.

Implementation outcomes: demonstration of a financing structure that overcomes long timelines (upfront/milestone + results-based payments) and manages reversal risk (buffers/risk pooling).

Environmental outcomes: verified net carbon storage improvements beyond business-as-usual baselines (where robustly defined), plus resilience-oriented practices that reduce reversal risk.

Socio-economic outcomes: strengthened trust and transparency through registries, third-party verification, and standardised methodologies.

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SCENARIO 4

Paying for climate resilience and forest wildfire risk reduction

Scenario 4 demonstrates how PES can support prevention-oriented, climate-resilience forest management in fire-prone landscapes through a realistic, policy-compatible payment and monitoring framework.

Why this scenario?

Scenario 4 addresses wildfire risk as an increasingly urgent and structural climate-adaptation challenge in European forest landscapes, particularly in high-hazard regions and wildland–urban interface zones.

Wildfire risk reduction is fundamentally a public-good function: benefits such as reduced damage to communities and infrastructure, lower suppression and recovery costs, and improved landscape resilience are widely shared, while private incentives for preventive management are often insufficient. This makes a publicly financed PES approach a realistic and policy-relevant option for scaling preventive action. By design, the scenario focuses on **verifiable risk-reduction conditions** (fuel structure, continuity, and maintained preventive measures) rather than event-based outcomes such as "fires avoided," which are strongly influenced by weather and external factors beyond the control of individual land managers.

Theme	Reccomended option
1. FORESTRY ECOSYSTEM SERVICES TARGETED	Regulation of disturbance impacts through reduction of wildfire spread potential *(CICES*: Regulation & Maintenance → Mediation of extreme events).*
2. TEMPORAL FRAMEWORK	Medium-term commitments (5–10 years), with periodic review of compliance and landscape risk conditions.
3. GEOGRAPHICAL SCOPE	Regions with high wildfire hazard, particularly wildland–urban interface (WUI) zones and areas identified through national fire risk assessments.
4. FINANCIAL MECHANISM	Public (state aid): National or regional public programmes for risk prevention and climate adaptation, potentially complemented by EU co-financing instruments (e.g. Pillar II measures + LIFE adaptation grants).
5. IMPLEMENTATION CONTROL SYSTEMS	Verification based on implementation of strategic preventive measures and landscape conditions, including: Assessment of fuel reduction in priority locations (e.g. firebreak zones, buffers near settlements, high-risk spread pathways) + Verification of compliance with approved fuel management plans + Remote sensing to monitor vegetation density and land-cover changes + Confirmation of timing of interventions relative to fire season + On-site verification of implemented measures + Use of fire risk assessment tools (e.g. waldbrand.at) where available.
6. TYPE OF FINANCIAL PROGRAMME	Action-based, with risk-reduction performance bonuses, rewarding implementation and maintenance of preventive measures that reduce fire spread potential rather than fire occurrence.
7. PROMOTION AND FACILITATION MECHANISMS WITHIN FINANCIAL PROGRAMME	Incorporation into public funding schemes through: dedicated funding windows for preventive landscape management + incentives for coordinated participation across neighbouring land managers + support for collective applications where landscape-scale action is required + alignment with national wildfire risk management strategies.

*CICES: Common International Classification of Ecosystem Services

Who benefits?

Forest owners/land managers: long-term income from verified carbon removals and storage.

Local communities (especially in high-risk areas): reduced wildfire spread risk and lower exposure to damage.

Public authorities / civil protection systems: lower long-term suppression and recovery costs.

Infrastructure operators and local economies: reduced disruption and damage risk in fire-prone regions.

Expected outcomes

Policy outcomes: measurable reduction in hazard indicators in targeted zones; improved alignment of forest management incentives with EU resilience/prevention framing.

Implementation outcomes: workable scheme that avoids unfair "fire outcome" conditionality by paying for verifiable risk-reduction actions and condition-based bonuses (not "no-fire" results).

Environmental outcomes: reduced fuel continuity and hazardous biomass accumulation; more fire-resilient landscape structures and strategic treated areas maintained over time.

Socio-economic outcomes: reduced long-term public costs from extreme fire events (suppression, recovery, infrastructure losses) where prevention is sustained and well targeted.

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SCENARIO 5

Paying for urban cooling and well-being through urban and peri-urban forests

Scenario 5 demonstrates how PES-style maintenance contracts can complement urban investment programmes and strengthen the long-term delivery of cooling and well-being services in cities and peri-urban areas.

Why this scenario?

Scenario 5 addresses a rapidly growing European policy challenge: urban heat exposure and unequal access to high-quality green space, with direct implications for climate adaptation, health, and social equity.

This scenario captures a **distinct PES integration pathway** in the overall set because it links forest and green infrastructure management to urban climate and well-being objectives, rather than to biodiversity conservation, watershed protection, carbon removals, or wildfire prevention. In the European context, this is particularly relevant because cities increasingly need not only capital investment in green infrastructure, but also durable financing for its long-term management and maintenance in places where **climate vulnerability and social need** are most concentrated. By focusing on locally experienced and policy-relevant benefits such as cooling, accessibility, and well-being, the scenario reflects a **practical and governance-compatible pathway** for testing how PES-style approaches can support urban and peri-urban forest management.

Theme	Reccomended option
1. FORESTRY ECOSYSTEM SERVICES TARGETED	Local climate regulation with co-benefit physical/psychological well-being enabled by urban green infrastructure. *(CICES*: Regulation & Maintenance → Micro- and local climate regulation, air quality regulation where local attribution is plausible; and Cultural → Physical and experiential interactions with the environment).*
2. TEMPORAL FRAMEWORK	Medium-term delivery window aligned with EU urban programming periods (e.g. 2026–2032) with ongoing annual management contracts.
3. GEOGRAPHICAL SCOPE	Urban and peri-urban forests and green corridors, with priority for heatstress hotspots (biophysical targeting) + Neighbourhoods with higher vulnerability (socio-economic targeting).
4. FINANCIAL MECHANISM	Public–private: European Union cohesion/urban funding as capital support + Municipal budgets for ongoing management + Developer contributions/planning-related levies (where available under national or municipal rules) earmarked for green infrastructure and maintenance.
5. IMPLEMENTATION CONTROL SYSTEMS	Verification focused on high-attribution, low-noise indicators combining: Canopy cover and vegetation condition (remote sensing + on-site verification) + Accessibility and use indicators (e.g. proximity, access points, maintenance standards; optional visitor counts) + On-site verification of management and maintenance action. Air-quality indicators may be included only where monitoring is localised, and attribution is plausible (e.g. roadside corridors), and treated as contextual evidence rather than a primary payment trigger.
6. TYPE OF FINANCIAL PROGRAMME	Action-based, providing payments for ongoing management and maintenance of urban and peri-urban forests, complementing capital funding for green infrastructure establishment where relevant.
7. PROMOTION AND FACILITATION MECHANISMS WITHIN FINANCIAL PROGRAMME	Alignment with Sustainable Urban Development strategies supported under cohesion policy + Integration into municipal climate adaptation, health, and urban resilience plans + Dissemination of guidance, case studies, and tools through European urban policy networks and partnerships (e.g. Greening Cities Partnership, European Urban Initiative, ESPON, ICLEI) + Capacity-building and knowledge exchange supporting cities in designing and implementing PES-style maintenance contracts.

**CICES: Common International Classification of Ecosystem Services*

Who benefits?

Urban residents (especially in vulnerable neighbourhoods): cooler environments, improved access to green space, and health/well-being benefits.

Municipalities / urban authorities: support for climate adaptation and public health objectives.

Peri-urban forest owners/land managers: compensation for ongoing management that provides public urban benefits.

Public health systems / local services: reduced heat-related stress and improved urban liveability.

Expected outcomes

Policy outcomes: measurable improvement in habitat-condition indicators in targeted priority areas; increased uptake of biodiversity-relevant practices within CAP Strategic Plans; improved coherence and comparability of biodiversity delivery across participating regions.

Implementation outcomes: functioning hybrid payment model at scale (action core + performance bonus) with feasible monitoring (remote sensing + checks), demonstrating an operational PES logic within CAP.

Environmental outcomes: increased deadwood retention, habitat trees, structural diversity and stand heterogeneity; strengthened ecological condition and resilience over time in priority zones.

Socio-economic outcomes: improved acceptance of biodiversity-oriented payments among forest owners via predictable support and clear compliance rules.

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SCENARIO 6

Paying for bundled forest ecosystem services at landscape scale

Scenario 6 provides a policy-compatible model for bundled, landscape-scale forest PES in contexts where coordinated management is necessary to achieve meaningful ecological outcomes.

Why this scenario?

Scenario 6 addresses a structural limitation in many forest PES designs: the fragmentation of ecosystem services and management across landscapes where biodiversity, water regulation, and carbon storage are ecologically interdependent.

In many European forest contexts, **fragmented ownership and parcel-based contracting** reduce ecological effectiveness, particularly where services such as habitat connectivity, watershed protection, and landscape-scale carbon storage depend on coordinated action across multiple properties. A single-service approach is often insufficient in such settings. This scenario was retained because evidence and workshop discussions consistently highlighted the need for **more integrated, place-based PES configurations** that can contract multiple primary ecosystem services jointly rather than treating one service as dominant and the others as incidental co-benefits. By **structuring payments at the landscape scale** and supporting collective participation mechanisms, the design seeks to overcome coordination barriers while maintaining service-specific accountability.

Theme	Reccomended option
1. FORESTRY ECOSYSTEM SERVICES TARGETED	Bundled primary services: habitat and gene pool protection + Hydrological cycle regulation and water purification + Global climate regulation *(CICES*: Regulation & Maintenance → lifecycle maintenance and habitat protection; hydrological cycle regulation, global climate regulation).*
2. TEMPORAL FRAMEWORK	Medium-term (5–10-year) landscape contracts, with periodic review and adaptive management provisions.
3. GEOGRAPHICAL SCOPE	Functionally defined forested landscapes where coordinated management influences multiple services, such as: Large Natura 2000 complexes + Mountain regions + Forested watersheds or river sub-basins + Cross-border forest landscapes.
4. FINANCIAL MECHANISM	Public–private: EU and national public funds, through rural development cooperation instrument (CAP Pillar II / community-led approaches) serve as baseline, complemented by service-specific co-financing from identifiable beneficiaries (e.g., utilities, carbon buyers, tourism stakeholders) where applicable.
5. IMPLEMENTATION CONTROL SYSTEMS	Service-specific monitoring combined at landscape scale: ES Indicators (e.g. habitat condition, watershed indicators, carbon metrics) + Remote sensing for land-cover and structural changes + On-site verification of agreed management actions across participating land units + Aggregated reporting of outcomes for programme accountability.
6. TYPE OF FINANCIAL PROGRAMME	Hybrid (collective): Action-based payments for coordinated management measures + Results-based bonuses linked to landscape-scale service indicators, while payments are distributed to participants based on agreed rules.
7. PROMOTION AND FACILITATION MECHANISMS WITHIN FINANCIAL PROGRAMME	Support for landscape-scale coordination: Funding for intermediary organisations or coordinating bodies + Technical assistance for collective planning and applications + Simplified procedures for group participation + Incentives for cooperation among neighbouring land managers.

**CICES: Common International Classification of Ecosystem Services*

Who benefits?

Forest owners and other land managers participating collectively: access to payments that depend on coordination and landscape scale.

Local and regional authorities: more efficient delivery of biodiversity, watershed, and climate objectives through integrated management.

Identifiable service beneficiaries (where applicable): e.g., water utilities, carbon buyers, tourism actors benefiting from improved landscape functions.

Rural communities and landscapes: stronger cooperation, reduced fragmentation, and improved multifunctionality.

Expected outcomes

Policy outcomes: demonstrable multi-objective delivery in selected functional landscapes; stronger coherence across biodiversity, water and climate policy goals where services are interdependent.

Implementation outcomes: tested collective hybrid design with layered finance (public baseline plus service-specific co-financing) and service-specific indicators aggregated at landscape scale (avoiding a single composite score that weakens conditionality).

Environmental outcomes: combined improvements in habitat condition, watershed function, and carbon storage trends (interpreted per service); reduced trade-offs through explicit planning and monitoring.

Socio-economic outcomes: strengthened cooperation and trust among participating land managers; increased participation through reduced individual transaction costs (via intermediaries and group applications); improved perceived fairness and local legitimacy of environmental payments where distribution rules are transparent; potential local employment/skills benefits linked to coordinated planning, monitoring, and management activities.

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SCENARIO 7

Paying for drinking water source protection through utility-led PES

Scenario 7 illustrates a targeted and governance-compatible utility-led PES pathway for drinking-water source protection, one of the most policy-relevant and potentially durable PES configurations in the European context when carefully designed.

Why this scenario?

Scenario 7 addresses a clearly identifiable, operational policy challenge: securing long-term drinking-water quality at its source through upstream land management. While it shares a hydrological focus with Scenario 2, it is conceptually and institutionally distinct.

Scenario 7 is anchored in **specific source catchments** linked to defined drinking-water systems, where a **clearly identifiable beneficiary - the water utility** - has direct financial and regulatory incentives to invest in upstream protection measures. Project discussions and earlier findings highlighted that utilities across Europe face rising treatment complexity, compliance pressures, and long-term supply risks, while **preventive catchment management** can often be more cost-effective and durable than relying solely on downstream treatment technologies. This creates a strong and economically grounded **"beneficiary pays"** logic. In this scenario, utilities are not peripheral co-funders but structured anchor payers within a formalised PES arrangement, complemented by public support where broader public-good elements are involved.

Theme	Reccomended option
1. FORESTRY ECOSYSTEM SERVICES TARGETED	Watershed protection for drinking-water supply enabled by forest cover, low-input management, erosion control, and riparian buffering. *(CICES*: Regulation & Maintenance → Regulation of the chemical condition of freshwaters (water quality regulation).*
2. TEMPORAL FRAMEWORK	Long-term contracts (10–30 years) aligned with drinking-water infrastructure planning and utility asset cycles, with periodic compliance and performance reviews.
3. GEOGRAPHICAL SCOPE	Upstream source catchments supplying major drinking-water systems, including protected abstraction zones.
4. FINANCIAL MECHANISM	Public–private: Utility tariffs/service charges as primary funding + Targeted public co-funding for restoration and monitoring capacity (EU or national programmes (Interreg/LIFE).
5. IMPLEMENTATION CONTROL SYSTEMS	Compliance monitoring of agreed land-management measures combined with targeted water-quality indicators (Nitrate and pesticide concentrations at abstraction points, Turbidity and sediment load indicators) + Periodic upstream sampling at representative locations + Remote sensing to verify land cover and buffer integrity + Hydrological or water-quality modelling to interpret trends and external influences.
6. TYPE OF FINANCIAL PROGRAMME	Hybrid: Action-based payments for agreed watershed protection measures + results-based components linked to raw water quality outcomes at abstraction points where attribution is feasible.
7. PROMOTION AND FACILITATION MECHANISMS WITHIN FINANCIAL PROGRAMME	Integration into drinking-water source protection planning and regulatory frameworks (primarily the recast Drinking Water Directive risk-based approach, with WFD coordination where relevant) + Utility–landowner coordination mechanisms and advisory support + Technical guidance on watershed protection measures + Model long-term contract structures to reduce transaction costs + Capacity support for monitoring and data management.

**CICES: Common International Classification of Ecosystem Services*

Who benefits?

Water utilities / drinking-water providers: lower treatment costs, reduced operational risk, and more secure raw water quality.

Forest owners/land managers: stable long-term payments for source protection measures that may otherwise reduce income from timber production.

Citizens/society: safer drinking water supply and greater resilience of public water services.

Public authorities: progress on source protection and water policy objectives, reduced environmental risks to critical infrastructure, and co-benefits for other reservoir functions where applicable, supported through targeted co-funding rather than

Expected outcomes

Policy outcomes: improved preventive source-protection outcomes in designated catchments; clearer operational linkages between land management contracts and drinking-water risk management frameworks.

Implementation outcomes: a realistic hybrid contract model combining action-based payments with results-based components only where attribution is plausible; improved trust via monitoring plus modelling interpretation of "noisy" indicators.

Environmental outcomes: reduced erosion and pollutant risk in source catchments; strengthened riparian function and buffer integrity; improved multi-year trends in key raw-water risk indicators (interpreted with context).

Socio-economic outcomes: reduced long-term treatment and risk-management costs; improved reliability of public water services and reduced vulnerability to contamination episodes.

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