Market-based and Private Financing for Ecosystem Services

International Experiences and Transferable Lessons for Eastern Partnership Countries

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EU4Environment Regional Workshop, 9 June 2026,

Brussels, Belgium

Overview: financing instruments for ecosystem services

Public instruments

- Budgets
- Grants/subsidies;
- Tax incentives;
- Public environmental funds

Private instruments

- Corporate investment;
- Sustainability-linked bonds/loans;
- Green loans;
- Eco-tourism;
- Impact funds

Market-based instruments

- PES;
- Carbon credits;
- Biodiversity credits/offsets
- Ecosystem certificates
- Water funds

Cross-cutting: blended finance

- Guarantees;
- First-loss capital;
- Technical assistance;
- Project preparation facilities;
- DFI anchor investment

Same instrument, different funding sources

The categories are not mutually exclusive. Many ecosystem finance instruments combine several funding sources.

Instrument	Public funding	Donor/ DFI	Private companies	Utilities/service users	Investors	Communities/ landholders
Green bonds	✓	✓			✓	
Sustainability-linked bonds	✓	✓	✓		✓	
PES	✓	✓	✓	✓		✓
Carbon credits		✓	✓		✓	✓
Ecosystem certificates	✓	✓	✓	✓	✓	✓
Eco-tourism	✓	✓	✓			✓
Biodiversity offsets			✓			✓

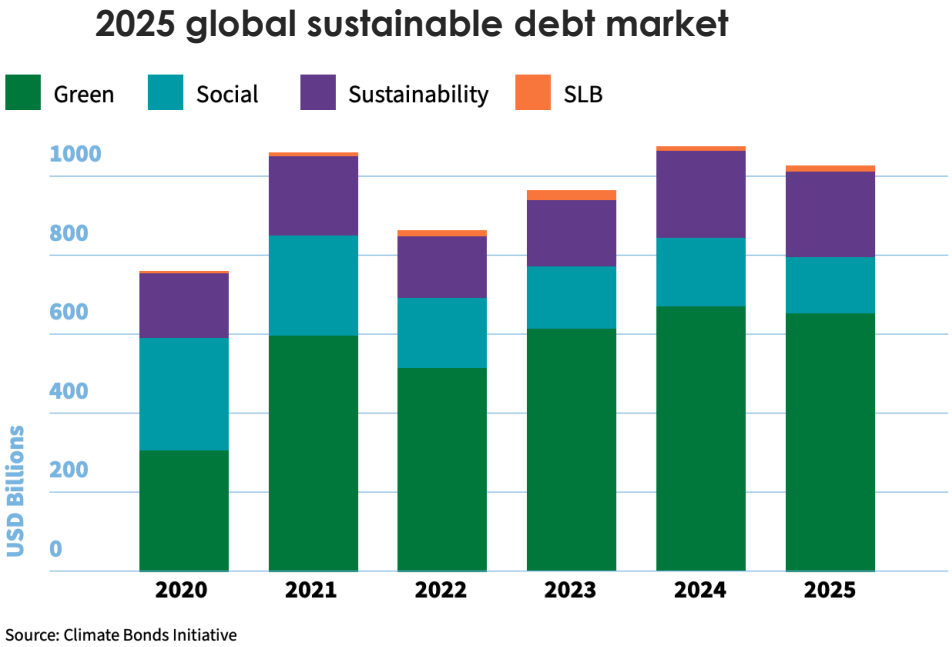
It is useful to classify instruments by their primary mechanism, but implementation often depends on blended funding sources.

Today's focus: three market/private financing pathways

This presentation focuses on three financing pathways that are particularly relevant for mobilising additional finance for forests and other priority ecosystems.

	Why it matters	Case examples
1. Bonds and capital market instruments	Can mobilise large-scale upfront capital where there is a credible issuer, eligible project pipeline and reporting system	• Irish Sovereign Green Bond; • Sveaskog Green Bond; • Georgia Capital Sustainability-Linked Bond
2. Environmental credits and ecosystem certificates	Can convert verified ecosystem outcomes into financeable units, but require standards, MRV, registries and safeguards	• UK Woodland Carbon Code; • France Label Bas-Carbone; • Peatland Finance Ireland
3. Payments for Ecosystem Services	Can create recurring payments where beneficiaries of ecosystem services are clearly identified	• Vietnam Payment for Forest Environmental Services; • ReFarm

Sustainable debt: a scaling tool for green investment



Source: Climate Bonds Initiative

GSS+ bond types

- **Green bonds:** finance eligible environmental projects.
- **Social bonds:** finance eligible social projects.
- **Sustainability bonds:** finance a combination of green and social projects.
- **Sustainability-linked bonds:** link bond terms to sustainability performance targets, without necessarily earmarking proceeds.

- **Aligned GSS+ issuance remained above USD 1 trillion in 2025**, showing sustained investor demand for labelled debt.
- **Green bonds dominate the market**, accounting for around 64% of aligned GSS+ issuance in 2025.
- **Europe remains the leading region**, representing around 45% of aligned annual GSS+ volume.

Bond case 1 — Irish Sovereign Green Bond

Aspect	Detail
Issuer	National Treasury Management Agency (NTMA), Republic of Ireland
Instrument	Use-of-proceeds green bond
Framework	Ireland's Sovereign Green Bond Framework (aligned with ICMA Green Bond Principles)
Proceeds (as of 2025)	€10.35 billion raised across multiple issuances
Eligible Categories (Use of Proceeds)	Renewable energy, energy efficiency, sustainable water management, environmentally sustainable management of living natural resources and land use, climate adaptation, and clean transportation
Allocation Reporting	Annual allocation and impact report, audited by the Comptroller and Auditor General

Sovereign green bonds can create a national pipeline for public expenditure on ecosystem services, enhancing fiscal transparency and donor coordination.

Bond case 2 — Sveaskog, Sweden

Aspect	Detail
Issuer	Sveaskog AB (Sweden's largest forest owner, 100% state-owned)
Instrument	Use-of-proceeds green bond
Framework	Green Bond Framework aligned with ICMA Green Bond Principles and EU Taxonomy
Use of Proceeds	Sustainable forestry, forest protection, and biodiversity-enhancing measures, renewable energy
Impact Example (2022)	Net carbon uptake of 1,795,000 tCO_2 from green bond-financed activities
External Review	CICERO "Dark Green" shading (highest rating)

State-owned or large private forestry enterprises can issue green bonds to finance sustainable land management, provided credible land-use and carbon accounting systems are in place.

Bond case 3 — Georgia Capital sustainability-linked bond

Aspect	Detail
Issuer	Georgia Capital PLC (Georgian investment group)
Instrument	Sustainability-linked bond (SLB) – first in the Caucasus region
Total issuance	$150 million (largest corporate bond in Georgia)
KPI	20% reduction in GHG emissions intensity (scope 1 & 2) by 2027 (baseline 2019)
Anchor Investor	IFC($10M) and EBRD ($25M).
Verification	Annual external verification by a qualified assurance provider

An SLB can align a corporate borrower's overall strategy with climate targets. The IFC's participation demonstrates how development finance institutions (DFIs) can de-risk such instruments and catalyze private investment in EaP countries.

Suggestions for EaP countries

Match the bond model to the issuer

- **Sovereign green bonds** are most suitable for governments with eligible public expenditure and reporting capacity.
- **Corporate green bonds** are suitable for financially strong utilities, forestry companies or state-owned enterprises.
- **Sustainability-linked bonds** are useful for corporate transition, but only support ecosystem finance if KPIs are nature-relevant.

Strengthen the nature link

Bond frameworks should include clear eligible categories or KPIs, such as:

- hectares of forest restored or sustainably managed;
- wetland or peatland area rewetted;
- water quality or sediment reduction indicators;
- biodiversity habitat maintained or restored;
- climate adaptation and flood-risk reduction outcomes;
- avoided emissions or verified carbon removals.

Use DFIs to de-risk early issuances

The Georgia Capital case shows the role of IFC as an anchor investor. For EaP countries, IFC, EBRD, EIB or other DFIs can help by providing:

- anchor investment;
- guarantees;
- technical assistance;
- second-party opinion support;
- reporting framework development;
- investor confidence.

Build reporting systems before issuance

Investor confidence depends on transparent allocation and impact reporting. For nature-related bonds, this means developing MRV systems for ecosystem outcomes, not only financial reporting.

Environmental credits and ecosystem certificates: market context

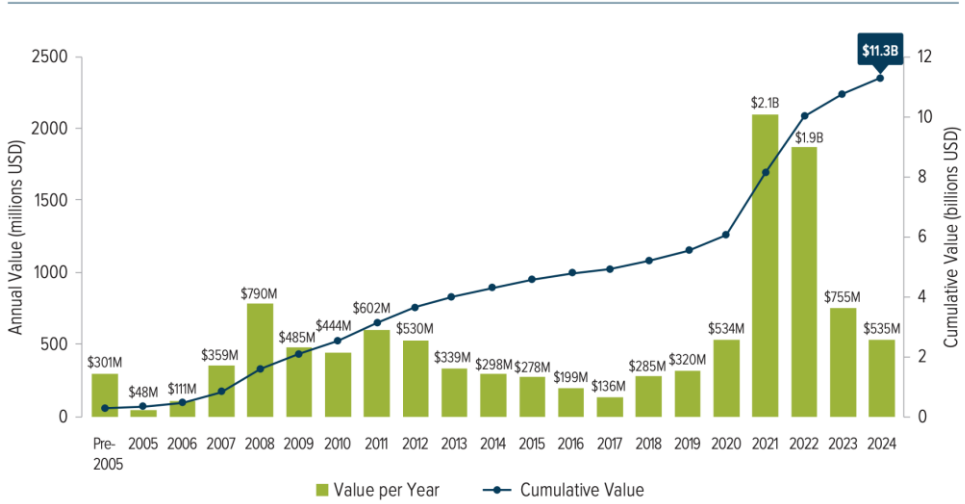
Environmental credits and ecosystem certificates are emerging as tools to channel private and blended finance into nature-based solutions.

1.The voluntary carbon market has grown, but remains volatile.
Market value and prices fluctuate significantly, reflecting buyer confidence, regulatory uncertainty and quality concerns.

2.Nature-based credits are a major part of project activity.
Forestry and land-use projects remain important in voluntary carbon markets, including afforestation, reforestation, improved forest management, avoided deforestation and soil/wetland-related projects.

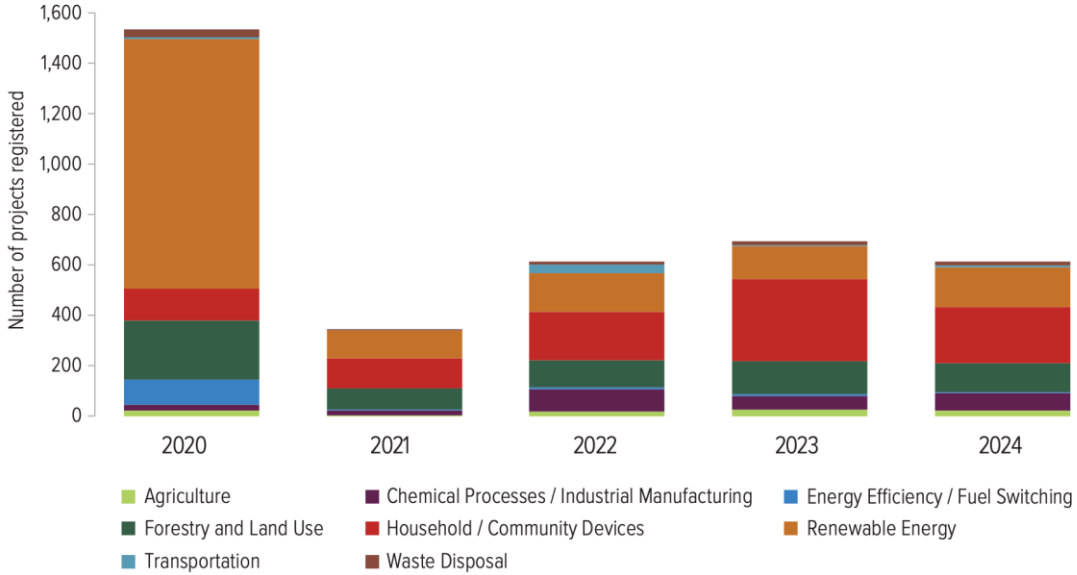
3.Credit quality matters increasingly.
Buyers are moving toward projects with stronger additionality, permanence, MRV, safeguards and co-benefits.

Voluntary Carbon Market Size by Value of Traded Carbon Credits, pre-2005 to 2024



Source: Ecosystem Marketplace, State of the Voluntary Carbon Market 2025.

Carbon Credit Project Registrations by Category, 2020-2024



Note: This figure includes data on project registrations from ACR, ART, BioCarbon, CAR, CDM, Cercarbono, Global Carbon Council, Gold Standard, Plan Vivo, and VCS registries.

Source: Ecosystem Marketplace, State of the Voluntary Carbon Market 2025.

VCM Transaction Volumes, Values, and Prices by Forestry and Land Use Project Types, 2023-2024

	2023			2024			Percent Change		
Project Cluster	Volume ($MtCO_2e$)	Value (USD)	Price (USD)	Volume ($MtCO_2e$)	Value (USD)	Price (USD)	Volume	Value	Price
REDD+	28.2	$222.3M	$7.87	13.6	$82.1M	$6.03	-52%	-63%	-23%
Improved Forest Management (IFM)	2.6	$41.9M	$16.2	8.8	$132.3M	$14.97	242%	216%	-8%
Afforestation-Reforestation and Revegetation (ARR)	4.8	$82.4M	$17.15	3.8	$77.7M	$20.44	-21%	-6%	19%
Agroforestry	0.7	$8.1M	$11.58	0.6	$8.3M	$14.11	-17%	1%	22%
Blue Carbon	0.4	$3.2M	$8.33	0.2	$5.2M	$29.72	-54%	64%	257%

Source: Ecosystem Marketplace, State of the Voluntary Carbon Market 2025.

Corporate Demand Drivers – Environmental Credits & Ecosystem Certificates

Regulatory compliance

Mandatory climate reporting (CSRD), Biodiversity Net Gain (BNG)

Corporate net-zero & ESG commitments

Companies use credits/certificates to support net-zero, nature-positive or biodiversity strategies.

Reputation & stakeholder pressure

Positive brand association, consumer expectations

Risk management

Carbon and Nature-related risk disclosure (TCFD, TNFD), supply chain resilience

Early market positioning

Companies may participate early to build internal capacity, secure future supply, and prepare for stricter standards.

Credit case 1– UK Woodland Carbon Code

Instrument type
Government-backed domestic voluntary forest carbon standard.

What it does
The Woodland Carbon Code is the UK's voluntary carbon standard for woodland creation projects. It is managed by Scottish Forestry on behalf of the Forestry Commission, Welsh Government and Northern Ireland Forest Service.

Financing logic
Landowners or project developers register woodland creation projects. Carbon sequestration is estimated, validated, monitored and verified. These units create a revenue stream for landowners/project developers and allow buyers to support domestic carbon removals and report them under UK Government environmental reporting guidance, subject to the Code's claims rules.

Results (as of 2025):
- Over 845 registered projects.
- 14.8 million tonnes of CO_2 expected to be sequestered over project lifetimes.
- Nearly 43,000 hectares of new woodland created.

A government-backed, science-based carbon code can reduce transaction costs and investor risk, enabling smaller landowners to access carbon markets.

Source: https://www.woodlandcarboncode.org.uk/news-events/woodland-carbon-code-recognised-international-award

Credit case 2 – France Label Bas-Carbone

Instrument type
Government-approved domestic voluntary carbon certification framework.

What it does
The Label Bas-Carbone is France's official certification scheme for greenhouse gas reduction or sequestration projects. It was established in 2018 and is held by the French Ministry for Ecological Transition.

Financing logic
Project developers implement activities that reduce emissions or increase carbon sequestration. These projects are certified under approved methodologies. Buyers finance the certified emissions reductions or removals. **LBC credits have been officially compatible with CSRD since September 2025.**

Results (as of 2025):
- 1,685 projects validated → 6.4 $MtCO_2e$ potential
- 600 forestry projects → 12,000+ hectares → 3.3 $MtCO_2$ removals
- Major buyers: Vinci, La Poste, Engie

Label Bas-Carbone show that public endorsement can build trust, especially in early-stage domestic markets.

Source: https://www.i4ce.org/en/publication/six-years-carbon-certification-france-assessment-label-bas-carbone-climate/

Credit case 3 – Peatland Finance Ireland

Problem Context:
•Ireland's peatlands cover ~20% of land area but are highly degraded, emitting ~10% of national GHG emissions.
•Restoration cost estimated at >€1.5 billion, yet annual public allocation ~€29 million.

Instrument type
Voluntary ecosystem certificate / multi-benefit nature finance platform.

What it does
•Peatland Finance Ireland is developing a national and catchment-scale financing system for peatland restoration. Its Peatland Standard enables the creation and sale of verified ecosystem certificates, connecting funding with measurable environmental outcomes.
•The Peatland Standard for Ireland was officially launched in March 2025. It is designed to help landowners and farmers demonstrate environmental benefits from peatland restoration, including carbon reduction, increased water storage, biodiversity enhancement and improved water quality.

Early Outcomes (pilot phase)
•Private Investment Commitments: over €3 million in investment from Google, Microsoft, and Meta through intermediaries Bonneville Environmental Foundation and Agua Segura.

A blended finance platform with a science-based standard can unlock private capital for large-scale ecosystem restoration (e.g., wetlands, steppes, peatlands in EaP countries).

Source: https://peatlandfinance.ie/news-and-stories/our-year-in-review-looking-back-at-2025

Summary: what can EaP countries learn?

Standards come before markets

Environmental credits only work if buyers trust the standard. EaP countries need clear rules on:

- eligible activities;
- baseline scenarios;
- additionality;
- permanence;
- leakage;
- MRV;
- verification;
- registry and double-counting controls.

Government backing can reduce market risk

The Woodland Carbon Code and Label Bas-Carbone show that public endorsement can build trust, especially in early-stage domestic markets. But government backing must be matched with scientific integrity and transparent governance.

Carbon is often not enough

Peatland Finance Ireland shows the importance of multi-benefit ecosystem certificates where restoration produces carbon, biodiversity and water benefits. This is especially relevant for wetlands and peatlands.

Credits should be treated as co-finance, not full project finance

Carbon or ecosystem certificate revenues rarely cover the full cost of restoration. Public and donor finance are still needed for:

- feasibility studies;
- baseline data;
- MRV systems;
- project aggregation;
- landowner engagement;
- early restoration costs.

PES

Payments for Ecosystem Services (PES) are contractual or policy-based mechanisms where beneficiaries of ecosystem services pay landowners, communities, or ecosystem managers to maintain or improve those services.

PES creates a financial link between:

	Example
Service provider	Forest owners, farmers, pasture users, municipalities, protected area managers
Ecosystem service	Water regulation, erosion control, carbon storage, biodiversity habitat, landscape beauty
Beneficiary / payer	Water utilities, hydropower operators, irrigation users, tourism businesses, public agencies
Intermediary	Environmental fund, watershed fund, government agency, NGO, community association

PES works best when there is a **clear ecosystem service**, a **clear beneficiary**, and a **credible payment mechanism**.

PES case 1 — Vietnam Payment for Forest Environmental Services

Instrument type
National mandatory forest ecosystem service payment system.

How it works
Vietnam's PFES policy requires users of forest environmental services to make payments to suppliers of those services. The policy was institutionalised nationally after Government Decree No. 99, and CIFOR-ICRAF describes Vietnam as the first country in Asia to institutionalise a nationwide PFES policy.

Who pays?
•Hydropower plants; water supply companies; tourism operators; industrial water users in some applications.

What services are paid for?
•Watershed protection; soil erosion control; water flow regulation; landscape beauty for tourism; forest carbon in emerging applications.

Statutory payment rates
•20 VND/kWh for hydropower; 40 VND/m³ for clean water; 1–2% of gross revenue for ecotourism

Vietnam demonstrates that **mandatory, government-regulated PES** can be scaled nationwide with legal backing. Key success factors: (1) payment rates set by decree; (2) dedicated provincial funds for collection and distribution; (3) clear linkage between payers (hydropower, water utilities) and providers (upstream forest owners).

PES case 2 - ReFarm

Instrument type	Blended finance PES initiative
Implementing body	ReFarm (not-for-profit), co-founded by Burrenbeo Trust (Brendan Dunford) and impact investor Anke Heydenreich
Services covered	Biodiversity restoration – wildlife ponds, hedgerows, mini-woodlands, species-rich grasslands
Payers (beneficiaries)	Corporate funders: RWE Ireland, John Paul Construction, CIE Tours, BiOrbic, Community Foundation Ireland, plus an impact investor
Early outcomes (2025 – first full year)	Direct farmer payment: €84,000 Participating farmers: 80 Habitat projects delivered: 139 Total commitments to 2030: €3 million

ReFarm is relevant for countries seeking to pilot **farm-level nature-positive payments** before launching formal biodiversity credit or PES markets. A similar model could support hedgerows, shelterbelts, riparian buffers, ponds, grassland restoration or agroforestry on private and community land.

What makes PES work?

1. **A clearly defined ecosystem service.**
   Example: reduced sedimentation, improved water quality, flood regulation, carbon storage.
2. **A clear beneficiary.**
   Example: hydropower operator, water utility, irrigation agency, municipality, tourism business.
3. **A credible service provider.**
   Example: landowners, forest users, municipalities, pasture user groups, protected area managers.
4. **A trusted intermediary.**
   Example: national fund, watershed fund, public agency, NGO or independent facility.
5. **Simple and credible MRV.**
   Example: forest cover, turbidity, sediment loads, grazing pressure, vegetation condition.
6. **Fair benefit-sharing.**
   Payments must reach those changing land management practices.

PES is not just a payment. It is a governance arrangement.

Final recommendations

1. Start with pilots, not full markets.
Pilot instruments in priority landscapes where ecosystem services, beneficiaries and institutions are clear.
2. Treat MRV as core infrastructure.
Without credible MRV, there is no investor confidence.
3. Use public and donor finance to de-risk private participation.
Private finance will not enter early-stage ecosystem markets without support.
4. Build trusted intermediaries.
National funds, water funds or landscape facilities can reduce transaction costs and improve governance.
5. Match the instrument to the ecosystem service.
Watershed PES for water regulation, carbon credits for verified sequestration, biodiversity offsets for regulated residual impacts, ecotourism for high-amenity landscapes.
6. Ensure local benefit-sharing.
Landowners, communities and ecosystem managers must receive fair and predictable benefits.

Overall, the main message is that market-based and private finance can help mobilise additional resources, but only when the enabling architecture is in place: legal clarity, MRV, standards, reporting, intermediaries and safeguards.

Thank you

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