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INVESTIRE NELLA NATURA

Ecosystem Markets: European Outlook

Genevieve Bennett, Forest Trends' Ecosystem Marketplace



Promotori dell'evento



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About Forest Trends' Ecosystem Marketplace

Forest Trends works to conserve forests and other ecosystems through the creation and wide adoption of a broad range of environmental finance, markets and other payment and incentive mechanisms.

Our Ecosystem Marketplace initiative is the leading global source of information on environmental finance, markets, and payments for ecosystem services.

www.ecosystemmarketplace.com



THE ECOSTAR PROJECT



Nature-based business models: Research and assessment of needs

Objectives: Develop a knowledge base on entrepreneurship and innovation in the field of marketing and economics of ecosystem services and biodiversity for ECOSTAR training materials

1. Innovation report: Factors influencing innovation and entrepreneurship in nature-based initiatives
2. Case studies: Best practice in business models
3. European market outlook reports: High-level review of market activity and direction

www.ecostarhub.com

European Market Outlook Reports

Scope

1. Voluntary carbon offsets (European buyers & sellers)
2. Watershed investments: PES, public agri-environmental subsidies, collection action funds (compliance and voluntary)
3. Biodiversity offsets and compensation (compliance and voluntary)

Methods

- Three confidential surveys of project developers and other suppliers (brokers, retailers) in conducted in February-May 2016, supplemented by interviews and desk research

Our methodology is conservative and likely underestimates actual market activity

- We only report what we can confirm with a primary source



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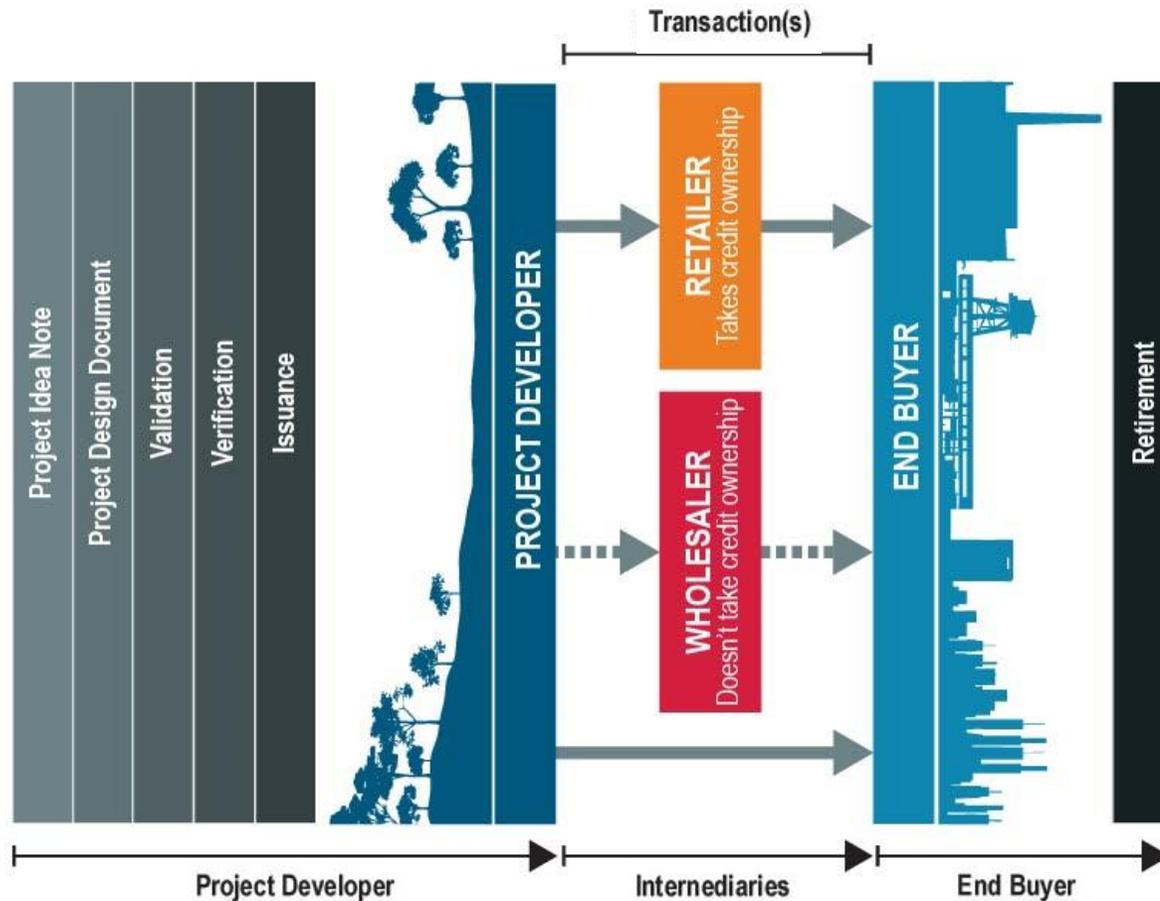
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VOLUNTARY CARBON

The carbon project offset cycle



Carbon offsets are **quantified emissions reductions** from activities that reduce or avoid emissions, such as planting trees or improving energy efficiency. They are measured in tCO₂e.

Project developers must complete a series of steps before they can sell offsets.

- PIN/PDD: Project plans, methodology, and technical issues
- Validation: Third-party approval of project design
- Verification: Quantifying actual emissions reductions against a third-party standard
- Issuance: Offsets are issued by a standards body

VOLUNTARY CARBON

Overview: Offset price, volume, and value

Scope:

Voluntary carbon offsets

Responses:

59 organisations headquartered in Europe selling offsets from voluntary carbon projects located throughout the world

8 organisations headquartered in Europe selling offsets from voluntary forest carbon projects located in Europe

Market Size and Average Price of Voluntary Carbon Offsets Sold by European Organizations, 2015

	Offsets from Projects Based Worldwide	Offsets from Forestry Projects Based in Europe
Volume	39.2 MtCO ₂ e	285 KtCO ₂ e
Value	€129.0M	€4.4M
Average Price	€3.2/t	€15.6/t

Notes: All prices and market values are volume-weighted to determine their significance.

VOLUNTARY CARBON

Supply: Project location & project type

Market Volume, Average Price and Value by Offset Project Types Based Worldwide, 2015

Project Types	Volume	Average Price	Value
Afforestation/Reforestation	1.9 MtCO ₂ e	€7.4/t	€14.0M
Wind	5.4 MtCO ₂ e	€1.5/t	€8.3M
Clean cookstoves	1.8 MtCO ₂ e	€4.3/t	€7.8M
REDD+: Avoided unplanned	1.5 MtCO ₂ e	€4.2/t	€6.2M
REDD+: Avoided planned	4.3 MtCO ₂ e	€1.1/t	€4.5M

Market Volume, Average Price and Value by Forest Carbon Offset Project Types Based in Europe, 2015

Afforestation/Reforestation	285 KtCO ₂ e	€14.7/t	€4.2M
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VOLUNTARY CARBON

Demand: New European end-users entering the market

Offsets Sold to European Buyers, by Buyer Experience, Type, and Sector

Worldwide
Voluntary
Carbon
Offsets Sold to
European
Organisations

European
Forest Carbon
Offsets Sold
to European
Organisations

TOP BUYER LOCATIONS	
United Kingdom (29%); France (23%); Netherlands (22%); Germany (11%); Switzerland (6%)	United Kingdom (68%); Germany (30%); Italy (2%)
TOP PROJECT TYPES	
Forestry (65%); Renewables (22%)	Forestry (100%)
BUYER TYPE	
Retailer (76%); End-user (24%)	Retailer (10%); End-user (90%)
BUYER EXPERIENCE	
Returning (91%); New (9%)	Returning (68%); New (32%)
TOP BUYER SECTORS	
Energy (40%); Finance & Insurance (15%); Food & Beverage (14%)	Transportation (75%); Energy (5%)

Outlook & Opportunities Post-Paris

- The double-counting problem: **Project developers look to market “climate impacts” instead of “carbon offsets”**
 - Low rates of verification against third-party standards in Europe but many high-profile tree-planting projects
 - Buyers interested in marketing, multiple benefits
- Plan B: **Nesting projects into landscape-level emissions reductions programs** enacted at national or jurisdictional levels
- **Monetizing multiple benefits**
 - Integration of climate and forest certification standards
 - Alignment of indicators with Sustainable Development Goals
- Beyond markets: **Corporate commitments tackle deforestation in the supply chain**
- SRI & conservation finance: **Billions are on the table** waiting for bankable projects

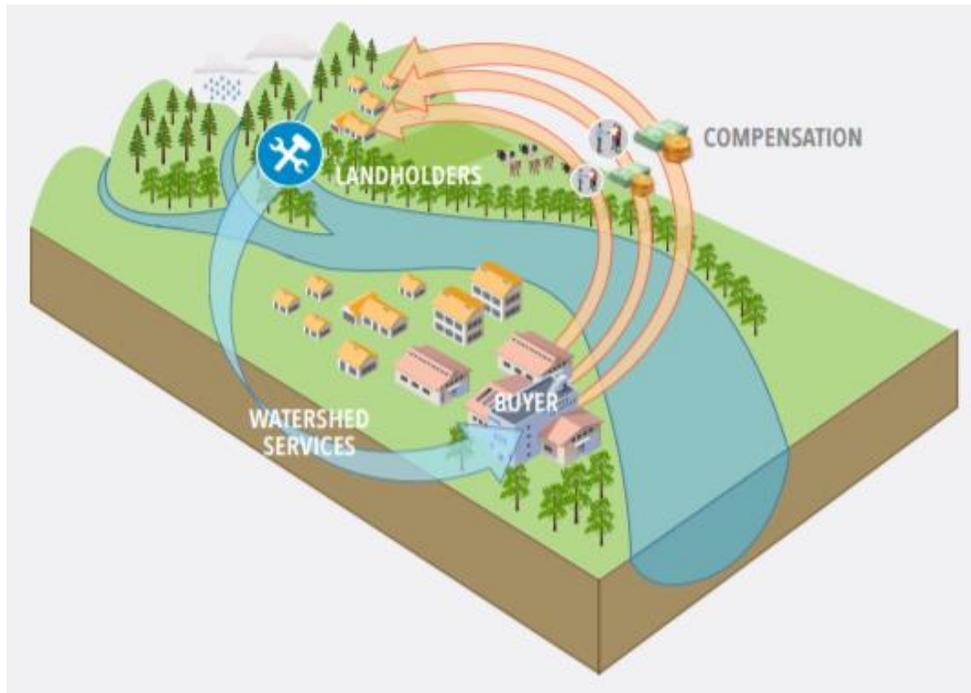
The concept of green infrastructure for water



Healthy landscapes support a complex network of ecosystem services. Some of these services (like pollination) cannot be replaced with existing technology.

In other cases, integrating nature-based and built solutions for water treatment, storage, or delivery can reduce operating costs or prolong the lifespan of built infrastructure. For example, reforesting hillsides can limit sedimentation in a hydropower station's reservoir—protecting the turbines from damage and prolonging the life of the reservoir—and also provide immediate, direct benefits for rural communities nearby in terms of soil retention, reduced flood risk, or enhanced groundwater recharge.

Watershed investments



Scope:

- User-driven (payments for watershed services, collective action funds for watershed protection)
- Agri-environmental subsidies for watershed protection
- Water quality offsets

Responses:

40 organisations profiled through our survey
Additional country-level information and case studies compiled with the help of an EU network of experts through COST Action project (CA15206) Payments for Ecosystem Services (Forests for Water)

WATERSHED INVESTMENTS

Overview: Value and area (all programmes and median)

Mechanisms Tracked in This Report: Value, Area under Management, and Number of Operational Programmes in 2015

	Total Value, All Programmes	Total Area, All Programmes	Median Programme Value	Median Programme Area
Public subsidies for watershed protection	€5,668M	12.8M ha	€77.6M	417,020 ha
User-driven watershed investments	€39.4M	0.6M ha	€0.8M	3,500 ha
Water quality trading/offsets	n/a	n/a	n/a	n/a
TOTAL	€5,708M	13.4M ha	-	-

WATERSHED INVESTMENT

Supply: Private landowners report a mix of activities

Table 2: Most Popular Interventions, User-Driven Watershed Investment Programmes

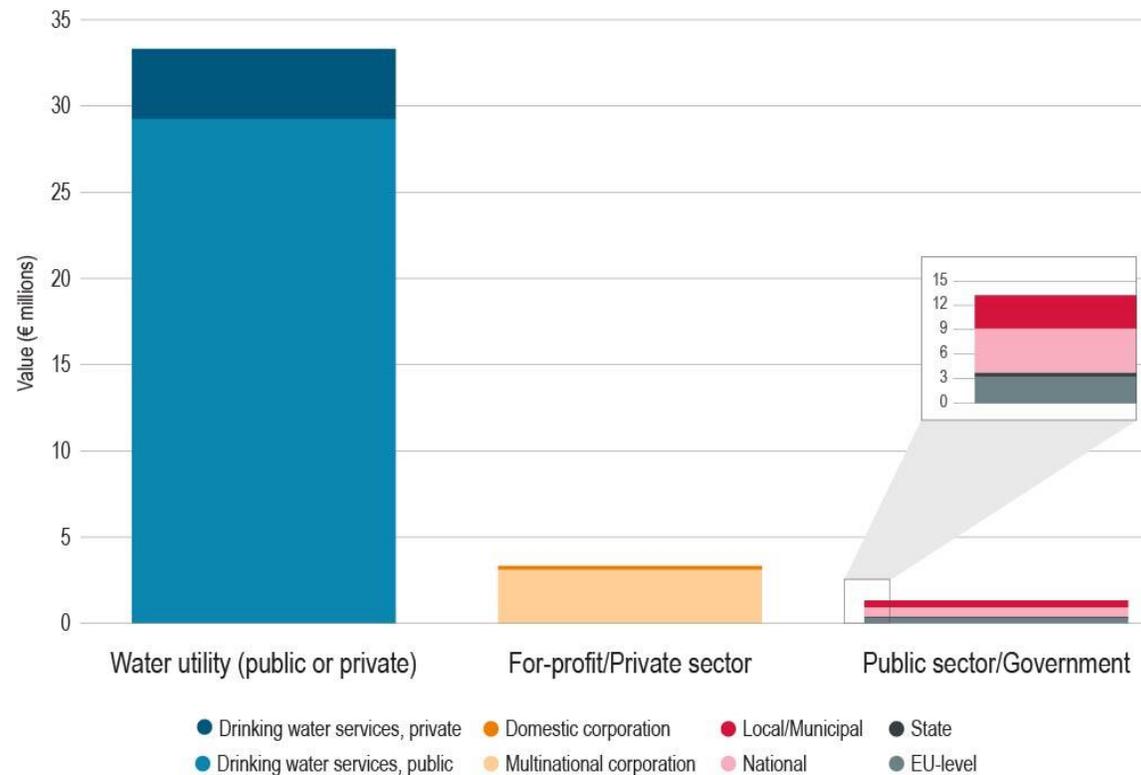
Intervention	% of Programmes (Number)
 Agricultural or pastoral sustainable management	62% (21)
 Grassland conservation	50% (17)
 Forest restoration or enhancement	50% (17)
 Forest conservation	29% (10)
 Wetland restoration or enhancement	24% (8)

Notes: Interventions are reported for total share of programmes implementing that intervention. Most programmes use a mix of interventions – thus percentages sum to greater than 100%.



Demand: Water utilities lead among buyers

User-Driven Watershed Investments: Buyers by Type and Value Transacted in 2015



WATERSHED INVESTMENTS

Demand: Across sectors, buyers driven by risk

Table 4: User-Driven Watershed Investment Programmes: Buyer Motives by Sector

Rank of motive	Public sector/ Government	For-profit/ Private Sector	Water Utility (Public or Private)
1.			
2.			
3.			

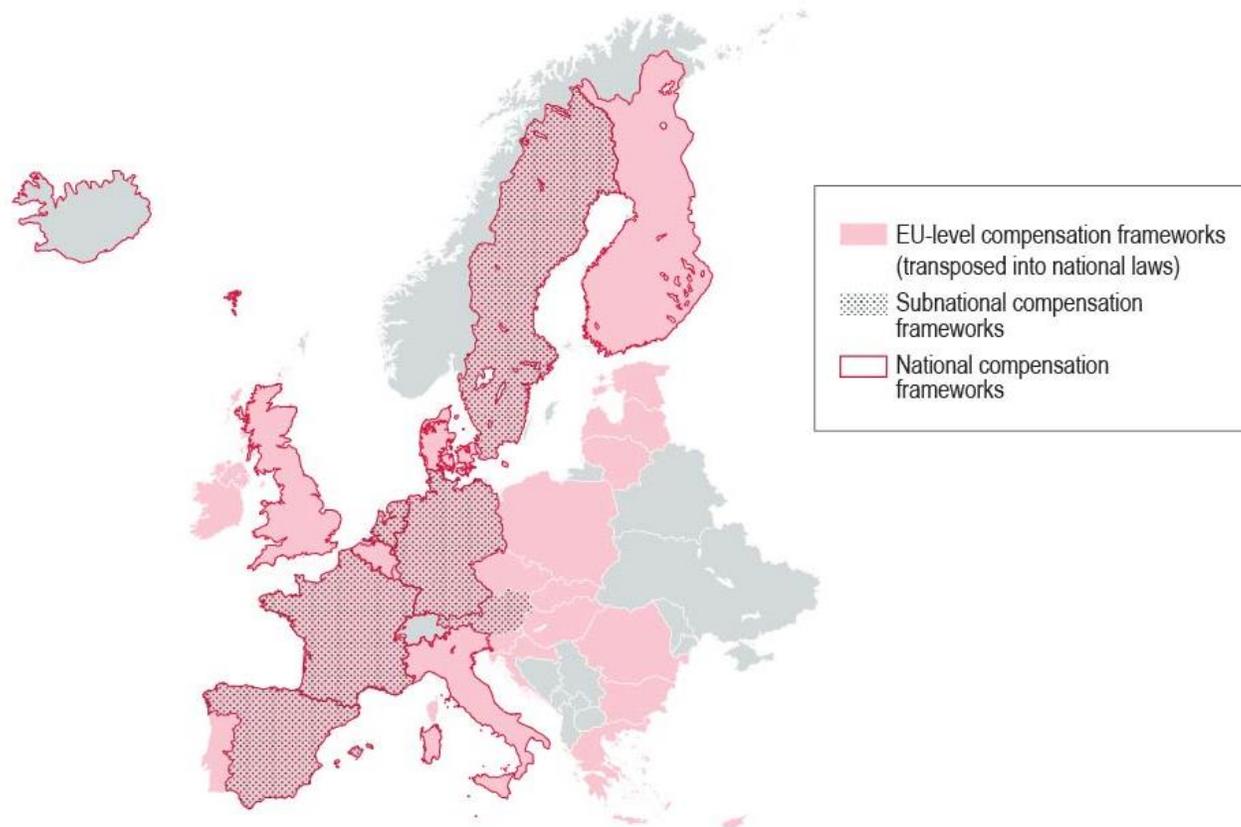
-  To mitigate risks to water resources or infrastructure from climate change or natural disasters
-  To enhance brand value/ demonstrate leadership on water resource challenges
-  To mitigate risks to water resources or infrastructure from land-use decisions in the basin
-  To deliver social co-benefits, such as sustainable livelihoods or drinking water access, delivered by project

-  To ensure supply chain resilience
-  To meet compliance with regulations
-  To address physical risks, such as declining water quality or supply disruptions affecting business model
-  To avoid or reduce capital costs of drinking water or wastewater services

Outlook & Opportunities for Watershed Approaches

- **Water Framework Directive driving basin approaches**, including stakeholder networks and basin-level knowledge – the building blocks of watershed investment!
- **EU level policy supports for green infrastructure**: GI Strategy; new funding including European Commission to contribute more than €300M in 2017 to Horizon 2020-funded projects demonstrating innovative nature-based solutions in cities and for hydro-meteorological risk reduction as alternatives to traditional built infrastructure
- **New national-level strategy and guidance on green infrastructure investment** on the way: Germany, Denmark, Sweden, Italy, Spain
- **English & Welsh water companies** blaze the learning curve & win over regulators – but will UK remain the frontrunners in catchment approaches?
- **Europe a leader in corporate water stewardship and private water risk management** – new European Water Stewardship Standard has been piloted for basin planning efforts in Belgium, France, and Germany and platform for collective action for water stewardship in the agricultural sector

Overview: Offsets & compensation frameworks in Europe



Scope:

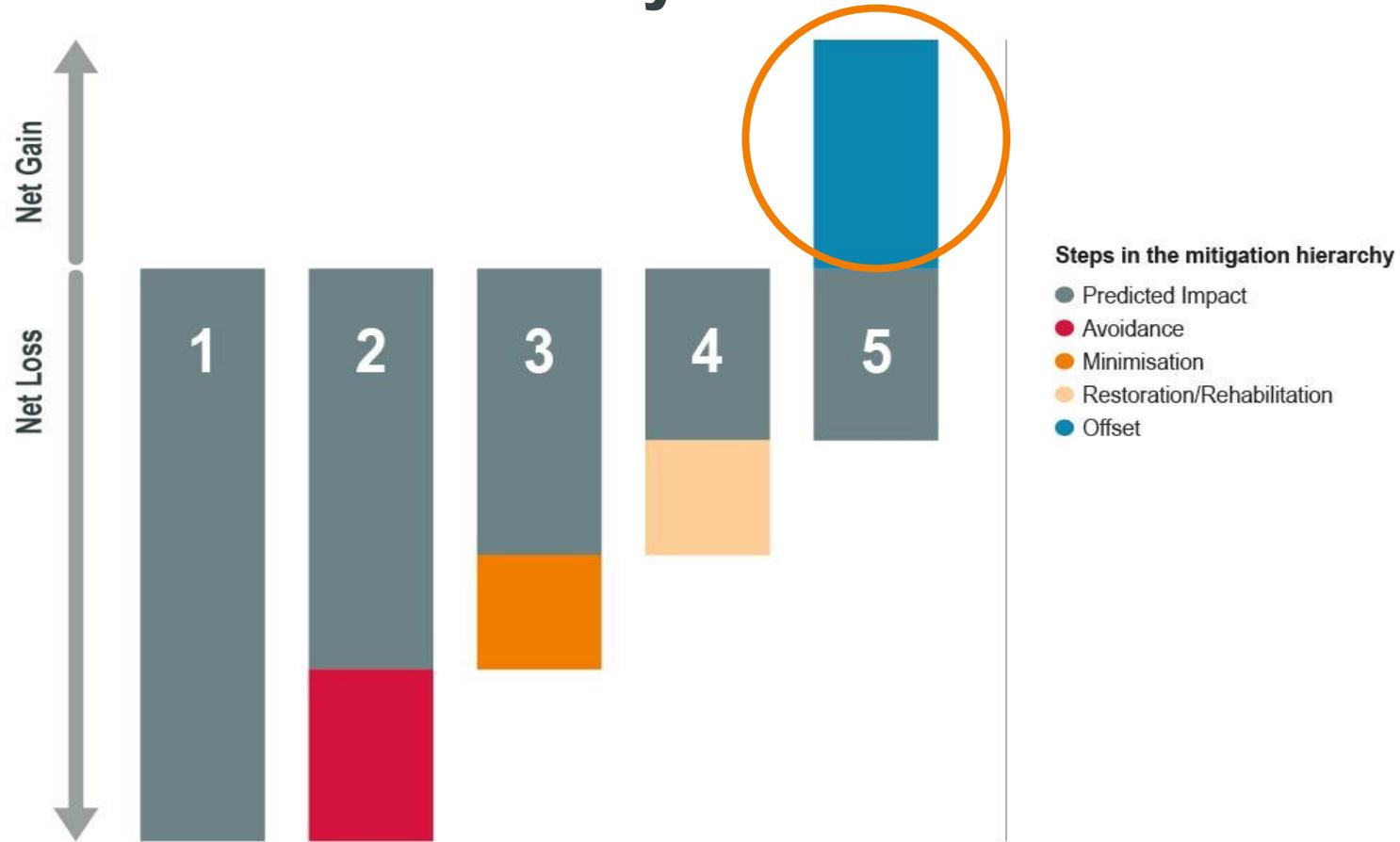
- **One-off offsets:** Actions undertaken to compensate for residual adverse impacts to biodiversity directly by the party responsible for those impacts (or a subcontractor)
- **Financial compensation:** The impacting entity might instead set aside funds for biodiversity management or protection, or make a financial contribution to an existing environmental fund—a practice referred to in this report as financial compensation.
- **Habitat banking:** Impacting entity buys offset credits from a mitigation bank operated by a third party that has already carried out advance mitigation, e.g., actions to restore, enhance, create, or protect biodiversity values prior to any negative impacts from development.

Responses:

65 compliance programmes / 180 projects

BIODIVERSITY OFFSETS & COMPENSATION

Report looks at offsets & compensation within the mitigation hierarchy framework



Supply: Nearly 74k ha implemented; hundreds of projects

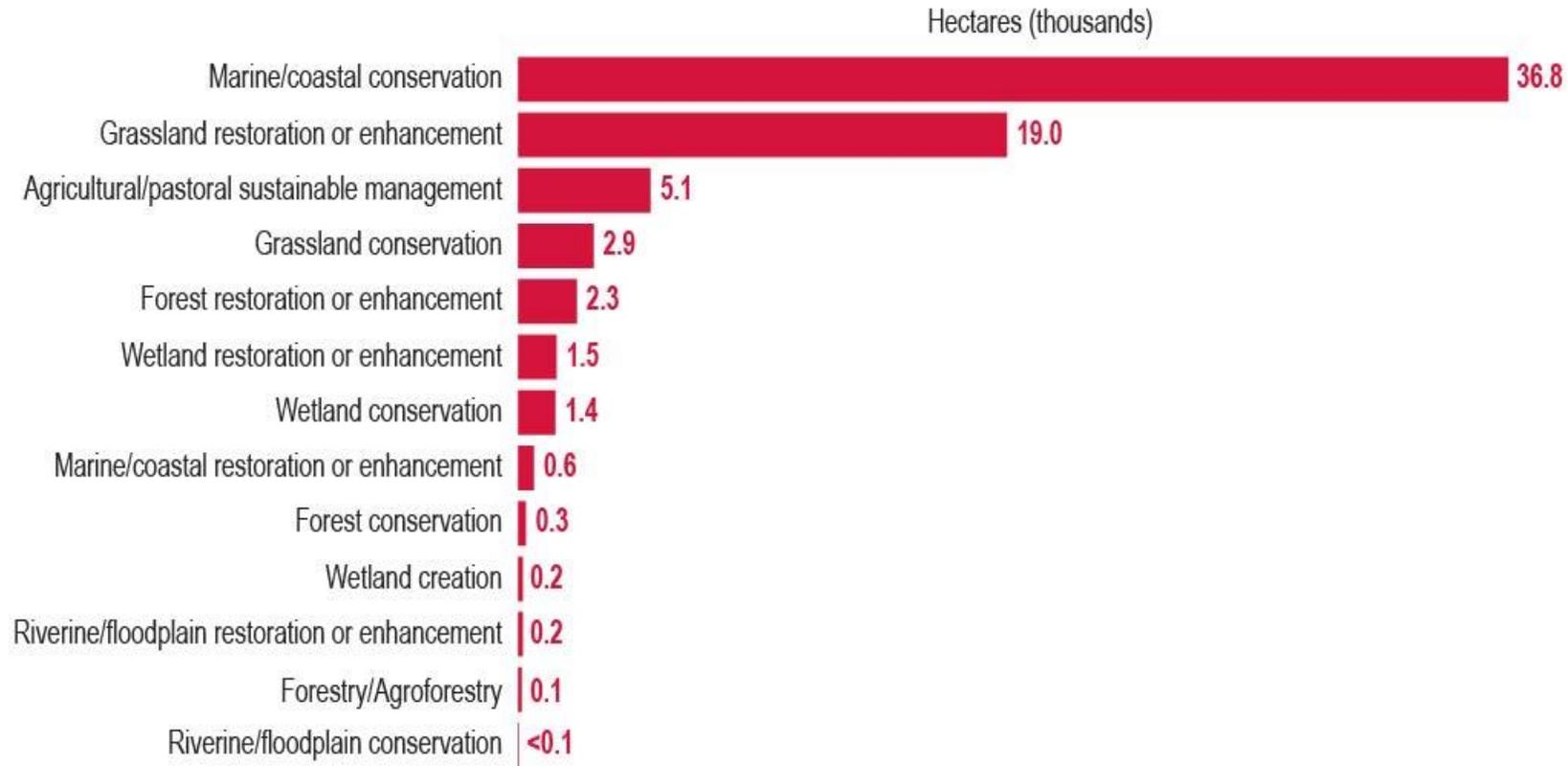
Figure 4: Projects by Compensatory Mitigation Type, Number, and Impact in 2015

Offsets and Compensation Projects



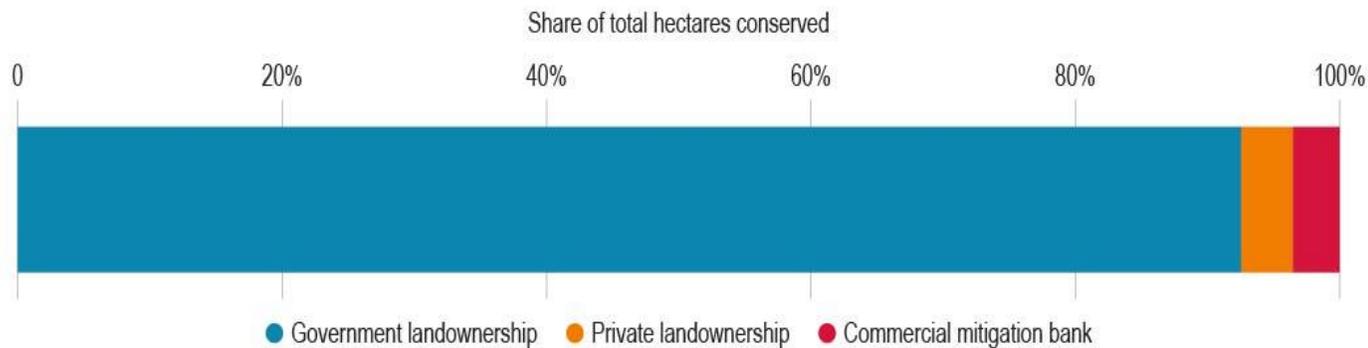
BIODIVERSITY OFFSETS & COMPENSATION

Supply: Projects focus on marine/coastal; grasslands habitat



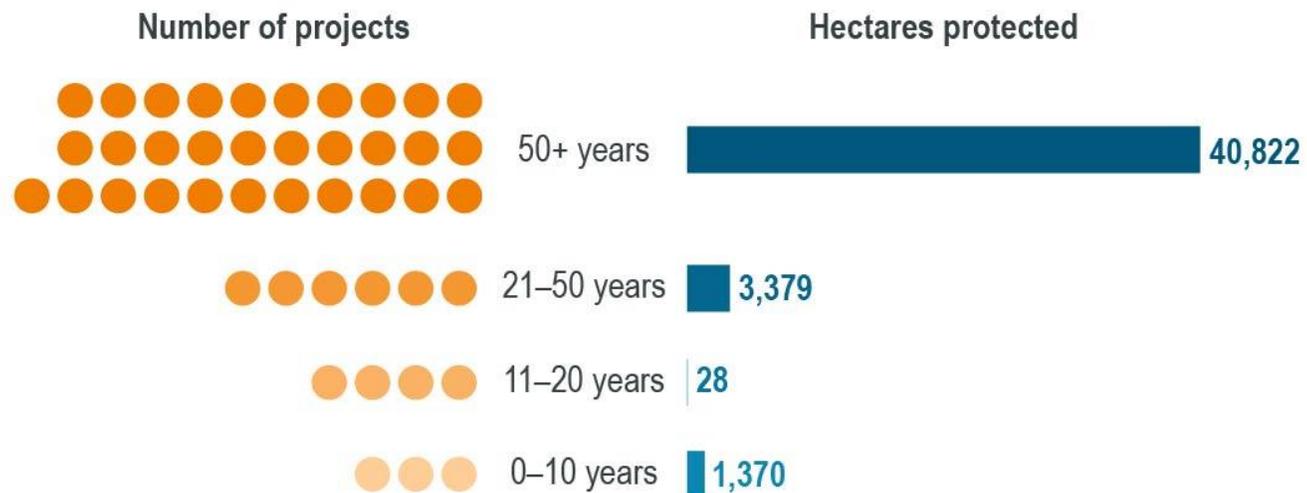
BIODIVERSITY OFFSETS & COMPENSATION

Supply: Public lands & permanent protection are the standard



Share of Offsets and Compensation Projects' Land Area Conserved by Land Ownership Type, 2015

Project Protection Duration by Number of Projects and Hectares Protected, 2015



Demand: Infrastructure sectors driving offsets & compensation demand

Buyers by Location, and Buyer Sectors by Value, Number, and Average Project Size Funded

Top Sectors by Share of Buyers

Transportation/Shipping (public sector): 24%
Local/Municipal government: 15%
Energy generation/distribution: 12%
Industrial Processes (non-energy): 9%
Energy extraction: 9%

Average Project Size, by Buyer Sector

Energy generation: 15,014 ha
Transportation/Shipping (public sector): 7,789 ha
Transportation/Shipping (private sector): 537 ha
Energy extraction: 175 ha
Local/Municipal government: 37 ha

Outlook & Opportunities

- **EU No Net Loss initiative:** An impact assessment study of No Net Loss policy options in 2016 suggested that achieve NNL, some form of mandatory offsetting measures would be necessary – though public opinion on offsets remains ambivalent.
- **Lack of transparency a limiting factor in demonstrating effectiveness – and fixing problems.** Little information available to the general public about how these mechanisms actually are working on the ground.
- **Natural Capital Financing Facility:** In pilot phase NCFF has a €125M budget for loans and investments for “bankable” projects making a business case for ecosystem-based approaches to natural resources and climate adaptation challenges. In 2017, NCFF inked its first loan agreement with Rewilding Europe Capital, an enterprise financing facility based in the Netherlands.
- **Habitat banking seeks to grow market share:**
 - **Pilot efforts in France, Spain, the Netherlands, and the UK** have met with mixed success, with bank developers citing a lack of regulatory drivers and clear guidance behind weak demand. In France and Spain, forthcoming regulations and guidance seek to streamline permitting processes and ensure that offsetting requirements are equivalent for banks and one-off offsets.
 - Meanwhile in **Germany**, where banking is well-established but an estimated 80% of banks are publicly managed, there are new signals that private sector actors are interested in developing more banks.

MARKET OUTLOOK



Stay connected!

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Join ECOSTAR's network to get connected to entrepreneurs or business & scientific mentors

Learn more about the Nature Accelerator

www.ecostarhub.com

Thank you!

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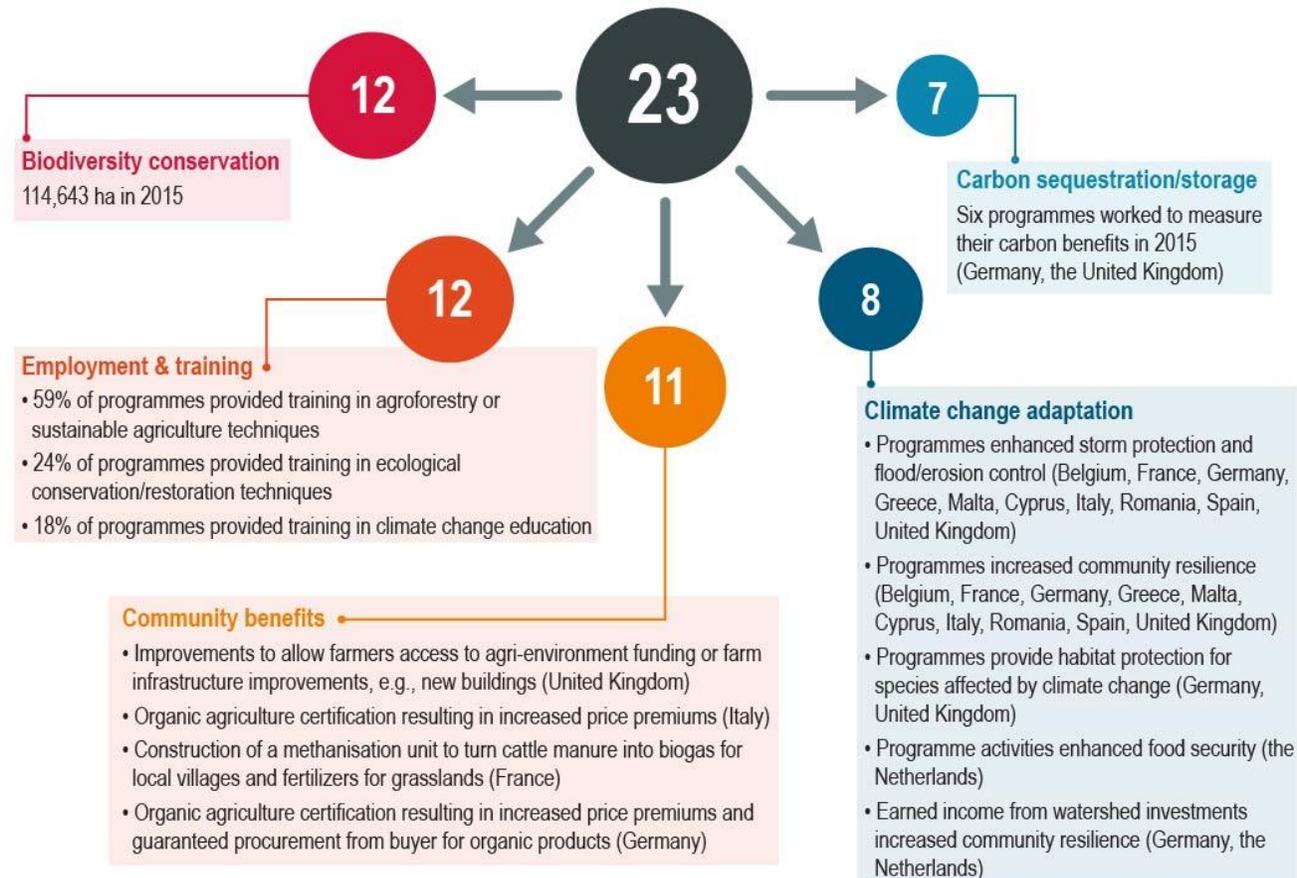


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WATERSHED INVESTMENT

Co-benefits: Benefits for jobs, biodiversity, communities

Total number of programmes reporting



European Market Outlook

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