



Guidelines on Closer to Nature Forest Management

Rationale

Critical Enablers

Scope and Principles

Regional Context

Toolbox

Good practice

The Policy Context

EU Biodiversity Strategy for 2030:

“To increase the quantity of forests and improve their health and resilience” [...] “biodiversity-friendly forestry practices such as closer to nature forestry should be further developed.”

“To support this, the Commission will develop guidelines on biodiversity-friendly afforestation and reforestation and closer-to-nature-forestry practices.”

New EU Forest Strategy for 2030:

“The Commission will develop a definition and adopt guidelines for closer-to-nature-forestry practices”

“a set of multiple practices to ensure multifunctional forests by combining biodiversity and increased carbon absorption with timber-related revenues”



The guidelines will...

- **promote biodiversity-friendly and adaptive forest management** for forest multifunctionality and climate change resilience without neglecting socio-economic benefits.
- **assist competent authorities and key stakeholders** across different scales, discussing challenges and opportunities in practice.

The guidelines are...

- developed for forests that have a **commercial use for timber and non-timber forest products** not explicitly designated as protected areas



Basic considerations & objectives



Closer-to-nature forest management (CNF):

- is based on ecosystem dynamics
- focuses on safeguarding ecosystem functioning and resilience
- integrates technical, economical, and social considerations
- considers forests as ecosystems composed of a variety of organisms and abiotic elements above and below ground, all working together to constitute and maintain forest multifunctionality.
- promotes natural and complex forest ecosystem dynamics takes account of natural species succession dynamics and interactions of environmental factors

General principles



- Learning from and permitting natural processes to develop
- Maintain the heterogeneity and complexity of forest structures and patterns
- Integrate forest functions at different spatial scales
- Use a variety of silvicultural systems based on natural disturbance patterns of the region
- Low-impact timber harvesting with equal attention to what is retained in the forest as to what is removed, thereby preserving habitats, forest soil and microclimate

**Building on: Larsen, J.B. et al. 2022. Closer-to Nature Forest Management. From Science to Policy 12. EFI*

Main objectives



Enhance structural complexity

Closer-to-nature forest management strives to create forests that are more:

- Heterogeneous and diverse in height, diameter, age and species
- Mixed with denser and sparser parts

...according to their natural mix of species and structures, forest type and phase of development

Promote natural forest dynamics

Closer-to-nature forest management relies as much as possible on natural dynamics to:

- Reduce investment costs (e.g. planting in the long-term)
- Promote structural complexity

...light interventions to orientate natural dynamics in line with objectives and the natural range and distribution of existing and potential species of the considered site

Biodiversity benefits of various practices

Name	Main characteristics	Limitations
Close to Nature Silviculture	<p>Optimize forest ecosystem use and conservation for sustainability and profitability.</p> <p>Single-tree selection harvest</p> <p>Smaller group harvesting (<0.2ha) possible to create mosaic stands.</p>	<p>Risk of limited flexibility to ensure adaptive capacity of forest ecosystems in a changing climate subject to shifting ecological conditions and societal needs.</p>
Integrated forest management “INTEGRATE”:	<p>Combining ecosystem service provision in forest landscape</p> <p>Focus on aligning biodiversity conservation and sustainable wood production.</p>	<p>Forest biodiversity requires a comprehensive concept that combines segregative (protected areas/ no go-areas) and integrative (off-reserve) conservation instruments</p>
Continuous cover forestry	<p>Heterogenous forests by selecting and harvesting individual trees or groups of trees.</p> <p>Clear-felling is preferably limited to 0,25 ha to ensure continuity of woodland conditions.</p>	<p>Biodiversity benefits depend on the level of wood-harvest intensity and the combination with other measures like set-aside areas or dead-wood retention.</p>
Triad Management	<p>Forest organized in sectors with varying management intensities and integration levels.</p>	<p>Biodiversity benefits in practice not clear.</p> <p>Might undermine multifunctionality and resilience</p> <p>Difficult in mixed-ownership settings</p>
Silvo-pastoral systems/ Agro-forestry	<p>Combination of tree growing with agriculture on the same land.</p> <p>Valuable for biodiversity, including rare and endangered species and multifunctionality</p>	<p>Challenged by agricultural intensification and rural exodus restoration and maintenance of natural processes or low intensity management practices are required</p>
Retention Forestry	<p>Strengthen biodiversity in even-aged management and clearcutting systems by strengthening continuity in forest structure, composition, and complexity.</p> <p>Variable retention levels at landscape scale ensures structural diversity.</p>	<p>Actual benefit depends on position and volume of retention trees left in the stand</p> <p>Post-harvest mortality can be significant pending for example tree-species and diameter.</p> <p>Benefits for red-listed species not clear</p>



Closer to Nature Forest Management Toolbox

Natural tree regeneration

Respectful harvest conditions

Minimize management interventions

Forest Soil and Water

Optimizing Deadwood

Setting areas aside

Scale-specific approach

Managing ungulate species

Promoting natural tree regeneration



- First choice because:
 - Preserves and increases genetic diversity
 - Strengthens adaptive resilience
 - Promotes spatial and temporal heterogeneity
- Artificial Regeneration if:
 - Natural regeneration not possible (no suitable seed trees, browsing, competitive ground vegetation)
 - Need for assisted migration
 - Restoration needs (e.g. food habitats)

**EC Guidelines on biodiversity friendly afforestation, reforestation and tree planting*

Ensuring respectful harvest conditions



- Avoid intensive practice
- If done, qualitative analyses for biodiversity benefits and increasing carbon stock capacity in the forest ecosystem and in the harvested wood products
- Partial harvesting, i.e. single-tree selection, group selection or gap cuts (max. 0.2-0.5ha) mimicking natural disturbance patterns to promote diverse stands
- Buffer zones along water streams
- Maintain permanent habitat trees
- No harvesting during ecologically sensitive periods (EU Birds Directive)
- Strict protection of old-growth and primary forest

**EC guidelines for Defining, Mapping, Monitoring and Strictly Protecting EU Primary and Old-Growth*

Minimize other management interventions



Relying on natural dynamics as much as possible but in some cases:

- Limited organic fertilisation avoiding sudden changes in pH or nutrient content
- Targeted use of biological pesticides to treat pest or pathogen outbreaks in absence of other possible measures



Preserving & restoring forest soils & water



Forest soil is an ecosystem of its own

- Crucial role for biodiversity and climate change mitigation
- High diversity of fungi is prerequisite for healthy forests
- Protect natural landforms and geomorphic processes
- Avoid heavy machinery
- Minimise fertiliser and pesticides

Forests are an important component of water management

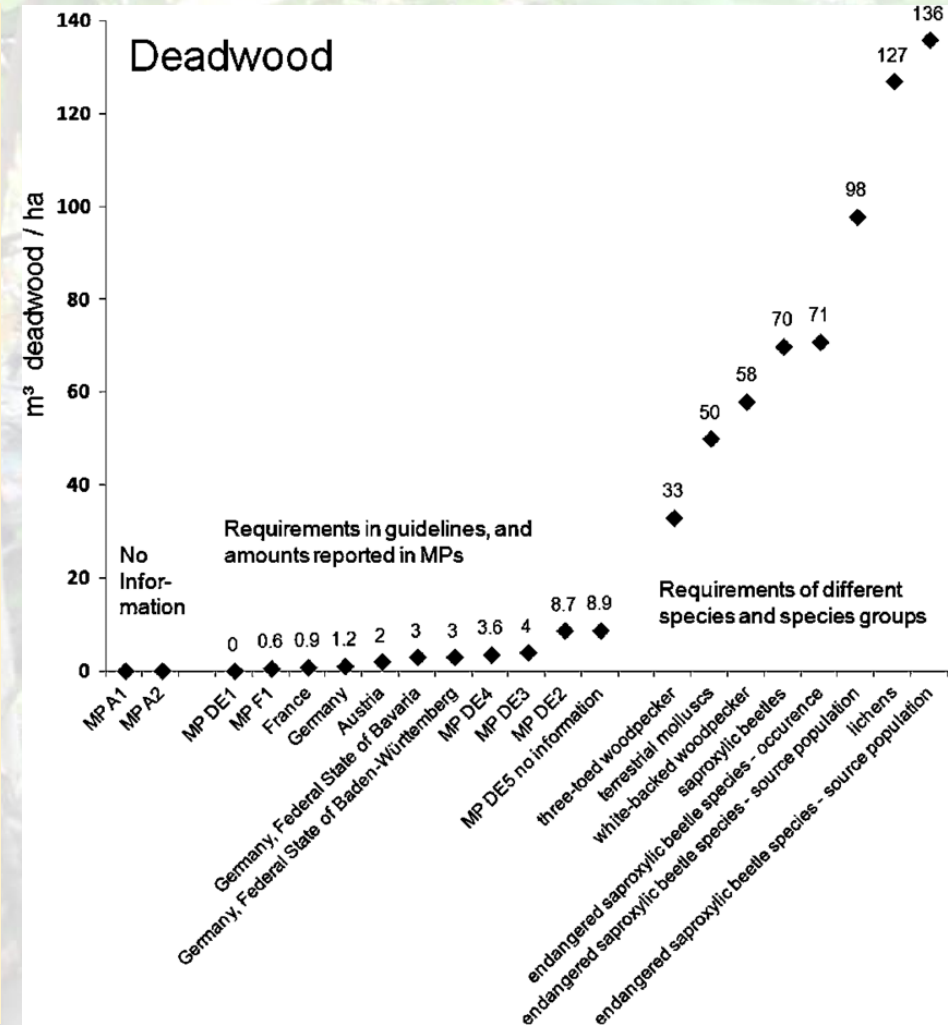
- They include for example wetlands, rivers, and lakes
- Preserving their quantity and quality to reduce drought impacts on surrounding ecosystems and human activity
- Buffer zones to avoid impacts
- Periodic removal of riparian vegetation should be avoided

Optimising deadwood retention



There is no waste in the forest

- Important role as natural habitat, nutrient pool, water storage and precursor of soil organic matter
- Certain species of fungi, mosses and insects will not occur without deadwood.
- Volume, type and stage of decay are important
- Volumes, density and locations in balance with fire management, safety (recreation) and pest outbreak
- Removing all deadwood will counteract efforts to improve biodiversity



Setting areas aside

- Voluntary set aside areas can be an accompanying measure to CNF
- Important tool for integrating biodiversity conservation into forest management
- Facilitate the preservation of key habitats and topological features and the establishment of transition zones between different landscape features
- Biodiversity benefits depend on permanence, size, representativeness and connectivity
- Selection and design should match biodiversity conservation and restoration needs in a given area
- For example the lesser spotted woodpeckers requires min. 40 ha of forest dominated by deciduous trees, fragmented over max. 200 ha



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Taking a scale-specific approach



Individual trees and groups of trees

- Harvest selection based on their different and distinct roles in the forest ecosystem throughout their lifecycle

Stand level

- Key for managing structural complexity, soil fertility or tree species mixture
- Flexible boundaries adapted to natural dynamics/ land-scape planning

Landscape level

- Mosaics coupled with ecological corridors increase the abundance of species or groups of species
- Balance protection, production and adaptation
- Key to minimise risk of cumulative impacts from harvesting operations or gap-cuttings
- Requires planning beyond the forest holding and might need competent authorities involvement

Managing ungulate species at natural carrying capacity



- High grazing pressure hampers natural and artificial forest regeneration and permanent and quick renewal of mixed stands
- Where alternative forage is limited, promoting or maintaining ground vegetation can help to reduce grazing pressure on seedlings and saplings
- Alternatively:
 - Site-specific barriers or protective measures such as stem or temporary and small-scale plot fencing considering habitat connectivity
 - Population regulation adapted to the state of the population, the state of biotopes and the extent of the damage and considering the wider landscape context





Enabling the Transition

Training and Skills

Economic Viability

Mapping and Monitoring

Planning the Transition

Adaptive Management and Resilience

Taking account of Forest Fires

Training and Skills



- Need to improve awareness amongst forests actors and stakeholders and ensure knowledge transfer and relevant skills in CNF
- European Pact for Skills - support in establishing a network for upskilling and reskilling
- European Social Fund Plus (ESF+) financial support for educational programs on sustainable management practices, forest biodiversity and to foster innovation in science and practice exchange
- Existing networks: INTEGRATE / Pro Silva

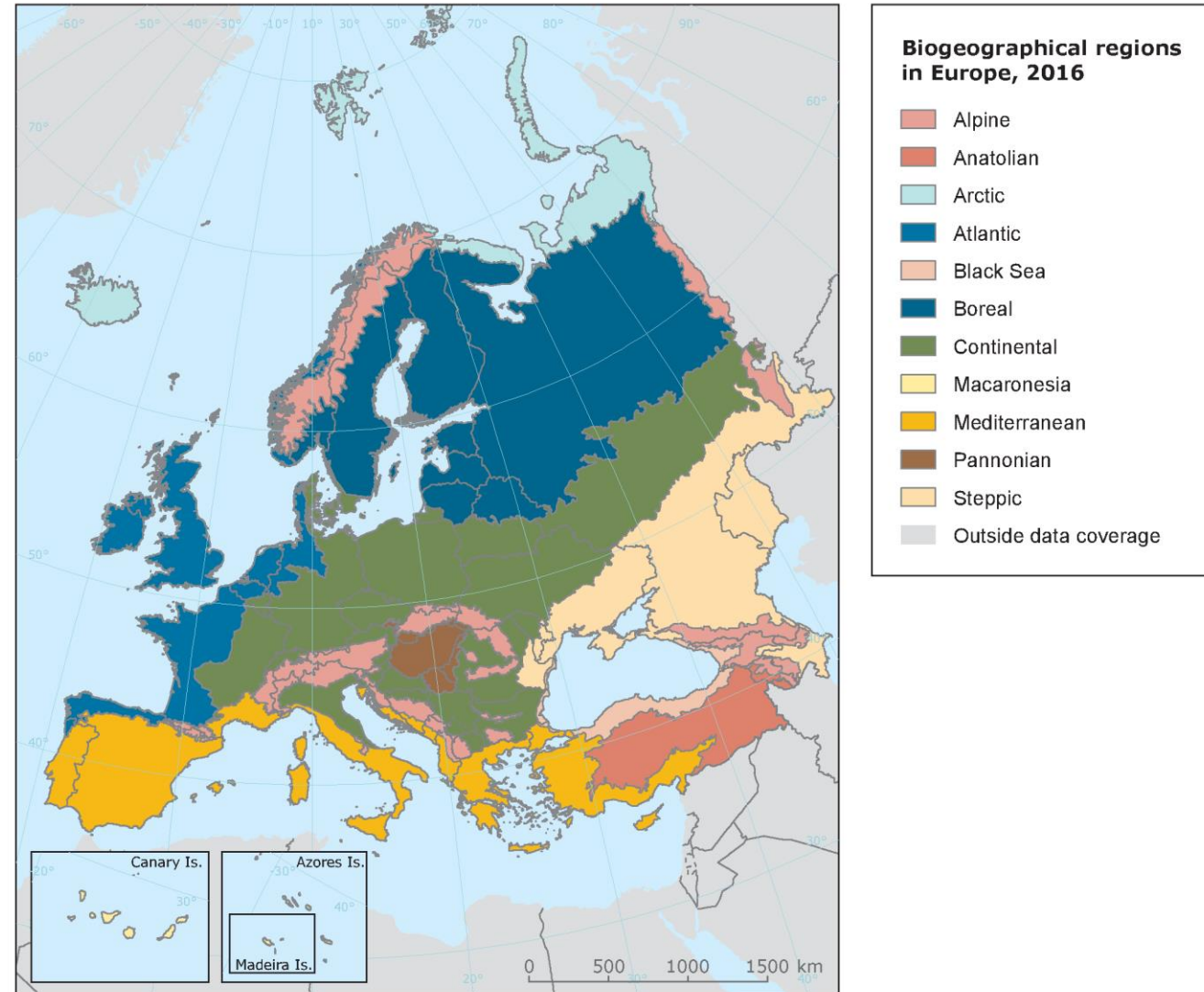
Economic viability

- Important driver, especially for private forest owners
- Influenced by site productivity, timber quality, market prices and operational costs
- CNF can be financially more profitable than forests managed in an intensive manner, whilst also reducing risks
- Forest have much more to offer than wood -> Payment for Ecosystem Services
- Funding (CAP, TSI, New State Aid Guidelines, LIFE, Horizon Europe)



Closer to Nature in different Regions

- Translate common objectives and principles into region-specific forestry reality
- Different region- different approach:
 - Case Studies
 - Parts of a Region
 - Region as a whole



Good practice examples

Integrative Forest Management in Ebrach, Germany

Stadtwald Lübeck, Germany

Ecology & Economy Project, Austria



...and now ?



1. Outreach & buy-in on the Guidelines by different actors
2. From theory to practice
3. Incentivising
4. Monitoring of CNF transition

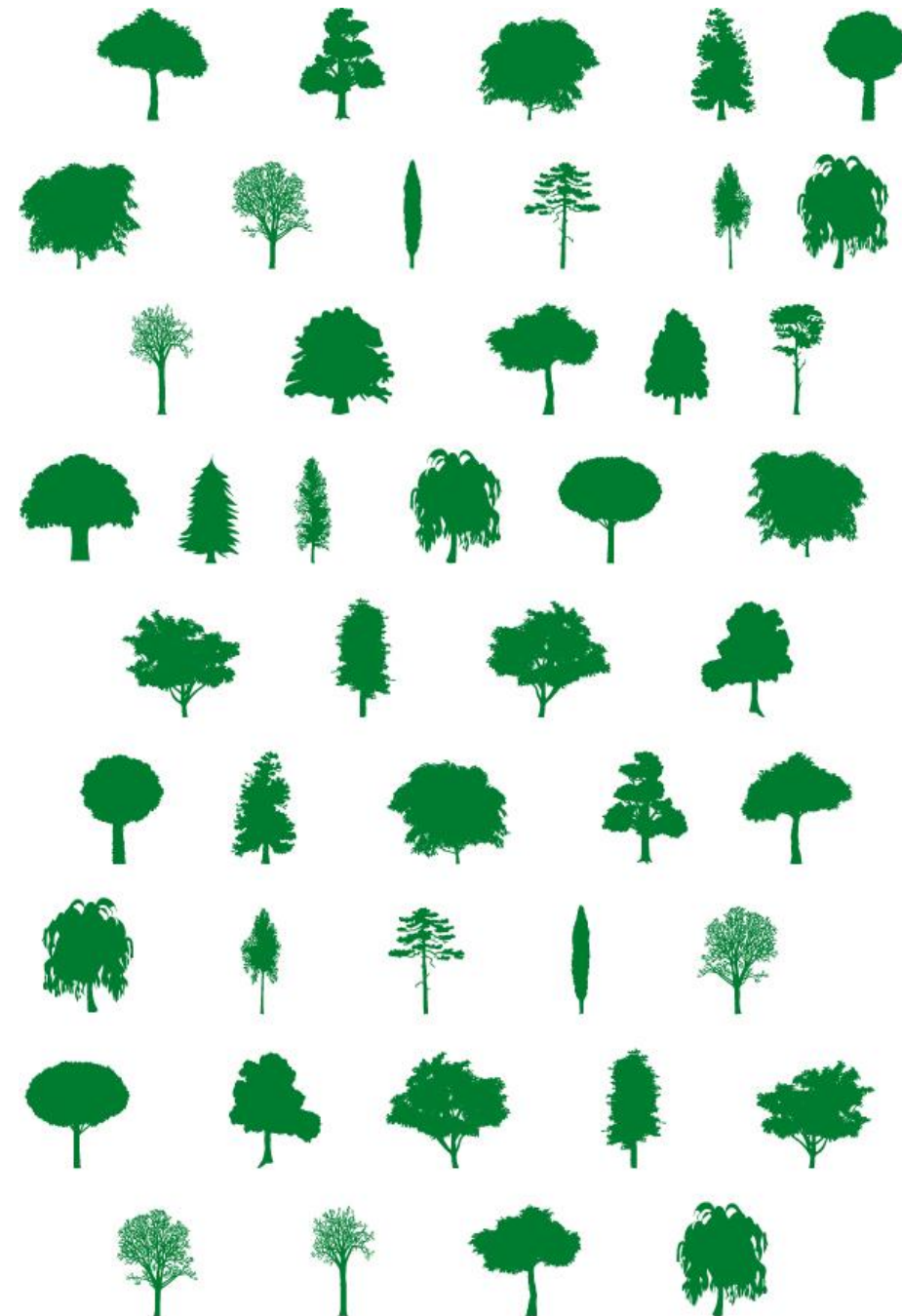
Outreach and Buy-in

Outreach:

- July 2023 –Guidelines in English
- November 2023 – Brochure Version
- Q1 2024 – all other EU languages
- Parallel presentation in meeting and seminars
- Multipliers (like Integrate ?)

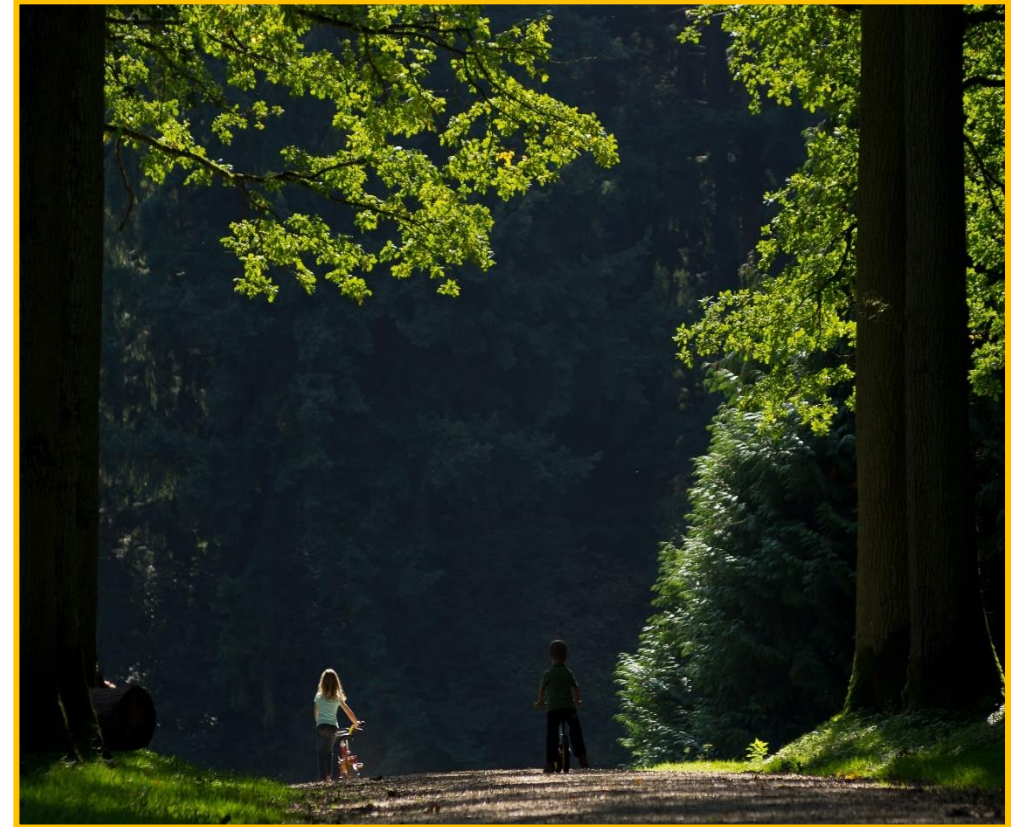
Buy-in:

- Voluntary approach
- Regional context
- Different starting points and no end-point



From theory to practice...

- Theory – all tools fully implemented
- Practice – different combinations and level of ambition
- Challenge – limited quantifiable references
- Solution – good practice, work in progress, CNF certification, SFM criteria



CNF guidelines as part of a package

- 1. Guidance on Payment for Ecosystem Schemes**
- 2. Legal proposal for EU framework for carbon removal certification**
- 3. Legal initiative on forest monitoring and integrated long-term planning*
- 4. COM initiative for Voluntary Certification for Closer to Nature Forest Management*



Guidance on the development of Public and Private Payment Schemes for Forest Ecosystem Services

SWD(2023) 285 final

A tool to provide financial incentives to forest owners and managers to provide forest ecosystem services in addition to the provision of wood and increase the resilience of their forests

- Forest Ecosystem Services in a nutshell
- Valuation and assessment of ecosystem services
- Financing for forest ecosystem services
- Research and Innovation
- Private payment schemes
- Development of payment schemes for forest ecosystem services
- Common Framework for Public and Private Schemes
- Natural Capital Accounting
- Examples of schemes and projects

EU framework for carbon removal certification

What are carbon removals?



PERMANENT STORAGE



CARBON FARMING



CARBON STORAGE IN PRODUCTS

What does the proposal include?

QU.A.L.I.TY criteria

QUantification
Additionality
Long-term storage
Integrity
Transparency
Yield

+ **tailored certification methodologies** for the different types of carbon removal activities (next step)

Certification rules

Third-party verification
Reliable certif. schemes
Public **registries**

+ **Commission recognises** the certification schemes that can certify compliance with QU.A.L.I.TY criteria

Why this proposal?

Incentivise high-quality removals



Fight greenwashing and build trust

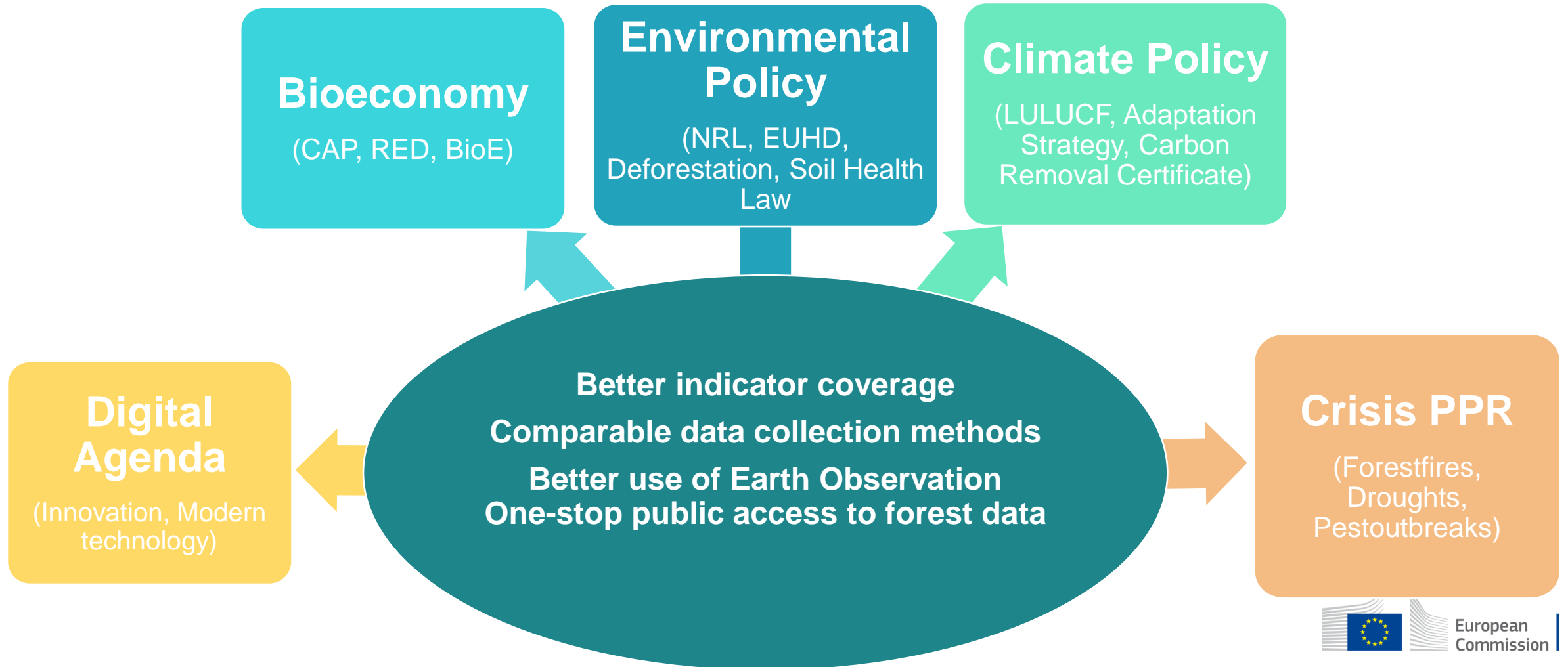


Tailored certification rules



Harmonise market conditions

FML proposal - An EU framework for consistent, comparable, timely and accessible data on EU forests





Thank you for your attention