Brno Agroforestry Declaration - 31st May 2024

Knowledge and actions needed on agroforestry for landscape features and tree production in Europe

Meeting at the 7th European Conference on Agroforestry in Brno, Czechia, under the patronage of the Czech Minister of Agriculture, Marek Výborný, and the Czech Minister of Environment, Petr Hladik, 396 Delegates from 43 countries heard 137 presentations reporting on studies investigating the potential benefits of agroforestry.

These focused on the farm impact of agroforestry and on the six indicators of sustainable development listed in the EU Taxonomy Regulation: climate mitigation, climate adaptation, sustainable water resources, pollution control, biodiversity and ecosystems, and the circular economy.

Many of those studies reinforced the scientific evidence for the multiple positive benefits of agroforestry on farm economics, rural landscapes, soil health, biodiversity and climate mitigation and adaptation.

The congress was officially opened by European Commissioner for Agriculture, Janusz Wojciechowski, who stressed the "importance of increasing the number of trees in our agricultural landscapes", and indicated that "agroforestry will become one of the first, if not the first, carbon certification methodology to become available" in his speech.

Delegates noted, however, that only 9 member states have implemented agroforestry measures in their CAP Strategic Plans and called on European policymakers at Union and Member State levels to recognise this enormous potential and integrate the promotion of, and support for, agroforestry systems in their national agricultural, environmental and climate plans.

They further noted the overwhelming evidence that regulatory constraints drastically limit the freedom farmers need to adapt their practices to their local contexts, and to adopt effective mixed farming systems such as agroforestry.

The scientific evidence presented at successive European conferences have enabled EURAF to draft Policy Briefings in each of these six crucial areas of sustainability, confirming agroforestry's potential. These are reviewed below.

1. Climate Change Mitigation

EURAF calculates that neutrality in the land sector is possible for the EU by 2040, but only if there is an massive planting programme of Trees outside the Forest[1].

This should focus on areas where trees can bring the biggest environmental and carbon- sequestration benefits, and where there is least reduction in agricultural production. EURAF calculates that there are 95.2 million hectares of cropland and pastureland in the EU-27 that are devoid of trees, and 117.9 million hectares with less than 10% tree-crown-cover. Bringing these areas to the 10% tree-crown-cover threshold common for agroforestry systems worldwide would mean planting 11.2 million ha of agroforestry, or an area equivalent to the size of Bulgaria.

Farmers and foresters should be rewarded through the proposed voluntary Carbon Removals Certification Framework, and also through a statutory agricultural/forestry Emission Trading Scheme. Find details in EURAF Policy Briefing #26

2. Climate Change Adaptation

Agroforestry is mentioned in the adaptation strategies or plans of only 11 EU Member States, despite the extensive scientific literature on its benefits. EURAF commends the Adaptation Plans of Czechia, France, Italy and Slovakia as examples of good practice, and encourages other EU Member States to introduce measures focused on i) improved carbon sequestration; ii) reduced soil erosion, increased fertility and resource use efficiency; iii) greater resistance to droughts and floods; iv) diversified landscapes and biodiversity; v) reduced pest and disease pressure; vi) maintained crop yields and animal welfare; vii) increased resilience to extreme events, including droughts, wildfires and storms; viii) improved economic diversity and benefits; and ix) reduced groundwater and air pollution. Agroforestry can deliver on all these criteria: see Policy Briefing #27 for details and references.

[1] *Each Member State has its own definition of "forest land" EURAF also argues that there should be an integrated Rural cadastre to link databases of Forestry and Agricultural land (Policy Briefing #15)*

3. Sustainable Water Resources

Mixtures of trees and agriculture in upland catchments increase the water holding capacity of soils and reduce stormwater flows. Riparian strips and lines of trees, established in a network of berms and swales, contribute to floodwater dispersal and management. In drought-prone areas, trees can be established after contour ripping, and combined with the establishment of lagoons to conserve water supply locally.

Well-designed, tree-rich landscapes evaporate rainfall and help it to fall again in downwind catchments. That evapotranspiration helps cool our continent if carried out at a big enough scale.

The opportunity for hydrologic bioengineering at landscape scale is great, and we invite much greater cooperation between local authorities, river-authorities and farmer groups in the planning and planting of agroforestry and landscape features, in line with the objectives of the upcoming EU Water resilience initiative (Policy Briefing #64).

4. Soil, water and atmospheric pollution

Agroforestry trees have clear benefits to soil health, water quality and atmospheric pollution directly by i) binding soils in place, reducing water erosion, ii) reducing wind speeds and so lessening windborne soil erosion, including dust plumes and atmospheric pollution from phytochemicals, iii) absorbing excess nutrients, and iv) slowing down pollutant migration through soils to groundwater, and indirectly by boosting soil fertility and pest predation pressure, and so lessening the extent of fertiliser and phytosanitation use.

The Directive on Soil Monitoring and Resilience will help standardise soil monitoring methods in the EU Member States, but much greater help is needed to encourage farmers and foresters to record field-by-field information on soil carbon, fertiliser use and soil nutrient content. The analyses that data allows should be free for all farmers, and held in open databases linked to i) the long-delayed Farm Sustainability Tool for Nutrients and ii) the CAP Land Parcel Identification System.

This detailed information can provide a basis for environmental "payment by result" schemes linked to carbon sequestration, GHG emissions reductions, soil health indicators, groundwater impacts and atmospheric pollutant emissions. See Policy Briefing #65 for more details.

5. Protection of Biodiversity and Ecosystems

Progress towards targets in the EU 2030 Biodiversity Strategy is restricted by current pressures on both agriculture and forestry. EURAF suggests that a massive planting of trees in lines and small groups on agricultural land can allow agricultural yields to be maintained, animal welfare to be improved and trees to be put to productive use in a way which makes landscapes more structurally and biologically diverse.

EURAF's mission is to work with the public and private sector to ensure that all areas of grassland and cropland in Europe have 10% tree-crown-cover by 2040. This needs a much stronger focus on planting trees on areas of mineral soil beset by problems of erosion and soil degradation.

We call for the active participation of national and local governments in setting and monitoring these targets, particularly for local authority regions most bereft of trees on agricultural lands, which are further discussed in Briefing #66.

6. The Circular Economy

The circular economy in agriculture means food systems that build natural capital and allow nature to thrive.

Agroforestry is a regenerative form of agriculture which mixes food and wood products in ways that generate positive outcomes for nature, such as healthy and stable soils, enhanced local biodiversity, and improved air or water quality.

It can be tailored to local contexts and merged with other practices such as more diverse crop varieties, keyline planting design, cover crops, adaptive multi-paddock grazing, and living barns.

It creates a mosaic of trees, crops and animals which more closely resemble natural ecosystems, and provides a habitat for a wider range of organisms. It also delivers a greater range of multiple products: for example, regular pruning improves wood quality, boosts crop yields, and generates animal feed and wood chips. Silvopastoral systems

reduce the greenhouse gas, ammonia and nitrate emissions associated with livestock. Silvoarable systems maximise use of soil, water and nutrient resources.

But sustainable farming practices only make economic sense if their environmental and carbon benefits are accurately accounted. We therefore call on the next CAP to improve its environmental "performance monitoring and modelling metrics", and implement payments by environmental results, which also recognise the past environmental efforts of farmers, in ways that are further discussed in Briefing #67.

7. Rural socio economics

Trees on farms can positively influence farm economics by buffering it against extreme climate shocks. They can reduce the amount of fertiliser, phytosanitation and irrigation that must be deployed. They offer additional products and services that can be marketed, including fruits, nuts, fodder, biomass, timber and ecotourism. They positively influence rural society by offering a wider range of jobs than monocropping, raising the quantity and quality of human interactions in the landscape. Agroforestry systems offer greater working comfort by providing shade and landscape aesthetics, thus helping to reduce stress levels and other deleterious impacts on mental health.

Delegates called for longer-term funding to accurately quantify these impacts and optimise the financial viability of agroforestry. They further called for the establishment of an EU-wide Agroforestry Day to encourage citizens to visit agroforestry farms and become familiar with its benefits.

8. Skills, Policies and Generation Renewal

Delegates welcomed the increasing evidence that farmers in Europe and around the world are recognising the importance of trees in their production systems. Yet they also noted that Europe's progress in establishing trees outside forests has been grossly inadequate for many decades. The current CAP has brought no noticeable improvement to this sad state of affairs.

They therefore called on Europe's agricultural and forestry decision makers to profoundly reform the administrative and regulatory framework that farmers must comply with to achieve greater farmer agency and decision-making, thus giving farmers the freedom to adapt their practices to their local contexts and market their products. This should include being free to choose how many trees of which species to plant, manage and cut on their lands. The guiding idea should be that the bureaucratic burden farmers face should be proportional to the farm size.

They further called on them to work with Europe's corporate and financial leaders and its leading research institutions to rapidly and fundamentally engage in a process of deep transformation to promote the benefits of agroforestry to the continent's landowners and land managers, and to help develop standard contracts between landowners and tenants that fairly allocate the costs and benefits of agroforestry establishment and management between the parties.

Priority should be given to the development and rollout of support that helps adopt agroforestry solutions appropriate to their particular regional contexts. Research institutions should prioritise the implementation of high-performance agroforestry solutions appropriate to all farm sizes, climatic zones, income levels, gender perspectives and generational renewal needs.