

Sustainable Intensification of agriculture as a lever to halt deforestation

Submission of the International Fertilizer Association (IFA) to the COP30 Presidency Roadmap for Halting and Reversing Deforestation and Forest Degradation by 2030

The [International Fertilizer Association](#) (IFA) is the only global fertilizer association of fertilizer producers, traders and distributors, as well as their associations, service providers to the industry, research organizations, agtech start-ups and non-governmental organizations, with around 500 members in some 80 countries. Its mission is to promote the efficient and responsible production, distribution, and use of plant nutrients.

I. Context: Deforestation, Food Security, and the Productivity Nexus

Deforestation is driven by multiple intersecting pressures, among the most significant of which is the expansion of agricultural land to meet growing food demand. In many regions, crop yields remain substantially below their agronomic potential due to degraded soil, limited access to financial and advisory services, and production systems that are ill-equipped to withstand climatic and market shocks. Under these conditions, demand for agricultural commodities — including food, feed, fiber, biofuels, and other biomaterials — is often met by bringing additional land into production, including forested areas, rather than by raising output on land already under cultivation. Beyond agronomic constraints, cropland expansion is also driven by growing global market demand for specific commodities, notably soybean, oil palm, and sugarcane, produced largely for feed and biofuels rather than food.

The imperative is therefore twofold: to protect forests directly and to reduce the economic and agronomic pressures that drive their conversion. Closing yield gaps on existing agricultural land can simultaneously improve food security, enhance farmer livelihoods, and relieve pressure on forests, grasslands, wetlands, and other natural ecosystems. **The deforestation and agricultural productivity agendas are interdependent and must be pursued in concert.**

II. Sustainable Intensification as a Forest Protection Strategy

Sustainable Intensification (SI) refers to a set of farming approaches and enabling conditions that increase agricultural output per unit of land while reducing environmental harm and strengthening the resilience of production systems. Its relevance to the deforestation agenda lies in its land-sparing function: when farmers can raise yields on existing farmland under appropriate enabling conditions, the economic incentive to expand into natural ecosystems is reduced.

SI integrates higher agricultural productivity with environmental stewardship, resource-use efficiency, and farm resilience, and can make a direct contribution to food security and national stability when supported by commensurate infrastructure, policy, and inclusive financial systems.

Critically, active land-sparing interventions that explicitly link yield increases to habitat protection or restoration commitments can substantially attenuate rebound effects, in which productivity gains might otherwise incentivize new forest clearing. The evidence base for this is growing:

- Technical and agronomic support for smallholders in the Amazon basin doubled average farmer incomes while reducing forest clearance by approximately 80 per cent.
- Strategic irrigation investment in Palawan (Philippines) redirected agricultural expansion towards previously cleared land, decelerating upland deforestation.
- Land formalization programs in Benin encouraged productivity investment and reduced deforestation by approximately one-fifth.
- In Sierra Leone, farmers who received combined market access support and agronomic training measurably reduced the rate of forest clearing.

III. Fertilizers as an SI Enabler

Fertilizers and sustainable nutrient management solutions underpin approximately half of current global food production. Plant nutrients are foundational to soil health, ecosystem function, and the production of nutritious food. In the context of halting deforestation, fertilizers should be understood not as an objective in themselves, but as a critical solution to making sustainable intensification operationally viable by helping farmers close yield gaps on land already under cultivation.

When responsibly managed, in a balanced and crop- and site-specific manner, fertilizer can restore and maintain soil fertility, support soil biological activity, and increase agricultural productivity on existing farmland, thereby reducing pressure to convert forests and other natural ecosystems.

It bears emphasis, however, that both excessive and insufficient fertilizer application carry distinct environmental risks: overuse can contribute to pollution, such as eutrophication, and greenhouse gas emissions, while underuse can degrade soils, suppress yields, and create incentives for agricultural expansion onto new land. The policy objective is therefore optimized nutrient management, based on the 4R Nutrient Stewardship principles: Using the right nutrient source, at the right rate, at the right time, in the right place.

IV. Policy Recommendations

IFA respectfully urges Parties, the COP30 Presidency, and relevant multilateral bodies to consider the following policy measures as integral elements of the COP30 Roadmap on Deforestation and Forest Degradation:

1. ***Reorient Agricultural Support Mechanisms toward Productivity on Existing Land.*** Parties should review and reform existing agricultural subsidies and support frameworks to redirect resources toward balanced and efficient nutrient management, access to quality agricultural inputs, and farmer advisory services on existing farmland.

2. **Expand Access to Affordable and Blended Agricultural Finance.** Parties, in collaboration with multilateral development banks, development finance institutions, and private sector actors, should scale up the deployment of public and blended finance instruments to de-risk smallholder and agribusiness investment in inputs used sustainably, soil health restoration, irrigation, and extension services. Particular attention should be given to ensuring that financing mechanisms are accessible to smallholder farmers in high-deforestation risk landscapes.
3. **Establish Mandatory No-Conversion Conditionalities for Productivity Support.** All public and privately funded programs that provide support for agricultural productivity enhancement - including financing, technical assistance, and subsidies - should incorporate enforceable no-conversion requirements as a standard conditionality. Productivity gains supported under such programs shall not result, directly or indirectly, in the conversion of forests, wetlands, or other natural ecosystems. Verification of compliance should be integrated into program monitoring and evaluation frameworks.
4. **Develop and Harmonize Monitoring Frameworks for Land-Use and Productivity Outcomes.** Parties should develop, adopt, and report against a harmonized set of indicators for tracking the land-use and productivity outcomes of agricultural support programs, including crop yield trends, nutrient-use efficiency ratios, and land-use change in and adjacent to supported areas. Such monitoring frameworks should be integrated with national REDD+ measurement, reporting, and verification (MRV) systems and with National Determined Contribution (NDC) reporting obligations under the Paris Agreement.
5. **Deliver Integrated Support Packages through Coordinated Policy Instruments.** Parties and international organizations should ensure that support for sustainable intensification is delivered as an integrated package that combines access to finance, quality agricultural inputs, technical and extension services, market linkages, and clear land-use rules. Evidence consistently indicates that behavior change at the farm level is more likely and more durable when these enabling conditions are provided jointly rather than in isolation. Coordination mechanisms among agriculture, finance, environment, and land tenure ministries should be strengthened accordingly.

The recommendations set out above are consistent with and complementary to the following existing UN commitments and frameworks:

- The Kunming-Montreal Global Biodiversity Framework, Target 10 on Sustainable Agriculture
- The Paris Agreement – Article 5 (REDD+)
- The Glasgow Leaders' Declaration on Forests and Land Use (COP26, 2021)
- FAO Voluntary Guidelines on Sustainable Soil Management
- FAO Code of Conduct on the Responsible Use of Fertilizers
- The UN Food Systems Summit Pathways on Sustainable Food Production
- UN Sustainable Development Goals (SDGs), in particular SDG 2 (Zero Hunger, Target 2.4 on sustainable food production), SDG 15 (Life on Land, Targets 15.1 and 15.2 on forest conservation), and SDG 13 (Climate Action)