PRESERVING AND PROTECTING AGROBIODIVERSITY THROUGH AGROECOLOGY

50%

of the Earth's habitable land is used for agriculture. This means the protection, conservation, and restoration of agrobiodiversity offers one of the most promising avenues to achieve the goals of the Kunming-Montreal Global Biodiversity Framework (GBF).

Agrobiodiversity refers to the organisms directly or indirectly used for food and agriculture - including crops, livestock, fisheries, wild species, and genetic resources (genes, varieties, breeds), as well as species that are not used by humans but are still integral to agro-ecosystems. Around the world, agrobiodiversity has been sustained by the intentional use of local knowledge, practices, and traditions by farmers, peasants, herders, and fishers across cultures and over millennia.

Industrial agriculture: the biggest threat to biodiversity

The spread of industrial agriculture has seen vibrant native ecosystems replaced by large-scale monocultures based on a handful of high-yielding seeds and breeds, and intensive use of chemical inputs. These uniform farming systems are undermining agrobiodiversity, wild biodiversity, and the diversity of our diets. Moreover, they are leaving food systems highly vulnerable to diseases and climate shocks, forcing farmers and communities off their land, and accelerating the loss of biodiversity-rich farming systems and associated knowledge.

The erosion of diversity in food systems

- Industrial food systems drive more than 30% of all tropical deforestation, are threatening 86% of endangered species, and 40% of insects (including pollinators).
- 70% of the active ingredients in pesticides are causing critical harm to organisms that maintain healthy soils.
- Over the last few decades, Turkey has lost 95% of its 18,000 local varieties of wheat, and Sri Lanka has seen its varieties of rice reduced from 2,000 to just 5.
- Currently, only 3 crops (rice, wheat, maize) account for 60% of the global energy intake.
- Between 2000 and 2014, 100 livestock breeds went extinct. Today, 26% of livestock breeds are at risk of being lost.

Agroecology enhances biodiversity, resilience, and livelihoods

- Agroecological practices boost biodiversity in intensively-farmed regions, which enhances resilience to climate shocks.
- Crop diversification enhances the presence of wild species by as much as 24%, which in turn increases yields by 14%.
- Agroecological plots retain 40% more top soil and are more flood-resistant.
- Agroecological practices are generally associated with gains in income, revenues, productivity, and efficiency. Mixed farming systems can sustainably intensify production, generating 25% more income per hectare without increasing environmental impacts.

Integrated policies to enhance biodiversity through agroecology

Shifting away from industrial agriculture and supporting transition to agroecology should be a central goal of every government's National Biodiversity Strategies and Action Plans (NBSAPs). This will contribute to achieving most of the GBF's targets (namely, Targets 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, and 18), while fostering resilient food systems capable of nourishing both producers and consumers.

Production

- Subsidize and/or offer price support to agricultural activities following or transitioning to the 13 principles of agroecology
- Grant tax incentives to farmers with sustainable production systems that contribute nutritious and diversified foods
- Promote farmer-to-farmer training and knowledge exchange to scale out agroecological practices

Markets

- Ensure public procurement prioritizes sustainable, healthy, locally-sourced food
- Use True Cost Accounting to embed negative and positive externalities into pricing schemes
- Support territorial markets where agroecological, local food producers can sell directly to consumers

Cross-Cutting

- Make agroecology the cornerstone of cross-sectoral policies, strategies, and laws, including the NBSAPs and the Nationally Determined Contributions (NDCs). For example, the Community-Managed Natural Farming Andrah Pradesh (APCNF) in India encouraged over 6 million farmers to use natural inputs and diverse agroecological farming systems, increasing yields by 11% and nourishing over 50 million consumers
- Promote agroecological approaches within research institutions and academic curricula

iPES FOOD

For the online version, scan the QR code
For more visit www.ipes-food.org