

While climate change is among the biggest challenges we need to address as a global society, it's not the only one – **we are also facing the sixth mass extinction in our planet's history.**<sup>1</sup> And this time round, the extinction event is being caused by human activity. What we eat has a massive impact on biodiversity – agriculture currently uses half of the earth's habitable land and has drastically changed the planet's physical environment in the last few decades. Between 2000 and 2018 alone, agriculture was responsible for about 90% of global deforestation,<sup>2</sup> destroying the habitat of countless species around the world.

The expansion of agricultural land, particularly for livestock production, has a direct impact on the habitats of all lifeforms on earth and is a primary driver of species extinction – from animals to plants, fungi, and other microorganisms. More than half of the species that are currently at risk of extinction are threatened by agriculture.

## Agriculture is a threat to more than half of the species at risk of extinction

### All threats

More than **45,000 species** assessed are currently threatened with extinction

### Agriculture

More than **25,000 species** are threatened by agriculture

Based on data by **IUCN (2024)**<sup>3</sup>

## Our current food systems contribute to habitat loss<sup>4</sup>

**1,300**

terrestrial vertebrate species will lose at least **25% of their habitat** by 2050

if current trends in agricultural expansion and diets continue

When moving towards the **Planetary Health Diet** this can be reduced to

**33**

terrestrial vertebrate Species

## Food systems rely on biodiversity

The World Economic Forum's Global Risks Report 2024 lists biodiversity loss and ecosystem collapse as one of the three most severe risks we face over the next ten years.<sup>5</sup> Our food systems – and thus our global food security – depend on biodiversity and its **ecosystem services**.

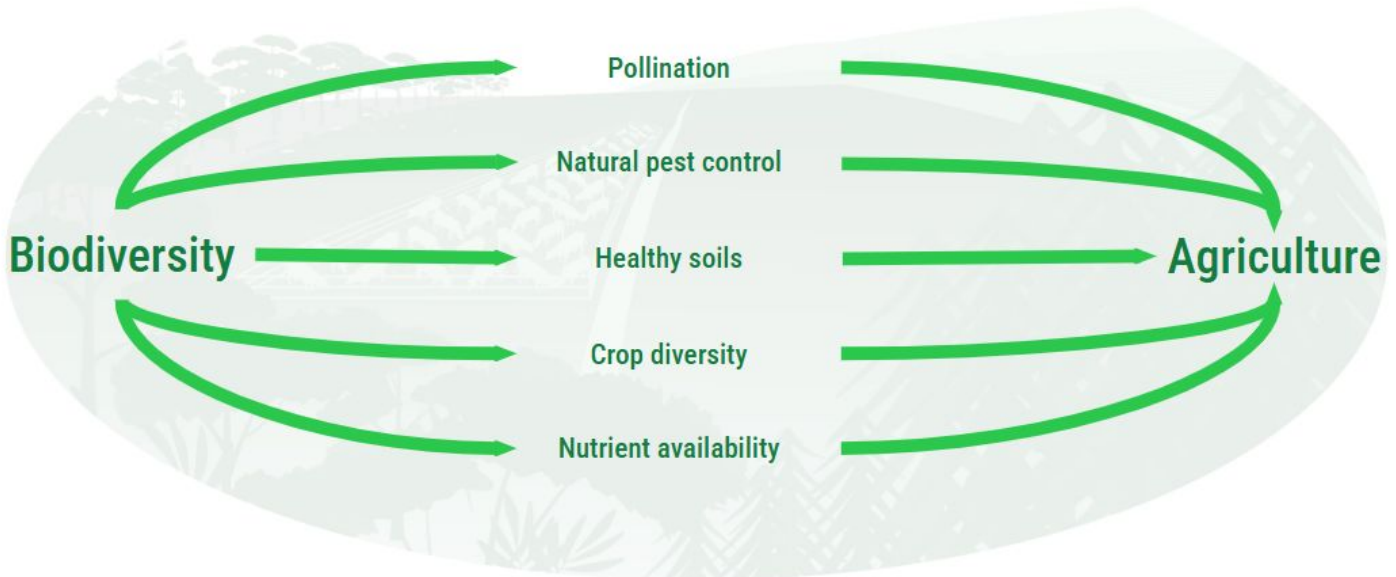
These services include soil health and the recycling of nutrients, insect-assisted pollination, and natural pest control for the countless plant species we already eat, as well as for those that might be potential nutrient sources in the future.

### Ecosystem services

Ecosystem services are the benefits that humans receive from natural ecosystems, such as clean air, water purification, pollination, and climate regulation. These services are essential for human well-being and contribute to economic, environmental, and social sustainability

Around 44 trillion USD of economic value generation, representing about 55% of global GDP, is dependent on nature. While some sectors might be less dependent on nature, the agricultural sector as well as the food-and-beverage sectors (together, representing nearly 4 trillion USD of economic value generation) is highly dependent on nature.<sup>6</sup> A loss of biodiversity will lead to vast losses for the global economy, while the diminishment of our food system will result in food insecurity and economic instability around the world.

## Ecosystem services for agriculture

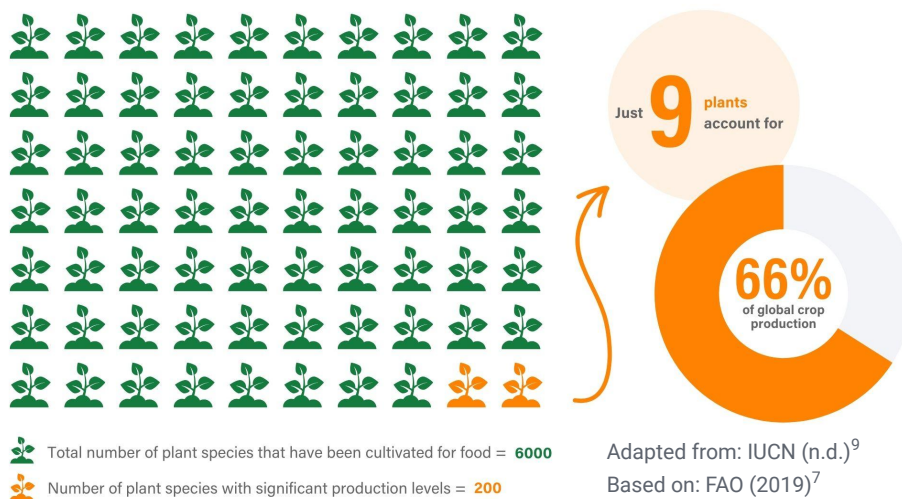


## Biodiversity in our food systems

While our food systems are highly dependent on the services provided by nature and biodiversity, they can also be major contributors to counteract biodiversity loss and help to restore the natural environment. The global food supply currently relies heavily on a limited number of staple foods, which has major implications for nutrition and food security. Although, historically, more than 6,000 plant species have been cultivated for food, less than 200 species currently make substantial contributions to global food production – and just nine plants account for two-thirds of total crop production.<sup>7</sup>

Biodiversity within agri-food systems can have multiple benefits for both biodiversity itself and human well-being. Food systems and diets around the world are diverse and often depend on foods available in both local regions and other parts of the world. To improve food security, a large diversity of plants is needed, since combining a wide variety of different (plant-based) foods can improve nutrient supply. It has been shown that there is a positive link between crop diversity and improved dietary diversity and reduced hidden hunger.<sup>8</sup> (Hidden hunger is a form of malnutrition resulting from a lack of essential micronutrients in a person's diet even though they are consuming enough calories.)

## A small number of crop species provide the majority of our food



## Kunming-Montreal Global Biodiversity Framework

The Kunming-Montreal Global Biodiversity Framework was adopted at COP15, with the aim of halting and reversing biodiversity loss. The framework sets ambitious global goals for implementing actions to support biodiversity by 2030.<sup>10</sup> Target 10, 16, and 18 are especially relevant to our food systems, since they aim to:

- Enhance biodiversity and sustainability in agriculture, aquaculture, fisheries ,and forestry (Target 10),
- Enable sustainable consumption choices in order to reduce waste and overconsumption (Target 16) and to
- Reduce harmful incentives by at least \$500 billion per year, and scale up positive incentives for biodiversity (Target 18).

A shift towards plant-based diets is one of the biggest levers for reducing the impact of our food systems on biodiversity. The need for this shift is especially urgent in countries with high levels of meat consumption and where the production of animal-based foods is highly dependent on the importing of feed from countries that are most at risk of biodiversity loss.

### KEY TAKEAWAYS

- 1 The areas used for agriculture need to be sustainably managed:** this includes an increase in agricultural practices that are beneficial to biodiversity, such as agroecological approaches.
- 2 Increase research and innovation for crop diversification:** Prioritize funding for developing diverse, resilient crop varieties that support exosystems and enhance food security, especially in regions vulnerable to climate change.
- 3 Increase the availability of plant-based options:** expanding the availability of plant-based meals in supermarkets, restaurants, and public catering can reduce the burdens placed on the environment and biodiversity by our food systems, and improve the nutritional quality of meals while preserving freedom of choice.
- 4 Align food-based dietary guidelines with biodiversity targets:** dietary guidelines are important instruments for establishing healthier and more sustainable diets.<sup>11</sup> They need to contain clear advice on plant-based diets so that they align with national and international biodiversity targets.
- 5 Reduction of harmful subsidies:** on a global level, 87% of agricultural support is price distorting, as well as environmentally and socially harmful.<sup>12</sup> In the EU, 80% of the budget of the Common Agricultural Policy is allocated to emission-intensive animal products.<sup>13</sup> Farm subsidies need to be re-designed in order to favour more environmentally friendly practices and reflect and acknowledge the true costs of our food

## Literature

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## About ProVeg International

ProVeg International is a food awareness organisation working to transform the global food system. Our mission is to replace 50% of animal products, globally, with plant-based and cultivated foods by 2040.

ProVeg has received the United Nations' Momentum for Change Award and works closely with key UN food and environment agencies. We have observer status with the UNFCCC and the IPCC, special consultative status with ECOSOC, and are accredited for UNEA.