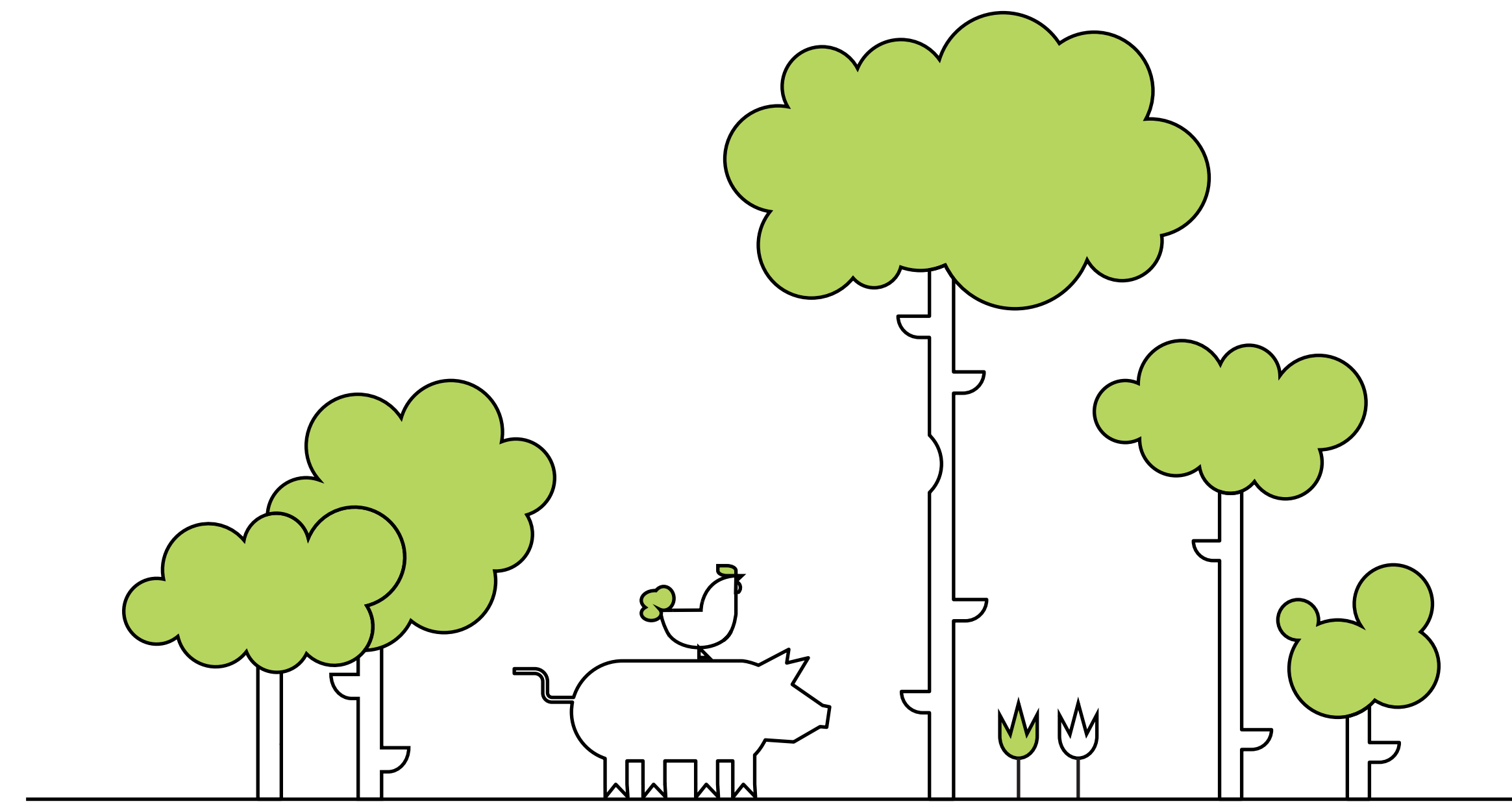


# The loss of biodiversity

## is closely linked to the climate crisis



Of the approximately 150,000 animal and plant species studied, over 42,000 are considered endangered.<sup>1</sup> According to estimates, around 1 million species, or 25% of all species, are at risk.<sup>2</sup> Humans significantly contribute to global species extinction.<sup>3</sup>

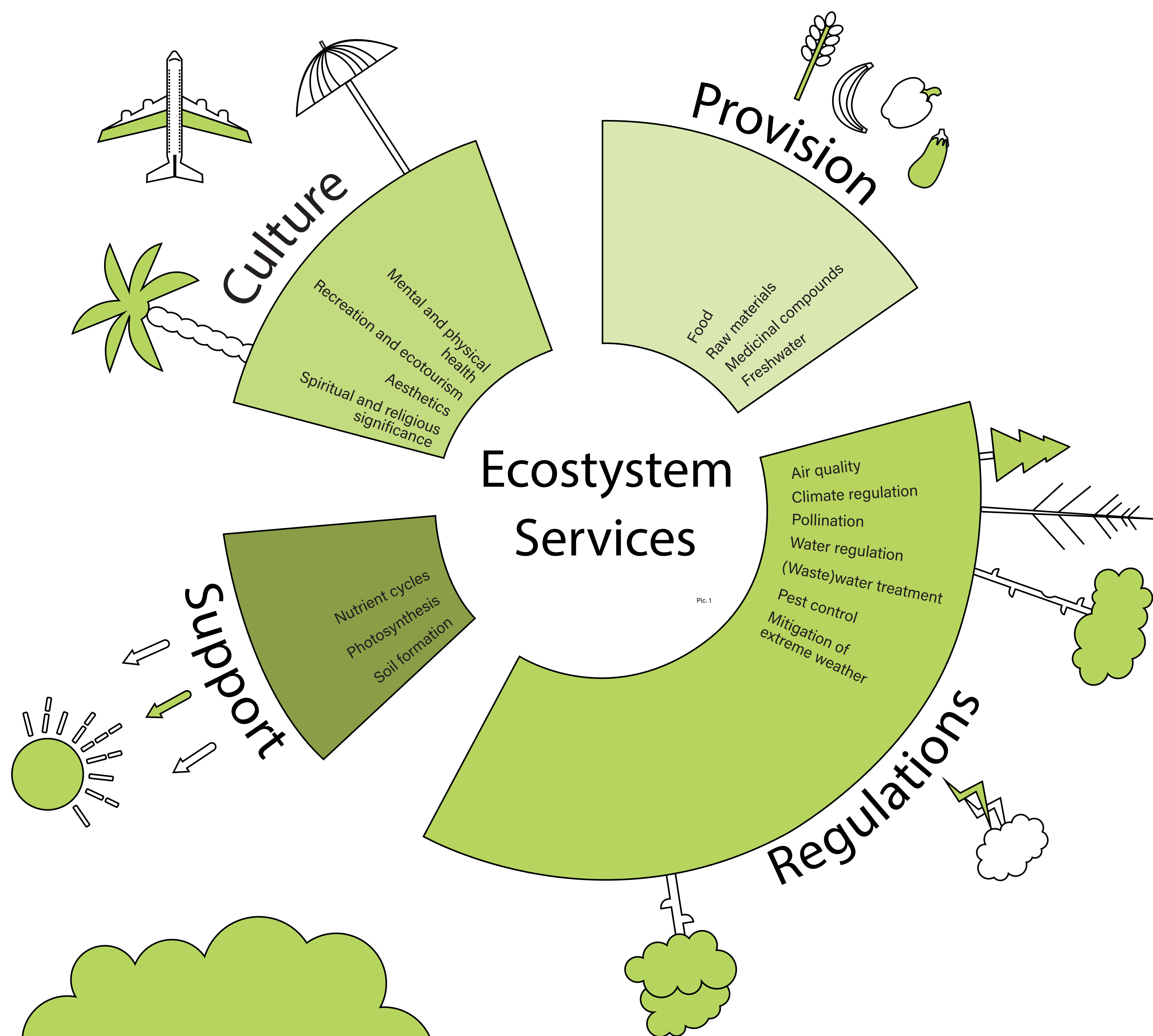
Biodiversity means:

- Genetic diversity within a species
- Diversity (number) of species
- Diversity (number) of ecosystems
- Diversity of achievable functions and processes in an ecosystem,<sup>45</sup> such as the predator-prey balance

Intact ecosystems are, in turn, of central importance to humans.<sup>6</sup>

### Ecosystem services

Ecosystems provide valuable services to humans without their intervention, thereby forming a foundation for life. The graphic on the right illustrates the diversity of these services. This is why preserving biodiversity is essential.<sup>7a</sup>



### Causes

#### Climate crisis

The required migration and adaptation speed due to rapid climate change poses a significant challenge for many species.<sup>910</sup> These challenges include rising average temperatures, extreme weather events such as heatwaves and drought, heavy rainfall, storms, floods, and pressure from invasive species.<sup>1112</sup>

#### Direct contribution of humans

Land-use changes directly destroy ecosystems, such as through the drainage of wetlands, deforestation, construction activities, conversion of land for agriculture, mining, and other resource extraction.

Wild animals are pushed back: hunting and overexploitation of natural (fish) stocks reduce populations to the point where they can no longer reproduce sufficiently.

The cultivation of only a few standardized varieties in agriculture limits the genetic diversity of plant-based foods. This "monoculture" also plays a role in animal husbandry, where only certain breeds are further bred.

The intentional or unintentional introduction of non-native species can displace native species. Fires caused by humans – intentionally (e.g., slash-and-burn), negligently (e.g., cigarettes), or accidentally (e.g., sparks) – can spread quickly and devastate entire regions.

Additionally, there is various pollution of the atmosphere, soil, and water bodies caused by human activities (agriculture, industry, waste generation, etc.).

A comprehensive list is provided in the report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).<sup>13</sup>

### Consequences

#### The "green lungs" of the Earth

The Amazon rainforest is considered one of the most species-rich ecosystems on the Earth's surface.<sup>1415</sup> It is home to species whose natural components are, for example, relevant for medicine.<sup>16</sup>

At the same time, it is one of the "green lungs" of the Earth and a significant CO<sub>2</sub> reservoir.<sup>17</sup> The reduction in forest area due to slash-and-burn agriculture and other land-use changes, such as farming, releases large amounts of CO<sub>2</sub>.

#### Coral reefs

Corals will almost completely disappear with global warming exceeding 1.5 °C. Ocean acidification is already causing bleaching and the death of entire coral reefs.<sup>1819</sup>

This leads to the loss of valuable biodiversity hotspots, damaging entire marine food webs.<sup>2021</sup>

#### Pressure on native animal and plant life

The temperature increase in Austria particularly affects Alpine flora above the tree line. Many plant species are retreating to cooler, higher-altitude areas.<sup>22</sup> Additionally, native species are being displaced due to warmer climatic conditions and the associated spread of invasive species.<sup>23</sup>

Coral reefs serve as nutrient sources, refuges, and spawning grounds for fish and other marine creatures, protect against coastal erosion, and are essential for regional tourism.

