

## **078 Encouraging agroforestry and mycorrhization practices that promote soil biodiversity**

CONCERNED about the impact of climate change on agriculture and forestry, which increases food insecurity and the risk of malnutrition;

UNDERLINING the need to preserve and regenerate soil biodiversity to ensure both food and water security, and to contribute to the mitigation of climate change through carbon storage in soils;

WELCOMING the recent development of agricultural practices that sustainably improve food production, including integrated crop and forestry systems (agroforestry) that reduce dependence on water, an increasingly limited resource;

NOTING that mycorrhizae, symbiotic organs resulting from an association between plant roots and fungi, promote an exchange of minerals, water and carbon;

OBSERVING that the use of these mycorrhizae as well as microorganisms brings many benefits such as the absorption of nutrients, improved soil health, better water uptake by plants, reduced need for irrigation, fertilizers and pesticides, reduced absorption of toxic elements such as heavy metals and increased resilience of crops to global warming;

RECOGNISING the complexity of the functioning of these mycorrhizae and their interactions with plant roots, which can vary depending on soil and climate conditions;

RECALLING IUCN Resolution 7.007 *Developing agroecological practices as nature-based solutions* (Marseille, 2020), aimed at promoting agroecological approaches as NbS, and the IUCN Thematic Brief entitled "Maintaining healthy soils"; and

FURTHER RECALLING that agroforestry systems using endomycorrhizae and micro-organisms provide co-benefits for health, employment, agricultural yields in specific production contexts, water resources and biodiversity;

### **The IUCN World Conservation Congress 2025, at its session in Abu Dhabi, United Arab Emirates:**

1. ASKS the IUCN Secretariat to support its Members to enable them to better understand the importance of mycorrhizae and micro-organisms in agriculture, and in particular in agroforestry, while ensuring respect for endogenous species;
2. INVITES its Members to fully embrace practices that promote the conservation and sustainable use of fungi and mycorrhizal microorganisms in soil, to promote them among agricultural and conservation stakeholders, and to create the conditions necessary for their successful implementation;
3. ENCOURAGES agricultural stakeholders to:
  - a., adopt agroforestry and other soil conservation practices that promote the development of mycorrhizae and beneficial microorganisms, such as minimal tillage, maintaining cover crops without uprooting at the end of the cycle, and a diversity of perennial plants from different families; combining mycotrophic plant species such as the planting of legumes in intercrops, and the supply of organic matter such as mulch, compost or ramial chipped wood; and
  - b. consider the possibility of using micro-organisms to combat pests (naturally nematicidal micro-organisms, trichoderma fungi, *Beauveria bassiana*, etc.) rather than chemical means, where appropriate;
4. URGES States and communities to target and strengthen agricultural aid to encourage the adoption of such practices: payment for ecosystem services, subsidies for the purchase or planting of recommended species in nurseries, aid for trees planted or not destroyed, advice, subsidies for infrastructure linked to these practices (subsoiling, soil work services, etc.).