The Madrid Declaration

Flourishing Together:
Healthier Connections Between Plants and People for a Resilient Planet

"Plants are our past, present, and future.
They sustain life on Earth."

Introduction

Interactions between plants and people over millennia have profoundly shaped societies by providing essential services like food, medicine, clothing, building materials, and bioenergy. Nevertheless, much remains to be understood about plant relationships with other organisms and their roles in ecosystems. To address the biodiversity crisis, collaborations across science, technology, arts, humanities, and local and Indigenous communities are crucial. More than ever, we must leverage the power of plants through approaches that weave together different ways of knowing, doing, and being so we can better understand plant-human interactions, safeguard knowledge, and ensure that our planet remains diverse, healthy, and habitable for future generations.

The Madrid Call for Action

We propose ten strategic actions for plant scientists, botanical institutions, governments, the corporate sector, and civil society, aiming to address plant life degradation caused by human activities. These actions seek to strengthen the connection between plants and people, nurture mutual benefits, and enhance planetary health and resilience. The ten actions are the following:

1. Plant Diversity as the Foundation

Identifying and naming plant diversity is crucial for conservation, restoration, and the sustainable use of ecosystems. Knowing the organisms surrounding us provides perspective on the rich diversity and complexity of the natural world and helps shape our identity. Understanding plant diversity depends on herbaria and other well-curated natural history collections, where specimens provide historical records and the ultimate source of verification of individual species.

We call for improved support and recognition of the critical role of plant diversity studies, natural history collections, and botanical gardens.

2. Botanical Education at all Levels

Botanical education, both formal and informal, is essential from early childhood to adulthood to raise awareness of the importance of plants and equip new generations with fundamental knowledge of plant form and function. The World is changing rapidly, and understanding how plants grow, reproduce, adapt, interact with their environment, and contribute to human well-being is crucial to our ability to address the biodiversity crisis and ensure a sustainable future.

We call for increased emphasis on botanical education from early childhood through life-long learning.

3. Collaborative Transdisciplinary Approaches

Plants are vital to life on Earth and indispensable for human existence. Integrating local and Indigenous knowledge, arts, humanities, and diverse scientific approaches broaden our understanding of plants. Diverse perspectives are central to understanding and managing our interactions with the natural world and preserving the ecological and evolutionary processes sustaining plant diversity for the future.

We call for collaborative and transdisciplinary approaches to plant research, including local and Indigenous knowledge, the arts, humanities, and diverse scientific approaches.

4. Addressing Inequalities in the Plant Sciences

Plant sciences have evolved through complex and unequal ways, from colonial extractive practices to the constraints imposed by long-standing inequalities in science funding and infrastructure. To achieve equitable coexistence, it is essential to understand biases in biodiversity knowledge, address unequal relations, and remove barriers to access and benefit-sharing. Inclusive and collaborative partnerships with local scientists and diverse stakeholders are crucial for building trust, facilitating horizontal knowledge exchange, and ensuring fair distribution of benefits and resources.

We call for respectful, inclusive, and equitable approaches that benefit all stakeholders involved in research, policy formulation, and product development.

5. Recognizing Biocultural Diversity

Plant diversity is closely connected to cultural diversity. Traditional knowledge is central to plant knowledge and links the plant sciences with local and Indigenous communities. Biocultural diversity includes the connections between species, ecosystems, and cultures and is reflected in language, spiritual practices, medicinal uses, and food traditions. Recognizing and sustaining the cultural services provided by plants is essential for a healthy planet.

We call for improved recognition and support for biocultural diversity, including the co-production of knowledge.

6. Plant Diversity is Central to Ecosystem Protection and Restoration

Habitat loss and degradation threaten ecosystem integrity and increase the risk of extinction. Societal actions are urgently needed to safeguard natural systems, restore degraded habitats, protect biodiversity and species interactions, and sustain the ecological and evolutionary processes that maintain and generate biodiversity. A systemic transformation of global efforts is essential to prevent biotic homogenization and ensure ecosystem protection and restoration in ways that benefit all organisms.

We call for conservation and restoration strategies that prioritize plant diversity while protecting the functioning of ecosystems and landscapes.

7. Better Integration of Plant Knowledge into Policy

Pursuing short-term, narrowly focused policy goals undermines the societal resilience provided by plants and habitats. Deep knowledge of the functions and benefits provided by plants is essential for an improved understanding of the ecological impacts of land use, the importance of preserving native species, and the benefits of habitat restoration. Informed strategies that promote ecological balance, enhance ecosystem services, and ensure long-term environmental resilience require better integration of plant knowledge into policy.

We call for evidence-based decision-making, integrating botanical knowledge into sustainable long-term policy decisions.

8. Harnessing Nature-Based Solutions

Nature-based solutions can help address environmental, social, and economic challenges by enhancing biodiversity, improving water quality, and bolstering climate resilience. Restoring wetlands to mitigate flooding, reforesting areas to enhance carbon sequestration, and protecting coastal regions from extreme weather can help foster harmony between human development and the natural environment. Such strategies require a holistic understanding of ecosystems and a commitment to long-term ecological stewardship.

We call for increased nature-based solutions that maximize species diversity, increase resilience to climate change, enhance plant conservation, and encourage sustainable management and ecosystem restoration.

9. A Stronger Role of Plants in Achieving Sustainability and a Net Zero Economy

Plants play a crucial role in achieving sustainability and a net-zero economy due to their exceptional ability to sequester carbon, regulate climate, and support biodiversity. Prioritizing the conservation and restoration of forests, grasslands, and wetlands can enhance carbon sinks, reduce atmospheric CO2, and sustain global processes. Plants also provide renewable energy, improve soil health, and boost resilience to climate change. Transformative change is essential for a just and sustainable future for both plants and humanity.

We call for an increased recognition of the role of plants in achieving sustainability and establishing a net-zero economy.

10. Increasing Awareness of the Centrality of Plants for Planetary Health and Resilience

Plants have been the driving force for the evolution of biological diversity on Earth. They provide the air we breathe, the food we eat, the wood we use, and the many cultural services that are the building blocks of diverse human activities. Lifelong learnings that reinforce a deeper understanding of how plants impact our lives and those of other organisms are crucial for planetary health and resilience.

We call for increased awareness of the importance of plants for planetary health and resilience.