

## **A joint program on soil health for the Rio Conventions**

### **Proposal of the International Fertilizer Association**

**April 2025**

The **International Fertilizer Association (IFA)** is the only global fertilizer association of fertilizer producers, traders and distributors, as well as their associations, service providers to the industry, research organizations, agtech start-ups and non-governmental organizations, with around 500 members in some 80 countries. Its mission is to promote the efficient and responsible production, distribution and use of plant nutrients.

IFA is an accredited observer to the UN Convention on Biological Diversity since 2021, and welcomes the opportunity to submit its views to on options for enhanced policy coherence, including a potential joint work programme of the Rio Conventions, as per Decision decision 16/22. Its proposal to focus on soil health is based on the importance of this critical ecosystem for the achievement of each Convention's objectives.

#### **Soil health is directly relevant to the three Rio Conventions:**

- Soils are the most species-rich ecosystems worldwide<sup>1</sup> and **the largest reservoirs of biodiversity** on earth<sup>2</sup>.
- They are also the largest terrestrial pool of carbon, and according to the Intergovernmental Panel on Climate Change, represent 89% of **agriculture's future mitigation potential**<sup>3</sup>. The projected mitigation potential in agriculture via improved crop and livestock management is 1.8-5.5 Gigaton CO<sub>2</sub> (eq) per year in 2030, comparable to the mitigation potential of wind energy.<sup>4</sup>
- Healthy soils also play a crucial role in **preventing land degradation and desertification**. Their sustainable management can prevent erosion, salinization, compaction, acidification, loss of organic carbon and biodiversity.<sup>5</sup>

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<sup>1</sup> [https://phys.org/news/2023-08-two-thirds-world-biodiversity-soil.html#google\\_vignette](https://phys.org/news/2023-08-two-thirds-world-biodiversity-soil.html#google_vignette)

<sup>2</sup> <https://openknowledge.fao.org/server/api/core/bitstreams/9a5b9373-3558-43b3-b732-f69326a7314d/content>

<sup>3</sup> Smith et al, 2007. <http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-chapter8.pdf>

<sup>4</sup> [https://static1.squarespace.com/static/62333c8ff349d7ad5226804/t/63d2e4de37fe624d4cdc1af9/1674765536220/DRAFT\\_Soil+Health+Resolution\\_ENGLISH.pdf](https://static1.squarespace.com/static/62333c8ff349d7ad5226804/t/63d2e4de37fe624d4cdc1af9/1674765536220/DRAFT_Soil+Health+Resolution_ENGLISH.pdf)

<sup>5</sup> CA4SH Soil health Resolution.

As one-third of the Earth's surface is degrading, negatively impacting over 3.2 billion people, time is of the essence to protect and improve global soil health, while at the same time:

- Promoting sustainable agricultural production and increasing yields for a growing world population,
- Achieving universal food security,
- Supporting rural livelihoods and human well-being,
- Adapting to and mitigating climate change<sup>6</sup>.

### **Soil health in the Global Biodiversity Framework:**

Soil health plays a pivotal cross-cutting role and is directly relevant to several GBF Targets, including:

- **Target 1:** Plan and manage all areas to reduce biodiversity loss.
- **Target 2:** Restore 30% of all degraded ecosystems.
- **Target 3:** Conserve 30% of land, waters, and seas.
- **Target 7:** Reduce pollution to levels that are not harmful to biodiversity.
- **Target 8:** Minimize the impacts of climate change on biodiversity and build resilience.
- **Target 10:** Enhance biodiversity and sustainability in agriculture.
- **Target 11:** Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as regulation of air, water, and climate, **soil health**, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature. (Despite soil health being included in this Target's scope, soil metrics are omitted from its list of indicators, reducing its potential impact.)

Healthy soil is critical for carbon sequestration, water retention, increased fertility, and overall ecosystem stability, thereby supporting greater biodiversity and resilience to climate change. **Soils should therefore be at the forefront of the global climate, biodiversity and land management agendas.**

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<sup>6</sup> 2024. Coalition of Action for Soil Health (CA4SH) . Gamechangers for improving global soil health, <https://www.fertilizer.org/resource/gamechangers-for-improving-global-soil-health/>

**IFA proposes the following areas of joint work on soil health for the Rio Conventions:**

- **Encourage guidance to Parties** to effectively include soil health in their National Biodiversity Strategies and Action Plans (NBSAPs), Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) and national land management plans. Existing tools such as the [FAO Voluntary Guidelines for Sustainable Soil Management](#) or the [2023 FAO Technical Guidelines on Soils for Nutrition](#) provide concrete guidance on topics such as balanced fertilization, increasing soil organic matter, crop diversification, enhancing soil biodiversity, and can be leveraged further by the Conventions.
- **Organizing joint workshops** on soil health as the nexus between climate, biodiversity and desertification, would explore the cross-sectoral policy linkages between agriculture, climate and conservation practices.  
**Expert panels or interactive group sessions** could be envisaged, bringing in expertise from non-state actors, and strengthening public-private cooperation and knowledge. Topics such as [Gamechanging solutions for soil health](#) can also provide new approaches for policymakers to overcome barriers to the improvement of their soil,.