

Concept note

FAPESP-IAI

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The Amazon and tropical forests: its global implications and needed urgent actions

Environmental governance frameworks, such as the 17 Goals and 169 targets under the Sustainable Development Goals and the post 2020 Biodiversity Framework under the Convention on Biological Diversity, the United Nations Framework for Climate Change Convention, among others, provide the mechanisms and mandates for urgent action to meet the challenges posed by global environmental change. Among these frameworks, it is important also to note the WHO initiative “One Health”, which recognizes the fundamental relationship between the health of all living beings and the environment.

The Amazon region is awe inspiring. It represents one of the most biologically diverse regions in the world spanning approximately 67% of the planet's remaining tropical forests. It is responsible for 20% of the freshwater supply to the ocean, containing, in its aquatic and terrestrial ecosystems, one of the richest biological diversities on the planet. Additionally, 17% of the planet's photosynthesis takes place in the Amazon and stores approximately 120 billion tons of carbon, or the equivalent of ten years of all the world's burning of fossil fuels. The Amazonian region also stores about 120 billion tons of carbon, or the equivalent of ten years of all the world's burning of fossil fuels. It supports approximately 38.7 million people in the region and hosts 420 different indigenous peoples speaking 86 languages and 650 dialects.

Among changes that are detrimental to the Amazonian ecosystem includes climate change, deforestation, unregulated agriculture, illegal wildlife trade and destruction of indigenous communities whose survival depends on the resources under threat.

Threats to the services provided by this unique ecosystem are many, interconnected and urgent. Some services may include the amount of water vapor released into the atmosphere, affecting climate at the local, regional and global scales. Other immediate concerns include the release of new pathogens resulting from the destruction of the Amazon's biodiversity. Currently, thousands of potential pathogens, most still unknown and uncatalogued, may be released with the exponential increase of deforestation and systematic industrial scale destruction of the Amazonian ecosystem. Emerging diseases such as Zika, SARS- CoV-2, and the re-emergence of older diseases such as monkey pox are intertwined with the conservation and sustainable use of biodiversity.

The destruction of indigenous communities exacerbates the challenges and destroys invaluable traditional knowledge needed to better understand tropical forests in an integrated and holistic manner.

The integrated knowledge of the functioning of the Amazon region and its services—including the socio-economic and environmental processes—is necessary to identify and implement measures to sustain and conserve the livelihoods of communities in the region. It also brings to the fore questions related to environmental justice and meeting of recommendations under many environmental governance frameworks protecting the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity.

The possible results from this proposal will have relevance to other tropical areas and ecosystems, particularly in the Global South. Even more, understanding the relationship between human health and biodiversity loss compounded by climate change and land use changes is complex, and difficult to model. Activities under this proposal will meet these challenges with innovative design, transdisciplinary approaches and equitable participation. Capacity building initiatives will spearhead efforts to enhance institutional capacities at the local, municipal and state levels. It will also take into account issues related to the process underpinning science to policy.

This proposal aims to coordinate a number of innovative actions and projects supporting SDG 15, Life on land, and the objectives of the Convention on Biological Diversity and its sister conventions such as CITES, Convention on Migratory Species and Ramsar and the UNFCCC. It also nods to the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America. It will work with partners with knowledge and experience in the Amazon and tap into existing local scientific networks willing to lend expertise and knowledge.

Activities and projects will be proposed, designed and implemented collaboratively and focus on a transdisciplinary, participatory approach. Particular attention will be given to indigenous peoples and local communities and touch on urgent global environmental change issues including: The need for regional/global cooperation to address the challenges of the Amazon region, which spans multiple countries, and many different indigenous nations; More context/emphasis on social systems, cultural diversity, and indigenous/local peoples; -Illegal trafficking of wildlife; Issues related to human migration and illegal gold mining in the Amazon; -Issues related to wildfire, and its relation with emerging diseases and other related health effects; and, finally, efforts to compile and make interoperable and open data related to the Amazon. Actions to conserve and use sustainably the Amazon have global reverberations.

Initial partners to this proposal include FAPESP and the Inter-American Institute for Global Change Research (IAI). We invite Belmont Forum members to join us in this important and urgently needed initiative of global relevance. We also invite Belmont Forum members to consider the application of the principles of this proposal to other regions thereby expanding the project to a global scope.