



## *Coimbatore Declaration*

# **An urgent call for bridging of knowledge–action gaps in tropical conservation**

### BACKGROUND

Tropical ecosystems around the world hold much of Earth’s biodiversity, and support the lives and livelihoods of millions of people. Yet these systems are at risk from ad hoc land use change, unregulated extraction of natural resources, climate change, and other factors. A key impediment to successful conservation in the tropics has been the insufficient incorporation of scientific evidence into planning, action, and monitoring.

This gap is threefold: First, conservation science and associated skill development have long been geographically biased towards North America and Europe. Second, a significant knowledge–action gap persists, as does a lack of synergy between conservation scientists and practitioners from governmental and non-governmental organisations. Third, biodiversity conservation is not adequately integrated into developmental activities or human well-being policies, despite recognition of the links between nature conservation and human well-being.

India offers an ideal opportunity to bridge these gaps. India is home to rich biodiversity, supporting 4 out of 36 global Biodiversity Hotspots, alongside a population of 1.4 billion people and being an aspirational economy. India is a stronghold of species such as elephants and tigers that sometimes come into conflict with humans, with enormous implications for people and wildlife. More than 350 million people in India depend on forests and other natural ecosystems for their daily lives and livelihoods. There is also a rich and diverse culture across India with close links to nature and wildlife. India is one of the most vulnerable countries to climate change,



and the need for long-lasting, sustained, nature-based solutions for climate change mitigation is deeply felt.

We currently have great ability, opportunity, and need to ensure evidence-based planning and to incorporate science into our environmental and societal actions. We, the participants from more than 35 countries who attended the 59th Annual Meeting of the Association for Tropical Biology and Conservation, held at Coimbatore, India, between the 2nd and 6th of July 2023, with the focus of “Balancing Science, Conservation and Society,”

Recognise the importance of timely, transparent, and justifiable decision-making to solve complex, multifarious conservation problems, many of which are closely linked to human well-being;

Emphasize the consequences of ecologically uninformed progress for people and biodiversity. In India alone, there is mortality of endangered animals such as elephants due to linear infrastructure that crosses habitat corridors; biodiversity loss from rapid land use change; increased human–wildlife conflict due to fragmentation of nature; loss and degradation of open ecosystems; water stress due to destruction of watersheds; devastating changes to regional climate; and much more.

Identify knowledge–action gaps, which can be bridged by a further appreciation of ecological knowledge and conservation science, increased financial and institutional support for research on social-ecological systems, and better linking of conservation science, policy, and action; and urge for action, and declare the following as critically needed.

### **1. Increased support for generating knowledge on social-ecological systems in the tropics.**

We recommend increasing conservation science’s financial, institutional, and political support, including funding from government departments and schemes, corporate social responsibility,



philanthropy, and foundations. We hope India's new National Research Foundation will provide the necessary impetus for excellence in ecology and conservation science in this country, which is critical for ecosystem health and human well-being.

We suggest that dedicated programs be initiated, supported and sustained for studying endangered species and ecosystems, supporting nature conservation and recovery.

We call for an increased understanding of issues at the interface of people and biodiversity—for example, human–wildlife conflict and links between ecosystem health and human well-being—that are critical for nature conservation in India and other parts of the tropics.

We recommend support for long-term projects that enhance knowledge of terrestrial and marine tropical systems, biodiversity and ecosystem functioning, and their associated cultural diversity, as well as for more targeted research with tangible applications that address specific conservation problems.

We recommend supporting the diverse group of conservation scientists, including those from the humanities, whose work spans different fields, geographies, and taxa, and from governmental, academic, research, and non-governmental institutions.

## **2. Collaboration for knowledge transfer among scientists, practitioners, and decision-makers**

We recognise that representative collaborations can enhance knowledge transfer, skill development, and generation of new ideas. Simultaneously, such collaboration, when built on existing and emerging strengths from the Global South, can address problems of parachute science, emphasise traditional ecological knowledge, and shift systemic power dynamics in tropical biology and conservation.



As a global society, we will endeavour to support and nurture collaborations among tropical ecologists and conservationists from across the globe, focusing on building capacity in the tropics, reversing the impacts of parachute science, and spurring South–South collaborations. We will strengthen representation from the Global South in conservation science and action, encourage the participation of members from tropical countries in working groups and committees, and identify means to enhance these members’ skills and professional development, and their involvement in scientific and policy arenas (e.g., journal editorial boards, policy working groups, transboundary collaborations).

We recommend communication across administrative boundaries, such as across districts, states, and countries, and urge for transboundary collaborations, as ecosystem processes transcend these boundaries.

We recommend the organisation of collaborative workshops, conservation planning task forces, and policy working groups, among communities, conservation practitioners and scientists to facilitate dialogue and knowledge transfer for science-based solutions to conservation problems.

We recommend liaisons across agencies and institutions that can shape conservation and human well-being, spanning groups working on conservation, climate change, development, rural livelihoods and economies, and human well-being.

ATBC will contribute to strong links between global biodiversity conservation and climate adaptation strategies (e.g., Kunming-Montreal Global Biodiversity Framework, Nature-based solutions) to ensure that they are informed by science.



### **3. Achieving coupled goals of nature conservation and human well-being**

The interlinkages and dependencies between human and natural systems, and the coupled nature of ecological and societal goals, are increasingly recognised. This has led to increased efforts founded on this recognition, such as the transdisciplinary One Health approach.

ATBC emphasises the need to foreground ecosystem health as a core component of One Health and a major driver of human health and well-being.

We urge further research and action on nexus approaches that are built on interdependent human and natural systems, including the energy–human–water nexus and the restoration–livelihood–climate change nexus. We recommend that these draw from global models such as the International Union for Conservation of Nature’s Forest Landscape Restoration, and Connectivity Conservation, while adapting to local needs, context-specific knowledge and traditional nature governance systems.

We push for the decolonising of conservation and knowledge production, through enhanced collaborations that strengthen local capacity, conservation models that embrace the tapestry of the Global South, incorporation of traditional ecological knowledge, and the strengthening of cultural people–nature relationships.

### **4. Improved science communication, public engagement, and science-based conservation policy, planning, and action**

We push for increased science communication, and for institutions to value, support and incentivise conservation scientists to engage in science communication. ATBC will make concerted efforts to support our members to engage more widely and deeply in disseminating conservation science. As a global group, we will strive to produce resources that offer tangible and practical benefits for conservation decision-making, and policy crafting. We will encourage the implementation of conservation models and ideas that have emerged directly from the ATBC



2023 Conference, for example, a commitment to carbon offsetting from the conference and practical solutions applicable to connect people for a climate-resilient future in and around the Nilgiri Biosphere Reserve.

We underline transparent, independent, and scientifically robust monitoring of conservation action as a critical part of the conservation process.

We urge for public engagement as a critical and core process in conservation planning, decision-making and action.

We recommend encouragement and incentivisation of development and policy think tanks to consult conservation experts such that conservation, development and human well-being goals can be achieved simultaneously.