



# Foreword to the Special Issue on Access and Benefit Sharing and Biological Control Genetic Resources

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Invasive alien species are a major cause of biodiversity loss, and the Conference of the Parties to the Convention on Biological Diversity (CBD) has recognized that classical biological control can be an effective measure to manage already established invasive alien species, while also encouraging the use of the precautionary approach to minimize any potential direct or indirect risk to non-target organisms (United Nations Environment Programme, Secretariat of the Convention on Biological Diversity 2016). In 2020, the Secretariat of the CBD published its Technical Series 91, which provides detailed technical information on the application of classical biological control as well as common understanding to facilitate effective scientific and technical cooperation among countries interested in applying classical biological control against invasive alien species in broad sectors (Sheppard et al. 2019). These efforts, among others carried out under the CBD, have also emphasized the relevance of access and benefit-sharing (ABS) for research and development regarding biological control agents.

In December 2022, the international community adopted the Kunming-Montreal Global Biodiversity

Framework with the mission to take urgent action to halt and reverse biodiversity loss by 2030. Target 6 of the Framework aims to “Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50% by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands” (United Nations Environment Programme, Secretariat of the Convention on Biological Diversity 2022a). This global target, which includes a measurable component, represents a significant step-up from the ambition of the 2010 Aichi Biodiversity Target (Target 9) which provided that “By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.” (United Nations Environment Programme, Secretariat of the Convention on Biological Diversity 2020). The new target can help catalyze the urgent actions needed to address the impacts of invasive alien species in the coming decade, including through the use of biological control agents.

The Kunming-Montreal Global Biodiversity Framework also includes a long-term goal and an action-oriented target dedicated to the CBD’s third,

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and perhaps most elusive, objective on the fair and equitable sharing of benefits arising from the utilization of genetic resources. Goal C and target 13 of the Framework aim to increase the sharing of benefits arising from the utilization of genetic resources, traditional knowledge associated with genetic resources and digital sequence information on genetic resources. This global commitment brings a renewed attention to ABS as means of enhancing fairness, equity, and transparency in the utilization of genetic resources, whether in physical or digital form, as well as associated traditional knowledge.

In parallel to the Framework itself, Parties also adopted in December 2022 a landmark decision to establish a multilateral mechanism for benefit-sharing from the use of digital sequence information on genetic resources, including a fund, to be further developed and operationalized by 2024 (United Nations Environment Programme, Secretariat of the Convention on Biological Diversity 2022b). This agreement holds unique potential to generate additional resources for biodiversity and the indigenous peoples and local communities who depend upon it most.

The Framework and its accompanying decisions (United Nations Environment Programme, Secretariat of the Convention on Biological Diversity 2022c) will set us on a new path to actualize the vision of living in harmony with nature by 2050. It will also lead us towards the full and effective implementation of the Convention and its two Protocols, the Cartagena Protocol on Biosafety and the Nagoya Protocol on access and benefit-sharing.

At the time of writing, the Nagoya Protocol has been ratified by 139 Parties—representing 70% of the CBD constituency (United Nations Environment Programme, Secretariat of the Convention on Biological Diversity 2023a). Through its adoption, the global regime on ABS was consolidated with specific provisions on access to traditional knowledge associated with genetic resources held by indigenous peoples and local communities, compliance with domestic access requirements and mutually agreed terms, and monitoring utilization of genetic resources. The Nagoya Protocol also advanced “special considerations” for Parties to consider in the development of their ABS legislations. This included the need to promote and encourage research that contributes to the conservation and sustainable use of biological diversity, to pay

due regard to cases of present or imminent emergencies that threaten or damage human, animal or plant health, and to consider the importance of genetic resources for food and agriculture, including for food security (United Nations Environment Programme, Secretariat of the Convention on Biological Diversity 2011, Art. 8).

The Nagoya Protocol encourages the development and use of sectoral and cross-sectoral model contractual clauses for mutually agreed terms and codes of conduct, guidelines, and best practices and/or standards (United Nations Environment Programme, Secretariat of the Convention on Biological Diversity 2011, Art. 19–20). Organizations such as the International Organization for Biological Control (IOBC) play a vital role through the development of such tools, to help bring clarity and assistance to their members in complying with ABS requirements, including through standardized approaches based on sectoral best practices and lessons learned. Recent examples of these tools can be found on the Access and Benefit-sharing Clearing-House (United Nations Environment Programme, Secretariat of the Convention on Biological Diversity 2022d; 2023b). Beyond providing practical considerations around obtaining prior informed consent and establishing mutually agreed terms, these tools can also bring users of genetic resources to reflect on how they interact with resource providers and on how their activities can further benefit local communities and contribute to sustainable development.

In this issue, authors discuss implications and realities of national implementation of the Nagoya Protocol on biological control and raise important considerations for ABS policymakers. Facilitated access is weighed against taking due precaution and assessing risks, in view of maximizing global benefits. I welcome these efforts to increase awareness of ABS within the biological control community and help identify and address the sticking points in national implementation that we must continue to work on in the coming decade. While other intergovernmental processes seek to develop access and benefit-sharing mechanisms, we must continue to build bridges and strive for harmonized, mutually supportive implementation of the Nagoya Protocol and other relevant instruments, such as the International Treaty on Plant Genetic Resources for Food and Agriculture, at all levels. It is important that all stakeholders come to

the table and participate in this effort so that pragmatism, effectiveness, innovation and future proofing become characteristic of ABS interventions. I hope this special issue will encourage all relevant actors to join forces, expand their collaboration, and take urgent action to achieve both Targets 9 and 13 of the Kunming-Montreal Global Biodiversity Framework by 2030.

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#### Declarations

**Conflict of interest** The author declares that there are no conflicts of interest associated with this publication.

**Research involving human participants and/or animals** This article does not refer to any studies with human participants or animals (vertebrates) performed by the author.

**Informed consent** There are no requirements for informed consent associated with this publication.

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