Introduction

In upholding the Principle of the Universality of Science, ICSU promotes the equitable access of scientists to data, information and other resources for research. Equally important, scientists should conduct their work with integrity, respect, fairness, trustworthiness, and transparency, recognising its benefits and possible harms.

This Advisory Note is concerned with the freedom and responsibility of individual scientists and the world scientific community with respect to access to genetic resources and sharing of benefits arising from their use, as described in the Convention on Biological Diversity (CBD, 1992). This note supports other endeavours and initiatives to this effect. Because scientists must be able to work without unnecessary impediments, a balance must be struck between the important question of responsibility and the global issue of equity. At the same time, overly restrictive procedures might create research constraints.

Although the Principle of Universality is not restricted to publicly funded research, this note concerns, primarily, research with non-commercial purposes. CFRS recognises, however, that the connection between private sector and academic non-commercial research is blurred. CFRS therefore proposes further discussion, including measures for ensuring equitable sharing of the benefits of commercial development of such research with providing countries.

Setting the context

Biodiversity research generates knowledge needed to attain the first two CBD objectives, namely, the conservation and sustainable use of biological diversity. Academic non-commercial research depends on access to biological and other genetic resources in-situ and ex-situ and their exchange within the research community. Such research, however, is also subject to the Access and Benefit Sharing (ABS) system, established to achieve the third CBD objective, that is, the fair and equitable sharing of benefits arising from the use of genetic resources, with the parties providing these resources. Because access to genetic resources is needed, in large part, for academic, non-commercial research, the scientific community is an important player.

The ABS system is based on the sovereignty of states over their genetic resources, with implementation at the national level. The CBD provides a procedural framework, consisting of the consent of the provider prior to access, based on user information (Prior Informed Consent, PIC) and contractual definition of details such as monitoring, reporting and modalities for sharing benefits by provider and user (Mutually Agreed Terms, MAT). As a further element, providers are required to create conditions to facilitate access to genetic resources, which is balanced by the obligation of user countries to monitor the sharing of benefits arising from the use of genetic resources.

Nevertheless, the implementation of the system triggered concerns of both providers and users. For the countries providing genetic resources, it is difficult to control their use, including for commercial purposes, once they have left the country, and a number of countries therefore imposed restrictive ABS procedures. This reaction, in turn, raised concerns among
the scientific community that academic non-commercial research would become increasingly difficult, if not impossible, to undertake.

In 2010, the CBD Parties adopted the “Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity”. It spells out in more detail the rights and obligations regarding the ABS system. Implementation of the Protocol is planned for 2012.

Scientists are important players in the implementation processes underway at the international and the national levels, because a major part of ABS access applications concerns academic non-commercial research. To realise its rights and responsibilities, the scientific community must participate in shaping future biodiversity research conditions.

**Rights and responsibilities in the ABS system**

*Create mutual trust*

Respect, transparency, cooperation and mutual trust are essential elements in ABS relations. Users of genetic resources, such as individual scientists and research institutions, should therefore scrupulously apply for Prior Informed Consent and, together with repositories, and *ex-situ* collections, fulfil the Mutually Agreed Terms as well as monitor location and use of genetic resources during and after research. Research funding institutions worldwide should require that project applications with ABS elements include proof of compliance with the ABS system. Individual scientists should make possible short- and long-term non-monetary and/or monetary benefits of their research on genetic resources, including their possible potential for commercial development, transparent to the providing countries. Attention to these issues, and those in the following paragraph, will foster openness between researchers and the countries they are working in, and will reduce the motivation for protective barriers that impede research.

*Share the benefits*

ICSU Statute 5 states that the freedom of scientists to conduct research should be balanced by the responsibility to recognise its benefits and possible harms. Article 8b of the Nagoya Protocol calls for “fair and equitable sharing of benefits”. CFRS considers that proactive measures are necessary to achieve this goal. Particular care should be taken by researchers from high income countries visiting low income countries who transfer research findings to companies for development. Such development is desirable for the production of valuable medicines and other products, but if these products are beyond the means of providing (and other developing) countries, there is understandable friction. CFRS considers that licensing arrangements should mandate affordability of products to low-income countries. Model agreements and contractual clauses that move in this direction are available at www.cbd.int/abs/resources/contracts.shtml.

*Develop fair and effective regulatory measures*

Academic stakeholders should seek cooperation with national governments to devise ABS regulatory measures adapted to the needs of academic non-commercial research. National ABS regulatory requirements should be fair, effective and not overly burdensome for researchers, and yet allow monitoring of the flow of genetic resources. They should further implement article 8(a) of the Nagoya Protocol, namely to “create conditions to promote and encourage research, which contributes to the conservation and sustainable use of biological diversity, particularly in developing countries”. Just as important is the development of regulations for equitable sharing of the benefits of commercial development of such research, as outlined in articles 8(b) and 8(c) of the Nagoya protocol.

*Mitigate the biodiversity crisis*

Scientific organisations should point out to national governments that an overly restrictive implementation of the ABS system could ultimately lead to the abandonment of academic non-commercial research and delay or prevent obtaining knowledge urgently needed for the conservation and sustainable use of biological diversity. In addition, individual scientists and scientific organisations need to explain the biodiversity crisis more clearly to political stakeholders and to the general public.
Raise awareness
National and international scientific organisations should engage in awareness raising to increase knowledge about the ABS system, and about rights and responsibilities it implies among academic stakeholders and relevant government agencies handling ABS issues at the national level.

Build capacity
Scientific institutions and other organisations worldwide should support capacity-building measures to increase expertise of relevant institutions to distinguish between commercial and non-commercial ABS proposals being submitted to National Focal Points. In this regard, building networks among countries providing genetic resources may be particularly valuable.

Engage in global negotiations
International scientific organisations should implement the Nagoya Protocol at the global level, contribute to shaping the ABS system, and represent the voice of science.

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1 This Advisory Note is the responsibility of the CFRS, which is a policy committee of the International Council for Science (ICSU). It does not necessarily reflect the views of individual ICSU Member organisations.

2 This Advisory Note was informed by presentations and the discussion at the International Workshop “Access to Genetic Resources and the Sharing of Benefits Arising from Their Utilization (ABS)” on 27 May 2011 in Berne, Switzerland, organised by the Swiss Academy of Sciences (SCNAT) in cooperation with the ICSU CFRS.