

Malaysia's Approach to Access and Benefit Sharing

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1.0 Introduction

Malaysia is one of the world's twelve mega-diversity countries. It is extremely rich in biological resources. Tropical forests cover much of the country and are amongst the most biologically diverse ecosystem on Earth. There are over fifteen thousand known species of flowering plants, two hundred and eighty-six species of mammals, one hundred and fifty thousand invertebrate species, twelve hundred butterfly species, twelve thousand moth species and over eight thousand species of marine fish in Malaysia's varied ecosystems.

Biological diversity plays a very important role in our lives. The interaction of species within highly diverse ecosystems performs ecological functions that are extremely important to many human activities. Ecosystems function to maintain hydrological cycles, regulate climate and recycle essential nutrients in the soil to maintain its fertility. They also absorb and break down pollutants.

The intricate interdependence between bats, mangrove trees and the production of durians (*Durio zibethinus* Murr.) highlights the complex relationships between species, habitats and ecosystems. In fruit production, durian flowers are pollinated by fruit bats (*Eonycteris spelaea*). The bats feed on the nectar of durian flowers during the season. They travel over fifty kilometres per night from their roosts to feed, but feed on the nectar of mangrove trees (*Sonneratia alba*) during the interim months.

Malaysia's phenomenal economic growth is largely due to its success in moving from a commodity-based and agricultural economy to a competitive manufacturing economy. It has diversified into resource processing, high technology and export industries. Before the currency turmoil, which battered many of the Asian economies, particularly the ASEAN nations, Malaysia was one of the fastest growing economies in the world. It still has goals of economic growth of eight percent per annum during the next two decades. Without careful management, economic growth of this magnitude may seriously affect the environment. Natural resources may be depleted. Pollution may increase. Hazardous materials from households may increase. Industry, transportation and energy production may also increase.

Development activities in the various economic sectors, therefore, could have profound impacts on biological diversity. Invaluable biological resources not yet documented could be lost from continuing habitat loss. Loss of biological diversity would include loss of species together with their economic potential to be developed into useful products. There is also the important need for the country to protect its natural resources not only to promote and sustain tourism, but also to bank on their intrinsic values and tap the increasing growth in the eco-tourism market.

Malaysia is aware of the situation and has the resources to counterbalance any detrimental development. To meet the future environmental challenges, new technologies are being introduced and environmental education is being strengthened. Environmental awareness is also growing rapidly, particularly as a result of the unprecedented recent experience with the El' Nino-triggered haze which perilously engulfed Malaysia and other countries in the region. Given these scenarios, Malaysia will continue to strive to be a key player on the international scene.

2.0 Ratification of the Convention on Biological Diversity

Malaysia is a signatory to the Convention on Biological Diversity (CBD) which was opened for signature at the United Nations Conference on Environment & Development (UNCED) in Rio de Janeiro in 1992. The Convention entered into force on 29 December 1993. It is one of the most significant and far-reaching environmental treaties ever developed. Malaysia signed the treaty at the Earth Summit and ratified it on 24 June 1994. It was the 65th country to do so. At the national level, Malaysia's efforts to implement the CBD are co-ordinated by the National Committee on Biological Diversity and led by the Ministry of Science, Technology and the Environment (MOSTE).

Much of the country's biological diversity has yet to be investigated and documented. Our efforts to better utilise biological diversity are impeded by the lack of data. Furthermore, very little information currently exists on the extent of bioprospecting in the country.

Biological diversity has important economic, technological and social implications for the country. Economic benefits, food security, environmental stability, national biological heritage, scientific, educational and recreational values and biosafety are all particularly significant.

Having ratified the Convention, Malaysia is working towards incorporating into its national policy the treaty's set of commitments. The Convention reaffirms the sovereign rights of the States over their biological resources and their responsibility for conserving their biological diversity and utilising biological resources in a sustainable manner.

Few measures currently exist in Malaysia to control access to biological resources, and no comprehensive strategy is yet in place to implement the provisions of CBD Article 15 on biodiversity commercialisation, access to genetic resources or benefit sharing.

3.0 Workshop on Access and Benefit Sharing of Genetic Resources: International Imperatives and National Needs

The Workshop on Access and Benefit Sharing of Genetic Resources: International Imperatives and National Needs was convened in August 1997. It was jointly organised by the Genetics Society of Malaysia and Universiti Kebangsaan Malaysia on behalf of the National Committee on Biological Diversity, and also the Task Force on Access to Genetic Materials in Malaysia, in collaboration with the World Resources Institute (WRI). The objectives of the workshop were (1) to formulate national responses to CBD Articles 15, 16 and 19; (2) to review existing national legislation with respect to access and benefit sharing; and (3) to review current initiatives in neighbouring countries and other regions of the world while assessing the existing international situation on genetic resources utilisation.

The workshop participants included representatives from government agencies, universities and NGOs. Representatives from the WRI, IUCN Environmental Law Centre and the Royal Botanic Gardens, Kew also attended the workshop as resource persons. The workshop was as an awareness-raising consultative process involving the various stakeholders at the national level. Recommendations for developing the legal and institutional framework for access and benefit sharing in Malaysia were discussed and are summarised in Box 6.

BOX 6: Workshop on Access and Benefit Sharing of Genetic Resources: Recommendations

In the workshop, three issues were identified as deserving attention, namely:

- Assessing comprehensively needs and opportunities;
- Identifying options for access and benefit sharing legislation; and
- Reviewing a model agreement for biodiversity prospecting.

Assessment of needs and opportunities

The workshop agreed that there was a need to assess comprehensively the current situation in the country with regard to access and benefit sharing initiatives. The objective of such a measure would be to assess the needs, opportunities, resources and capacities in the country. The assessment could comprise surveys and consultations to (1) identify needs and priorities, (2) survey industry demand, (3) identify market opportunities and (4) document biodiversity prospecting activities. An assessment would also create awareness on issues relating to biodiversity prospecting, access and benefit sharing. The assessment's findings would then form the basis upon which a national strategy for biodiversity prospecting could be formulated.

Access and benefit sharing legislation

The primary concern on legislation relating to access and benefit sharing was the federal-state system in Malaysia. The constitutional dichotomy raises the issue of legislative competence over genetic resources. The workshop agreed that the constitutional issues should be examined further to explore the possibility for new legislation. In this context, the workshop identified a number of options that could be considered:

- Amending existing sectoral legislation;
- Enacting a national (Federal) framework law applicable to Peninsular Malaysia;
- Enacting a national (Federal) framework law applicable to the whole of Malaysia;
- Amending existing sectoral legislation and enacting a separate law to address the gaps or loopholes; or
- Enacting model state legislation for the individual states to adopt.

The workshop also discussed the elements which should be included in legislation for access and benefit sharing, inter alia, a definition of genetic/biological resources, the problem of administrative authority, enforcement issues and constitutional issues.

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BOX 6: Workshop on Access and Benefit Sharing of Genetic Resources: Recommendations

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A model agreement for biodiversity prospecting

The workshop agreed that a model agreement would be an important element within the framework for regulating biodiversity-prospecting activities. It will ensure minimum standards and facilitate benefit sharing arrangements. Legislation may be able to provide minimum standards, but a further set of standards could be incorporated into biodiversity-prospecting agreements. As for benefit sharing, whilst the general character of benefits can be specified in legislation, specific agreements can spell out the detailed list of benefits and other operational aspects. It was also agreed that whilst a model agreement would provide a useful basis for negotiations, it should not be looked upon as a rigid prescription but rather as a checklist of items for consideration. With these points in mind, the workshop reviewed the provisions of the draft Access Agreement for Research, Collection and Utilisation of Biological/Genetic Resources for Environmentally Sound Uses (drafted by the Attorney General's Chambers). A list of provisions to be reconsidered was compiled and would be forwarded to the Attorney General's Chambers for their action.

3.1 Assessment of biological diversity in Malaysia

A country study was commissioned by MOSTE to record the current status of biodiversity conservation and its utilisation. This study was also commissioned to address and recognise the current threats to biodiversity, how the country benefits from biodiversity and to act as a guide for policy and decision-makers. A Task Force, jointly co-ordinated by Universiti Kebangsaan Malaysia (UKM) and the Forest Research Institute of Malaysia (FRIM), which reports to the National Technical Committee on Biological Diversity, was responsible for overseeing the country study. It included representatives from various governmental agencies, institutions and NGOs.

The study was carried out between June 1995 and August 1996. It covered four major components. These were sub-contracted to local organisations, namely the Institute of Strategic and International Studies (ISIS), Malayan Nature Society (MNS), Universiti Putra Malaysia (UPM) and the World Wide Fund for Nature Malaysia (WWF). The study is now complete. The findings are being compiled and will be entitled "Assessment of Biological Diversity in Malaysia".

3.2 National policy on biological diversity

The National Policy on Biological Diversity is being formulated as an outcome of the country study. It is presently being refined. Preparations are being made for its launching before the middle of 1998. The National Policy has three basic components, namely: (1) Malaysia's policy, (2) its strategies and (3) its action plan of programmes.

The "policy component" comprises Malaysia's vision statement, policy statement, principles and objectives. It has been premised on the basis of economic benefits, food security, environmental stability, national biological heritage, scientific, educational and recreational values, and biosafety.

The "strategies component" addresses the status of biodiversity conservation and management in Malaysia. It has an overview section and additional sections on in situ conservation, ex situ conservation, sectoral policies, the legislative framework, international co-operation and linkages. Strategies to effectively manage biological diversity are proposed.

Fifteen strategies vis-à-vis action plans make up the "action plan of programmes component".

4.0 Genetic Resources and Benefit Sharing

The CBD establishes conditions for "countries of origin" to capture the economic benefits of genetic resources and to channel the benefits towards biodiversity conservation efforts.

There is already some commercialisation of biological diversity under way in Malaysia. The country's rich biological diversity is a huge potential economic resource given the current demand for raw genetic materials. Malaysia's rich marine and terrestrial biological resources offer countless opportunities for biotechnology. Biotechnology will be used to capitalise on previously unexploited sources for food and will lead to the development of new technologies.

Perhaps the biggest potential of our genetic resources is their potential to provide new sources of medicinal products. Tropical forests contribute twenty-five percent of the world's medicinal products and nearly half of the currently used plant-derived prescription drugs. Indigenous and traditional knowledge is very much associated with this since the majority of the Malaysia's rural and ethnic peoples still rely on traditional medicines derived from wild products. Tropical

plants produce a great variety of phyto-chemicals or secondary metabolites. These are important products from which pharmaceuticals, natural pesticides and herbal medicines can be synthesised.

Quinine, used in the treatment of malaria, and the rosy periwinkle (*Catharanthus roseus*), used to treat leukaemia, are examples of drugs derived from tropical plants. Extracts obtained from the bintangor tree in Sarawak contain an active component against the HIV virus. Another example is the Akar Susun Kelapa (*Tabernaemontana divaricata*), whose cancer-fighting properties have been confirmed by scientific studies. The native peoples have commonly used the latter for decades. Lichens are being studied for their potential antibacterial and cytotoxic properties. Pharmaceutical products are also developed from various marine organisms.

4.1 Legal status and ownership of genetic resources in Malaysia

A federal-state jurisdictional dichotomy complicates the question of rights to access within the Malaysia. Although state governments govern land and natural resources, only the Federal Government has the authority to enter into an international agreement. Problems in implementing national policies and international commitments result from this division of responsibilities.

Each of Malaysia's thirteen states has its own respective legislature. State law-making powers are defined by the Federal Constitution via the Federal, State and Concurrent Lists (i.e., competency is shared). Biological diversity per se is not enumerated on any of these three lists, but aspects of it (e.g., forests, fisheries and wildlife) are scattered between the various competencies. As a general rule, matters that concern land and natural resources, such as forests and water, are on the State List. Consequently, they come under the exclusive jurisdiction of the States. However, others do not. Fisheries appear on the Federal List. Wildlife protection appears on the Concurrent List. It is this division of legal status and jurisdictional competency that complicates the process of implementing CBD Article 15.

In Malaysia, the Constitution allocates to the thirteen states ownership of land and any minerals on or within it. More complex is the situation regarding what inhabits the land.

For example, Sabah and Sarawak have a different constitutional status vis-à-vis the Federal Government. Prior to joining the Federation, they signed a 20-point agreement with the Federation of Malaysia that guaranteed them special rights.

Sabah and Sarawak are excluded from national plans for land use, local government and development. As a result, the native peoples in Sabah have been accorded certain special legal rights over land.

Sabah's land law, enacted under the Sabah Land Ordinance, permits native customary rights over certain lands to indigenous peoples. The Sabah Land Law recognises special classes of land rights, namely, native title to land and native reserves, which are applicable only to the natives. The situation is different in Peninsular Malaysia where the indigenous communities are not accorded customary rights over land even though for long periods of time the land may have been occupied and cultivated.

The constitutional situation in Malaysia prevents the legal implementation of a general and all-encompassing Act governing all sectors of genetic resources. Indeed, it would be very difficult for a nationally administered scheme to cover all of Malaysia's biodiversity. The Federal Government does not have the legal competency to do so. However, the Constitution does allow the Federal Government to take a co-ordinating role.

For example, the Federal Government can legislate to (1) fulfil obligations under international treaties, and (2) to promote uniformity of the laws of two or more states (although for such a law to become operational the states must adopt their own implementing legislation). Consequently, it should be possible constitutionally for the Federal Parliament to adopt legislation to introduce framework provisions on access and benefit sharing because (1) access and benefit sharing is an obligation of the CBD, an international convention to which Malaysia is a party, and (2) there is a need for uniform application in all States.

The legislation could outline a national scheme that involves the full participation of federal and state authorities. The legislation may:

- identify competent authorities at the state level;
- establish a national co-ordinating body to, among other things, act as a broker for access requests and ensure uniformity of applications; and
- establish a decentralised benefit sharing scheme that would devolve decision-making "to the most appropriate level".

Adopting a framework act could be a long and time-consuming process, but this would depend on the legislation's scope and the level of support from the states. Such framework legislation could also serve a useful purpose in clarifying the legal status of biological diversity vis-à-vis the federal and state powers.

4.2 Benefit sharing

The CBD's idea of fair and equitable sharing of benefits from the commercialisation of genetic resources is based on the principle of reciprocity. The CBD has developed compensation and technology transfer models as entitlements for the countries of origin in exchange for providing biological resources. However, the question of fair and equitable distribution of benefits has yet to be addressed in the Malaysian context.

5.0 Traditional Knowledge and Benefit Sharing

The CBD recognises the importance of indigenous and local communities in developing, conserving and using biological resources in a sustainable manner for millennia. Several of the CBD's provisions stress the right for these communities to share the benefits derived from ideas and innovations they have developed.

Benefit sharing in the context of indigenous and local communities should recognise the communities' knowledge of biological resources and allow adequate compensation when that knowledge is applied. There is also the question of traditional resource rights that the indigenous and local communities should be able to assert to control access to biological resources and their traditional knowledge. There are many more unresolved questions. For example, should benefits be divided among the community, or should they be given solely to the individual who provided the knowledge or shared among the individuals who claim to have similar knowledge? What should be the appropriate form the benefits take?

The CBD Secretariat convened a meeting in Madrid in November 1997 on these and other subjects related to the implementation of CBD Article 8(j). The Madrid meeting was the first inter-governmental process to further develop Article 8(j). However, Malaysia was not represented at that important meeting.

6.0 National Access and Benefit Sharing Planning

6.1 National approach to access and benefit sharing

No legislation specific to access and benefit sharing is currently in place in Malaysia. Some national access controls are in place for foreign researchers but they pre-date the CBD. No new specific national legislation is currently planned. Instead, another approach is being developed. It is premised on five elements comprising: (1) an access licensing scheme, (2) an access agreement, (3) revised

government research guidelines, (4) a co-ordinating body and (5) amendments to existing intellectual property law.

An Access Licensing Scheme may be introduced by amending three existing pieces of legislation: the National Forestry Act (1984), the Protection of Wildlife Act (1972) and the Fisheries Act (1985). These three Acts form the main body of legislation directly relating to biodiversity conservation and protection in Peninsular Malaysia. Sabah and Sarawak have their own laws on forestry and wildlife protection. All foreign researchers will be required to obtain a license prior to carrying out any activities that involve access to genetic resources.

Under the Access Licensing Scheme those parties that seek access to genetic resources will be required to enter into an access agreement with the Malaysian Government. The Task Force on Access to Genetic Materials is developing a model agreement. This will be annexed to the amended legislation.

The Government Guidelines on Research Activities are currently being reformulated to take into account current developments on access to genetic resources. The Guidelines will have no legal standing. Further “policy directives” are required to establish the relationship between the Guidelines and the proposed legal requirements.

A co-ordinating mechanism will be established to “ensure that requirements are streamlined and are consistent with its original objectives to protect Malaysia’s interests with respect to access to genetic resources” under the Convention.

It was determined that the provisions of the Patents Act (1983) are insufficient to protect Malaysia’s interest under Article 16 of the CBD and a sui generis system of intellectual property rights (IPRs) is recommended and further study should be conducted to this effect.

6.2 Model agreements for biodiversity prospecting

6.2.1 Access agreement for research, collection and utilisation of biological/genetic resources for environmentally sound uses

The Attorney General’s Chambers began work on a model collector’s agreement in the absence of specific legislation or a process to address the issue of bioprospecting. The Malaysian Government and prospective collectors would sign this. The original contract drawn-up and negotiated between the Government and a foreign company was the basis for the draft agreement. The main elements of the draft model agreement are: (1) access to genetic resources, (2) prior

informed consent (PIC), (3) benefit sharing, (4) intellectual property rights, and (5) sustainable use of biodiversity. These are summarised below.

Regarding access to genetic resources, the draft agreement states that collecting activities must be limited to clear biological and geographical boundaries defined by the Government.

Prior informed consent can be inferred from the agreement's clauses. These require the collecting party to provide clearly and precisely information on the scope of work. A reporting mechanism is defined within the agreement to allow the Government to monitor the activities of the collector. In addition, there is a term related to informing and notifying local and indigenous communities. How this is to be accomplished is not elaborated upon.

The agreement's provisions on benefit sharing address benefits to indigenous and local communities, local collaboration and monetary gains.

Where research, collecting or prospecting are undertaken jointly with the Government, IPRs applicable to any findings, results, products and/or technology shall be equally shared. IPRs shall be in the joint name of the parties. Likewise the arising benefits or profits shall be equally shared unless otherwise agreed. In instances where activities are not undertaken jointly, the collector may own the IPRs. However, this would be subject to the Government's right to take measures to ensure the results of research and development and other benefits are shared fairly and equitably.

Regarding sustainable use of biodiversity, the agreement requires a collecting party's activities to be sustainable. In other words, only a specified amount of a specimen can be harvested.

6.2.2 Procedure for conducting research by foreign researchers

A minimum list procedure is already in place to control access to genetic resources by foreign nationals. The Economic Planning Unit, located within the Prime Minister's Department, administers the scheme. Foreign researchers intending to conduct research in the country should obtain permission from the Government of Malaysia to do so. They need to obtain the necessary visa for conducting research.

6.3 Implementing authorities and initiatives at state level

The relevant sectoral authorities will administer and implement the proposed access-licensing scheme. These include the state forest departments, the national Department for Wildlife and National Parks and the national Fisheries Department. Therefore, responsibility rests with both national and state administrations. A co-ordinating body or national focal point is needed. No body exists presently to ensure consistency in decision making, to monitor implementation, to assess progress and to act as a national focal point while providing recommendations on how the scheme could be improved in the future.

Little information exists currently on the thirteen states' positions on the issue of access to genetic resources. So far, none of the Peninsular Malaysia states have adopted unilateral measures, but initiatives are being developed in both Sabah and Sarawak. Some of Malaysia's richest biodiversity is found in these two states. They are places where indigenous communities still depend upon biodiversity for their survival.

In April 1994, Sarawak amended its Forests Ordinance to incorporate new controls on access to genetic resources. The new provisions require any person wishing to remove or export trees (or any of their derivatives) to acquire prior authorisation from the Director of Forests on the approval of the Minister if they intend to conduct research into pharmaceutical or medicinal compounds. The legislation's coverage is limited to "trees." As such, its main limitation is that it does not cover other biological diversity found in forest or other habitats.

In Sabah, the "Guidelines for Plant Specimen/Botanical Collecting" apply specifically to collecting from areas under the Forestry Department's jurisdiction or where special requirements necessitate Forestry Department approval. In such cases, permission from the Sabah Director of Forestry is required prior to collecting. Collectors are required to lodge a good duplicate of any collection with the Forestry Department within thirty days. When the fieldwork is finished, collectors must submit a field report listing plants collected and their numbers.

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