

Bhutan's National Access and Benefit Sharing (ABS) Policy

1) Vision:

The conservation and sustainable use of Bhutan's biodiversity through securing the economic, social and spiritual wellbeing of the Bhutanese people.

The vision for Bhutan's National ABS policy is one that is in harmony with Bhutan's larger vision of Gross National Happiness (GNH). The vision establishes an integral link between Bhutan's biodiversity and the wellbeing of the Bhutanese people. The vision emphasizes that the Bhutanese people have strong spiritual and cultural bonds with Nature and hold Bhutan's biodiversity in trust for the benefit of the planet and the current and future generations. The vision further recognizes that the fair and equitable sharing of the economic benefits generated from the utilization of biological diversity with its local custodians and the Bhutanese people as a whole, will incentivize sustainable use and lead to the fulfillment of the conservation mandate of the Constitution of Bhutan.

2) Scope:

The National ABS policy covers the utilization of Bhutanese genetic resources and traditional knowledge associated with biological resources when used for commercial and/or research purposes.

This policy excludes biological resources when traded and used as commodities. If biological resources traded as commodities are later used as genetic resources for commercial and/or research purposes, such use shall be covered by the scope of this policy.

This policy further excludes the use, sharing and exchange of traditional knowledge associated with biological resources within and between local communities. If such knowledge is used beyond its traditional context for commercial and/or research purposes, such use shall be covered by the scope of this policy.

3) Objectives:

a) To augment and secure the economic value of Bhutan's biodiversity for the purposes of its conservation and sustainable use.

The main objectives of both the Convention on Biological Diversity (CBD) and the Nagoya Protocol on Access and Benefit Sharing (Nagoya Protocol) are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of benefits arising from the use of biological diversity.¹

Article 5.3 of the Constitution of the Kingdom of Bhutan requires the government to ensure that a minimum of sixty percent of Bhutan's total land shall be maintained under forest cover for all time. However in order to realize this constitutional mandate, Bhutan should be able to ensure the economic wellbeing of its growing population from these forests. As 'The National Environment Strategy of Bhutan' (The Middle Path) of 1998 notes in its Special Focus on 'Resource- Based Mechanisms for Financing Sustainability' that:

Eventually, Bhutan will want to move from being a passive conserver of genetic resources to an active partner in their commercial utilization and international promotion. The hope is to someday develop the technical and legal capacity to undertake the sophisticated genetic research and international negotiations involved in germ plasm development and gene patenting. In addition to its current small-scale commercial activities in medicinal plants herbs and decorative flora, Bhutan would like to develop its

¹ Article 1 of the Convention on Biological Diversity states that: "The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding." Article 1 of the Nagoya Protocol states that: The objective of this Protocol is the fair and equitable sharing of the benefits arising from the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components.

own pharmaceutical industry so that it can take proper advantage of its own immense biological storehouses.²

Bhutan's Vision 2020 (Bhutan 2020: A Vision for Peace, Prosperity and Happiness) however notes that danger in perceiving the environment as purely economic resources by stating:

It may be a shorter step than we might care to imagine from seeing ourselves as a part of a living world to seeing it as a source of wealth and as a resource base to be exploited for immediate gain- a step that would undermine the whole ethos and ethics of conservation. We must be ever conscious of this danger. It can only be addressed by deliberate efforts to keep alive traditional attitudes and values. This establishes a clear link between environmental conservation and the conservation of our cultural heritage.³

Nevertheless Bhutan's Vision 2020 concludes that its vision for the year 2020 regarding its environment will be one where:

Our (Bhutan's) approach to environmental conservation will not be a static one. It will be given a dynamic and development oriented interpretation in which natural resources are not only seen as something to be preserved but also as a development asset that can, with care and wisdom, contribute to the process of sustainable social and economic development. This interpretation ...two decades hence will have provided the basis for new economic activities that will not only provide an important source of export revenues and high quality employment but also place our nation in the vanguard of technological advances for the benefit of humankind.⁴

Bhutan's values therefore emphasize the inherent value of biodiversity while at the same time seeking to ensure that the Bhutanese people economically benefit from their efforts

² Special Focus C: Resource-Based Mechanisms for Financing Sustainability, in *The Middle Path: The National Environment Strategy of Bhutan*, National Environment Commission, Royal Government of Bhutan, 1998, p.59

³ "Environmentally Sustainable Development," in *Bhutan 2020: A Vision for Peace, Prosperity and Happiness*, Planning Commission, The Royal Government of Bhutan, 1999, p. 62

⁴ *ibid*, p. 74

towards its conservation and sustainable use. Building on these foundations the current objective of Bhutan's National ABS Policy seeks to make a strong link between ensuring economic benefits for the Bhutanese people and the conservation and sustainable use of its biodiversity. While environmental conservation is one of the key principles of the concept of GNH, it is critical to ensure that such conservation leads to economic development, thereby transforming Bhutan's biodiversity into a development asset.

b) To ensure the integral link between conservation and sustainable use of Bhutan's biodiversity and the livelihoods of its peoples.

Bhutan's Biodiversity Action Plan of 2009 notes that despite Bhutan's GDP averaging seven percent per year since the 1980s there exists a high level of poverty. The Biodiversity Action Plan identifies this poverty as a relative poverty, which is distinguished from abject poverty or destitution and is primarily related to Bhutan's harsh terrain, small and scattered population, subsistence way of life, a young private sector and limited infrastructure. Bhutan's Living Standards Survey 2007 established the poverty line at Nu.1096.94 per person per month and estimated that 23.2 percent of Bhutan's population lives below the poverty line with 30.9 percent of those living under the poverty line being the rural population compared with 1.7 percent of the urban population. The Biodiversity Action Plan underscores that poverty can be both the cause and effect of environmental degradation and impoverished communities are likely to engage in activities that negatively impact biodiversity if not provided with sufficient income generating opportunities.⁵

Confronted with this reality Objective 5 of Bhutan's Biodiversity Action Plan of 2009 requires the '*use of biodiversity resources as a development capital for national economic growth but within the limits of environmental sustainability*'. Under this objective, the Biodiversity Action Plan encourages the 'bioprospecting' of Bhutan's rich genetic resources and associated traditional knowledge as a way of integrating biodiversity conservation and economic development objectives. Nevertheless the Biodiversity Action Plan notes that little has been done to further bioprospecting due to a lack of institutional capacity and regulatory framework.

⁵ *Biodiversity Action Plan of 2009*, Ministry of Agriculture, Royal Government of Bhutan, 2009, pp. 84-85.

With the Conference of Parties to the CBD adopting the Nagoya Protocol in October 2010, there is a clear momentum towards securing the fair and equitable sharing of benefits arising from the bioprospecting of genetic resources and associated traditional knowledge. The Biodiversity Action Plan identifies 4 key strategies in the context of bioprospecting under Objective 5. They are:

Strategy 1: Development of a comprehensive biodiversity policy and legal framework;

Strategy 2: Systematic documentation and protection of traditional knowledge associated with biodiversity;

Strategy 3: Development of institutional mechanisms and technical capacity for bioexploration;

Strategy 4: Development of regional/international collaboration for bioprospecting;

The intent of the current objective of Bhutan's National ABS Policy however is to make a clear link between poverty alleviation and support for livelihoods through bioprospecting and conservation and sustainable use of biodiversity. Ultimately conservation of the environment happens on the ground and as the Biodiversity Action Plan notes, unless action is taken to address rural poverty, it will increasingly lead to unsustainable environmental practices and overharvesting. It is therefore critical that Bhutan's rural communities who have for generations conserved their local ecosystems are among the primary recipients of the benefits generated from any bioprospecting activities. This implies that Bhutan's rural communities must become an integral part of any value chain created towards the development of bioprospecting related products based on genetic resources and associated traditional knowledge.

Being a part of this value chain could encompass a range of activities- including the generation of local livelihoods through sustainable harvesting and processing of biological resources relevant for bioprospecting and products arising therein to receiving a fair and equitable share of monetary benefits arising from the bioprospecting activities. While it is clear that the long history of conservation practices of Bhutan's rural communities have not been motivated by economic incentives but by strong spiritual and cultural bonds with their

local ecosystems, it is important that these bonds are not frayed due to growing economic pressures. A balance between social, spiritual and material wellbeing needs to be maintained to realize the conservation objectives of the CBD and the Constitution of Bhutan. This balance can only be maintained if the material needs of the community custodians of Bhutan's biodiversity are at the forefront of our National ABS Policy. Ultimately the National ABS Policy should ensure that it contributes to the Principle of State Policy in Article 9.1 of the Constitution of Bhutan which states that: *The State shall endeavor to promote those circumstances that would enable citizens to secure an adequate livelihood.*

c) To secure the trusteeship of the Bhutanese people over their genetic resources.

Article 5.1 of the Constitution of Bhutan states that: *'Every Bhutanese is a trustee of the Kingdom's natural resources and environment for the benefit of the present and future generations...'* The National Forest Policy of Bhutan, 2009 notes that the total area of forest in the country constitutes 72.7 percent of the land area. The constitutional mandate of the trusteeship of the Bhutanese people is affirmed through the Forest and Nature Conservation Act, 1995 of Bhutan that establishes three kinds of forestry- government reserved forests, social/ private and community forestry. Since 2008 a total of 117 community forests have been established covering 15,489 ha of forestland in the country. Bhutan also has an extensive agricultural and livestock biodiversity with some 350 landraces of rice, 47 of maize, 24 of wheat and 30 of barley and unique livestock breeds of cattle, horses, yak and sheep.⁶ This agricultural and livestock biodiversity has been developed by Bhutan's farmers, pastoralists and livestock keepers over generations.

It is with a firm understanding that conservation and sustainable use of biodiversity happens on the ground and in line with Article 6 of the Nagoya Protocol on Access to Genetic Resources⁷, the current objective of the National ABS Policy seeks to develop ways

⁶ *Ibid*, p. 24

⁷ **Article 6: Access to Genetic Resources:**

1. In the exercise of sovereign rights over natural resources, and subject to domestic access and benefit-sharing legislation or regulatory requirements, access to genetic resources for their utilization shall be subject to the prior informed consent of the Party providing such resources that is the country of origin of such resources or a Party that has acquired the genetic resources in accordance with the Convention, unless otherwise determined by that Party.

to secure the trusteeship of Bhutanese people who have contributed to the development and conservation of Bhutan's biodiversity. In the context of ABS two key questions arise regarding access to genetic resources and sharing of benefits arising from their utilization. The first question is who will give 'prior informed consent' and negotiate 'mutually agreed terms' when genetic resources are accessed for research and/or commercial utilization. The second question is who will share in the benefits arising from the utilization of such genetic resources. The National ABS Policy proposes a stepwise approach to answering these questions:

- 1) In the case of genetic resources accessed from government reserved forests, the provision of prior informed consent and the negotiation of mutually agreed terms will be undertaken by the National Biodiversity Center (NBC) in consultation with the communities living in and around the government reserved forests. A portion of the benefits arising out of the utilization of genetic resources from government-reserved forests will be shared with the communities living in and around the government reserved forests to incentivize conservation and a portion of the benefits will go into a national ABS trust fund established for this purpose. The national ABS trust fund, which will be managed by the NBC, will disburse the monies to secure the objectives of the Biodiversity Action Plan of 2009.
- 2) In the case of genetic resources accessed from community forests, the NBC will support the communities managing these forests to provide prior informed consent and negotiate mutually agreed terms. This support could take the form of capacity development to understand the nature and the implications of the potential ABS agreement along with the necessary legal input to ensure a level playing field. Prior to such negotiations, the NBC will aid the communities in question to develop their own community protocols that will identify who are the communities that share the genetic resources, what their spiritual and cultural and economic values and priorities are, what the process of securing consent is and how they will share the benefits arising from the

2. In accordance with domestic law, each Party shall take measures, as appropriate, with the aim of ensuring that the prior informed consent or approval and involvement of indigenous and local communities is obtained for access to genetic resources where they have the established right to grant access to such resources.

utilization of their genetic resources. The development of an ABS agreement between the community and the bioprospector will be monitored by the NBC who will provide the final approval for the agreement. The benefits arising from such an ABS agreement will flow directly to the communities that are party to the agreement and will be shared in accordance with their community protocol with oversight from the NBC.

- 3) In the case of bioprospecting of Bhutan's plant and animal genetic resources, the NBC will again identify the farmers, livestock keepers or pastoralists who have developed and sustained these genetic resources and support them to develop a community protocol. Based on this community protocol, the NBC will facilitate a process of securing the prior informed consent and negotiating mutually agreed terms between the communities in question and the bioprospector. The benefits arising from such an ABS agreement will flow to the communities who have developed and sustained the genetic resources pertinent to the agreement and will be shared in accordance with their community protocol.
- 4) In the case of bioprospecting of Bhutan's ex-situ collections in gene-banks or botanical gardens, the NBC will provide prior informed consent; negotiate mutually agreed terms and the monetary or non-monetary benefits. However where the NBC is able to identify the community forest where the genetic resource sought by the bioprospector is endemic or the community that has developed the genetic resource in the context of plant or animal genetic resources, the NBC will follow the process outlined in points 2) and 3).

d) To secure the trusteeship of Bhutanese communities over their traditional knowledge associated with biological resources.

Article 8(j) of the CBD establishes the biocultural link between the traditional ways life and the knowledge, innovations and practices of indigenous and local communities and the in-situ conservation and sustainable use of biodiversity.⁸ Article 7 of the Nagoya Protocol

⁸ Article 8(j) of the CBD states that: Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and

seeks to implement Article 8(j) of the CBD by requiring Parties to ensure that the traditional knowledge of these communities is accessed only with their prior informed consent and through the establishment of mutually agreed terms.⁹ In order to do this, Article 12 (1) of the Nagoya Protocol requires Parties to take into consideration the communities' customary laws, community protocols and procedures.¹⁰ Article 12 (3) (a) requires Parties to support communities to develop community protocols that would set down the community criteria for providing prior informed consent for the utilization of their traditional knowledge and the sharing of benefits arising from such utilization.¹¹

The current objective of the National ABS Policy seeks to secure the trusteeship of Bhutanese communities over their traditional knowledge associated with biological resources through the implementation of the aforementioned Articles of the CBD and the Nagoya Protocol. However it is a fact that traditional knowledge associated with specific biological resources is collectively held within and between communities living in regions where these biological resources are endemic. This raises the question of which community will provide the prior informed consent for the use of traditional knowledge and share in the benefits generated therein. The National ABS Policy develops a step-wise approach to answering this question while staying true to the directives of the Nagoya Protocol.

- 1) When there is commercial or research interest in utilizing the traditional knowledge associated with biological resources that is prevalent within a community or a group of communities, the NBC would support the community or communities who

practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices;

⁹ Article 7 of the Nagoya Protocol states: 'In accordance with domestic law, each Party shall take measures, as appropriate, with the aim of ensuring that traditional knowledge associated with genetic resources that is held by indigenous and local communities is accessed with the prior and informed consent or approval and involvement of these indigenous and local communities, and that mutually agreed terms have been established.'

¹⁰ Article 12 (1) of the Nagoya Protocol states: In implementing their obligations under this Protocol, Parties shall in accordance with domestic law take into consideration indigenous and local communities' customary laws, community protocols and procedures, as applicable, with respect to traditional knowledge associated with genetic resources.

¹¹ Article 12 (3) (a) of the Nagoya Protocol states: Parties shall endeavour to support, as appropriate, the development by indigenous and local communities, including women within these communities, of: (a) Community protocols in relation to access to traditional knowledge associated with genetic resources and the fair and equitable sharing of benefits arising out of the utilization of such knowledge;

are the holders of such traditional knowledge to develop a community protocol that details: how they share their traditional knowledge, the cultural and spiritual norms that govern its use, the rightful authorities who will represent the community or communities in providing prior informed consent and negotiating mutually agreed terms and how any potential benefits arising from the use of their traditional knowledge will be shared. The NBC will further support the capacity development of the community or communities in understanding the nature and implications of the potential ABS agreement.

- 2) Based on this community protocol the NBC will support the community or communities in negotiating the ABS agreement and where necessary facilitate legal advice. The NBC will also provide oversight to ensure that the negotiated benefits arising from the ABS agreement is shared within/between the community/communities in accordance with their community protocol.
- 3) Where the traditional knowledge associated with biological resources sought for bioprospecting is widely spread across a number of communities across Bhutan, the NBC will represent the communities in negotiating an ABS agreement regarding the utilization of such traditional knowledge. Any monetary benefits arising from such an ABS agreement will flow into the ABS Trust Fund that will disburse the monies for to support the biodiversity conservation and sustainable use practices of Bhutanese communities.

e) To safeguard the unique spiritual and cultural relationships of the Bhutanese people with Nature.

Regarding the unique spiritual and cultural relationships the Bhutanese people have with Nature, Bhutan's Vision 2020 (Bhutan 2020: A Vision for Peace, Prosperity and Happiness) notes that:

In rural Bhutan, the fusion of Tantric Buddhism and animistic Bonism with our mainstream beliefs and values leads us to interpret nature as a living system in which we are part rather than as a resource base to be exploited for material gain.

Bhutanese society is one that has evolved in terms of relationships with the environment that have given rise to a complex of institutions, rules, customs and folklore governing the use of natural resources. We have been practicing environmental conservation long before it was referred to as such.¹²

Bhutan's Vision 2020 further highlights that Bhutan's development policies have always been underpinned by the cultural and spiritual values of the Bhutanese people and this has held Bhutan in good stead. In this regard Bhutan's Vision 2020 states that:

Our traditional Buddhist interpretation of development is often at odds with conventional theories of development. These theories have no place for such notions of *sangyal wai lam* (spiritual path) or karmic evolution. From our traditional perspective, poverty and underdevelopment should not be defined only in terms of the absence of wealth but also in terms of the persistence of ignorance and prejudice. At the same time, many of the priorities now advocated by international development institutions, such as human development, environmental conservation, self-reliance, decentralization, participation and empowerment, and gender sensitivity are not new for Bhutan. Although we have not always referred to these priorities in the terminology favored today, they have for decades been essential components of our distinctively Bhutanese approach to development.¹³

The Middle Path (National Environment Strategy for Bhutan) in a section on Gross National Happiness further elaborates on the spiritual and cultural relations the Bhutanese people have with Nature by noting that:

According to both Buddhist and pre-Buddhist philosophies, the mountains, rivers, streams, rocks and soils of Bhutan are believed to be the domain of the spirits. Pollution and disturbance are believed to be the causes of death and disease for those spirits. The Buddhist respect for all living things has led to the development and adoption of ecologically friendly strategies- a solid base upon which a national

¹² In *Bhutan 2020: A Vision for Peace, Prosperity and Happiness*, Planning Commission, The Royal Government of Bhutan, 1999, p. 21.

¹³ *ibid*, p. 22

environmental strategy can be built. This, coupled with the Buddhist tenet that the acts of this life will be rewarded or punished in the next, provides a powerful motivational principle for sustaining Bhutan's natural resource base.¹⁴

The current objective of the National ABS Policy seeks to ensure that the development and implementation of ABS law and policy in Bhutan does not contradict the spiritual and cultural values of the Bhutanese people that have sustained Bhutan's biodiversity for generations. While it is clear that one of the key aims of the National ABS Policy is to secure the economic benefits arising from biodiversity conservation, it is imperative to acknowledge that market relations are not the only relations the Bhutanese people have with biodiversity. The relationship of the Bhutanese people to Nature is multifaceted where Nature is not only perceived as a reliable and consistent service provider in a rugged terrain but is also an integral part of the spiritual and cultural worldview of Bhutanese communities.

To realize this objective the National ABS Policy recommends:

- 1) That ABS agreements relating to Bhutan's genetic resources and traditional knowledge associated with biological resources do not disrupt the unique spiritual and cultural relationships that the Bhutanese people have with Nature;
- 2) That the products resulting from bioprospecting of Bhutan's genetic resources and traditional knowledge associated with biological resources do not violate the spiritual and cultural values of the Bhutanese people;
- 3) That not only the economic imperatives but also the spiritual and cultural values of the Bhutanese communities play a key role in negotiating ABS agreements;
- 4) That the benefits arising from such ABS agreements affirm rather than erode these spiritual and cultural values.

¹⁴ *The Middle Path: The National Environment Strategy of Bhutan*, National Environment Commission, Royal Government of Bhutan, 1998, p.59

f) To grant access to Bhutan's genetic resources and traditional knowledge associated with biological resources only for commercial and research utilization that meets the ethical and environmental standards of the Bhutanese people.

Bhutan is unique in its requirement that the utilization of its genetic resources and traditional knowledge associated with biological resources meet certain ethical and environmental standards, this requirement stems from the spiritual and cultural values of the Bhutanese people. Gross National Happiness (GNH), which is one of the building blocks of our polity, doesn't separate the material from the social or the social from the spiritual. On the contrary it sees all of them as inter-related. It is from this perspective that the National ABS Policy views ABS as not merely a vehicle to generate economic benefits from Bhutan's biodiversity but also to affirm the ethical and environmental values of the Bhutanese people which have conserved and sustained this biodiversity for generations.

As Karma Ura, the President of the Center for Bhutan Studies in his explanation of GNH indicators notes:

...from a Bhutanese cultural perspective, it must be understood that the subjective versus objective distinction is merely a heuristic device that does not in any fundamental sense represent what is basic to the nature of reality. The interdependence of all things, and the non-abiding self of everything, is a key concept. The conventional subjective versus objective division is an abstraction from what is actually inter-relational. For GNH indicators, this cultural concept means that seeing everything as relational is more useful than seeing them as separate categories. In fact, happiness itself dwells in the experience of quality of relationship. Thus, the various domains are not simply separate conditions of happiness in and of themselves. Rather, it is the intimate inter-relationship among these domains that is significant. The GNH index construction aimed at a deeper representation of well-being than conventional indicators. The distinction between subjective and objective is but an abstraction from reality, given that from a Buddhist view, they do not exist. What exists in a fundamental way is relationality (as opposed to subject and object) at all levels, which can only be assessed by a

broad range of social, economic, cultural, and environmental indicators. Seen in this way, happiness and well-being is ultimately a way of being that is affected by and affects relational quality, which changes in meaning over time with deepening sensitivities to the world around us and with our understanding of what is important or valuable for us and for all sentient beings.¹⁵

The National ABS Policy therefore seeks to ensure the relational aspect of any ABS agreement, wherein ABS is not viewed only for economic gain but rather an ethical and an environmentally sustainable relationship between Bhutanese providers of genetic resources and/or traditional knowledge and the commercial or research users of such resources and knowledge. It is only through ensuring that our genetic resources and traditional knowledge are not used in a manner that conflicts with our deeply held values can we stay true to the Buddhist tenet of relationality and ensure that all our relationships are rooted on firm ethical foundations.

With this in mind, the National ABS Policy requires the following questions to be explored prior to entering into any ABS agreement for the use of Bhutanese genetic resources and traditional knowledge associated with biological resources. They are:

- 1) What will the genetic resources or traditional knowledge be used for?
- 2) What are the spiritual, social, environmental and economic implications of such use for the planet, the current and the future generations of people?
- 3) Does such use conflict with the cultural and spiritual values of the Bhutanese people?

g) To ensure that the benefits arising from the commercial and research utilization of Bhutan's genetic resources and associated traditional knowledge will enhance research and development in Bhutan.

¹⁵ Ura, Karma, *Explanation of GNH Index*, The Center for Bhutan Studies, <http://www.grossnationalhappiness.com/gnhIndex/introductionGNH.aspx>

The Biodiversity Action Plan of 2009 identifies bioprospecting as one of two uses of 'biodiversity as a development capital for national economic growth'¹⁶. This is elaborated by 'Strategy 3: Development of institutional mechanisms and technical capacity for bio-exploration' and 'Strategy 4: Development of regional/international collaboration for bioprospecting' which describe the actions that are of relevance to the current objective.

The current objective seeks to enhance research and development capacity within Bhutan. The aforementioned Strategy 3 of the Biodiversity Action Plan identifies three actions that are of relevance to the current objective. These actions are:

Action 3.1: Establish a well-equipped Bio-Exploration Laboratory within NBC. This would involve procurement and installation of laboratory equipments, tools and operational amenities;

Action 3.2: Construct a treatment plant for chemical wastes emanating from the Bio-Exploration Laboratory;

Action 3.3 Develop technical capacity for: PCR/HPLC analysis; biochemical extraction and fermentation; biochemical assays; and handling and maintenance of laboratory equipment;

If these three institutional/ technology related actions are fulfilled it will lead to a better research and development infrastructure in Bhutan that could further enhance Bhutan's ability to engage to attract commercial and research interest and enter into ABS agreements that involve collaborative and where possible in-country research. Agreements of this nature will have the potential of further strengthening the research and development capability within Bhutan. .

The reasoning behind the current the objective is the significant emphasis placed on the potential of utilizing genetic resources from Bhutan in the Biodiversity Action Plan coupled with the other objectives of the National ABS Policy that seek to augment the economic value of Bhutan's biodiversity along with encouraging research and development that do not contradict the environmental, cultural and spiritual values of the Bhutanese people.

The National ABS Policy makes the following recommendations to realize the current objective:

- Require a research and development collaboration between the bioprospecting company seeking to access Bhutanese genetic resources and traditional knowledge and Bhutanese partners by giving preference to those companies that agree to work with Bhutanese researchers and institutions.
- Require up-front technology transfer including where possible a transfer of equipment as a component of the benefits to be derived from an ABS

¹⁶ *Supra* n. 5, p.104

agreement. Linking technology transfer to a concrete ABS agreement will enhance the Bhutan's value-addition capability to the bioprospecting chain.

- Seek companies and research institutions that have technologies relevant for building Bhutan's research and development capability and require access to these technologies (patented or otherwise) as a non-monetary benefit arising from any potential ABS agreement between Bhutanese providers of genetic resources and traditional knowledge and the said company or research institution.
- The extent of technology transfer that can be negotiated in an ABS agreement will depend on the potential value of Bhutan's genetic resources and traditional knowledge for the company or research institution in question. It must be borne in mind that it will always be a challenge to predict the full value of genetic resources or traditional knowledge sought to be accessed at the time of access itself. Nevertheless, it would be important for the Bhutanese Competent Authority to inform itself to the best possible extent of the research and commercial potential of the genetic resources or traditional knowledge sought at the outset and also negotiate periodic reviews of any ABS agreement at pre-specified milestones.
- Ensure that the technology that is being transferred through an ABS agreement is not out dated, relevant and workable in a Bhutanese context. Technology transfer for educational purposes to be used by Bhutanese educational institutions is an interesting option that can be explored along with the necessary capacity development to be able to effectively use such technology.

h) To establish long term mutually supportive relationships based on trust between the Bhutanese people and foreign users of Bhutan's genetic resources and associated traditional knowledge.

The current objective is linked with objective f. since the better the in-country research and development capacity within Bhutan, the greater the chance of attracting bioprospecting partners interested in long-term collaboration with Bhutan thereby initiating a virtuous interdependence.

However long term collaboration is based on building mutually supportive relationships and trust, which takes time and good working experiences. The initial bioprospecting agreements would be of crucial for building mutual supportive relationships and trust and establishing a reputation for Bhutan as a reliable, committed and ethical partner. This requires that the early ABS agreements entered into should be based on a careful selection of the collaborating partners where the chances of success are higher.

The early best practice agreements entered into may not necessarily require an amendment of the Biodiversity Act. Rather they can provide valuable experiences based on which we can engage in an informed review of the ABS framework in Bhutan. From this perspective it would make sense to seek out a possible best practice ABS agreement that would aid the Competent Authority in developing concrete experiences. However caution should be exercised in doing so since the ABS agreements do not always succeed due to a number of factors including unforeseen research and marketing challenges.

The current objective stems from international experience that sound bioprospecting relationships are based on long term collaboration. Long-term collaboration has a series of advantages as will be identified below.

POLICY MEASURES

Policy objective 1: To augment and secure the economic value of Bhutan's biodiversity for the purposes of its conservation and sustainable use.

- 1.1 Affirm the sovereign rights of the country over its genetic resources through the regulation of access to genetic resources and traditional knowledge associated with biological resources for commercial and research purposes and ensures the equitable sharing of benefits arising from the use.
- 1.2 Develop a legal framework and establish national mechanisms to facilitate and regulate access to genetic resources and traditional knowledge associated with biological resources.
- 1.3 Prioritize the completion of a full inventory of the nation's biodiversity resources to secure the maximum benefits from our rich biodiversity.
- 1.4 Establish Bioprospecting to secure benefits from the use of biodiversity to further the process of socio-economic development of the country.
- 1.5 Promote in-country research and development on the commercial utilization of biological resources to strengthen national capacity, employment generation and minimize the risk of mis-appropriation.
- 1.6 Enable advanced collaborative research and product development with national and international pharmaceutical and/or biotech companies with sound ethical and environmental standards, from the use of genetic resources and traditional knowledge

associated with biological resources, to secure equitable benefits for the local communities and the Bhutanese people as a whole.

- 1.7 Develop efficient mechanisms to ensure the plough-back of benefits to conservation from the commercial utilization of biological resources for the sustenance of conservation and ecosystem services and the fulfillment of Article 5 of the Constitution.

Policy Objective 2: To ensure the integral links between conservation and sustainable use of Bhutan's biodiversity and the livelihoods of its people.

- 2.1 Strengthen income-generating opportunities from sustainable utilization of biological diversity to incentivize conservation and enhance livelihoods of local communities.
- 2.2 Ensure that local communities are the primary recipients of the benefits generated from any bioprospecting activities.
- 2.3 Establish an Access and Benefit sharing fund to channel the benefits acquired from the access and utilization of genetic resources into the local communities and conservation activities.

Policy Objective 3: To secure the trusteeship of the Bhutanese people over their genetic resources.

3.1 The Ministry of Agriculture and Forests will be the Competent Authority and shall reserve the right to approve or deny access to genetic resources.

3.2 The Competent Authority shall designate an appropriate Authorized Agency to act as an entry point for proposals seeking access to genetic resources.

3.3 The access of genetic resources from government reserved forests will be based on the provision of prior informed consent and the negotiation of mutually agreed terms undertaken by the Authorized Agency in consultation with the communities living in and around the government reserved forests.

3.3.1 A portion of the benefits arising out of the utilization of genetic resources from government-reserved forests will be shared with the communities living in and around the government reserved forests to incentivize conservation.

3.3.2 A major portion of the benefits will go into a National ABS trust fund established for this purpose. The National ABS trust fund, which will be managed by the Authorized Agency, will disburse the monies to secure the objectives of the Biodiversity Action Plans.

- 3.4 The access to genetic resources from community forests will be based on the provision of prior informed consent and negotiation of mutually agreed terms undertaken by the communities managing these forests under the guidance of the Authorized Agency. The finalization of the agreement between the community and the bioprospector will be subject to approval by the Competent Authority.
- 3.4.1 The major portion of the benefits arising from such an ABS agreement will flow directly to the communities that are party to the agreement and will be shared in accordance with their community protocol with oversight from the Authorized Agency.
- 3.4.2 A smaller portion of the benefits will go into the National ABS trust fund established for this purpose.
- 3.4.3 The Authorized Agency shall facilitate and coordinate capacity development of local communities in understanding the nature and the implications of ABS agreements, development of community protocols and the conservation and sustainable management of biological resources.
- 3.5 In the case of bioprospecting of Bhutan's plant and animal genetic resources related to food and agriculture, the Authorized Agency will identify the farmers, livestock keepers or pastoralists who have developed and sustained these genetic resources. The Authorized Agency will facilitate a process of securing the prior informed consent and negotiating mutually agreed terms between the communities in question and the bioprospector.
- 3.5.1 The benefits arising from such an ABS agreement will flow to the communities who have developed and sustained the genetic resources pertinent to the agreement and will be shared in accordance with their community protocol.
- 3.5.2 A smaller portion of the benefits will go into the National ABS trust fund established for this purpose.
- 3.5.3 Access to plant genetic resources for food and agriculture that are exchanged in the Multilateral System shall be according to the Standard Material Transfer Agreement.
- 3.6 In the case of bioprospecting of Bhutan's ex-situ collections in gene-banks or botanical gardens, the Authorized Agency will provide prior informed consent; negotiate mutually agreed terms and the monetary or non-monetary benefits. However where the Authorized Agency is able to identify the community forest where the genetic resource sought by the bioprospector is endemic or the community that has developed the

genetic resource in the context of plant or animal genetic resources, the Authorized Agency will follow the process outlined in points 2) and 3).

Policy Objective 4: To secure the trusteeship of Bhutanese communities over their traditional knowledge associated with biological resources.

4.1 Communities that have developed and sustained the traditional knowledge associated with biological resources shall be the holders of the traditional knowledge.

4.2 The Authorized Agency in collaboration with local communities will conduct inventory and documentation of traditional knowledge associated with biological resources prevalent in communities for its protection, preservation and use in research and commercial purposes.

4.3 The Authorized Agency will facilitate in developing community protocols that may include how they share their traditional knowledge, the cultural and spiritual norms that govern its use, the rightful authorities who will represent the community or communities in providing prior informed consent and negotiating mutually agreed terms and how any potential benefits arising from the use of their traditional knowledge will be shared.

4.4 The use of traditional knowledge for research and commercial purposes will be based on the prior informed consent of the holders of the traditional knowledge and/or the Authorized Agency and drawing of mutually agreed terms.

4.4.1 Access to traditional knowledge associated with biological resources that are prevalent within a community or a group of communities will be based on the provision of prior informed consent and an ABS agreement undertaken by communities who are the holders of such traditional knowledge under the guidance of the Authorized Agency. The finalization of the agreement between the holders of the traditional knowledge and the bioprospector will be subject to approval by the Competent Authority.

4.4.2 The major portion of the benefits arising from ABS agreement will flow to the communities who are the holders of traditional knowledge and will be shared in accordance with their community protocol. A smaller portion of the benefits will go into the National ABS trust fund established for this purpose.

- 4.4.3 The Authorized Agency will provide oversight to ensure that the negotiated benefits arising from such ABS agreement is shared within/between the community/communities in accordance with their community protocol.
- 4.4.4 Access to traditional knowledge associated with biological resources that is widely spread amongst a number of communities across Bhutan will be based on the provision of prior informed consent and an ABS agreement undertaken by the Authorized Agency. The finalization of the ABS agreement will be subject to approval by the Competent Authority.
- 4.4.5 Any monetary benefits arising from such an ABS agreement will flow into the ABS Trust Fund that will disburse the monies to support the biodiversity conservation and sustainable use practices of Bhutanese communities.

Policy Objective 5. To safeguard the unique spiritual and cultural relationships of the Bhutanese people with Nature.

- 5.1 Access to genetic resources and traditional knowledge associated with biological resources and the products resulting from bioprospecting should not disrupt and/or violate the unique spiritual and cultural relationships that the Bhutanese people have with Nature.
- 5.2 Access to genetic resources in areas declared and/or regarded as sacred will be limited and controlled to safeguard and uphold the unique spiritual and cultural relationships of the Bhutanese people with Nature.
- 5.3 In negotiating ABS agreements, not only the economic imperatives but also the spiritual and cultural values of the Bhutanese communities should play a key role and the benefits arising from such ABS agreements should affirm rather than erode spiritual and cultural values of Bhutanese people.

Policy Objective 6. To grant access to Bhutan's genetic resources and traditional knowledge associated with biological resources only for commercial and research utilization that meets the ethical and environmental standards of the Bhutanese people.

6.1 Promote access to genetic resources and traditional knowledge associated with biological resources to collaborators and partners that conform to the ethical and environmental standards of Bhutan and its people.

6.2 Access and use of genetic resources and traditional knowledge associated with biological resources should not bring negative spiritual, social, environmental and economic implications for the planet and the current and the future generations.

6.3 The use of accessed genetic resources and traditional knowledge associated with biological resources should not conflict with the ethical and cultural values of the Bhutanese people.

Policy Objective 7: To ensure that the benefits arising from the commercial and research utilization of Bhutan's genetic resources and associated traditional knowledge will enhance research and development in Bhutan.

7.1 To strengthen the national capacity and scientific knowledge base, collection of genetic resources and primary research should be carried out in country in collaboration with national institutions.

7.2 In negotiating ABS agreements preference will be given to companies who are willing to :

7.2.1 Embark on long term collaborations and investments based on mutual trust and understanding.

7.2.2 Strengthen research facilities and capacity in country.

7.2.3 Include Bhutanese researchers in advanced research carried on outside the country.

7.2.4 Establish product development facilities in country.

7.2.5 Share benefits up-front through transfer of technical equipment and expertise.

7.2.6 Give access to technology and patented techniques which are of immense benefit to the country

7.2.7 Review and supplement the benefits in the ABS agreement on arriving at certain pre-agreed milestones (time, collection and product development).

7.3 Promote regional collaboration and linkages with appropriate organization and companies to enhance national capacity development and technology transfer.

Policy Objective 8: To establish long term mutually supportive relationships based on trust between the Bhutanese people and foreign users of Bhutan’s genetic resources and associated traditional knowledge.

8.1 Develop a clear understanding of the history, financial status, ethical values and environmental and social practices of the company.

8.2 Explore the potential of developing a mutually beneficial and respectful, long-term relationship with a company or research institute, by identifying common interests and possible areas of conflict with Bhutanese values.

8.3 Establish a healthy working relationship through regular communication, periodic meetings, sharing of information and pre-specified reviews.

8.4 Ensure that the contractual agreement is governed by laws of Bhutan and any disputes arising are resolved primarily through negotiation and mediation in Bhutan using a mediator that both parties are in agreement with.

8.5 Commit to being an ethical, reliable, committed and transparent partner who will provide full and easily accessible information about Bhutan’s ABS requirements, facilitate a consistent process for access and do its utmost to fulfil its contractual obligations.

8.6 Distinguish itself as being the most attractive, dependable and long-term ABS partner in the region through consistent best practice and active seeking out of potential bioprospecting opportunities by identifying and engaging pre-selected companies and research institutes.

8.7 Explore the possibility of support and capacity building of Bhutan’s research capability and technology transfer over the course of the long-term ABS partnership with a company or research institution.