
Government of Indonesia

National Report on the Implementation of the Convention on Biological Diversity

The First National Report: Implementation of
Article 6, General Measures for Conservation
and Sustainable Use



State Ministry of Environment

Executive Summary

In Indonesia, the evolution of a strategic concept for biodiversity started with the process of completion of a book entitled *Biodiversity for the Survival of the Nation* in 1989. Then, in 1991 *Indonesian Country Study on Biological Diversity* was completed. This study was conducted under the bilateral cooperation between the Government of Indonesia and Kingdom of Norway. It was also carried out in relation to the United Nations Environment Program's need for document on biodiversity to be discussed at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, 3 -14 June 1992. The primary objective of the Country Study is to improve the accuracy and realism of a global assessment of total benefits, current management cost, and needs of biodiversity conservation and rational use, to facilitate a political agreement on financial needs to be associated with the Convention.

The process continued with *Indonesian National Strategy on the Management of Biological Diversity*, which was published by the Indonesian Ministry of State for Environment with the help of the National Biodiversity Standing Committee in 1993. The Committee consists of participants from all the major agencies, national planning agency, universities, and non-governmental organizations. The objective of this document is to give a guidance that should be followed by all sectors that involved in the management of biological diversity in Indonesia, not only to make project in respective sector successful, but also to guarantee the success of the integrated national programmes in biological diversity. And the process carried on with *Act No. 5 concerning the Conservation of Living Resources and Their Ecosystems of 1990*, *the Tropical Forestry Action Plan of 1991*, and *the Biodiversity Action Plan of 1991*. The process has been further enriched by international experience, for example, by the Ministry's work with the National Biodiversity Institute (Inbio) of Costa Rica and with reference to the Global Biodiversity Strategy by UNEP and others.

The Indonesian National Strategy on the Management of Biological Diversity (1993) states that the success of action plans for the management of biodiversity is determined by two main things, firstly the stability of analysis on the factors causing the reduction or the loss of biodiversity and secondly development of management based on sustainable utilisation. The objective to be achieved from the stand point of biodiversity management are: a) to maintain the utilization of the Indonesian biodiversity badly needed by the present as well the future generations, b) to conserve the potential of biodiversity so that its availability as resources for development is guaranteed at all time, and to study biodiversity we own as main bases for the development of its sustainable utilization.

The strategy is based on three basic elements; utilization of science and technology, diversification of utilization and integrated management of biological diversity. There are three approaches in the management, i.e. fulfilling basic

needs, providing income and developing a healthy environment. The strategy also proposes the formation of the National Commission on Biological Diversity to stimulate cooperation of various actors in managing biodiversity. This could be used as guidance for the establishment of clearing house at the national level.

The Indonesian Biodiversity Action Plan published by the Ministry of National Development Planning (1993) sets out a strategy for action under four heading, a) in-situ conservation in terrestrial parks and protected areas, b) in-situ conservation outside the protected area network (production forests, wetlands, agricultural lands, coastal and marine conservation and ex-situ conservation. Much loss of biodiversity in Indonesia, as elsewhere, is due to economic policy distortions that encourage rapid exploitation of biological resources rather than sustainable use. Slowing the rate of biodiversity loss will require policy and institutional reform as well as institutional strengthening for effective action in all four areas. The active participation and support of local communities will also be essential for in-situ conservation for they are the de facto managers of forest, wetland and marine resources. The plan call for greater collaboration between the government agencies and local communities and NGO's to work together as partners in biodiversity conservation.

Even before Indonesia ratified the Convention a number of the provisions of the Convention have been practiced by the government. The State Guidelines of 1978 envisaged that the utilization of biological resources to support the national development should be conducted in wise manner. Further more, in the year of 1982 the Government enacted the Basic Provision on the Management of the Environment (Act Number 4 of 1982). This Act envisaged that environmental consideration has to be an integral part of economical and physical development. And as envisaged also by this Act, the Government enacted two more acts (Act Number 5 of 1990 concerning the Conservation of Living Resources and Their Ecosystems, and Act Number 24 of 1992 concerning Spatial Management) and several Government Regulations as environmental impact assessment, management of water resources, criteria and designation of protected areas, etc.

Indonesian National Strategy for the Management of Biological Diversity stressed on the priority of approaches toward the management of biological diversity through fulfillment of basic human needs, income generation, and environmental purposes. This is backed up by the statement of Article 10 (e) of CBD, which is to "encourage co-operation between its governmental authorities and its private sector in developing methods for sustainable use of components of biological diversity", and Article 11, that says that "each Contracting Parties shall, as far as possible and as appropriate, adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity". These two guiding principles, together with the already undertaken activities in the sustainable use of biodiversity components, one of the assured ways of sustainable use and the fair and equitable sharing of the benefits is commercialization of the components.

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1. Introduction

Indonesia is rich in biodiversity. This richness is not only limited to the species level - covering wild as well as domesticated and cultivated, native as well as introduced species of plants and animals – and to a certain extent, the microbes - but also at the ecosystem and gene/genome levels. The diversity is even enriched by the diversity in functions and processes happening in each of the level of biodiversity present in the country.

With the high degree of diversity in all levels, especially the species and ecosystem levels, Indonesia will have better options in utilising the components in these levels of biodiversity. It has been realised for a long time that biodiversity is very important assets for development. This asset is ideal for the purpose of development since it is renewable. The fulfilments of many of the basic human needs are based on the use of biodiversity. Indonesian biodiversity is not only important nationally, but it is also important for the people of the world.

Food supply

Most of food materials are obtained from biological resources which are originated from biodiversity. Many of these food materials are already cultivated or domesticated. The local specificity is giving more enrichment in diversity in food resources. Many other food resources are still not cultivated or domesticated, but rather collected from the wild or nature.

Shelter

Most of the rural communities depend heavily on biological resources for their shelter. Bamboo, woods, leaves of certain palms, alang-alang grass (*Imperata*) and other shelter materials are provided by biological resources. The more diverse the resources are, the more options the people can get for developing their shelter.

Health

Most of the Indonesian people maintain their health by taking traditional tonics or medicines, which they believe to be able to promote the curtail of diseases and regain their vitality after so much used for energetic activities. The raw materials of these tonics or medicines come from medicinal plants, which are components of biodiversity.

Biodiversity is also important for the people and the country, since this can be playing many roles as sources of income. Communities within and surrounding forests, or other types of wilderness, will benefit from their surroundings, which contain high degree of biodiversity. The country also strongly bases its economy on this diversity for generating its national revenue.

For the environment, biodiversity is also playing very important role. The supply of water, fresh air, soil fertility and other environmental features are determined by the existence of biodiversity. In addition, the presence of biodiversity is also useful for tourism that will generate income for the country and the people.

The advantage of having biodiversity can be viewed from their various levels. This is the closer outlook. The species richness will give opportunity to the country to have more options for developing resources in various sectors. Agriculture, forestry, health, tourism, and other types of industry have explored and utilised the richness of the species to meet the needs and economic development of the country. The resources are playing great roles in the economic security of the country.

The importance of biodiversity in agriculture has been shown in the better choice of commodities. The diversity of source of materials for fulfilling the basic human needs has reflected the cultural diversity in this aspect. The development of agro-ecological security has its root in the species diversity. The diversity of native plantation species, such as spices, tropical fruits and medicinal plants, has help the country in developing industry related to these commodities. Horticultural products of the country depend very heavily on the diversity of the horticultural crop species. Not of less importance is the role of animal diversity in agriculture. The diversity in animal species has given opportunity to the country in the development of sources of animal protein for the nation. Fish diversity has been the important source of food supply as well as income generation. There are practically unlimited uses of species diversity found in the country for various sectors of livelihood.

In the forestry sector, the importance is so obvious. Economy of the country is highly dependent on the forest species diversity. National revenue has been determined by the existence of the diversity of forest timber. The non-timber forest products - including gums, rattans, honey, and birds nests, – are also playing important role in the economy of the country. The exploitation and use of the existing species diversity in the forest have given a wide opportunity to the country in getting secured income.

For the health purposes, Indonesian biodiversity plays its main role as a source of medicinal plants and animals. The industry of “jamu” (traditional tonics or medicines) depends solely on the existence of medicinal plant diversity. The daily livelihood of the people is also dependent heavily on these plant species. Not less important is the role of animals in health sector. Secret ingredients of traditional medicines have included various animal species in them.

The microbes have also been playing important roles in the livelihood of the Indonesian people. Traditional food such as “tempe” and soya sauce, the fermented casava and glutinous rice, and the alcoholic beverage known as “brem” depend on the existence of certain microbes. Many of industrial products are now being developed through the existence of microbe diversity. This diversity of these micro-organisms is now being appreciated more and more.

Other industries, such as tourism, cannot be possibly developed without the existence of biodiversity. This is source as well as targets in tourism industry.

Diversity in species and ecosystems are playing important roles in the development of this industry in the country.

With such importance, Indonesia is aware of the need of conserving and sustainably using this natural wealth. Therefore, the country is fully committed to the Convention provisions, and in so doing, ratified the Convention through the highest possible legal instrument in the country after the national constitution, i.e. by an act (Act No. 5, 1994), which had been passed by the National People's Assembly/Parliament. The national government has appointed the Ministry of State for Environment as the national focal point for the implementation of the Convention. To further this implementation, this Ministry has formed working groups assigned for the elaboration of the measures on publication and distribution of scientific and technical information, clearing house mechanism, biosafety protocol, consideration of Articles 6 and 8, forest biological diversity, marine and coastal biological diversity, access to genetic resources and benefit sharing, intellectual property rights, other related conventions, and plant genetic resources for food and agriculture. In addition, the Ministry of State for Environment has formed an Advisory Team of Experts which is responsible for advising the National Committee for the Management of Biodiversity. This advisory team is also constituting the Delegation of the Republic of Indonesian to the COP and the SBSTTA.

Indonesia has established a National Strategy for the Management of Biodiversity and Biodiversity Action Plan for Indonesia. The strategy is clearly aimed at maintaining the sustainable use of the country's biodiversity, for fulfilling the need of the present as well as the future generations, conserving its potentials, for the sustainable provision of natural resources, and studying it for its sustainable use development. These strategic objectives are highly important for maintaining biodiversity as the assets for the national development.

It is clearly stated in the strategy, that the guideline principles include science and technology, diversification of use, and management integration. To implement these three principles, various sectors are to be actively involved. It has been explicitly identified that those involved are (1) the government organisations, (2) academic and scientific societies, (3) private sector, (4) non-governmental organisations, and (5) the public at large. The management of the country's biodiversity is also approached from the following priority: fulfilling basic human needs, especially food, shelter and medicines (health), source of income, and the usefulness for the environment.

2. Background

The Government of Indonesia has ratified the Convention on Biological Diversity through an act (Act No. 5, 1990, concerning the conservation of Living Resources and Their Ecosystems). This is to show that Indonesia is seriously committed to its involvement in implementing the convention. The government then decided and appointed the Ministry of State for Environment as the National Focal Point in co-ordinating the activities in the implementation of the convention provisions.

Prior to the UNCED in Rio de Janeiro, Brazil, June 1992, the Indonesian Ministry of State for Environment was already engaged in the study on the Indonesian biological diversity, in co-operation with many other institutions, such as the Ministries of Forestry, Agriculture, Education and Culture, and numerous research institutions. Later, after the signing of the Convention, Indonesia developed a national strategy, called *Strategi Nasional Pengelolaan Keanekaragaman Hayati* (National Strategy for the Management of Biological Diversity), and following up this strategy, the Indonesian National Planning and Development Board (BAPPENAS) issued an action plan called the *Biodiversity Action Plan for Indonesia*. Therefore, starting long before the Conference of the Parties that issues its decisions, the Ministry of State for Environment has been actively engaged in the management of environment, and in some cases, the implementation of the CBD provisions, especially Article 6, concerning the co-ordination of the country study, drafting the national strategy, and integration of sectoral programmes and policies on environment. It is, therefore, justified that this Ministry is the proper institution to prepare the action plan report.

Indonesia is one of the very few countries in the world that are endowed with rich biodiversity. The Indonesian biotic assets are found in its richness in all level of biodiversity, having 15% of the total species of the world, about 50 terrestrial and marine ecosystems, and rich agricultural environment. However, these assets in many aspects are not utilised, but still in potential condition. This less developed condition of the potentials are mainly due to the limited capacity of human resources and technologies in developing these assets.

The level of human resource capacity is considerably low, therefore, the technical and technological capability is much limited in exploring, developing and utilising the existing biological resources. However, with the awareness of the richness of the country, the government is working hard to its maximum capacity, to improve the level of the people's education and awareness, and is developing institutions capable of managing the biological diversity that is fully understood as the important assets for the national development. With the current economic condition, Indonesia is facing difficulties in funding its programmes and activities for development.

Regardless the lack of resources, the programmes on the management of biodiversity in the country have been kept going on. Sectorally, the programmes

are run accordingly, in the effort of complying with the CBD provisions. This can be done, since most of the national programmes developed or planned according to the *Garis-garis Besar Haluan Negara* (GBHN – State Guidelines for National Development) and the *Rencana Pembangunan Lima Tahun* (REPELITA – The Five Year Development Programme) are in accordance with the provisions in the Convention.

The implementation of the CBD at national level has to be based on the two guidelines mentioned above. The implementation of the Five-Year Development Programme is sectorally assigned to all government organisations and institutions, private sector, various communities and other organisations. The national strategy and biodiversity action plan reflects this institutional arrangement.

3. Goals and Objectives

Indonesia is aware of the value of biodiversity long before the term was coined, and given high values to it. Concept of biodiversity protection has been adopted and implemented for about one hundred and a half centuries, by establishing natural monument, which contained rich biodiversity. This undertaking has been developing ever since, to become the basis for nature conservation.

At present, Indonesia has established 373 gazetted reserves (nature reserves and conservation areas), categorised into 8 types, namely nature reserve, game reserve, recreation park, marine recreation park, grand forest park, hunting reserve, marine nature reserve, and national park, grouped into sanctuary reserve and nature conservation area. These reserves cover a total area of 21,3 million ha, which are about 12% of the country total land area. For further development, there is determination of expanding protected areas to become 25.5 million ha, about 13.4% of the country's total land area.

Protection of the country's biodiversity is legally instrumented by the establishment of several acts, namely:

- Act No. 5 of 1967, concerning Basic Provision on Forestry Management;
- Act No. 9 of 1985, concerning Fishery;
- Act No. 5 of 1990, concerning Conservation of Living Resources and Their Ecosystems;
- Act No. 12 of 1992, concerning Plant Cultivation;
- Act No. 23 of 1997, concerning Environmental Management;
- and their elaboration into government, presidential, ministerial and the subordinate decrees.

In addition to the national legislation, the country's concerns on the protection of its biodiversity is also reflected by its involvement in relevant conventions, such as CITES and Ramsar Convention, and other conventions concerning environmental conservation, including its sister conventions, namely Convention on Climate Change and Convention to Combat Desertification and Draught. By joining the relevant conventions, Indonesia has shown high commitment on the management of the country's biodiversity. It is expected that Indonesia will consistently take further actions based on the legal instruments and the provisions derived from the relevant conventions in the management of biodiversity toward its conservation and sustainable use. This expectation is based on the fact that biodiversity is very important for economic development and the livelihood of the people in the country.

Biodiversity will consistently have more important role to play for development, due to the increasing demands to fulfil human basic needs, such as food, shelter and medicines. To meet the demands, the existing biodiversity must be

conserved and used sustainably. Because of the changing on socio-economic conditions and increasing needs of the expanding population, development activities and economic growth, the losses of biological diversity will seriously affect the food supply and sustainable growth of economy. These conditions have generated significant consequence on the erosion of biological diversity. Therefore, the means and mechanisms in protecting and sustainably using the national biodiversity have become one of the most important concerns of the government.

In the field of legal instruments for the protection of biodiversity, the existing national legislation has been based on the nation and country's believe that all of these natural treasures are God's blessings and shall be used for the utmost welfare of the people (National Constitution, Article 33, Paragraph 3). This national philosophy has laid foundation for the use of biodiversity as integrated part of the national treasures that has been based as far as possible on sustainable way. For this purpose, the country has issued a strategy on the management of biological diversity and biodiversity action plan. This is also what is expected to be the guidance for the management leading to the conservation and sustainable use of biodiversity.

There are some requirements that have to be fulfilled if the strategy, the legal instruments and the provisions in the conventions would work. The stability of analysis on factors causing the decreasing effects on biodiversity and the sustainable use management must be determined. The biodiversity management must be directed to:

- the maintenance of biodiversity for the use by the present as well as the future generations;
- the conservation of the potential biodiversity for the future or at all time use;
- the scientific development for the sustainable use.

Scientific development has been integrated into the guiding principles of the management. Exploitation, conservation and sustainable use of biodiversity has to be based on the support of science and technology. This scientific support is important for the genetically based development of the use of biodiversity, in which the biological resources play the major role.

Developing awareness for having access regulation was started by the national scientific institution, the Indonesian Institute of Sciences, in 1968, by developing a rule regulating the access to scientific material and the sharing of these materials between the individual assessors and the government through scientific institutes involved. Following the ratification of CITES in 1978, a mechanism was developed on when and how scientific materials can be collected. In 1989, the Minister of Forestry issued a decree regarding permit to catch, own, keep and transport wildlife, focusing mainly on protected species. Recently, a decree of the Director General of Forest Protection and Nature Conservation was issued, concerning the protection of the natural habitats of the swiftlets. The decree is also focused on the access to the birds' nests and the sharing of the benefits arising from the harvest of the nests. In the field of agriculture, the Government Regulation No. 44 of 1995 was issued to concern with the access to and conservation of plant genetic resources. From one of the

articles of this government regulation, a draft of the Ministry of Agriculture regarding the export and exchange of plant genetic resources has been developed to be enacted.

These are the basic references that might be developed into the effective instruments for having benefits from the use of biodiversity. However, long-way measures have still to be completed before the national mechanisms can be established.

4. Strategy

The gaps between the goals and objectives as visions in the **Chapter 3** can be summarised as follows. The concept of nature reserve establishment has been strictly followed by the government. However, problems are encountered as long as the management planning is concerned. With the development of community forest management programme, the realisation of the reserve establishment including their management has become more complicated. This has been made more difficult to implement, with the uncoordinated programmes concerning the use of forest areas. Forests are considered the main areas where biodiversity is accommodated at the most. However, areas outside of the forests are to be treated as well for the strategy in achieving the goals and objectives.

Concerning the involvement of the communities in the management of biodiversity, one cannot leave the existence of traditional knowledge. So, in comprehensive account, the management of biodiversity must include the following:

- the more effective management of protected areas;
- the equal treatment to the biodiversity outside of the protected or forest areas;
- the promotion of *ex situ* conservation;
- the recognition, promotion and application of traditional knowledge concerning conservation and sustainable use of biodiversity;
- the development of mechanisms in benefit sharing arising from the use of biodiversity;
- the development of incentive measures for the action in the conservation of biodiversity.

The efforts in expanding nature reserve areas have some resistance from the needs of areas by other sectors than forestry. The resettlement programmes, the agricultural expansion for new cultivated areas, the plantation programmes, and other prioritised programmes that need land will be a difficult problem for the efforts or plans of expanding nature reserves in the country. Indonesia has come to a consideration of not how large the protected areas are, but rather how effective is the area to represent the protection of the biodiversity components.

The existence of the laws on protection of biodiversity should be implemented. There is a need in the law enforcement. However, the slow development of these legal instruments into effective regulations makes the effectiveness of the laws rather low or ineffective at all. Therefore, with the coming years, law enforcement should be exercised.

The national strategy on the management of the country's biodiversity and the biodiversity action plan were issued shortly after the Convention on Biological

Diversity was signed. However, these two documents have still to be promoted, so that the sectoral regulations will refer to these documents, and effectively implement the provisions of the Convention.

The existing regulations on the access to genetic resources and benefit sharing are only of sectoral level. The validity of these regulations in some cases have been challenged by the sectoral regulations.

To overcome the existing gaps, there are the following recommendations. Some activities on developing management plan for nature reserves, there has been cooperations among concerned stakeholders. Joint management planning has been carried out by the government organisations together with the communities living within or surrounding the protected areas, under the guidance by non-government organisations and private sectors. This effort must be encouraged and developed accordingly, since the results of this way of developing protected area management plan is considered very effective.

To avoid conflicts of interests, national planning on the management of biodiversity is planned to be developed under the guidance of the highest authority in the country. By this planning, the national legislation is expected to be respected by all sectors, and the implementing regulations in any sector that are relevant to the conservation and sustainable use of biodiversity will not be contradicting to one another, and be recognised and adopted as well by other sectors. This is what is being developed in the country, through the co-ordination by the Ministry of State for Environment, so that the management of the country's biodiversity will be as effective as possible.

Therefore, there is need in developing basic organisation and determination of programmes and actors. The following will be the outlines:

Basic organisation

There is plan for the establishment of biodiversity commission including representation from all stakeholders. This establishment has been more or less started, co-ordinated by the Ministry of State for Environment. It needs improvement.

Programmes

- Dialogue and co-ordination;
- Preparation and provision of resources;
- Development of funding strategy and mechanism;
- Development of incentive mechanisms for promoting biodiversity conservation;
- Review process.

Identification of actors

All stakeholders must be involved in the launching of the plan. There must be activities in identifying these stakeholders and their roles in the action.

Political Security

The existence of the government policies concerning the management of biodiversity, political will in conserving the country's biodiversity, legislation concerning the protection of biodiversity, national plans and programmes relevant to the conservation and sustainable use of biodiversity, and international involvement, are the assurance of carrying out the biodiversity plan.

5. Partners

The involvement of public and private entities is still considered low. This is due to the lack of awareness, understanding and support, on the importance of biodiversity to the welfare of the people and the security of the nation. Therefore, the main actors and key players are mainly the government organisations and the concerns of some non-governmental organisations.

The following is the list of the key players that has been identified in the networking of the participation concerning biodiversity management:

- a. *Ministry of Forestry* (Directorate General of Forest Protection and Nature Conservation, DG of Forest Utilisation, and Agency for R&D in Forestry);
- b. *Ministry of Agriculture* (Agency for Research and Development in Agriculture; National Committee on Genetic Resources)
- c. *Ministry of Environment*
- d. *Indonesian Institute of Sciences*
 - Development of data base on biodiversity of the country
- f. *Universities*
 - Education and researches

There are still other institutions and organisations that are involved in the networking. This is to be identified further, and in more detailed identification, the partners and key players in the management of biodiversity should be listed as follows.

1. Departmental institutions engaged in the management of biodiversity;
2. Non-departmental research institutions engaged in research activities concerning biodiversity, involving scientific community;
 - Public sectors;
 - Private sector;
 - Public at large.

6. Actions and Schedule for Implementation

6.1. ACTIONS

The detailed activities, tasks and policies that are to be implemented are as follows. The government has issued a national strategy that has to be used as the guidelines for the management of the country's biodiversity. These must be viewed from sectors, namely the government organisation, such as the departmental institutions engaged in the management of biodiversity, the non-departmental research institutions engaged in research activities concerning biodiversity, public sectors, private sector, and public at large. The actions may be in the form of policy making and technical programmes.

The Ministry of Forestry, through the Directorates General of Forest Protection and Nature Conservation and Forest Utilisation have developed programmes such as:

- Pilot project development in sustainable use of biodiversity (Integrated Protected Area System);
- Initiation of Concept on Community-based Management of Protected Areas
- Integrated Conservation and Development Project (ICDP)

The Ministry of Agriculture, through the Agency for Agricultural Research and Development:

- Activities in capacity building and community empowerment in sustainable use; socialisation of the CBD, COP, SBSTTA, and the importance of biodiversity;
- Understanding biodiversity and the Convention on Biological Diversity;
- Technical activities, such as collecting, conserving, up to utilising, toward the adoption by users.

The Ministry of Environment, through its function as national co-ordinator for the management of environment:

- Development of programme on strengthening institutional mechanism in the management of biological diversity;
- Completion of National Strategy in the Management of Wetland Ecosystem
- Formation of Working Groups on addressing main issues of CBD and COP decisions

Indonesian Institute of Sciences

- Development of data base and information dissemination mechanism research in biodiversity aspects
- Development of policy in data submission by all researchers carrying out their activities in biodiversity aspects in the country.

Universities

- Education on understanding biodiversity
- Research and scientific and technical activities concerning the management of biodiversity

The government has encouraged the active participation of the private sector in the management of the country's biodiversity. Therefore, it is considered utmost important that the activities or programmes in the awareness of the people, including the private sector, be promoted. The actions must also be realised in technical ones, such as planting and protecting wildlife by the public at large. The use of mass media will be very much helpful in attaining the socialisation or awareness programmes.

The involvement of local communities and their traditional knowledge is very important, since the success of the management of biodiversity at local level will be greatly depending on the involvement of these communities. The community-based conservation is playing decisive role in the success of the efforts.

The integration of efforts among sectors as well as between the central government and the local government (provincial and district levels) is the key to the successful achievement of the objectives of the efforts in the management of the country's biodiversity. Therefore, harmonization of the efforts among sectors and between different level of government will be maintained.

6.2. Schedule

<u>Programmes :</u>	<u>Implementation :</u>
Pilot project development in sustainable use of biodiversity (Integrated Protected Area System).	<ul style="list-style-type: none">• National Parks: Kerinci Seblat. Siberut-Sumatera, since 1980s;• Cibodas Grand Forest Park and Nature Reserve, since 1970s;• Ruteng - Flores, East Nusa Tenggara
Initiation of Concept on Community-based Management of Protected Areas.	<ul style="list-style-type: none">• Workshops in Serpong – West Java, 1995• Workshop in Medan – Sumatera, 1996

Activities in capacity building and community empowerment in sustainable use; socialisation of the CBD, COP, SBSTTA, and the importance of biodiversity.	<ul style="list-style-type: none"> • Seminars and workshop toward the programme development in East Kalimantan, in 1995-1996; • Programmes of Indonesian Biodiversity Foundation and other organisation.
Understanding biodiversity and the Convention on Biological Diversity	included in the capacity building program
Development of programme on strengthening institutional mechanism in the management of biological diversity	Programme developed by various institutions, funded from government sources and by international agencies and through bilateral co-operation (GEF, Government of Norway, etc.)
Formation of Working Groups on addressing main issues of CBD and COP decisions.	By the Ministry of Environment, 1995
Development of data base and information dissemination mechanism.	Continuing the previous efforts to be matched with the Convention, 1994
Research in biodiversity aspects	By technical institutions, since 1800's
Development of policy in data submission by all researchers carrying out their activities in biodiversity aspects in the country	By the Centre for Scientific Documentation (under Indonesian Institute of Science), since 1970's

7. Budget

In 1992, Indonesia conducted study on biodiversity of the country. In this study, the financial need was identified.

The detailed expenditures are presented as calculated in the Indonesian Country Study on Biological Diversity (see attachment). Later in the development of the national strategy (1993), it was estimated that annually, the budget for conducting the management of the country's biodiversity came to be US\$ 1 million.

8. Monitoring and Evaluation: Tracking the results

Programmes are being developed in government organisations and institutions, including the universities, and some of the non-government organisations, concerning the conservation and sustainable use of biological diversity. To track the results, annual reports of the technical institutions submitted to their respective organisations may be referred to. However, in some cases, the reports are limited in distribution. Therefore, in such case, there is constraint in tracking the results.

So far, there is no measures in monitoring the changes in economy, environment and society that have been developed, as far as implementation of the CBD's Article 6 is concerned

The country/government has not selected individuals or organisations that will carry the responsibilities in tracking the results.

9. Sharing of National Experience

Indonesia conducted a country study on its biodiversity, which covers such aspects as biodiversity management, its role in country's population and economy. The status of biodiversity was analysed through its nature, biography and endemism, conservation area system, and threats. It was also viewed through its economic benefits and financial costs. The study was also directed to identify the unmet needs for conserving and using biodiversity, including cost centres in biodiversity management, estimation of resource needs, and priorities for action.

In terms of case studies on detailed provision of the Convention, Indonesia has not conducted any meaningful activities. Some small encounter has been reported on the benefit sharing of the utilisation of some non-timber forest products, such as the valuable birds' nests. On incentive measures, review was done on the regulation on the conservation of the sandalwood. These cases can be referred to the regulations aiming at the conservation of bio-diversity components. These cases may be developed further as the bases for the legislation establishment concerning benefit sharing and effective incentive measures for conservation.

Other achievement regarding the implementation of Article 6 is the establishment of the *National Strategy for the Management of Biodiversity and Biodiversity Action Plan for Indonesia*. Another document relevant to the implementation of this article is the *National Strategy and Action Plan for the Management of Indonesian Wetlands*.

For developing and completion of the documents or studies, there has to be sufficient provision of resources. The willing competent human resource is the basic ingredient of the process. The next resource to be available is the sufficient funds to run the activities. However, available fund does not ensure the completion of the efforts, unless the available human resources are in hand. The fund is required to mobilise the human resources and collecting and analysing data and information. The entire effort has to be based on strong determination.