

# Legal Aspec Bioprospecting Conservation of Medicinal Plants in Indonesia

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## Abstract

The country of Indonesia is an archipelago, which has various types of plants. One of them is a medicinal plant. This plant has ingredients that can be used as a treatment. But by seeing the high population growth of Indonesia, the medicinal plants are threatened. This makes the need for an action that can maintain the existence of these medicinal plants. Bioprospection conservation is an effort to preserve and develop medicinal plants so that their presence is not lost.

**Keywords:** *Medicinal Plants, Bioprospection Conservation*

## Background

Indonesia is the country of the archipelago<sup>(1)</sup>, which has a vast area; besides that, Indonesia is also a tropical region that has forests and even a considerable plantation area. One of the enormous potentials in Indonesia is the potential of traditional medicinal plants<sup>(2)</sup>. The World Conservation Monitoring Center reports that Indonesia is a critical region because it is rich in medicinal plants.

WHO defines medicinal plants are plants that contain ingredients that can be used as treatment and active ingredients can be used as synthetic, medicinal ingredients. For the Indonesian people, traditional medicine derived from plants has been used hundreds of years ago, the ancestors of the Indonesian people who have a life that is close to nature are very dependent on nature primarily in order to maintain health or heal their illnesses.

The growth of Indonesian society which is increasing makes a concern for the possibility of the destruction of medicinal plants that are in Indonesian nature, land changes from productive land both in forest friends and not in forest areas vulnerable to extinction, the need for housing, the need for industrialization causes loss or damage to medicinal plants in Indonesia.

## Findings

Medicinal plants are each type of plant which in certain parts both roots, stems, bark, leaves,<sup>(3)</sup> and

the results of its expression are believed to be able to treat a disease or be useful in terms of health care Medicinal plants in Indonesia are not only in the forest but also outside Forest. There are forest areas that are in the conservation forest but also in wood that is not conservation.

The World Health Organization estimates that some 80% of developing countries depend on traditional medicines and, of these, 85% use plants or their extracts as active substances (Sheldon et al., 1998). This means that nearly 3 billion people depend on medicinal plants<sup>(4)</sup>.

Medicinal plants are useful in the health sector, education sector, and bring economic contribution to the local community<sup>(5)</sup>. Medicinal plants (MP) are essential for the livelihoods of poor people throughout the world. Most medicinal plants are flowering plants. Out of 32000 species of higher plants (Prance, 2001), more than 10% is used as medicine<sup>(6)</sup>. Various ethnophytomedica-ethnobotany studies conducted by Indonesian researchers have been known, at least 78 species of medicinal plants used by 34 ethnic groups to treat malaria, 133 species of medicinal plants to treat fever by 30 ethnic groups, 110 species of medicinal plants to treat disorders digestion by 30 ethnicities and 98 species of medicinal plants are used to treat skin diseases by 27 ethnicities<sup>(7)</sup>.

The potential for the development of the pharmaceutical industry by utilizing traditional medicinal plants is very high in Indonesia<sup>(2)</sup>. This happens one of

them due to changes in the pattern of human life to start consuming drugs from natural ingredients and reduce the consumption of chemical medications, by the concept of returning to nature (back to view). Another cause is the high cost of modern synthetic medicines, so choices of herbal medication with natural ingredients are an option.

The government, through its policy, must carry out conservation of medicinal plants, one of which can be done is to conduct bioprospection. Bioprospecting (bioprospecting) is a systematic search, classification, and investigation for commercial purposes from sources of new chemical compounds, genes, proteins, microorganisms, and other products with actual and potential economic value, which are found in biodiversity<sup>(8)</sup>.

Bioprospectionactivities. (bioprospecting) the medicinal plant is a significant effort to obtain value-added benefits of the diversity of medicinal plants found in an area, both in forest areas and non-forest areas. Through bioprospecting (bioprospecting) of medicinal plants, it is expected that all components involved in these activities can feel the benefits, especially benefits that can be received by local communities and interests that can be acquired by an area where the medicinal plants are located.

## Discussion

### Types of Traditional Medicinal Plants In Indonesia

Indonesia, which is rich in natural resources, has many medicinal plants, and Indonesia is the second tropical country after Brazil Of a total of 40 thousand 30 thousand plants thought to be in Indonesia. Besides, in Brazil, many medicinal plants are found in India<sup>(9)</sup>.

The types of medicinal plants that have been utilized by the Indonesian people include the following:

#### 1. Turmeric



#### 2. Ginger



#### 3. Bangle



#### 4. Brotowali



#### 5. Curcuma



### The regulation of medicinal plants conservation

The Government of the Republic of Indonesia conducts legal protection through preventive aspects by issuing various regulations. The regulations/policies in the development of bioprospecting are the Convention on

Biological Diversity (CBD) which regulates biodiversity that has been ratified by the Government of the Republic of Indonesia to in the Law of the Republic of Indonesia Number 5 of 1994 concerning Ratification of the United Nations Convention on Biological Diversity which was ratified on August 1, 1994<sup>(10)</sup>. The objectives of the issuance of the regulation are; First, the sustainable use of its components; The concept of sustainability is important in order to prepare for the children and grandchildren in the future and also the sustainability of development. Second Share the benefits resulting from the efficient and equitable use of genetic resources, including through adequate access to genetic resources and with the appropriate transfer of technology, and by taking into account all rights to those resources and technology, as well as with adequate funding.

In addition to the aforementioned regulations, the government also ratified the Nagoya Protocol. Which is an international regulatory instrument for the implementation of the third objective of the Convention on Biological Diversity (CBD) which has also been ratified by the Government of the Republic of Indonesia into Law of the Republic of Indonesia Number 11 of 2013 concerning Ratification of Nagoya Protocol on Access to Genetic Resources and The Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity (Nagoya Protocol on Access to Genetic Resources and Equitable and Balanced Benefit Sharing Arising from Utilization of the Convention on Biological Diversity) which was ratified on May 8, 2013

The Nagoya Protocol is an international agreement on the environment in the framework of the Convention on Biological Diversity which regulates access to genetic resources and the fair and balanced distribution of benefits between the use and supply of genetic resources based on agreement based on initial information and collective bargaining and aims to prevent theft of diversity biological (biopiracy)<sup>(11)</sup>. The Nagoya Protocol Agreement is a significant agreement for the Indonesian State to get a fair and balanced benefit arising from its use of the Convention on Biological Diversity<sup>(11)</sup> (RI Law No. 11 of 2013).

As for the benefits obtained by Indonesia through the ratification of the Nagoya Protocol, among others<sup>(12)</sup> (RI Law No. 11 Tahun 2013):

1. Protect and preserve genetic resources and

traditional knowledge related to genetic resources.

2. Preventing theft (biopiracy) and illegal use (illegal utilization) to biodiversity.

3. Ensure equitable and balanced distribution of benefits (financial and non-financial) on the use of genetic resources and traditional knowledge related to genetic resources to genetic resource providers based on mutually agreed terms.

4. Laying the legal basis for regulating access and equitable and equitable distribution of benefits from the utilization of genetic resources and traditional knowledge related to genetic resources based on mutual agreement.

5. Strengthening state control over natural resources as mandated by Article 33 of the 1945 Constitution of the Republic of Indonesia and recognizing the existence of indigenous peoples and traditional rights by Article 18 of the 1945 Constitution of the Republic of Indonesia.

6. Affirming State sovereignty over the regulation of access to genetic resources and traditional knowledge relating to genetic resources.

7. Providing incentives and funding support by statutory provisions.

8. Creating opportunities for technology transfer access to conservation activities and sustainable use of biodiversity<sup>(13)</sup>.

Also, the basis for other regulations/policies in the development of bioprospection of medicinal plants, especially in conservation areas, are as follows<sup>(13)</sup>:

· Law of the Republic of Indonesia Number 5 of 1990 concerning Conservation of Living Natural Resources and its Ecosystems

· Law of the Republic of Indonesia Number 12 of 1992 concerning Cultivation Systems

· Law of the Republic of Indonesia Number 16 of 1992 concerning Animal, Fish and Plant Quarantine

· Law of the Republic of Indonesia Number 41 of 1999 concerning Forestry

· Law of the Republic of Indonesia Number 24 of 2000 concerning International Treaties

· Law of the Republic of Indonesia Number 29

the Year 2000 concerning Protection of Plant Varieties

- Law of the Republic of Indonesia Number 18 of 2002 concerning the National System of Research in the Development and Application of Science and Technology

- Law of the Republic of Indonesia Number 32 of 2004 concerning Regional Government

- Law of the Republic of Indonesia Number 27 of 2007 concerning Management of Coastal Areas and Small Islands

- Law of the Republic of Indonesia Number 32 the Year 2009 concerning Environmental Protection and Management

- Law of the Republic of Indonesia Number 36 the Year 2009 regarding Health

- Republic of Indonesia Government Regulation Number 7 of 1999 concerning Preservation of Plant and Animal Species

- Republic of Indonesia Government Regulation No. 8/1999 concerning Utilization of Wild Plants and Animals

- Republic of Indonesia Government Regulation No. 6/2007 concerning Forest Management and Forest Management Planning and Forest Utilization

- Republic of Indonesia Government Regulation No. 3/2008 concerning Amendment to Government Regulation No. 6/2007 concerning Forest Management and Forest Management Planning and Forest Utilization

- Republic of Indonesia Government Regulation Number 28 of 2011 concerning Management of Nature Reserves and Nature Conservation Areas

- Republic of Indonesia's Presidential Decree Number 100 of 1993 concerning Research Permits for Foreigners

- Regulation of the Minister of Forestry of the Republic of Indonesia Number: P.56 / Menhut-II / 2006 concerning National Park Zoning Guidelines

### Conclusion

One of Indonesia's abundant natural resources is medicinal plants that must be protected. The protection of medicinal plants can be done through bioprospection.

This effort emphasizes the government's efforts in conducting in-depth identification of medicinal plants in Indonesia, as well as strengthening the laws and regulations regarding medicinal plants in Indonesia.

**Source of Funding :** Self

**Conflict of Interest :** Nil

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