

THE ECONOMIC VALUE OF NATURAL RESOURCES AND THE PRINCIPLE OF LOCAL WISDOM AS ENVIRONMENTAL PROTECTION EFFORTS IN INDONESIA

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Abstract

One of the environmental managements should get the benefit of the economy, but in obtaining the benefits of the economic value it should not be compromising the value of local wisdom. Local wisdom as one of the principles in the protection and management of the environment as provided for in Article 2 L Law No. 32 of 2009. The principle of local wisdom has the intention that the protection and management of the environment should pay attention to the noble values prevailing in the system of community's lives. However there is a view is by maintaining the principle of local wisdom is one of the efforts in environmental protection in Indonesia, but otherwise to abolish the principle of local wisdom can get the benefit of the economy resulting environment becomes damaged. In some areas in the Territory of the Republic of Indonesia there are still a lot of people defending the values of local wisdom in order to protect and preserve the natural environment such as in the Community of Muna who looks that in life humans are tied with environment as a macrocosm system, then the Community of Cimangu in the Village of Gunung Malang West Java who maintain forest conservation, indigenous community of Badui located on the Hill of Kendeng Province of Banten who always maintain forests and pristine rivers, and Community of Colo, Kudus, Central Java with religious approaches, which focus on the environmental movement with local wisdom relating to local people's belief to preserve the environment. This shows that the principle of local wisdom is one of the strongholds for maintaining the economic value of natural resources as environmental protection efforts in Indonesia.

Keywords: Indonesia, Economic Value of Natural Resources, Local Wisdom, the Environmental Protection.

Introduction

Indonesia as an archipelago state with 13,466 islands is divided into 34 Provinces, 410 Regencies and 98 Municipalities and some of them have the richness of abundant natural resources. The richness of natural resources owned by the provinces in Indonesia is very varied, both living and non-living natural resources are as the buffer of environment. Living natural resources such as forests scattered in the areas of Papua, Sumatra, Kalimantan, Sulawesi and Java are diminishing. Likewise with non-living natural resources are scattered in the province areas; for example in the Province of Papua with natural resources such as gold ore, copper, coal, limestone, quartz sand, marble, granite, iron sand, nickel and chrome. Then, in the Province of Nangro Aceh Darussalam have mines, crude oil and natural gas, in the Province of Kalimantan have a gold mine, iron, plumbum and zinc, limestone, gypsum, sandstone, coal, silver, diamond, and then in the Province of West Sumatra there are coalmine, copper, plumbum and silver, in the Province of Central Java with crude oil mine, and in the Province of East Nusa Tenggara there are mines of manganese, chrome and nickel.

From the richness of living and non-living natural resources owned by the State of Indonesia all have very high economic value as a source of state revenues so that the protection and management should be carried out by observing the principle of local wisdom, principle of conservation and sustainability, integration, benefits, prudence, justice, and participatory, as stipulated in Article 2 of Act No. 32 of 2009.

As a mandate in the preamble of Act No. 32 of 2009 states that national development mandated in the Constitution of 1945 of the Republic of Indonesia that the implementation of the development is carried out sustainably and environmentally insight. From the mandate of the Constitution then the development process should not be sacrificed the environment.

But in the development process, it often becomes a debate of two groups of thinkers; that is, the group maintaining economic growth and the group maintaining ecology. For the group that maintains the economy has a reason that environmental damage and depletion of natural resources can be solved by technology while ecological group always put the environment and ecology remains intact. Of the two groups of thinkers when juxtaposed with the theory of environmental ethics, the group of thinkers that just maintaining economic, is anthropocentrism, means a theory of environmental ethics that sees human beings as the center of the universe system. Humans and their interests are considered as the most decisive in ecosystem structure and in the policies taken in connection with nature, either directly or indirectly, this theory was accused of being the main cause of the environmental crisis.¹

For the group of thinkers that promotes ecology remains intact, when linked with the theory of environmental ethics includes the biocentrism theory, this theory means that humans have a moral obligation to nature. This obligation is sourced and based on the consideration that life is worth something for either human life or the life of other species.²

Between the economic value and the principle of local wisdom as efforts to protect the environment, then each still remains in his argument, but according to the author it tends dominantly to increase the economic value when compared to

¹ A. Sonny Keraf, *Etika Lingkungan (environmental ethicts)*, penerbit buku Kompas, Jakarta, 2002, p. 32.

² *ibid*, p. 51

maintaining the principle of local wisdom in preserving the environment. This is proved to some facts related to the high of environmental damage in Indonesia as a result of human activities solely to the pursuit of economic value, among others:³

- In Java and Kalimantan with the rate of deforestation reached 1.8 million hectares / year which resulted in 21% of the 133 million hectares of Indonesia's forests disappear. Forest loss causes environmental degradation, increasing natural disasters, and threats to the preservation of flora and fauna.
- 30% of the 2.5 million hectares of Indonesia's coral reefs damaged. Damage to coral reefs increase the risk of disasters on coastal areas, threatening marine biodiversity, and reduce the production of marine fisheries.
- The high of air pollution, water pollution, soil pollution, and pollution of the sea occur in Indonesia. Even in 2010, the Citarum River has been named as the Most Polluted River in the World by website of huffingtonpost.com. World Bank also put Jakarta as the city with the third highest pollutant after Beijing, New Delhi and Mexico City.
- Hundreds of rare Indonesian plants and animals Indonesia are threatened with extinction. According to the IUCN Red list, as many as 76 Indonesian animal species and 127 plants are in the highest threatened, that is, status of Critically Endangered, and 205 animal species and 88 plant species are categorized as Endangered, as well as 557 species of animals and 256 plants have status of Vulnerable.
- Some areas in Indonesia which contained a gold mine in Papua, crude oil mine in Sumatra and Java, tin mines in Bangka-Belitung, liquefied natural gas mine in Aceh and many other mines in the region are becoming increasingly depleted. Including Kalimantan with a vast and tremendous area of coal mines done by many investors as the research results of Hidayatullah Sidiq on calculating the economic value of coal mining environment in Samarinda, East Kalimantan, in which the benefit of economic value is greater than the production costs incurred.⁴

From those data it shows that the principle of local wisdom is increasingly marginalized although in some areas people still maintain the value of local wisdom, this is the result of uncontrolled economic forces of financiers, whereas Act No. 32 of 2009 has set the principle of local wisdom as one of the efforts to protect the environment.

STATEMENT OF THE PROBLEMS

From the description above problems discussed in this paper are:

1. Can the activities of the economic value of natural resources ensure the life of the local community or it is otherwise it will make the environment damaged ?
2. Is maintaining principle of local wisdom as one of the environmental protection efforts in Indonesia?

DISCUSSIONS

1. *The Economic Value of Natural Resources in Environmental Protection in Indonesia*

In Act No. 32 of 2009 on the Protection and Management of the Environment there is provision of article regulating environmental economic instruments, among others, in Article 42 paragraph (1), Article 43 paragraph (4), Article 55 paragraph (4) that state: "In order to preserve the function of the environment, the Government and Regional Government shall develop and implement environmental economic instruments". Environmental economic instruments include:

- Development planning and economic activities;
- Funding the environment; and
- Incentives and / or disincentives;

To implement the provisions of Article 43 paragraph (4) and Article 45 paragraph (4) of the Act, then the provisions of environmental economic instruments as referred to in Article 42 and Article 42 paragraph (1) to Article 42 paragraph (3) and Article 55 paragraph (4) is regulated by the Government Regulation. Regarding the formation of Government Regulation is part of a implementing regulation an Act, and in accordance with the provisions of Article 126 of Act No. 32 of 2009 declared that "the Implementing Regulations mandated in this Act set a maximum of 1 (one) year after the enactment of this Act".

³ Uploaded on 4 July 2015, at 10.58, from <http://alamendah.org/2014/08/01/kerusakan-lingkungan-hidup-di-indonesia-dan-penyebabnya> (invironmental demages In Indonesia).

⁴ Research Result of Hidayatullah Sidiq, <http://Repository.Upnyk.Ac.Id/4296/1/Abstrak.Pdf> ; *Perhitungan Nilai Ekonomi Lingkungan Pada Rencana Penambangan Batubara (Calculation of Environmental Economic Value on Planning of Coal Mining)*, in CV Mada Perkasa Kota Samarinda Kalimantan, uploaded on 5 May, 2015, at 5.30.

Act No. 32 of 2009 has been enacted since October 3, 2009, while the Articles mentioned above in the formation of Government Regulation as its implementing regulations have not been made until now so that the making of Government Regulation has a delay of 6 (Six) years, then the Government Regulation which regulates environmental economic instruments became one of the causes for controllers in the setting of environmental functions, so that it becomes a necessity in a fast time to make a Government Regulation on environmental economic instruments. It is intended to:⁵

1. Integrating the economic value of the environment into planning and budgeting of the national development and economic activities;
2. Ensuring the availability of funds for the recovery and prevention of pollution and / or environmental damage; and
3. Changing the mindset and behavior of stakeholders to take into account the economic value of the environment into patterns of sustainable production and consumption.

Instrument of development planning and economic activities in relation to the environment, it must be done the preparation of the balance of both living and non-living natural resources and environment in every area of Regency / Municipality and Province, then the licensing process should be strict so that natural resources is maintained sustainably and not damage the environment.

For example, some regencies / cities in Indonesia, among others, in the Territory of Papua, Kalimantan, Sumatra, Sulawesi, West and East Nusa Tenggara, Nangro Aceh Darussalam, Java, each of which has a richness of non-living natural resources that are not renewable have suffered a tremendous environmental damage, occurred prolonged social conflicts such as drilling of PT. Lapindo Brantas in East Java, in addition excessive mining exploration conducted by PT. Newmont Nusa Tenggara, then an extension contract by the Government of Indonesia with PT. Freeport in Papua. This shows that the government does not have a strategic planning in managing natural resources, mostly dominated by foreign Corporation and it is necessary to manage the mining well and right in order to provide maximum benefits for the prosperity of the people of Indonesia. As mandated in Article 33 of the Constitution of the Republic of Indonesia, it states that the land, water and natural resources contained therein shall be controlled by the State and used for the benefit and prosperity of the people.

From exploration activities of natural resource in relation to economic development it does not affect the economic value of community significantly or promote the local area but it is adding a suffer of community poverty, causing disease, and damaging the quality of the environment that can not be returned into original condition. It is actually the duty of the government that any business activity that has an effect, then the Minister may carry out or assign an independent third party to audit the environment on expense of the responsible person for a business and / or activity, and the Minister announces the result of audit on the environment.

Therefore from some economic activities that have been done it does not give much economic prosperity for local people, but the environment is neglected due to any business activities conducted primarily only aims to pursue maximum profits, but funds for the maintenance or restoration of the environment if occurred a damage are not budgeted by responsible person for the business / activity. As in the activities of PT. Newmont Nusa Tenggara (NNT) has continued until today. Starting from tailings disposal activity to Senunu Bay, pollution of River of Sekongkang Sejong Tongo, opening 198.65 hectares of protected forest, until excited case of divestiture of PT. Newmont Nusa Tenggara. The mining activities of PT. Newmont Nusa Tenggara has been operating for years, but poverty and malnutrition have overshadowed the citizens. The existence of PT. Newmont Nusa Tenggara, does not give added value (economic value) to poverty reduction. Precisely, Province of West Nusa Tenggara where PT. Newmont Nusa Tenggara is situated, is one of the poorest provinces in Indonesia with as much as 21.55%.⁶

Factually with such condition, the state has a responsibility in environmental protection as the provisions of Article 2 explanation of Act No. 32 of 2009 states:

- a. State guarantees the utilization of natural resources will provide the maximum benefit for the welfare and quality of life of the people, for the present generation and future generation;
- b. State guarantees citizens' rights to good and healthy environment
- c. State prevents the utilization of natural resources resulting natural pollution and / or environmental damage.

From the provisions of that Article, the Government is obliged to provide guarantee for its citizens against all information relating to the environment continuously with the aim to support the implementation of the protection of life in a sustainability

⁵ Exposure of the Assistant Deputy of Environmental Economy of Deputy of Ministry of Environmental Affairs, *Environmental Management presented* at the meeting of Public Consultation in Gedung Manggala Wanabakti, Jakarta, January 2015 , uploaded <http://apki.net/wp-content/uploads/2015/01/Paparan-ASDEP-EKLING-22-Jan-2015.pdf>, on 6 January 2015, at 12.45

⁶ <http://borneomagazine.com/item/NEWS-Dampak-Lingkungan-Yang-Diakibatkan-PT-Newmont-Nusa-Tenggara.html>, uploaded on 6 July 2015, at 15.00.

2. Principles of Local Wisdom As One of the Environmental Protection Efforts in Indonesia

The principle of local wisdom has been established in Article 2 letter L Act No. 32 of 2009, from the provisions of Article 2 it means that the protection and management of the environment should pay attention to the noble values that apply in the community life. It means that the principle is a general truth and should be implemented, so that the principle of local wisdom when linked in the context of environmental protection, means not allowed to leave the customs of local communities which have embraced and implemented by hereditary (continual) from generation to generation even if the rules were not written.

An important event associated with the recognition and strengthening of customary law society departs from the result of Earth Summit in Rio de Janeiro in 1992 with the issuance of the Rio Declaration on Environment and Development (1992). In 22nd Principle states that common law communities have an important role in environmental management and development because of their knowledge and traditional practices. Therefore, the State must recognize and fully support the entity, culture and their interests as well as provide an opportunity to actively participate in the achievement of sustainable development.⁷

Local wisdom in each region of Indonesia in the concern for the environment has a different wisdom, such as, for example, Community of Muna have environmental wisdom which holds that the human life is tied to the environment as a system of macrocosm. Flora and fauna nature is seen as part of a system of macrocosm together with humans. Other natures around humans also have rights and obligations as well as their own roles. Therefore, human beings have to make friends with other life and should not be arbitrary to environmental nature. For that case, the Community of Muna has their own values to set pattern of relationship between human and its nature that are arranged in customary norms. The Community of Muna is banned arbitrary to the environment because it violated customary norms. Trees should not be felled without any rules because there is supernatural life in the form of spirits. Similarly, with animals and certain objects, one of which is what is called KASASI that is both forest areas that have been processed or not, are prohibited to be processed or reprocessed except on the permission of SARANO WITE (Central Government of the Kingdom). The goal is to protect the habitat of wildlife such as deer, buffalo, cows, partridges and bees. People are very afraid of breaking the norms of this tradition because the forest is considered to have spiritual powers.⁸

Furthermore, local wisdom in Cimanggu is one of the villages located in the Village of Gunung Malang.⁹ The village has local wisdom that is used to preserve the environment and increase agricultural production. Local wisdom or may be called traditional wisdom is a knowledge that are owned hereditary by farmers in processing their environment, that is, a knowledge of the behavior as a result of their adaptation to the environment that has positive implications for the environmental preservation.¹⁰

Local wisdom in Village of Cimanggu is a calendar system in agriculture, for example, the growing season calendar. This calendar system is a Sundanese dating system which is seen in its determination of the approximate position of the moon. For example, planting time is done during the prior month of Ramadan and is calculated from the first of Muharam. In the year of 1960s, Gunung Malang Villagers held a separate culture in processing their agricultural field. They did not know the conventional calculation month, but only to know the calculation of the months of Islam, and believed that there were only 30 days in a month. In determining the timing of planting calendar farmers generally use the moon as a guide, when the moon looks brighter light means showing the early date (date 1-10), first of the date set when the moon is directly overhead and when the moon is dark indicating ending month (date 17-30). Farmers in the Village of Gunung Malang have some kind of "inner knowledge" that can indicate when to plant, and when not to plant. When it is time not to plant, it means that all farmers should not plant simultaneously, if there is someone plants, it commonly occurs "catastrophe" as the farm affected by certain pests, or do not thrive.

Then local wisdom carried out by Community of Colo, District Dawe, Kudus, Central Java in maintaining the environment, through which they profess a religious approach, covering the earth alms tradition and Kupatan and there is also a tradition of utilizing forest products trust in the cycads tree.¹¹ The role of environmental protection carried out by the Community of Colo Village, there is economic, that is, activities that focus on the environmental movement associated with the local wisdom related to the belief of local communities beyond the power of human who helped preserve the environment. The belief

⁷ Kearifan Lokal Masyarakat Adat Maluku Dalam Perlindungan dan Pengelolaan Lingkungan Hidup (*Local Wisdom of Custom Community of Maluku in the Protection and Management of the Environment*), by Popi Tuhulele, uploaded on 6 July 2015 at 10.09, <http://fhukum.unpatti.ac.id/artikel/lingkungan-hidup-pengelolaan-sda-dan-perlindungan-hak-hak-adat>.

⁸ <https://sejarahwuna.wordpress.com/sejarah-kerajaan-muna/masyarakat-muna-memiliki-kearifan-lingkungan-yang-memandang-bahwa-dalam-hidup-ini-manusia-terikat-dengan-lingkungannya-sebagai-suatu-system-makrokosmos-alam-flora-dan-fauna-dipandang-sebagai-bagian-d/>, uploaded on 6 July 2015, at 23.37.

⁹ <http://rikar08.student.ipb.ac.id/2010/06/19/kearifan-lokal-terhadap-pemeliharaan-lingkungan-hidup-kampung-cimanggu-desa-gunung-malang-kecamatan-tenjolaya-kabupaten-bogor/> (et al)

¹⁰ Lamech dan Prioyulianto Hutama. 1995 (et al), *Kearifan Tradisional Masyarakat Pedesaan Daerah Irian Jaya Di Kabupaten Jayapura dan Biak Numfor*.

¹¹ Hasil penelitian dilakukan oleh Hendro Ari Wibowo, Wasino dan Dewi Lisnoor Setyowati, uploaded on 7 July 2015 at 08.30 dari <http://journal.unnes.ac.id/sju/index.php/jess/article/view/79/71>.

of Colo Village about the flora in the area of Muria is their belief in the cycads tree, Meranti tree and Parijoto fruit are believed to have healing properties, as well as earth alms ceremony as a means of communication with nature.

In the area of Province of Banten, known to indigenous people of Baduy Tribe located in the Village of Kanekes, District of Leuwidamar, Regency of Lebak, in environmental conservation efforts undertaken by the Baduy community is still very dependent on and always keep the natural surroundings. Wisdom of local communities in managing natural resources, among others are done by the division of the territory into three (3) zones namely; reuma zone (settlements), heuna zone (moor and fief) and leuweung kolot zone (old forest). Baduy Community has a synergistic integrity in creating a sustainable life. Baduy view is relatively the same on social relations, economic, cultural, and environmental management. Customs as part of local wisdom are held very firmly by Baduy and a self defence in facing of modernization included in conserving the environment.¹²

From all the examples of local wisdom above has been shown us that the behavior and local values done every day by a particular local community groups (homogeneous) always abiding with the advices or watchword of his ancestors, because local wisdom is always been reflected in their habit of living in a society for a long time and hereditary and good to be maintained. Therefore it is naturally that the State of Indonesia accommodates local wisdom in an article in Act No. 32 of 2009 as Article 1 of general provisions to set local wisdom. In the history of human civilization, each country has the local wisdom, including Indonesia, which has tribes up of 1,128 scattered in the territory of the Republic of Indonesia¹³ and each tribe has local wisdom in preserving the environment, but because of the development of modernization and technological era, then the local wisdom has shifted, partly due to the example of marriage between one tribe to another, then out of the local community, the region that his ancestors became the government's development projects, as well as private projects (construction industry), illegal logging in the forest region, as well as the examples above so that local people lose with the financiers, and finally local wisdom is increasingly lost.

Therefore, when the economic value is confronted with local knowledge has always been a contradiction, on the one side local wisdom hinder economic development, while on the other side the uncontrolled development of the economic value shifted local wisdom and damaged the environment. Basically if local wisdom is internalized, it will give perspective to mankind to do well and behave to care of nature for the survival of humans and other living things on the earth. Thus local wisdom has a good value of history and should be maintained from generation to generation in a certain community and situation to be the role models of the next generation.

Finally local wisdom will last when in the use of language, speech or communication, interaction, and community are fixed in a unity despite a pressure from outside the community.

CONCLUSIONS

1. The activities of economic value of natural resources cannot guarantee the life of the local community even it is otherwise the environment becomes damaged because in doing economic activities of natural resources, environmental audits and monitoring are not conducted openly and periodically as well as the principle of responsibility of the state that the utilization of natural resources will provide maximum benefits for the welfare and life quality of the people.
2. Basically, the principle of local wisdom is one of the strongholds for maintaining the economic value of natural resources as environmental protection efforts in Indonesia. With local wisdom in each region in Indonesia if it is done continuously and well it undoubtedly give enlightenment to the people to do well and behave to care for the environment and nature for the survival of humans and other living things on the earth

Bibliography

Lamech dan Prioyulianto Utama. 1995 (et al), *Kearifan Tradisional Masyarakat Pedesaan Daerah Irian Jaya Di Kabupaten Jayapura dan Biak Numfor. (Traditional Wisdom of Village Community Area of Irian jaya in Regency of Jayapura and Biak Numfor)*.

Sonny Keraf, *Etika Lingkungan (Environmental Ethics)*, penerbit buku Kompas, Jakarta, 2002.

Suparmini dkk (*Suparmini et al.*), hasil penelitian tentang Pelestarian Lingkungan Masyarakat Baduy Berbasis Kearifan Lokal, Fakultas Ilmu Sosial Universitas Negeri Yogyakarta (*research results on Preservation of Environment of Baduy Community in the Basis of Local Wisdom, Faculty of Social Science, State University of Yogyakarta*), uploaded at 09.15 on 7 July 2015, from <http://journal.uny.ac.id/index.php/humaniora/article/download/3180/2665>.

¹² Suparmini dkk, hasil penelitian tentang Pelestarian Lingkungan Masyarakat Baduy Berbasis Kearifan Lokal (*research result of Preservation of the Environment of Baduy Community in the Basis of Local Wisdom*), Fakultas Ilmu Sosial Universitas Negeri Yogyakarta, uploaded at 09.15 on 7 July 2015, from <http://journal.uny.ac.id/index.php/humaniora/article/download/3180/2665>.

¹³ Source, census carried out by Badan Pusat Statistik (*Statistic Central Board*) Year of 2010, uploaded through <http://www.jpnn.com/berita.detail-57455>

Paparan Asisten Deputi Ekonomi Lingkungan Deputi Kementerian Lingkungan Hidup Bidang Tata Lingkungan, disampaikan pada pertemuan Konsultasi Publik di Gedung Manggala Wanabakti, Jakarta, Januari 2015 (*Exposure of Assistant Deputy of Environmental Economy of Deputy of Ministry of Environmental Affairs Environmental Management, presented at the meeting of Public Consultation in Gedung Manggala Wanabakti, Jakarta, January 2015*), uploaded <http://apki.net/wp-content/uploads/2015/01/Paparan-ASDEP-EKLLING-22-Jan-2015.pdf>.

<http://borneomagazine.com/item/NEWS-Dampak-Lingkungan-Yang-Diakibatkan-PT-Newmont-Nusa-Tenggara.html>.

<http://alamendah.org/2014/08/01/kerusakan-lingkungan-hidup-di-indonesia-dan-penyebabnya>.

Kearifan Lokal Masyarakat Adat Maluku Dalam Perlindungan dan Pengelolaan Lingkungan Hidup (*Local Wisdom of Customary Community of Maluku in Protection and Management of Environment*), by Popi Tuhulele, uploaded on 6 July 2015 at 10.09, <http://fhukum.unpatti.ac.id/artikel/lingkungan-hidup-pengelolaan-sda-dan-perlindungan-hak-hak-adat..>

<https://sejarahwuna.wordpress.com/sejarah-kerajaan-muna/masyarakat-muna-memiliki-kearifan-lingkungan-yang-memandang-bahwa-dalam-hidup-ini-manusia-terikat-dengan-lingkungannya-sebagai-suatu-system-makrokosmos-alam-flora-dan-fauna-dipandang-sebagai-bagian-d/>,

[http://rikar08.student.ipb.ac.id/2010/06/19/kearifan-lokal-terhadap-pemeliharaan-lingkungan-hidup-kampung-cimanggu-desa-gunung-malang-kecamatan-tenjolaya-kabupaten-bogor/\(et al \)](http://rikar08.student.ipb.ac.id/2010/06/19/kearifan-lokal-terhadap-pemeliharaan-lingkungan-hidup-kampung-cimanggu-desa-gunung-malang-kecamatan-tenjolaya-kabupaten-bogor/(et%20al))

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Sensus Badan Pusat Statistik Tahun 2010 (*Census of Statistic Central Board Year 2010*), uploaded through <http://www.jpnn.com/berita.detail-57455>