

The Environmental Damage and the Institutionalization of Carrying Capacity Concept in Indonesia

Supratiwi¹
{tiwik75@gmail.com¹}

Universitas Diponegoro, Indonesia¹

Abstract. One of the causes of environmental damage is spatial planning policy which ignores the carrying capacity of the environment. Therefore, it is important to check how the institutionalization of carrying capacity concept of environmental in Indonesia. Since, the era of New Order, Indonesia had several regulations which related to carrying capacity of the environment and spatial planning; namely Law No. 4 of 1982 concerning on the Basic Provisions of Environmental Management, Law No. 24 of 1992 concerning on the Spatial Planning and Law No. 23 of 1997 concerning on Environmental Management. Whereas, in the regional autonomy period, there were Law Number 26 of 2007 [1] which concerned on Spatial Planning and Law No. 32 of 2009 [2] concerned on the Protection and the Management of Environment. In fact, the number of regulations did not yet guarantee the enforcement of carrying capacity of environment. Because from the checking results it was known that the policy framework of sustainable development was still limited as a formality; it had not really been used as a development paradigm. Economic interest was the top priority of government compared to environmental interest. Therefore, it influenced on the seriousness of government in making policy instruments to prevent the over carrying capacity of the environment on the use of environmental space. From the four policy instruments based on Christopher Hood [3]; both nodality (information), authority, treasure (resources), and organization all showed that they were still weak. Consequently, there was an increase in environmental damage from time to time.

Keywords: Environmental Damage, Institutionalization, Carrying Capacity.

1 Introduction

The environmental condition of Indonesia has been on the verge of collapse due to over-exploitation for 32 years. The developmentism and the sectoral approach paradigm used cause the environment as the asset and the commodity which can be exploited for the temporary benefits and the interest of certain group. Access and control are determined by the one who has the access towards the. These are done only for the sake of obtaining economic benefits.

Decentralization is expected to make a better environmental condition because the region has the authority to manage its own natural resources and environment. However, apparently in the regional autonomy period there is an increase in the damage of environment and natural resources which happened in almost all regions of the country. The weak of the law enforcement agency, overlapping permit, conflicts among the sectors, unclear authority, limited funds to manage the environment, low people aspirations in demanding the quality and the service of

environment, and often environmental interests are defeated by political and economic interests then, these are suspected as the cause [4].

One of the factors that lead to environmental damage is spatial planning policy which ignores the carrying capacity of environment. A lot of license is issued without calculating the carrying capacity of environment; conducted by both the central and regional governments. Based on the data submitted by the Ministry of Energy and Mineral Resources, the Mining License after the implementation of regional autonomy was recorded more than 10,000 or jumped more than 10 times compared to before the existence of regional autonomy. This number jumped dramatically compared to the period before the existence of regional autonomy which only amounted to 900 since 1967-2001 [4].

The data was strengthened by Walhi confirmed that around 159,178,237 hectares of land had been plotted with the licenses, which was equivalent to 30.65% of Indonesia's territory (land and sea). As an illustration, the wide of Indonesia area was around 191,944,000 hectares and the sea area reached 327,381,000 hectares. The distribution of these licenses, 59.77% were on the land and 13.57% on the sea. The spatial use can be greater, if the local license data can be registered or consolidated properly at the ministry or agency level [5].

This showed how the government was very accommodating of economic development interests. There was governance domination of space by enormous investment which had impact on the increase of environmental damage. Moreover, what often happens was that the spatial arrangement was made to facilitate the occurrence of crime against the environment.

2 Statements of the Problem

One of the causes of environmental damage is spatial planning policy which tends to ignore the carrying capacity of the environment. Therefore, it is important to see the seriousness of the government in the institutionalization of carrying capacity concept of environment to prevent environmental damage. This will be done by checking how the policy framework and policy instruments of the regulation of carrying capacity concept of environment in Indonesia; both in the New Order era and the reform era.

3 Discussion

Since the New Order era, Indonesia had several regulations which related to the carrying capacity of environment and spatial planning; namely Law Number 4 of 1982 concerning on the Basic Provisions of Environmental Management [6], Law Number 24 of 1992 concerning on Spatial Planning [7] and Law Number 23 of 1997 concerning on Environmental Management [8] Whereas, in the Regional Autonomy period there were Law Number 26 of 2007 [1] concerned on Spatial Planning and Law Number 32 of 2009 concerned on the Protection and the Management of Environment [2].

To find out the government's commitment towards the carrying capacity of environment, then the checking of policy framework and policy instruments from the regulations above will be carried out. This checking will be based on the theory of policy instruments from Christopher Hood [3]. Hood summarizes the four resource frameworks owned by the government; namely nodality (information), authority, treasure (property), and organization; which were abbreviated

as NATO [3]. The research method that will be used is descriptive qualitative with relevant document investigation technique.

3.1 The Institutionalization of Carrying Capacity Concept in Indonesia in the New Order Era

a. The Regulation regarding the Carrying Capacity of Environment in the New Order Era

The existence of carrying capacity concept of environment in Indonesia began when the environmental conference was held by the United Nations in Stockholm, Sweden in 1972. At the conference the concept of sustainable development was began; where the development was carried out by paying attention to environmental aspects. Then the operationalization of sustainable development used the carrying capacity concept of environment.

Indonesia became one of the participants at the Stockholm conference; and also signed the agreement to pay attention to environmental aspects of development. Furthermore, it was also arranged the basis for various provisions and regulations regarding environmental management issues; namely Law Number 4 of 1982 [6], concerning Basic Provisions for Environmental Management[9]. This regulation is an important milestone for Indonesia because the environment is getting special attention.

Moreover, the carrying capacity concept of environment began to be included in article 1 paragraph of Law Number 4 of 1982; which states: "the carrying capacity of environment is the ability of the environment to support human life and other living things [6]. This inclusion indicates that the carrying capacity concept is officially used as a guide of regulation in Indonesia. As a result, it becomes the government's obligation to make policies which always consider the aspects of carrying capacity of environment.

The use of the carrying capacity concept is further strengthened when the regulation about Spatial Planning emerges; namely Law Number 24 of 1992 [7] which also includes carrying capacity in the explanation section of Paragraph 2: "What is meant by integrated is that spatial planning is analyzed and formulated into a single unit from the various activities of spatial use both by the government and the community. Spatial planning is carried out in an integrated and comprehensive manner which includes aspects of time, capital, optimization, carrying capacity, environmental capacity, and geopolitics" [7]. Since then the carrying capacity of environment has become a requirement of spatial planning policy in Indonesia.

Meanwhile, in the new environmental regulation; namely Law Number 23 of 1997 [8] concerning on Environmental Management, the carrying capacity concept of environment includes in article 1. However, this law distinguishes between carrying capacity and environmental capacity; as mentioned in Article 1 paragraph 6 and paragraph 8; that carrying capacity of environment is the ability of the environment to support human life and other living things, whereas, environmental capacity is the ability of environment to absorb substances, energy, and / or other components which include or included into it [1]. The following are the regulations in the New Order era which contain the carrying capacity concept of environment:

Table 1. Regulations related to carrying capacity of the environment in the New Order era

No	Regulation	Institution/Organization
1.	Law Number 4 of 1982 concerning on the Basic Provisions of Environmental Management (article 1 paragraph 4)	Ministry of State Minister for Development and Environmental Supervision (Men-PPLH)

2.	Law Number 24 of 1992 concerning on Spatial Planning (Elucidation of paragraph 2)	Ministry of Public Work
3.	Law Number 23 of 1997 concerning on Environmental Management (Article 1 paragraph 6 and paragraph 8)	State Ministry for the Environment

Source: Processed.

b. Policy Framework and Policy Instruments of the Regulation of Carrying Capacity Concept of Environment in the New Order Era

The checking results of policy framework and policy instruments of the regulation of carrying capacity concept of environment in the New Order era can be seen in Table 2 below:

Table 2. Policy Framework and Policy Instruments of the Regulation of Carrying Capacity Concept of Environment in the New Order Era

Regulation	Policy Framework	Policy Instruments			
		Nodality	Authority	Treasure	Organization
Law Number 4 of 1982 concerning on Basic Provisions of Environmental Management (article 1 paragraph 4)	Ecological development	There is no implementing regulation so that it is not effective in dealing with environmental problems; including the implementation of carrying capacity concept of environment	the authority is weak because it is only at the level of the state minister (does not have authority over other ministries and does not have an extension in the regions); does not have the authority to give sanction on environmental violations; weak in supervision	lack of human resources who have the capability and lack of financial resources	The office of the State Minister for the Environment and the Environmental Impact Management Agency (Bapedal)
Law Number 24 of 1992 concerning on Spatial Planning (Elucidation of paragraph 2)	ecological development	this regulation is hierarchical and top down	It is weak because it does not have the authority to provide criminal sanction for spatial planning violations	lack of qualified human resources and funds	The Minister of Financial Economics and Industry as the coordinator
Law Number 23 of 1997 concerning on Environmental Management	sustainable development	- more complete regulation to complete the previous	The authority is increased and strengthened which has a	lack of qualified human resources	Ministry of Environment

(Article 1 paragraph 6 and paragraph 8)		Environmental Law -the community has the right to environmental information and very strategic because the active and the critical role only can be done when information access is available - Amdal as an instrument for preventing environmental damage	special mandate to coordinate, but it has not been implemented properly due to the weak of commitment and integrity	and lack of funding	
---	--	--	---	---------------------	--

Source: Processed.

The table above shows that the policy framework used in the regulation of carrying capacity of environment in the New Order era is sustainable development. However, this mindset has not been fully used as a guideline because there is still a tug of war between the environment interest with (economic) development; which means that the environment has not been made as mainstream in the development. The sustainable development is merely as jargon which is formally stated in the regulation. But it has not really been used as a reference in carrying out the development; including the spatial use that should not exceed the carrying capacity of environment.

The lack of government commitment in making sustainable development as a policy framework which then has an impact on the development and the preparation of policy instruments which also seems to be not serious. From the four components of NATO policy instrument based on Christopher Hood [3]; almost all of them are still very weak. From the nodality, there is no implementing regulation so that the law cannot be implemented properly. The authority is weak so that it cannot do much to implement the rules or to give sanctions for violations. Likewise the treasure is also low; such as human resources with capacity and also funding sources. The form of organization which does not have full authority increasingly shows the lack of seriousness of the government in keeping the unexceed carrying capacity of environment in using the space.

3.2 The Institutionalization of Carrying Capacity Concept in the Regional Autonomy Era

a. Regulation regarding the Carrying Capacity of Environment in the Regional Autonomy Era

In the era of reform and regional autonomy the carrying capacity concept of environment is increasingly being used in policies made by the government. In the beginning of the reform, the government still used the guideline of Law Number 23 of 1997 concerning on UUPLH. This caused problems when Indonesia implemented regional autonomy in 2004. Because the regulations became out of sync due to the regional autonomy placed the authority to manage the environment in the hands of local government.

Finally, this problem was solved when there was Law Number 32 of 2009 concerning on the Protection and the Management of environment. [2] And before that there was also Law Number 26 of 2007 concerning on Spatial Planning which also regulates the carrying capacity of environment.[1] Therefore, in the era of regional autonomy there were two laws which concerned on the rules about carrying capacity of environment; namely Law Number 26 of 2007 concerning on Spatial Planning and Law Number 32 of 2009 concerning on the Protection and the Management of environment; as shown in the table below:

Table 3. The Regulation regarding the Carrying Capacity of Environment in the Regional Autonomy Era

No	Regulation	Institution/Organization
1.	Law of the Republic of Indonesia Number 26 of 2007 concerning on Spatial Planning	The Ministry of Agrarian Affairs and Spatial Planning
2.	Law Number 32 of 2009 concerning on the Protection and the Management of Environment	The Ministry of Environment

Source: Processed

b. Policy Framework and Policy Instruments of the Regulation of Carrying Capacity Concept of Environment in the Regional Autonomy Era

The checking results of policy framework and policy instruments of the regulation of carrying capacity concept of environment in the regional autonomy era; as shown in Table 4 below:

Table 4. Policy Framework and Policy Instruments of the Regulation of Carrying Capacity Concept of Environment in the Regional Autonomy Era

Regulation	Policy framework	Policy Instruments			
		Nodality	Authority	Treasure	Organization
Law Number 26 of 2007 concerning Spatial Planning Article 19 letter e	Sustainable development	does not have any implementing regulation so that is not implementative; it is incompatible with other sectoral laws, this law is incompatible with Law 32/2004 on Regional Government, the conflict between spatial planning and the regional development interest, ratification procedures of RTRW are convoluted, the public is difficult	It is weak because it uses sectoral logic and there is no coordination between the fields; as a result, there are many perpetrators of spatial planning violations are free from the sanctions	lack of qualified human resources and the funds	the Minister of Public Works as the coordinator

		to access the regional of RTRW - licensing as a controlling instrument for the use of spatial planning to suit the carrying capacity of environment			
Law Number 32 of 2009 concerning on the Protection and the Management of Environment Article 1 numbers 6-8, Article 8, Article 12 paragraphs 2-4, Article 16, article 17 paragraph 2, and article 19	sustainable development	-There is implementing regulation -KLHS as an instrument to prevent pollution and / or environmental damage -KLHS is just recommendation	-wide authority to the Minister to carry out all governmental authorities in the field of protection and management of environment and coordinate with other agencies -but this authority has not been used maximally.	lack of qualified human resources and the funds	the Ministry of Environment

Source: Processed.

The table above shows that the policy framework used in the regulation of carrying capacity concept of environment in the regional autonomy era is sustainable development. As in the new order era; this framework is just as formality. It is not yet implemented seriously as a guideline in carrying out the development and also to prevent the exceed use of space so that it is not over the carrying capacity of environment.

Moreover, policy instruments made by the government during the regional autonomy era show an increase; however, it has not been able to maintain capacity of environment. In terms of nodality, the government makes instruments to maintain the carrying capacity of environment; such as SEA (Strategic Environmental Assessment). But the problem is that SEA often only stops with recommendation; it is not really used as the main consideration by the government in arranging development policy.

In terms of authority, wide authority is given to the Ministry of Environment to carry out all government authorities in the field of environmental protection and management and to coordinate with other agencies; including the authority to supervise and sanction violations. Unfortunately, this great authority is not used maximally because of the weaknesses in the government's integrity and commitment. For treasure, the condition is still the same as the New Order era; that is, the lack of human resources and little funds. These constraints because it could not run its authority properly. Moreover, from the organization instrument; the institutionalization of carrying capacity of environment is still limited in its scope to the ministry

of environment and the ministry of spatial planning. Environmental issues are not yet as compulsory affair for all ministries so that the results are not in line with the expectation.

4 Conclusion

From the above checking it can be concluded that the Indonesian government has not been seriously committed to the enforcement of carrying capacity of environment in the use of space. The sustainable development principle as a policy framework has not been implemented properly. As a result, the government has not yet shown its seriousness in preparing policy instruments to maintain that stable carrying capacity so that it is not exceeded. It is seen from the weakness of the four policy instruments; both nodality (information), authority, treasure (property), and organization.

The use of a sustainable development framework is just as *slogan*; it is not really used as a development paradigm. In addition, it is stated in various regulations; but not yet implemented in development policies and activities. That is because, since the new order until regional autonomy era, the government's orientation has always been on economic development which emphasizes the exploitative use of natural resources; including the use of space for development purposes.

It can be concluded that the change of the government system from centralization in the new order era to decentralization in the reform era apparently does not make better environmental conditions. The control of the state is weak because it is not serious in making policy instruments to prevent environmental damage. The source of the cause is the alignments to economic interests which always sacrifice environmental interests.

4.1 Suggestion

The government must be more committed in implementing a sustainable development policy framework; which will have an impact on the seriousness in preparing policy instruments which care about the enforcement of carrying capacity of environment. With the preservation of carrying capacity of environment in using of space, it is expected that environmental damage will be prevented and minimized.

References

- [1] "Pemerintah Indonesia. Undang-Undang Nomor 26 Tahun 2007 tentang Penataan Ruang. Lembaran Negara No.68. Sekretariat Negara. Jakarta, 2007."
- [2] P. Indonesia, *Undang-Undang Nomor 32 Tahun 2009 tentang Pengelolaan dan Perlindungan Lingkungan Hidup*. Sekretariat Negara. Jakarta, 2009: .Lembaran Negara No.140.
- [3] C. C. Hood and H. Z. Margetts, *The tools of government in the digital age*. Macmillan International Higher Education, 2007.
- [4] "Tata Kelola Lingkungan (Policy Brief)." [Online]. Available: www.worldbank.org . [Accessed: 17-Mar-2014].
- [5] A. S. Karokaro, "Kondisi Indonesia Masih Darurat Ekologis." [Online]. Available: <http://www.mongabay.co.id/2018/04/24/walhi-kondisi-indonesia-masih-darurat-ekologis/>.
- [6] P. Indonesia, *Undang-Undang Nomor 4 Tahun 1982 Tentang Ketentuan-Ketentuan* . .
- [7] *Pemerintah Indonesia. Undang-Undang Nomor 24 Tahun 1992 tentang Penataan Ruang*. Sekretariat Negara. Jakarta, 1992: Lembaran Negara No.115.
- [8] *Pemerintah Indonesia. Undang-Undang Nomor 23 Tahun 1997 tentang Pengelolaan Lingkungan Hidup*. Sekretariat Negara. Jakarta, 1997: Lembaran Negara No.68.

[9] “Sejarah Kementerian Lingkungan Hidup.” [Online]. Available: www.menlh.go.id .