

YURIDICAL STUDY ON CLIMATE CHANGE MITIGATION THROUGH FORESTRY MANAGEMENT BY THE LOCAL GOVERNMENT

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Abstract

The authority of the local government to regulate and manage its own household affair including forestry management is a challenge in the implementation of climate change mitigation. However there have been some amendment on forest sector in Act regarding Local Government. These change would impact to the authority of local government including climate change mitigation through forestry management. Therefore, aim of this study is to know whether the local government act may supported nor hampered the implementation of climate change mitigation trough forestry management. This study is a normative study with legislative approach and conceptual approach. Techniques of data collection is literature study. It is then analyse qualitatively. Result of the research is that amendment on rule over forest management in Act Number 23 year 2014 Regarding Local Government that gives the central government large authority concerning natural resources resulting to definite authority of local government concerning forest management including climate change mitigation. This may lead to the possibility of ineffective implementation on climate change mitigation by local government.

Keywords : climate; change; mitigation; forest; management.

INTRODUCTION

Lot of research have described fact about climate change and its negative impact to human life. To deter the increase of greenhouse gases concentration that caused climate change international community have made numerous agreement on the effort to mitigate climate change. Those agreement are United Nations Framework Convention on Climate Change (UNFCC), Tokyo Protocol, Bali Road map, Paris agreement, etc.

Refer from UNFCC definition of mitigation is a human intervention to reduce the source of greenhouse gases that caused global warming. Numerous climate change mitigation scheme that have approved by the international community are Emission Trading, Joint Implementation and Clean Development Mechanism as

stipulated in Kyoto Protocol and the Reducing Emission from Deforestation and Forest Degradation (REDD) mechanism.

Indonesian government already put climate change mitigation and adaptation in development plan. In The National Long Term Development Plan (RPJPN) 2005-2025, climate change described as one of the challenge that must be solved. This regulated further in The National Midle Term Development Plan (RPJMN) 2004-2009, The National Midle Term Development Plan (RPJMN) 2010-2014, The National Midle Term Development Plan (RPJMN) 2015-2019, and also in other development policy that aim to anticipate climate change. Effort to anticipate climate change specifically regulated in climate change national action plan document (RAN-PI) and Indonesia Climate Change Sectoral Roadmap (ICCSR).¹ Mitigation agenda directed to reduce greenhouse gases emission on the economic priority sector, namely energy, forest, agriculture-fishery, and infrastructure that based on the determination of each sector goal reduction.² Among all those sector, forest sector is very important sector considering that this sector is the second largest source of human activities that released carbon dioxide to atmosphere.³ Report from the Intergovernmental Panel on Climate Change/IPCC estimated around 1.6 billion ton of carbon released every year because of land use change that largely come from tropical deforestation. Expert emphasize that preventing deforestation rate is the success key for the next climate change framework.⁴

Indonesia is the third largest tropical forest country after Brazil and Kongo. Rhett Butler write that :

Around 13 percent of Earth's land is covered with tropical forests (about 2 billion hectares or 7.7 million square miles), of which much consists of tropical rain forest. The largest unbroken stretch of rain forest is found in the Amazon river basin of South America. Nearly two-thirds of this forest lies in Brazil, which holds about one-third of the world's remaining tropical rain forests. Another 20 percent of the world's remaining rain forest exists in Indonesia and Congo Basin, while the balance of the world's rain forests are scattered around the globe in tropical regions.⁵

Like other tropical forest country, Indonesian tropical forest faced the high rate of deforestation and degradation. This contributed to the increase of greenhouse gases that caused climate change. With regard to the Indonesian forest degradation and green house gases, a report that publish in nature climate change reveal that:

Extensive clearing of Indonesian primary forests results in increased greenhouse gas emissions and biodiversity loss. However, there is no consensus on the areal extent and temporal trends of primary forest clearing in Indonesia. Here we report a spatially and temporally explicit quantification of Indonesian primary forest loss, which totaled over 6.02 Mha from 2000 to 2012 and increased on average by 47,600 ha per year. By 2012, annual primary forest loss in Indonesia was estimated to be higher than in Brazil (0.84 Mha and 0.46 Mha, respectively). Proportional loss of primary forests in wetland

¹ Sri Nurhayati Qodriyatun, 2016, "Upaya Mitigasi dan Adaptasi Perubahan Iklim" dalam *Info Singkat Kesejahteraan Sosial*, Vol. VIII, No .01./1/P3DI?Januari/2016, *berkas.dpr.go.id/.../info_singkat/Info%20Singkat-VIII-1-I-P3DI-Ja*, (accessed at 01 October 2017).

² *Ibid.*

³ Kanninen, Markku; Brockhaus Maria, Daniel Murdiyarto, 2010, "3 Harnessing Forrest For Climate Change Mitigation Through REDD", *IUFRO World Series*. Vol.25, available at *Forest and Society-Responding to Global Drivers of Change*,/ www.iufro.org/download/file/5890/4668/043-054_pdf (accessed at 20 August 2017).

⁴ *Ibid.*

⁵ Butler, Rhett, 2014, *Tropical Rainforest of The World*, available at <http://rainforests.mongabay.com/0101.htm>, (aceses at 20 August 2017).

landforms increased and almost all clearing of primary forests occurred within degraded types, meaning logging preceded conversion processes. Loss within official forest land uses that restrict or prohibit clearing totaled 40% of all loss within national forest land. The increasing loss of Indonesian primary forests has significant implications for climate change mitigation and biodiversity conservation efforts.⁶

Ministry of forest and environment affirm close connection between forest and climate change. In draft of climate change national action plan, ministry of forest and environment specify that land use and land use change of forest (LULUFC) contribute about 60% of green house gases in Indonesia. Aware of important role of forest in climate change mitigation, government of Indonesia have included forest as one of the sector of national action plan to reduce emission.

Climate change mitigation in forest sector, particularly with regard to protect forest from deforestation and degradation need a policy framework that involve not only the central government but also the local government. Numerous fact and argument that linked rate of deforestation and forest degradation in Indonesia with local policy, make involvement of local government to overcome those problem evermore.

Based on decentralization concept, local government shall have large authority to managed and arrange its own household, including forest. However Act regarding Local Government have been amended. There are some major change in local government authority regarding natural resources including forest sector. These change would impact to the authority of local government including climate change mitigation through forestry management. Therefore, this study would described whether the local government act may supported nor hampered the implementation of climate change mitigation trough forestry management.

This research use normative legal method. There are some approach method use in this research, that are Statuta Approach, and Conceptual Approach. Statuta Approach undertaken by examine various regulations regarding management of forest, local government and protection and management of environment. As for conceptual approach undertaken by using doctrines in the science of law, particularly in constitutional law and environmental law.

Material research for this study are:

- (1) Primary Legal Materials; primary legal material is a binding legal material that form norm or fundamental rule or legislation. These including: Constitution of Republic of Indonesia year 1945, Act Number 41 year 2009 Regarding Forest, Act Number 23 year 2014 Regarding Local Government, Act Number 32 year 2009 Regarding Protection and Management of Environment.
- (2) Secondary Legal Material is a material that explained the primary legal material. These including: law text books, legal research, international and national journal that related with object of research.
- (3) Tertiary Legal Material, that is material that give guidance or explanation about primary legal material and secondary legal material. These including law dictionary and encyclopedia.

Normative legal research is a library research. This research only use literature materials as research data, therefore data collection undertaken by literature searching

⁶ Belinda Arunawati Margono, *et.all.*, 29 June 2014, *Primary Forest Cover in Indonesia Over 2000-2012*, <http://www.nature.com/nclimate/journal/v4/n8/full/nclimate2277.html?foxtrotcallback=true>, (accessed at 20 August 2017).

in several library, and electronic literature using internet. These materials then analyze by using descriptive qualitative.

DISCUSSION

To achieve Indonesian commitment to reduce green house emission so then climate change mitigation shall be conduct jointly by the central government and local government. The provincial government and district government have important rule because many of the activities that produce emission is located in the local region or under the authority of local government.⁷ Among those activities are deforestation and forest degradation. Like other tropical states, Indonesia faced high rate of deforestation and forest degradation. Deforestation and forest degradation oftentimes linked with the broad authority given to local government in arranged and manage natural resources. With respect to that issue, Giorgio Budi Indriarto, *et.all*, describe as follow

*“Otonomi daerah memicu percepatan deforestasi secara luar biasa, karena bupati diberi wewenang menerbitkan izin usaha hutan berskala kecil. Akibatnya selama tahun-tahun awal otonomi, bupati di wilayah yang memiliki hutan, termasuk Kalimantan, menerbitkan ratusan izin hak pemungutan hasil hutan (HPHH), yang masing-masing mencakup areal tidak lebih dari 100ha. Semula izin ini diberikan secara semena-mena dan tanpa pertimbangan dampaknya bagi ekologi, lingkungan fisik dan sosial yang memadai; hasilnya ialah pembukaan yang tersebar luas dan kerusakan parah pada kawasan hutan di seluruh Kalimantan.”*⁸

Kanninen, Markku, *et.all* suggested importance of comprehension on cause of deforestation and forest degradation as the most accurate way to suppress its rate. Other than that accurate comprehension about the cause of deforestation and forest degradation have strengthen the value of forest allowing concern of the policy maker and society generally concentrate to forest as a new appreciation to the role of forest in climate change mitigation and adaptation.⁹

There are different on term of deforestation, therefore it is important to have a proper definition. Rachendra Mawalagendara and Robert J .Oglesby give definition of deforestation as the removal of the existing natural vegetation cover, especially where the native cover is largely forest.¹⁰ Giri Tejaswi devide this definition into two group namely:

*“...those which refer to changes in land cover and those which refer to changes in land use. Land cover measurements often use a percent of cover to determine deforestation. Land use definitions measure deforestation by a change in land use. This definition may consider areas to be forest that are not commonly considered as such. An area can be lacking trees but still considered a forest. It may be a land designated for afforestation or an area designated administratively as forest.”*¹¹

⁷ P2E-PRE Kabupaten Jayawijaya: Rencana Aksi Mitigasi,(2017),

⁸ Giorgio Budi Indriarto, *et.al*, (2013), *Konteks REDD+ di Indonesia, Pemicu, Pelaku, dan Lembaganya*,p.9 available at https://www.cifor.org/publications/pdf_files/WPapers/WP105Resosudarmo.pdf, (accessed at 2 october 2017).

⁹ Kanninen, Markku *et.al*, (2009), *Apakah Hutan dapat Tumbuh diatas Uang, Implikasi Penelitian Deforestasi Bagi Kebijakan Yang Mendukung REDD*, Bogor, CIFOR, p.2., available at www.cifor.cgiar.org, (accessed 20 August 2017).

¹⁰ Mawalagendara Rachendra and Robert J .Oglesby in Paulo Mautinho (eds), (2012), “The Climatic Effects of Deforestation in South and Southeast Asia” dalam Paulo Mautinho (ed), *Deforestation Around The World*, Kroatia, In Tech, www.intechopen.com, (accessed at 28 September 2017).

¹¹ Tejaswi Giri, (March 2007), *Manual on Deforestation, Degradation and Fragmentation Using Remote Sensing and GIS*, p. 5, available in www.fao.org/forestry/18222-045c26b711a976bb9d0d17386ee8f0e37.pdf, (accessed at 28/09/2017).

Forest degradation often defined as the reduction of ability to provide goods and services. However there are more than 50 different way in defining forest degradation. Generally forest degradation considered as the loss of number of characteristics, functions and services as a reaction for an interference.¹²

Source or the cause of deforestation and forest degradation are complex and multidimensional that involved economic, social and political factors. Based on number of research, Markku Kanninen, *et.al* specify that one of the directed and non directed cause of deforestation and forest degradation reflect the government and society option to achieve economic growth and the reduction of poverty. In many of cases forest conversion for alternative land use is a key step for developing country to improve social welfare.¹³ Likewise in Indonesia, where the economic structure still depend on the revenue from natural resources.¹⁴ Ujud Tahajudin specifically considered that economic and political system of Indonesia assume forest as a resources that can be exploited for revenue.¹⁵

The strong of economic motive in the land use change of forest to non forest looked on the expansion of palm oil agriculture area. The growing of land use change of forest to non forest was not new in Indonesia. Yanis Maladi noted that around 1980 the area of palm oil agriculture have reached 29.560 hectaes and growing to 1.804.600 in 1994. That area of palm oil produced 4.804.600 ton crude oil (MSM). Area of Palm oil agriculture keep growing, as data in 2010 showed that there are 8.0 million hectares of palm oil agriculture area. All of those area be under different share, that are private sector share 3,1 million hectares, under PTPN ownership 1,2 million hectares and about 3,7 hectares mastery by people. From those area Indonesia can produce 22 million ton palm crude oil a year.¹⁶ Rob Glastra, Eric Wakker, Wolfgang Richert predicted that world demand for palm oil will keep up that are around 22,5 million ton a year getting to 40 million ton a year in 2020. To respond that demand, seem like expansion of palm oil agriculture area will escalated. Predicted that around 50 % new palm oil agriculture area will be placed in Indonesia. Sumatra will be main place for the new palm oil area, that is around 1.6 million hectares, 1 million hectares will be placed in Kalimantan and other 0,4 million hectares will be placed in West Papua. For economic reason and because lack of government control, palm oil area will continue to expand by converted natural forest rather than using degraded land that widely available.¹⁷

Forest is a natural resources with big economic potention. As the economic source the regime control of forest can attract central government and local government. History have recorded that control and management of natural resources always be part on establishment and amendment of regulation and policy regarding decentralization. Indeed Rikardo Simarmata dan Asep Yunan Firdaus contend that natural resources in

¹² Jaboury Ghazoul, Zuzanan Burivalova, John Garcia-Ulloa, Lisa A. King, "Conceptualizing Forest Degradation", *Trends in Ecology & Evolution*, October 2015, Vol. 30, No.10, p. 623, available in https://www.researchgate.net/.../282249287_Conceptualizing_Forest_Degradation, (accessed at 28/09/2018).

¹³ Markku, Kanninen, *et.al*, (2009), *Op.Cit.*,p.28.

¹⁴ Giorgio Budi Indriarto, *et.al*, (2013), *Op.Cit.*,

¹⁵ Ujud Tahajuddin. (2015), "Pengelolaan Sumber Daya Hutan: Suatu Tantangan", dalam Herman Hidayat (ed),*Pengelolaan Hutan Lestari, Pengelolaan, Partisipasi, Kolaborasi dan Konflik*, Yayasan Obor Indonesia, Jakarta, p.34.

¹⁶ Yanis Maladi, 2013, "Kajian Hukum Kritis Alih Fungsi Lahan Berorientasi Kapitalis" dalam *Jurnal Dinamika Hukum*, Vol. 13, No. 1, p. 111.

¹⁷ Glastra Rob, Wakker Eric, Richert Wolfgang, December 2002, *Oil Palm Plantation and Deforestation in Indonesia. What Role Do Europe and Germany Play*, p.5, accessed at assets.panda.org/downloads/oilpalmindonesia.pdf, (accessed at 28 September 2017).

decentralization regulation can be said as a compromised result in a making of policy.¹⁸ Furthermore they argue as follow:

Sebagai negara kesatuan, corak peraturan perundangan yang mengatur pengelolaan SDA salah satunya dipengaruhi oleh tarik menarik antara kepentingan pemerintah pusat dan pemerintah daerah. Setiap kali sentimen anti pusat menguat di daerah, pemerintah pusat menjawabnya dengan menerbitkan kebijakan pengelolaan SDA yang desentralistik. Tindakan tersebut sebagai langkah untuk mengakomodir tuntutan atau meredam meluasnya sentimen tersebut. Kebijakan desentralisasi dalam pengelolaan SDA juga bisa merupakan respon pemerintah pusat atas tindakan rakyat mengambil alih dan menduduki tanah dan sumberdaya alam lainnya yang sebelumnya diklaim dan dikontrol oleh negara. Metode yang dipilih pemerintah pusat menanggapi sentimen anti pusat dan gerakan pendudukan tanah negara oleh rakyat selalu sama yaitu melimpahkan sebagian urusan kepada pemerintah daerah khususnya mengenai pemberian hak atau izin pemanfaatan. Dengan kewenangan tersebut, pemerintah daerah diharapkan bisa meredam gejala daerah lewat pendistribusian manfaat atas SDA dengan memastikan hak atau izin diberikan kepada kelompok-kelompok kepentingan di daerah.

Kebijakan pengelolaan SDA yang sentralistik berpotensi untuk kembali apabila kekuasaan pusat semakin terkonsolidasi dan pada saat yang sama kebijakan-kebijakan pengelolaan SDA yang dibuat oleh pemerintah daerah dalam rangka desentralisasi, mendatangkan bencana sosial dan lingkungan.¹⁹

Following reformation three acts regarding local government were established, namely Act Number 22 year 1999, Act Number 32 year 2004 and Act Number 23 year 2014. The formation of Act Number 22 year 1999 considered as the answer for decentralization demand. Centralization realized as the weakness from the past. Therefore in the beginning of reformation era was established Decree of People Consultative Assembly Number XV/MPR/1998 regarding Local Autonomy; regulation on distribution; fairness on exploitation of national resources; and balance of central government and local finance, particularly district and city region where the full autonomy will be implemented.²⁰ However number of environment problem linked with local autonomy appear. Decentralization that basically designated to improve people's welfare by giving broad authority to local government to manage its own affair, in contrary this authority turned to be environment disaster.

One of the environment problem raised connected to local autonomy is regarding the forrest license giving by the head of local government. This license oftentimes not only caused environmental problem but also social conflict between government and local peoples. This as noted by Dianto :

Kebijakan Kepala Daerah yang saat ini yang mengundang banyak eksternalitas negatif atau dalam konteks lain tingginya angka konflik adalah kebijakan perizinan di bidang kehutanan. Banyaknya izin yang diterbitkan oleh Kepala Daerah baik izin usaha per-

¹⁸ Rikardo Simarmata dan Asep Yunan Firdaus, February 2016, *Pemberlakuan UU No 23/2014 dan Desentralisasi di Bidang Pengelolaan Sumber Daya Alam*, Jati Padang-Pasar Minggu, Huma, p.4., available at <http://www.huma.or.id>, (accessed at 06 October 2017).

¹⁹ *Ibid.*

²⁰ Muhammad Ali Syafa'at, 15 september 2015, *Sentralisasi Dalam UU No 23 Tahun 2014 Tentang Pemerintahan Daerah*, Disampaikan pada Focus Group Discussion "Inventarisir Persoalan UU No. 23 Tahun 2014 Tentang Pemerintahan Daerah" yang diselenggarakan oleh Asosiasi Pemerintah Kabupaten Seluruh Indonesia (APKASI). Jakarta, docplayer.info/51360650-Isu-isu-strategis-bidang-desentralisasi-da.. (accessed at 10 October 2017).

tambangan, izin perkebunan, izin pengelolaan hutan, izin wisata, izin mendirikan bangunan dan lain sebagainya menimbulkan trush atau perlawanan dari masyarakat yang merasa haknya diganggu atau haknya dihilangkan termasuk hak masyarakat hukum adat.²¹

Recentralization process in management of natural resources enacted in Act Number 23 year 2014. Article 14 Act Number 23 year 2014 affirmed centralization complexion in natural resources management, as follow:

- (1) *Penyelenggaraan Urusan Pemerintahan bidang kehutanan, kelautan, serta energy dan sumber daya mineral dibagi antara Pemerintah Pusat dan Daerah provinsi.*
- (2) *Urusan Pemerintahan bidang kehutanan sebagaimana dimaksud pada ayat (1) yang berkaitan dengan pengelolaan taman hutan raya kabupaten/kota menjadi kewenangan Daerah kabupaten/kota.*
- (3) *Urusan Pemerintahan bidang energi dan sumber daya mineral sebagaimana dimaksud pada ayat (1) yang berkaitan dengan pengelolaan minyak dan gas bumi menjadi kewenangan Pemerintah Pusat.*
- (4) *Urusan Pemerintahan bidang energi dan sumber daya mineral sebagaimana dimaksud pada ayat (1) yang berkaitan dengan pemanfaatan langsung panas bumi dalam Daerah kabupaten/kota menjadi kewenangan Daerah kabupaten/kota.*

Ali syafa'at argue that those details of distribution affirmed that (act number 24/2014) no longer followed principle of fairness and principle of harmony which embrace in Act Number 22 year 1999. There are numerous basic amendment in the local government authority on forest management after Act Number 23 year 2014 enacted.²² Bernadius Stenni noted that amendment of Act regarding local government from Act Number 32 year 2004 to Act Number 23 year 2014 have strengthen coordination authority in governor level. In forest sector governor have a significant authority compared to prior act. This give lot of impact to other authority including license; management of forest zone; and local spatial. Cited from Bernadius Stenni authority of local government in forest sector will describe as follow:

- (1) **Authority in the forest planning.** This authority included : authority to inventory forest; inaugural forest zone; administering forest zone; establishment of forest management zone and arrangement of national forest plan. Most of this authority remain in central government. Some technical authority handed to province government, that is recommendation on technical consideration of forest planning, among others recommendation on change of forest status and function, establishment of forest management unit (KPH) etc. On contrary, district government do not have any authority on forest planning sector.
- (2) **Licence authority in forest sector** can divided into two. First, strategic authority that is authority to issue licenses which contributed to change and reduction of forest cover also that have high economic value. Second, licenses which is less strategic. Strategic licenses remain in central government by means of forest and environment ministry. Among those license are business license for exploitation of timber forest product in natural forest and plant forest, license of loan use on forest zone to non forest purpose

²¹ Dianto, (Agustus 2015), "Kewenangan Kepala Daerah Menerbitkan Izin Usaha Perkebunan di Hutan Adat", Jurnal IUS Volume 8, p. 233.

²² *Ibid.* p.8.

such as mining. As for province and district government the license are environment services license and license for collecting non timber forest product.²³

Further Bernadius Stenni noted that Act Number 23 year 2014 transfer some exploitation authority which previously situated in district government to province government. According to the act, providence of forest authority shared between central and province government. District government almost have no authority on forest management and exploitation. The only forest management that explicitly handed to district/city is management of TAHURA (grand forest park) which is under administrative territory of district/city.²⁴

In climate change mitigation context, displacement of authority on forest sector—from decentralization to centralization— may affect to the providence of climate mitigation by local government. The obligation of local government regarding climate change stipulated in Act Number 32 year 2009 regarding Protection and Management of Environment, as follow:

First; local obligation to arrange Plan of Protection and Management of Environment (RPPLH). RPPLH is a written plan that contain potention, environment problem and effort to protection and management of environment in a certain period of time. Province government and district/city government have an obligation to arrange RPPLH. Province RPPLH arranged based on: (a) national RPPLH; (b) inventarisasi at the level of island/archipelago; (c) inventarisasi at the level of ecoregion. As for the district/city RPPLH arranged based on: (a) province RPPLH; (b) inventarisasi at the level of island/archipelago; (c) inventarisasi at the level of ecoregion. Province RPPLH arranged by governor and enacted as province regulation. As for district/city RPPLH enacted as district/city regulation.

Article 10 (4) Act Number 32 year 2009 Regarding Protection and Management of Environment stipulated that RPPLH contain plan regarding:

- a. *pemanfaatan dan/atau pencadangan sumber daya alam;*
- b. *pemeliharaan dan perlindungan kualitas dan/atau fungsi lingkungan hidup;*
- c. *pengendalian, pemantauan, serta pendayagunaan dan pelestarian sumber daya alam;*
- d. *adaptasi dan mitigasi terhadap perubahan iklim.*

Based on that provision, climate change adaptation and mitigation is one of local government obligation, at the level of province and district/city. Therefore climate change mitigation and adaptation is among local affairs that have to overcome by the local government.

Second, climate change adaptation and mitigation is part of local development. This is because RPPLH is a foundation for arrangement and loaded in Long Term of Local Plan and Middle Term of Local Plan (RPJPD and RPJMD). Middle Term of Local Plan is a document plan of local development that must be prepared by local government as a guidance for development implementation for the next five year. This document formulated based on purpose and goal of local development that consistent with vision, mission and program of the chosen Head local government and compatible with local capability or local government organization to implement.²⁵ As for Long Term of Local

²³ Bernadius Stenni, May 2016, *Op.Cit.*, p.2-p.4.

²⁴ *Ibid.*

²⁵ Eko Budi santoso, 27 Agustus 2008, *Penyerasian Proses, Koteks dan Kontent dalam Penyusunan Rencana Pembangunan Jangka Menengah Daerah (RPJMD) Kabupaten Probolinggo 2008-2013*, Makalah disampaikan pada Seminar Nasional ASPI 2008 di Kampus ITS, p.2., personal.its.ac.id/.../3562-eko_budi-urplan-Makalah%20Seminar%..., (05 October 2017).

Plan (RPJPD) is document of plan that contain vision, mission and direction for local development for 20 years ahead. Long Term of Local Plan (RPJPD) is a bridge to keep the synergy of local development plan in case of changing of local head every 5 years. This is important so that there will be no frontal reconvening on the development orientation, considering that every local head candidate have their own different vision and mission.²⁶

Displacement on authority of forest sector from decentralization to centralization implicates to the limitation on local authority. This can made local less unimpeded in initiation of programs including with respect to climate change mitigation. Most of the climate change mitigation programs in forest sector will back to central government initiatives. Likewise many different policy to prevent deforestation and forest degradation will become central domination.

Based on many kind of facts, it can not be denied that decentralization have failed to prevent deforestation and forest degradation in Indonesia. This failure mainly respect with use of authority by local government only to exploit the forest without any environment consideration. Christopher Barr, *et all*, by alluding numerous research noted that forest exploitation pattern by local government including: (1) issued large number of license and royalty for small scale of timber extraction and implemented new kind of payment and royalty to the timber harvester; (2) in many cases, the making of spatial plan and development strategy emphasized to exploitation and land use change of forest.²⁷ However recentralization in forest management is not an accurate option to guarantee the suppress of deforestation and forest degradation rate. With respect to this Darmawan *et.all* argue that:

If the nature of forest as a national public good genuinely justified its control by central government, time has shown that centralized management in Indonesia has failed. If lack of capacity at the district level is the problem, the most sensible solution is not to re-centralize control and put additional strain on limited central resources (finance, manpower and local knowledge).²⁸

Give back forest management solely to central government is not the best solution to prevent and suppress deforestation and forest degradation. As noted by Dermawan *et.al* that the experience before reformation era showed that centralistic on forest management have failed. Centralistic not only failed to managed forest based on sustainable principle but also have neglected local interest and indigenous community (masyarakat adat) interest. Other matter that should considered is serious stress that will faced by the central resources if all management and administrative of forest relied on central government. Excessive burdens to the central resources as implication of centralization on forest management can unfastened the possibility of ineffective on forest management.²⁹

²⁶ Tim Kajian PKP2A III LAN Samarinda, *Efektivitas Perencanaan Pembangunan Daerah di Kalimantan*, <https://media.neliti.com/media/publications/52375-ID-efektifitas-perencanaan-pembangunan-daer.pdf>, (05 October 2017).

²⁷ Barr Christopher, *et al*, 2006, *Decentralization of Forest Administration in Indonesia, Implication for Forest Sustainability, Economic Development and Community Livelihoods*, p.2., Center for International Forestry Reseach, Bogor Barat, Indonesia, <http://www.cifor.cgiar.org>. (20 August 2017).

²⁸ Ahmad Darmawan *et.al*, 19-23 June 2006, "Decentralization in Indonesia's Forestry Sector, Is it over? What Come Next?"; makalah disampaikan the Eleventh Biennial Global Conference of The International Association for the Study of Common Property (IASCP) on the theme "Survival of the Commons: Mounting Challenges and New Realities", Bali, 19-23 June, 2006. p 13, [https://www.researchgate.net/.../42760916_Decentralization_in_Indonesia's_Forestry_Se.....\(20/10/2017\)](https://www.researchgate.net/.../42760916_Decentralization_in_Indonesia's_Forestry_Se.....(20/10/2017)).

²⁹ *Ibid*.

Decentralization basically is a better option in forest management. Christopher Barr, *et.al* cited numerous research regarding reasons that forest better managed in decentralized settings, that are:

- (1) decision-makers are physically located closer to where their policies will be implemented (Fisher 2000; Rondinelli *et.al.* 1983; Conyers 1981). This proximity often brings with it improved understanding of the specific biophysical, social, and institutional conditions influencing forest management at the field level; better capacity to monitor the activities of forest user groups; and greater access to local knowledge about the management and utilization of forest resources – which are sometimes highly specific to particular social groups and/or ecosystems (Carney 1995).
- (2) decentralized forest administration can also allow for greater participation on the part of forest communities in decision-making processes, and for more direct accountability of policymakers to peoples whose livelihoods depend on forests (Ribot 2002; Anderson 2000; Fisher 2000; Brandon and Wells 1992). Each of these is particularly important if decentralization is to enhance democratization and enfranchisement in forested regions, as forest-dependent communities are often among the most vulnerable and marginalized of social groups.
- (3) decentralization also implies a more equitable distribution of benefits from forest resources, as local communities and governments in forested regions are able to secure a greater portion of revenues from the extraction of timber and other forest products (Ascher 1995; Ostrom 1990).³⁰

In addition decentralization shall not viewed merely as goal but also as a tool as well as a process.³¹ In forest sector, decentralization is a tool to achieve sustainable development. As a tool, decentralization must used with accurate concept as connerstone. The election of an accurate concepts is a prerequisite to achieve the goals.

Jesse Ribot as cited by Christopher Barr devided decentralization into administrative decentralization and politic decentralization, that are:

Administrative decentralization, often referred to as deconcentration typically involves the transfer of administrative responsibilities from a central government to lower level agencies which are upwardly accountable. In a hierarchical state structure, these might include provincial or district governments to the extent that their leadership is responsible to the central government, or regional offices and local implementing agencies of particular national government ministries.³²

As for the political decentralization is:

political decentralization – also commonly referred to as democratic decentralization – occurs when decision-making power and control over resources are “transferred to authorities representative of and downwardly accountable to local populations” ... “Through greater participation, democratic decentralization is believed to help internalize social, economic, developmental, and environmental externalities; to better match social services and public decisions to local needs and aspirations; and to increase equity in the use of public resources.”³³

³⁰ As cited in Barr Christopher, *et.al*, 2006, *Op.cit.*, p.4.

³¹ Report of A Workshop Co-Organized by The Governmant of Indonesia and Switzerland : 27-30 April 2004, *Decentralization, Federal System in Forestry and Forest National Programme*, www.un.org/esa/forests/pdf/cli/finalinterlakenreport.pdf, (accessed at 20 October 2017).

³² *Ibid.*

³³ *Ibid.*

In Interlaken Workshop Report on “Decentralization, Federal System in Forestry and national Forest Program” mentioned that democratic decentralization more likely lead to more benefit result. In regard with this the benefit result is forest management that can prevent deforestation and forest degradation rate so it can embodying effective climate change mitigation.³⁴

Based on Ribbot opinion important element in democratic decentralization is the existence of representative authority in a making decision. Nevertheless real democratic decentralization shall not desist merely on the authority that elect by the people through democratic election mechanism. As noted in Interlaken Report (Report of A Workshop Co-Organized by The Government of Indonesia and Switzerland : 27-30 April 2004) that decentralization in forest sector shall begin by working with local people and building on their institution. Representative and accountable local governments may be the most appropriate interlocutors for this process.³⁵

The involvement of local government in an effort to mitigate climate change not only regarding with decisions making that considering sustainable forest management, but also to assured the involvement of local people who lived near forest. This is important considering that community who lived around the forest generally depends on forest resources. Baginski-Oliver Springate and Eva Wollenberg recorded that around 1-1.6 billion people whose life depend on forest are among the most poorest people in the world.³⁶

Public involvement in the environment policies including forest policy have accommodated in Act Number 32 year 2009 regarding Protection and Management of Forest. Article 18 Act Number 32 year 2009 affirmed that Strategic Environment Analysis (KLHS) carried out with involvement of society and stakeholders. In the explanation of article 18 Act Number 32 year 2009 described that public involvement conducted by dialogue, discussion and public consultation. This is regulated further in Government Regulation (PP) Number 46 year 2016 Regarding Strategic Environment Analysis (KLHS). In Article 32 (2) Government Regulation (PP) Number 46 year 2016 Regarding Strategic Environment Analysis (KLHS) described kinds of public and stakeholder involvement, that are:

- a. giving opinion, suggestion and proposal;
- b. expert counseling
- c. technical assistance
- d. information submission and/or report

As for the qualification of community and stakeholders according to article 33 Government Regulation (PP) Number 46 year 2016 Regarding Strategic Environment Analysis (KLHS) are:

- a. community and stakeholders who get exposed with direct effect and non direct effect from policy, plan and/or programme; and
- b. community and stakeholders who have information and/or relevant expertise with substance of policy, plan, and/or programme.

³⁴ Report of A Workshop Co-Organized by The Government of Indonesia and Switzerland : *Op.Cit.*, (accessed at 20 October 2017).

³⁵ *Ibid.*

³⁶ Oliver Springate-Baginski dan Wollenberg Eva (eds), 2010, Oliver Springate-Baginski dan Eva Wollenberg (eds), *REDD, Forest Governace and Rural Livelihoods The Emerging Agenda*, CIFOR, Bogor-Indonesia, 2010, www.cifor.cgiar.org, p.1, (accessed at 20 October 2017).

Strategic Environment Analysis (KLHS) is a systematic process to evaluate environment impact and to ensure sustainable principles be integrated in a strategic decision making.³⁷ To ensure sustainable principle Strategic Environment Analysis (KLHS) should reflect environmental, economic and social considerations.³⁸ As for Act Number 32 year 2009 describe Strategic Environment Analysis (KLHS) as a systematic, comprehensive and participative to ensure sustainable principle have been a foundation in a region development and/or policy, plan and/or programme.

Strategic Environment Analysis (KLHS) is a precondition for land use change of forest for province zone designation. Government Regulation Number 10 year 2010 Regarding Procedure of Land Use Change and Function Change of Forest Zone governed that land use change of forest zone can undertaken in partial and province territory which must pass by some procedures, that are:

- (a) Partial land use change of forest undertaken by swapping forest zone and release of forest zone. As for the process on swapping forest zone shall through request proposed to ministry. As a follow up of that request ministry will form an integral team who will conducted research with respect to that request. Result of this research will be submitted as a recommendation for minister to take a decision over the request, that is the issuance of forest swapping principle or refusal letter. For the request on land use change of forest zone according to research and recommendation from integral team may have an important impact, wide scope and strategic value, then the issuance of swapping forest zone agreement by minister shall have an approval from house of representatives. Likewise the procedure of forest swap, the procedure for release of forest also shall shall through request proposed to ministry. However this procedure do not pass research phase and Integral Team recommendation. Ministry may issued refusal letter or agreement on the principle of forest zone merely by refer to fulfillment of administrative requirements and technical requirements.
- (b) Land use change on province territory undertaken by request from governor that proposed to ministry. That request shall pass with research by an Integral Team that established by ministry. The integral team shall give result of the research and recommendation to ministry who will handed it to The House of Representatives for an approval, whether for the whole or for the part of forest zone that have proposed. If the proposal for land use change of forest have a potentiation effect and/or environment risk, it must making a Strategic Environment Analysis (KLHS). Ministry decision on the proposal for land use change of forest in province territory determined by the approval or the refusal from The House of Representatives. In the even that The House of Representatives gives an approval on result of research of Integral Team, Ministry issued decision respect to land use change of forest in province territory. On contrary, if The House of Representatives refuse result of the research by Integral Team so Ministry will issue refusal letter.

CONCLUSION

Climate change mitigation is an obligation for the local government. Forest sector as one of the biggest contributor of green house gasses is an important sector shall managed by local government in order of climate change mitigation. However amendment on rule

³⁷ Deputi Bidang Tata Lingkungan KemenLH bekerjasama dengan ESP2 – DANIDA, 2007, *Buku Pegangan Kajian Lingkungan Hidup Strategis*, 2007, tataruangpertanahan.com/pdf/pustaka/panduan/1.pdf, p.4. (14 September 2017).

³⁸ Zunnuraeni, Kafrawi, Abdul Khair, (April 2017), "The Sustainable Development of Environment Protection and Management to the Framework of Regional Development", *ULREV*, Volume 1, Issue 1, p. 128.

over forest management in Act Number 23 year 2014 Regarding Local Government that gives the central government large authority resulting to definite on local government authority concerning forest management including climate change mitigation. This may lead to the possibility of uneffective implementation on climate change mitigation by local government.

SUGGESTION

1. Government and The House of Representatives shall review the rule regarding forest management in Act Number 23 year 2014 Regarding Local Government by incorporate democratic and participative decentralization, that is availability of bigger acces for public and stakeholders in making decision on a programme or local development plan.
2. Participative mechanism in decision making on a project plan or local development including forest sector have regulated in Act Number 32 year 2009 regarding Protection and Management of Environment that is by Strategic Environment Analysis (KLHS). Therefore rule on decentralization shall refer to Act Number 32 year 2009.

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