Legal analysis on the calculation of loss value for the case of industrial forest fire (Case study verdict No. 24/Pdt.G/2015/PN.PlgjoNo. 51/PDT/2016/PT.PLG)

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Abstract. PT. Bumi Mekar Hijau is an industrial forest company sued by Ministry of Environment and Forestry in the court for forest fire. In the lawsuit, Ministry of Environment and Forestry filed a lawsuit of IDR 7,986,605,000,000 in which the material compensation is paid in cash to the Plaintiff through State Treasury Account of IDR 2,687,102,500,000, while the defendant was required to recover the environment which was on fire, with a width of 20,000 hectares at the cost of IDR 5,299,502,500,000. The value of lawsuit against PT. Bumi Mekar Hijau is extremely large. It’s the largest lawsuit in the case of forest and land fire in Indonesia. In the verdict of Palembang District Court, the Judge rejected this lawsuit, considering that Judge did not see any loss caused by the fire since there was no extinction or ecological damage. Thus, soil can be planted again, while there was no intention of PT. Bumi Mekar Hijau to clear land by burning forest. When the fire occurred and who did it is not known, so the unlawful conduct cannot be proven. Decision of Palembang High Court No. 51/PDT/2016/PT.PLG annuls the first-degree decision by requiring the defendant, PT. Bumi Mekar Hijau, to pay compensation of IDR 78,502,500,000. This paper will discuss whether loss value claims submitted by the Ministry of Environment and Forestry are in accordance with the rules of environmental law. In addition, it also discussed whether the application of the law by the first-level Panel of Judges and the level of appeal were correct, specifically related to loss value or compensation.

Keywords: Environment Law, Loss Value, Industrial Forest, Forest Fires

1. Introduction
The forest fires become a serious problem that cannot be solved. Even though, forest resources given to Indonesia are gift of God that must be maintained and managed sustainably [1],[2]. Indonesia’s fires have been increasing in frequency since the 1990s. The forest fires in Indonesia have caused many losses in various fields [3], [4]. One of the cases of forest fires owned by PT. Bumi Mekar Hijau and taken to the legal path by the Ministry of Environment and Forestry (KLHK) with lawsuit of IDR 8
A lawsuit of Ministry of Environment and Forestry was filed in Palembang District Court to pay compensation for environmental loss of IDR 2.69 trillion and cost for environmental recovery of IDR 5.29 trillion. This lawsuit is the biggest lawsuit in the history of forest fire.

The panel of Judges in Palembang District Court has decided to reject the whole lawsuit from Ministry of Environment and Forestry. The panel of Judges completely used a positive legal approach as regulated in Article 1365 of Indonesian Civil Code and released PT. Bumi Mekar Hijau from Strict Liability principle as regulated in Article 88 of Law No. 32 Year 2009 concerning Protection and Management of Environment (Law No. 32 Year 2009) [5].

However, in 2016, the decision of Palembang High Court has annulled another decision from Palembang District Court. Decision of Palembang High Court No. 51/PDT/2016/PT.PLG Year 2016 is contrary to the previous decision. Decision of High Court approved the lawsuit from Ministry of Environment and Forestry partially. It is stated that PT. Bumi Mekar Hijau committed unlawful conduct and was obliged to pay compensation of IDR 78.50 billion or only 1% of lawsuit [6]. Palembang High Court considered that PT. Bumi Mekar Hijau has been neglectful in preventing fire, so it was required to pay compensation. Lawsuit case on PT. Bumi Mekar Hijau has permanent legal force and it is not until the cassation stage or judicial review. Defendant has paid compensation and it is the first lawsuit case of forest and land fire which is successfully executed by Ministry of Environment and Forestry.

This paper discusses whether or not the claim for compensation filed by Ministry of Environment and Forestry based on Regulation of the Ministry of Environment No. 7 Year 2014 is in accordance with the principles of environmental and civil laws. Besides, it discusses whether or not the legal implementation of Panel of Judges in the verdict is right, particularly related to compensation.

2. Research Methods
The type of research is normative legal research with case approach, legislation approach and conceptual approach. The types of legal materials used consist of primary, secondary and tertiary legal materials. Technique of collecting legal material of library study technique. The analysis technique uses prescriptive method.

3. Loss Value for Forest Fire
3.1. Loss Value according to Civil Law
The concept of unlawful conduct based on Article 1365 in Code of Civil Law determines that "For every unlawful conduct which brings loss to other people, the perpetrator shall pay the compensation for bringing the loss". The consequence of unlawful conduct is loss to the victims. Article 1365 of Indonesian Civil Code only states loss without explaining the definition of loss itself.

In Article 1365 of Indonesian Civil Code, it states that "every unlawful conduct shall pay compensation", but Article 1365 of Indonesian Civil Code does not obviously state its form and the way to pay compensation [7]. It is different from regulation about the default in which loss in the default is called compensation for loss and interest. It shows that loss in the default has definition which is broader than a loss in unlawful conduct. Besides, loss in the unlawful conduct has difference from loss in the default which only identifies material loss, while material and immaterial losses are identified in unlawful conduct [8].

Compensation on unlawful conduct in law is as follows: Nominal Compensation, Actual Compensation and Condemnation Compensation. Nominal compensation is given in the case of serious unlawful conduct, such as conduct with intentional factor, without bringing real loss to the victim, while the victim can be given a number of money based on the sense of justice without calculating how much the real loss is. Meanwhile, actual compensation is payment to victim on the loss which he/she truly suffers from due to an unlawful conduct. Condemnation compensation is compensation in large amount exceeding the real loss. Amount of compensation is intended to punish the perpetrator. This condemnation is applied to intentional case which is severe or sadistic.
The law enforcement through environmental lawsuits submitted by the government is expected to reduce the impact of environmental damage [9], [10]. However, the loss calculation must be calculated based on real data in field and not using a fixed formula. Several ecological researches show that physical, chemical, and biotic traits of a space/land are different to each other. Moreover, diversity or variation is intra-location. In forest or peat land, with a width less than 1 (one) hectare, it can have variation of physical, chemical, and biotic traits. Similarly, with single fire, the whole researches about several fire incidents on earth show the behavior of "fire" and its benefit/destructive power which are various in different incidents.

3.2. Loss Value for Forest Fire in Regulation

In Article 87 paragraph (1) Law No. 32 Year 2009, it is stated that "Every responsible person in business and/or activities which infringe the laws, in form of contamination and/or environmental destruction which bring loss to other people or environment, shall pay compensation and/or take certain action". Related to the case in forest, it is regulated in Article 76 paragraph (1), Law No. 41 Year 1999 concerning Forestry, which regulates that "Dispute settlement of forestry through court is intended to get decision concerning the return of a right, compensation, and/or certain action which must be taken by a party proven guilty in the dispute".

Article 90 paragraph (1) Law No. 32 Year 2009 states “Government institution and local government which are responsible for environment shall be authorized to file a lawsuit for compensation and certain action on business and/or activities which cause contamination and/or environmental damage that result in environmental loss". Meanwhile, paragraph (2) states that "Further provision about environmental loss as referred to in verse (1) is regulated in Ministerial Regulation."

In Regulation of the Ministry of Environment No. 7 Year 2014 as derivative of Article 90 paragraph (2) Law No. 32 Year 2009 concerning the definition of environmental loss, it is stated that "Environmental Loss is a loss due to contamination and/or environmental damage which are not private right of ownership". Article 3 in Regulation of the Ministry of Environment No. 7 Year 2014 states that Environmental Loss includes as follows:

a. loss beyond quality standard of environment as a result of negligence of whole or some obligations in managing wastewater, emission, and/or dangerous, poisonous waste;

b. loss for compensation of implementation cost in Environmental Dispute Settlement, including cost for field verification, laboratory analysis, and supervision of environmental loss payment;

c. loss for compensating cost in preventing contamination and/or environmental damage and environmental restoration; and/or

d. Ecosystem loss.

In Article 4 paragraph (1), it is stated that "Calculation for environmental loss is performed by the experts in the field of a) Contamination and/or Environmental Damage and/or b) Economic valuation of environment." Furthermore, in Article 5 verse (1), "Calculation of Environmental Loss performed by the experts as referred to in Article 4 verse (1) is in accordance with Guidelines for Calculation of Environmental Loss as referred to in Appendix II as an inseparable part of this Ministerial Regulation."

In Appendix II of Regulation of the Ministry of Environment No. 7 Year 2014, it regulates type of loss due to contamination and/or environmental damage which can be grouped into as follows:

1) Loss beyond quality standard of environment as a result of negligence of whole or some obligations in managing wastewater, emission, and/or dangerous, poisonous waste; Contamination or environmental damage can occur due to the negligence of business and/or individual activities on the legislation for managing waste and preventing the environmental damage. Therefore, they are required to realize their obligation by building Waste Water Management Installation and other installations in accordance with legislation. When the responsible person in business and/or activities does not carry out the obligation, it will bring
loss to the environment and society. Loss in this case is at least the cost for building and operating installation;

2) Loss for compensation of implementation in Environmental Dispute Settlement, including cost for field verification, laboratory analysis, expert, and supervision of environmental loss payment; In many cases, contamination and/or environmental damage often occur and cause loss to the environment and people as a result of accident, negligence, and intention. Certainty of contamination and/or environmental damage requires active role from government to verify complaint, inventory of environmental dispute, and supervision of compensation for environmental loss and/or implementation of certain action. Thus, government spends cost which must be compensated by businessmen and/or activities which bring contamination and/or environmental damage;

3) Loss for compensating the cost in preventing contamination and/or environmental damage and environmental restoration;

4) Ecosystem loss.
When environment is contaminated and/or damaged, several effects will appear as a result of contamination and/or damage of ecosystem. Contamination and/or damage of environment include public environment (government). All effects of contamination and/or environmental damage must be calculated, in terms of economic value, so value of the complete environmental loss can be obtained. For example, in the event of oil spill from tanker, sea ecosystem is contaminated. The next effects are coral reefs damage, mangrove deforestation, or sea grass damage, so productivity of the whole ecosystem type is reduced. This condition decreases the capability of mangrove forest to protect beach from wave decreases, the capacity of forest as a place for spawning and nurturing fish, and carbon absorption by mangrove. Similarly, when natural forest is damaged or its trees are cut, several environmental impacts will occur, in form of forest capacity loss in accommodating water and providing water system, the loss of capability in holding erosion and flood, the loss of forest capacity in preventing sedimentation, the loss of forest capacity in absorbing carbon, the loss of habitat for biodiversity. Moreover, trees in forest which are cut by the burning technique can add greenhouse gas emissions. Related to environmental loss individually or in group, environmental restoration can be sued. For example, in the contamination of embankment, where people individually perform the milkfish cultivation, existence of milkfish must be restored. With environmental contamination which negatively affects milkfish cultivation, ecosystem or environment in embankment, including quality of soil and water, is contaminated too. Environmental damage which is mentioned above must be calculated based on the degree of its damage and how long the damage occurs. The damage is then added to the obligatory cost. Cost of prediction verification for environmental contamination and/or damage, cost for prevention and/or restoration of environment, and loss suffered by people as a result of damage in ecosystem.

5) Loss suffered by people as a result of environmental contamination and/or damage.
What is meant by society is people as individual and people as group of people. The aforementioned environmental contamination and/or damage will bring effect in form of loss in society due to the damaged asset, such as fishing equipment, plantation and agriculture, embankment, loss of income in society, and so on. As a result of damage in fishing equipment and embankment, it means that some or whole sources of income in the field of fishery are completely or partially disturbed. Similarly, when agriculture, plantation, or livestock is damaged and make farmers suffer from loss, all of these losses must be calculated to get compensation.
4. Loss Value in Forest Fire Case of PT. Bumi Mekar Hijau

4.1. Lawsuit of Ministry of Environment and Forestry

Forest fire occurred from February to November 2014 in area of PT. Bumi Mekar Hijau in OganKomeringIlir Regency, South Sumatera, predicted to reach 20,000 hectares; it is considered a cause of considerable environmental loss. In this case, Ministry of Environment and Forestry filed a lawsuit in Palembang District Court as registered in Case No. 24/Pdt.G/2015/PN.Plg dated February 3, 2015. In the lawsuit, Ministry of Environment and Forestry filed petitum or requested as follows: Requiring defendant to pay material compensation in cash to the plaintiff through State Treasury Account of IDR 2,687,102,500,000 (two trillion six hundred and eighty-seven billion one hundred and two million five hundred thousand rupiahs); and Requiring defendant to recover the environment which was on fire with a width of 20,000 hectares at the cost of IDR 5,299,502,500,000 (five trillion two hundred and ninety-nine billion five hundred and two million five hundred thousand rupiahs), so land can be functioned properly based on applicable legislation.

Details of loss as proposed by Ministry of Environment and Forestry use standard and method as regulated in Regulation of the Ministry of Environment No. 7 Year 2014 as follows:

(1) Ecological Loss

Peat soil fire has damaged structure of peat land, so it loses its function to store water.

a. Reservoir making cost
To build water reservoir, it requires IDR 63,500,000 per hectares. Thus, cost for making artificial reservoir for the damaged peat soil with a width of 20,000 hectares is IDR 63,500,000 per hectares x 20,000 hectares = IDR 1,270,000,000,000 (one trillion two hundred and seventy billion rupiahs).

b. Reservoir maintenance cost
The artificial reservoir must be maintained. Therefore, maintenance cost for artificial reservoir for 15 (fifteen) years is IDR 100,000,000 per year x 15 years = IDR 1,500,000,000 (one billion five hundred million rupiahs).

c. Water system setting
Based on reasonable calculation method, cost for water system regulation is IDR 30,000 per hectares, so cost which must be spent for regulating water system with a width of 20,000 hectares is IDR 30,000 per hectares x 20,000 hectares = IDR 600,000,000 (six hundred million rupiahs).

d. Erosion control
Cost for erosion control for peat soil which was on fire is based on the calculation scale of IDR 1,225,000 per hectares, so cost for controlling erosion of the damaged land with a width of 20,000 hectares is IDR 1,225,000 per hectares x 20,000 hectares = IDR 24,500,000,000 (twenty-four billion five hundred million rupiahs).

e. Land formation
Cost for land formation, which was on fire, is IDR 50,000 per hectares, so the required cost for land formation with a width of 20,000 hectares is IDR 50,000 hectares x 20,000 hectares = IDR 1,000,000,000 (one billion rupiahs).

f. Nutrient recycler
Cost for recycling nutrient loss as a result of fire is IDR 4,610,000 hectares, so for land with a width of 20,000 hectares, it requires IDR 4,610,000 per hectares x 20,000 hectares = IDR 92,200,000,000 (ninety two billion two hundred million rupiahs).
g. Waste decomposer
Cost for decomposing soil loss as a result of the peat damage by fire is IDR 435,000 per hectares, so for land with a width of 20,000 hectares, it requires IDR 435,000 per hectares x 20,000 hectares = IDR 8,700,000,000 (eight billion seven hundred million rupiahs).

(2) Loss as a result of biodiversity and genetic resource losses
a. Compensation cost as a result of biodiversity loss
Cost for this biodiversity restoration is based on calculation, US$300 (IDR 2,700,000) per hectares, so for land with a width of 20,000 hectares, it requires IDR 2,700,000 per hectares x 20,000 hectares = IDR 54,000,000,000 (fifty four billion rupiahs).

b. Compensation for loss of genetic resource
Peat soil fire has eliminated the genetic resource, including microorganism in soil in which its function is not yet known to date, but it is not yet optimally used. Compensation for loss of genetic resource is US$41 (IDR 410,000) per hectares, so for land with a width of 20,000 hectares, it requires IDR 410,000 per hectares x 20,000 hectares = IDR 8,200,000,000 (eight billion two hundred million rupiahs).

(3) Loss due to the release of carbon to air
a. Cost for carbon release
The fire causes carbon release, so it requires restoration. It requires US$10 (IDR 90,000) for every ton of carbon release, so for land with a width of 20,000 hectares, it requires IDR 90,000/ton x 135,000 ton = IDR 12,150,000,000 (twelve billion one hundred and fifty million rupiahs).

b. Carbon reduction
Using fire in preparing land, carbon reduction occurs since the capacity of tree which serves to absorb CO2 is reduced by fire. Reduction cost per ton of carbon is US$ 10 (IDR 90,000), so the cost required for restoring carbon reduction of 5,670 ton from 20,000 hectares of peat soil which was on fire is IDR 90,000 per hectares x 47,250 ton = IDR 4,252,500,000 (four billion two hundred and fifty-two million five hundred thousand rupiahs).So, the cost required for loss as stated in (1), (2), and (3) based on ecological damage, biodiversity, and carbon release and reduction is IDR 1,477,102,500,000 (one trillion four hundred and seventy-seven billion one hundred and two million five hundred thousand rupiahs).

(4) Economic loss
Besides ecological loss due to damage of peat land, fire has caused economic loss specified as follows:

As a result of fire, land lifespan decreases into around 15 years, compared with the land preparation without fire. Therefore, for plant which starts producing at the age of 4 years, the damaged peat soil with average thickness of 5-10 centimeters has eliminated lifespan of land for 11 years, so the lost cost for 11 years is as follows:

- Cost for planting and caring until harvest IDR 140,000,000,000
- Operational cost IDR 250,000,000,000

Total cost required for production of 15 years is IDR 390,000,000,000
Acacia production for 11 years (productive age: 4-15 years) is IDR 1,600,000,000,000

Thus, profit loss due to fire is:
IDR 1,600,000,000,000 (sales) - IDR 390,000,000,000 (production cost) = IDR 1,210,000,000,000.
Total ecological loss/damage (points 1, 2, and 3) and loss of economic profit (4) is IDR 1,477,102,500,000 (one trillion four hundred and seventy-seven billion one hundred and two million five hundred thousand rupiahs) + IDR 1,210,000,000,000 (one trillion two hundred and ten billion) = IDR 2,687,102,500,000 (two trillion six hundred and eighty seven billion one hundred and two million five hundred thousand rupiahs). Thus, total material loss caused by what defendant did as described in points (1), (2), (3), and (4) above is IDR 2,687,102,500,000 (two trillion six hundred and eighty-seven billion one hundred and two million five hundred thousand rupiahs).

(5) Restoration Cost
As an effort for restoring peat soil with a width of 20,000 hectares which was damaged by fire, the damaged land must be restored, though it is impossible to restore the condition like before. Thus, peat soil restoration must be performed using material with function proximity, namely compost. Restoration of peat soil which was damaged by combustion using compost brought by truck with capacity of 20 m³ is as follows:

a. Cost for purchasing compost
For 20,000 hectares of the damaged peat soil with average peat thickness which was on fire of 10 cm and compost price per m³ of IDR 200,000, it requires 20,000 hectares x 0.1 m (10 cm) x 1 hectares (10,000 m²) x IDR 200,000/m³ = IDR 4,000,000,000 (four trillion rupiahs).

b. Transportation cost
Cost for transporting compost with volume as mentioned in point a above, using truck with capacity of 20m³ with rental fee of IDR 800,000 / 20 m³, transportation cost to peat soil which was on fire is 20,000,000 m³ / 20 m³ x IDR 800,000 (truck rent) = IDR 800,000,000,000 (eight hundred billion rupiahs).

c. Cost for spreading compost
Cost for spreading compost with a width of 20,000 hectares using manpower with wage of IDR 20,000 per sack and the weight of sack (@ 50 kg) is as follows: 1 hectares (1,000 m³) = 20,000 sacks (@ 50 kg)/200/people x IDR 20,000 x 20,000 hectares = IDR 320,000,000,000 (three hundred and twenty billion rupiahs).

d. Restoration cost
Cost required for activating the ecological function in order to restore peat soil which was on fire with a width of 20,000 hectares is
   a. Nutrient recycler IDR 92,200,000,000
   b. Wastedecomposer IDR 8,700,000,000
   c. Biodiversity IDR 54,000,000,000
   d. Genetic resource IDR 8,200,000,000
   e. Carbon release IDR 12,150,000,000
   f. Carbon reduction IDR 4,252,500,000

Subtotal of restoration cost is IDR 179,502,500,000 (one hundred and seventy-nine billion five hundred and two million five hundred thousand rupiahs). Thus, total lost in cost (point 5) which must be spent to restore land with a width of 20,000 hectares by spreading compost using truck with capacity of 20m³ and cost for functioning the lost ecological factor and compensating loss by fire is IDR 5,299,502,500,000 (five trillion two hundred and ninety nine billion five hundred and two million five hundred thousand rupiahs).
4.2. Verdict of Palembang District Court No. 24/Pdt.G/2015/PN.Plg
On December 30, 2015, Panel of Judges in Palembang District Court stated Resolution No. 24/Pdt.G/2015/PN.Plg in which the verdict is as follows: rejecting lawsuit of Plaintiff completely.

The consideration of Palembang District Court Decision with Panel of Judges (ParlasNababan, S.H., M.H., Elwarti, S.H., M.H., and Kartijono, S.H., M.H.) stated that there is no causality relation according to Panel of Judges between fire and intention of the Defendant to clear land at affordable cost, since acacia trees are planted in location of fire, some trees which were ready to harvest were burnt too. Thus, it will bring more loss if land is cleared by burning, while causal relation between error and loss is not met in which it is one of requirements or aspects in Article 1365 of Indonesian Civil Code.

The judge considering that postulate of plaintiff in which land which was on fire has the peat protected area, based on the proof of a quo case, in accordance with the permit that concession area of PT. BMH does not have protection forest, concession area of PT. BMH was a degraded forest as a result of el Nino fire in 1997, not primary forest area.

4.3. Verdict of Palembang High Court No. 51/PDT/2016/PT.PLG
Ministry of Environment and Forestry filed an appeal on Decision of Palembang District Court. Decision of Palembang High Court No. 51/PDT/2016/PT.PLG dated August 12, 2016 with Panel of Judges (H. MabruqNur, SH., MH, H AgusHariyadi SH., MH., and H. MuzainiAchmad, SH., MH) is as follows: Accepting and granting lawsuit of Plaintiff / Appellant partially; Stating that Defendant / Appellee has committed unlawful conduct; and 3. Requiring Defendant / Appellee to pay compensation of IDR 78,502,500,000 (seventy-eight billion five hundred and two million five hundred rupiahs) to Plaintiff / Appellant through State Treasury Account.

Consideration in Verdict of Palembang High Court which stated that PT. Bumi Mekar Hijau has committed unlawful conduct: "Considering that Defendant manages certain area in the case of forest fire, caused by facility and infrastructure for fire prevention owned by Defendant which are not adequate, according to High Court, Defendant has committed negligence as it does not complete facility and infrastructure for fire prevention in accordance with the requirements as determined in legislation in fire prevention as stipulated by Plaintiff in the lawsuit".

Meanwhile, for consideration of Panel of Judges related to rejection of Ecological Loss, cost for making reservoir, maintenance cost for reservoir, water system management, erosion control, land formation for recycling nutrient and waste decomposer, economic loss and environmental restoration on land which was on fire with a width of 20,000 hectares since the land has been planted with acacia by Defendant during inspection by Palembang District Court, while the land which was on fire was still in management of Defendant.

Furthermore, second claim for compensation is loss as a result of biodiversity and genetic resource losses as follows: Loss as a result of biodiversity loss requires IDR 2,700,000 per hectares x 20,000 hectares = IDR 54,000,000,000 (fifty four billion rupiahs) and loss as result of genetic resource loss at the cost of IDR 410,000 per hectares x 20,000 hectares = IDR 8,200,000,000 (eight billion two hundred million rupiahs), Palembang High Court can grant it considering that consequence of fire in land dominated by Defendant is death of biodiversity and genetic resource; based on the calculation of Plaintiff, it is still reasonable, so the claim for compensation can be granted.

Third claim for compensation is loss due to carbon release as follows: Cost for carbon release which increases greenhouse gas emissions to the atmosphere, IDR 12,150,000,000 (twelve billion one hundred and fifty million rupiahs) and cost for carbon reduction, IDR 4,252,500,000 (four billion two hundred and fifty two million five hundred thousand rupiahs), Palembang High Court can grant the lawsuit, provided that the consequence of land fire owned by Defendant has been obvious; carbon release increases greenhouse gas emissions to atmosphere as a result of fire. It requires restoration which needs cost which is still reasonable based on calculation of Plaintiff, so this claim for compensation can be granted. Based on the aforementioned consideration, claim for compensation on
land which was on fire can be granted partially, for the loss as follows: IDR 78,502,500,000 (seventy eight billion five hundred and two million five hundred thousand rupiahs).

In this case, Chairman of the Panel of Judges (MahruqNur, S.H., M.H.) stated a dissenting opinion that whole reason and legal consideration in first-level Panel of Judges, which were basis of decision, have been proper and right, so Verdict of Palembang District Court No. 24/Pdt.G/2015/PN.Plg on December 30, 2015 must be strengthened, with reason and consideration as follows: That in local legal hearing on 1-2 December 2015 in location of fire, as postulated by Plaintiff / Appellant, in Simpang Tiga District and Biyuku District of PT. Bumi Mekar Hijau in OKI Regency, South Sumatera Province, the Parties agree that land which was on fire was land planted with acacia trees. That in the case of ecological loss, fire did not cause increase of pH and other nutrients, such as Ca, Mg, and K. Fire reduced the organic content in soil in which mineral soil has exceeded C-organic, but it can be concluded that there was no extinction/damage in soil biological trait, as stated by Dr. Ir. Basuki Sumawinata M.Agr and Dr. Ir. Gunawan Djajakirana, MSc.

5. Legal Analysis on Calculation of Loss Value for Fire Case

Many environmental law experts said that proving value of compensation in forest fires is not easy, especially in calculating the loss value [11], [12]. The opinion is disputed by using illustration of calculation as stated in Appendix II of Regulation of Minister of Environment No. 7 Year 2014. Without using expert of valuation for environmental loss; it can be calculated by multiplying width of fire with IDR 400 million per hectares. Implementation of Regulation of Minister of Environment No. 07 Year 2014 concerning qualification of "Valuation Expert" which is "single expert" in its implementation, since it has a fixed formula. In fact, it is known that forest or garden ecosystem has several aspects with the whole interaction which is complex, so it must be studied by a multidisciplinary Team or Committee, including Valuation Expert. In a mechanistic way, a process for calculating environmental loss consists of processes of environmental damage quantification and economic valuation on the quantification result. Therefore, these two processes should not be performed only by one or two experts all this time. Calculation in illustration of Appendix II in Ministerial Regulation generalizes loss value, regardless of its location, (whether it is plantation of oil palm, industrial forest, natural forest, protection forest, or national park); the loss remains the same.

Mistakes of lawsuit calculation as proposed by Ministry of Environment and Forestry to PT. Bumi Mekar Hijau and other fire cases start from a mistake in calculation as stated in Appendix II of Regulation of the Ministry of Environment No. 7 Year 2014. When using formula of loss calculation in Appendix II of Regulation of the Ministry of Environment No. 7 Year 2014, it consists of environmental loss, economic loss, and cost for environmental restoration; the loss can occur when forest fire in PT. Bumi Mekar Hijau caused fire in state forest or national park bordering with PT. Bumi Mekar Hijau. In that condition, state can claim the deforestation and demand compensation for environmental loss, economic loss, and cost for environmental restoration. However, in fact, the issue is area of industrial forest which was on fire and has been private property.

In Verdict of Palembang High Court, it rejected the ecological loss in form of cost for making reservoir, cost for reservoir maintenance, water system management, erosion control, land formation to recycle nutrient and waste decomposer, and cost for environmental restoration, considering that land which was on fire is under management of the company. Palembang High Court has only granted the biodiversity loss and carbon reduction. Verdict enforces a principle that restoration of deforestation is a private affair of company in which company can still manage and maintain it, while state is not entitled to submit claim of ecological loss and restoration cost, provided that environmental loss is a loss due to environmental contamination and/or damage which are not private right of ownership. Considering that PT. Bumi Mekar Hijau is the legitimate holder of Business License of Timber Forest Product Utilization in Industrial Plantation Forest, the land management is a private affair. Thus, land restoration becomes private responsibility of PT Bumi Mekar Hijau.

A lawsuit of economic loss in form of the loss of estimated sales, minus cost of land development and maintenance, is a calculation of loss which is not reasonable. Ministry of Environment and
Forestry is not disadvantaged in terms of aspect of profit loss, since it is not owner or shareholder of PT. Bumi Mekar Hijau. Government does not have any affairs to submit compensation in form of profit loss against the sales of plant which was on fire. The condition is different when Ministry of Environment and Forestry is shareholder, so it can submit a compensation for economic loss. If national park bordering with PT. Bumi Mekar Hijau is on fire too as a result of what PT. Bumi Mekar Hijau did, Ministry of Environment and Forestry can submit compensation for economic loss.

Many environmental activists were not satisfied with verdict of Palembang District Court and Palembang High Court [13]. They disagreed with this verdict, considering small loss approved by Palembang High Court and the width of land which was on fire and sued in the court. Green groups such as the Indonesian Forum for the Environment (WALHI) hailed the latest verdict as a “small win” for Indonesia’s conservation efforts.

If Ministry of Environment and Forestry files a lawsuit intended to prevent the fire in the future in forest area, loss value will be focused on making facility and infrastructure which can prevent fire. Besides, loss in lawsuit is focused on cost for fire prevention issued by government, and loss suffered by people as a consequence of fire, starting from health, flight, and so on. In loss calculation stated in lawsuit, effect of smoke by fire which belongs to public affair is only minor. Focus of loss calculation should be intended to environmental loss suffered by the public.

6. Conclusion
Implementation of Regulation of the Ministry of Environment No. 7 Year 2014 in a civil case concerning lawsuit of Ministry of Environment and Forestry against the companies exposed to forest and land fire brings controversy; when it is neglected, there will be systemic negative effect on development of industrial forest and oil palm plantation at national scale. Calculation basis for lawsuit of environmental loss required by Ministry of Environment and Forestry refers to Appendix II in Regulation of the Ministry of Environment No. 7 Year 2014 in which compensation is considerable, as if state tries to get profit from the forest and land fire. Effect of smoke and cost for fire prevention are minor and they are not calculated in the lawsuit.

Appendix II of Regulation of the Ministry of Environment No. 7 Year 2014, Chapter IV in particular, which elaborates Calculation Example of Environmental Loss, requires revision, so loss calculation as real loss harms public interest and cost for fire prevention. It is expected that lawsuit of forest and land fire brings an issue of injustice, since responsibility in law is higher than what should be borne by the related party (versari in rellicita).

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