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## COPING WITH FOREST AND LAND FIRE REGULATORY CHALLENGES IN INDONESIA: AN ASSESSMENT TO THE REGULATORY ENFORCEMENT

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**Abstract.** The uncontrolled expansion of plantation activities within peatland areas is one of the major trigger causing forest and/or land fire (Fire) in Indonesia. To deal with such problems including other influencing variables such as land use management, Indonesian law provides various options of regulatory instrument. The law indicates strong message that the Fire must be stopped, reflected through stipulations on regulatory instruments including command and control type of regulation (direct regulation) and alternative approaches to hold compliance. After exacerbate Fire in 2015, many protests from the people, neighborhood countries and broader international parties encouraged Indonesian government to be more active in conducting regulatory enforcement of some regulatory instruments. Some of the examples are the imposed administrative sanction and lawsuit against companies within 2015 to 2017. However, the regulatory enforcement has not been assessed as to whether it has obtained significant improvement to stop Fire. This paper attempt to assess whether regulatory enforcement on selected Fire cases has met the regulatory objective particularly to stop the Fire. This research finds that output of the applied enforcement for violation on Fire provisions remains incoherent with the regulatory objective while the strategy of enforcement is not well-systemized.

**Keywords:** regulatory enforcement, Fire, direct regulation, alternative approach, regulatory instruments.

### 1. INTRODUCTION

The character of Fire in Indonesia is influenced by human activities, which involves the land-use expansion for plantation<sup>1</sup>. Despite the risk of Fire, plantation business still popular among big to small enterprises due to its prospectus income<sup>2</sup>. Unfortunately, the plantation activities have invading too

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<sup>1</sup> To simplify the terminology in this article, the word 'plantation' refers to not only plantation in land but also plantation in the forest and forest utilization for industrial activities as well.

<sup>2</sup> There are more than 1500 recorded palm oil plantations (The Directory of Palm Oil Plantation, National Statistic Center Agency, 2015) and 706 (The Directory of Forest Estate, National Statistic Center Agency, 2015) Number of plantation companies (existing) not to mention number of unrecorded or illegal plantation activities. See: <https://media.neliti.com/media/publications/48378-ID-direktori-perusahaan-perkebunan-kelapa-sawit-2015.pdf>;  
<http://ditjenbun.pertanian.go.id/tinymcpuk/gambar/file/statistik/2015/SAWIT%202013%20-2015.pdf>;  
<https://media.neliti.com/media/publications/48681-ID-direktori-perusahaan-kehutanan-2015.pdf>.

much of the peat-land areas, a special ecosystem that highly sensitive with the drought and tend to get easily burnt [1]. The longing un-monitored expansion of plantation within peat-land areas and the lack of monitoring compliance to the working plantation paved a way to higher risk of Fire<sup>3</sup>. Despite the lack of efforts to monitor, government admit that most Fires are occurred by human cause<sup>4</sup>, be it intentional or negligence.

Indonesian laws treat the Fire threat as violation to environmental protection and share the liability to prevent and mitigate Fire with the right-holders. The stipulation in the Forestry Act, for example, states that any right holders are responsible to fire occurs within his right-given areas as part of their obligation to protect the forest. The Environmental Act, moreover, generally<sup>5</sup> prohibit any slash and burn activities in either forest or land. In line with it, the acts stipulate that all business activities must comply with the sustainability goals as well as not causing pollution nor damage to the environment<sup>6</sup>. These provisions put the Fire regulation as part of instrument to reach a greater benefit from environmental protection for greater people, by regulating behavior of right holder in terms of Fire control. The objective of Fire provisions within environmental protection framework can be entails to the protection on the right to sound and healthy environment as stated in the Constitution. Environmental Act further emphasize such right as the part of human right, by setting robust procedural rights within the provisions<sup>7</sup>. Thus far, controlling the Fire shall be construed as part of environmental protection and management.

The regulation on Fire itself is not a standalone provision. It is correlated with other kind of regulatory instruments which influenced the Fire regulatory enforcement<sup>8</sup>. With regards to plantation compliance on Fire control obligation, it is inevitably influenced by the regulatory enforcement on other interrelated aspects, such as environmental compliance monitoring, land use management and other natural resources management. Because of that, Fire regulation involved not only command and control instrument, but also other alternative approaches.

As a matter of fact, since 2015 furious Fire invites protests from multi-international level parties, Indonesian government improve their combat ammunition to deal with the Fire. Numbers of State Budget allocated for Fire mitigation is increased to 680 billion rupiahs in 2016<sup>9</sup> while coordination action among government institution in national and regional level is tightened. It was part of the international and national commitment of the leading President, remarked also by the up-lift of mitigation activities by both national and regional Fire Control Team during 2016 until now<sup>10</sup>. In terms of regulatory enforcement, this momentum signed the raise of cases exercised by the government. The history of Fire regulatory enforcement in recent years is remarked by the act of Minister of Environment and Forestry and/or law enforcement institution (Police) which has been conducting enforcements over some entities allegedly commit unlawful act or violation to Fire regulation. The enforcements are including, for instance, administrative coercion, government lawsuit, and criminal investigation [22].

<sup>3</sup> *Loc. cit.*

<sup>4</sup> Tempo, "99% Kebakaran Hutan karena Ulah Manusia", see: <https://nasional.tempo.co/read/709324/99-persen-kebakaran-hutan-karena-ulah-manusia>. ("99% of Forest Fire is Human Caused"); Detiknews, "BNPB: 90 Persen Kebakaran karena Ulah Manusia", accessed through: <https://news.detik.com/berita/d-3015346/bnpb-90-persen-kebakaran-hutan-karena-ulah-manusia>, 12 September 2017. ("National Disaster Management Agency: 90 percent of Fire is Human Caused").

<sup>5</sup> There is an exception for local wisdom activities in Act No. 32, 2009 on Environmental Protection and Management (Environmental Act), article 69 paragraph 2.

<sup>6</sup> Article 98, Environmental Act.

<sup>7</sup> If the character of protection to substantive rights can be seen from the building of institution, enforcement and remedies such as defined by IUCN, the Environmental Act could be one of examples which determined to form environmental right as independent form of human right. This is basically in line with the Constitution, which positioned environmental right under the Chapter of Human Right (Chapter XA was added in the Constitution at the second amendment of the Constitution).

<sup>8</sup> For example, that the Fire regulation is also included in regulation regarding sectoral licenses or performance certification. This notion will be further discussed in the next chapter of this paper.

<sup>9</sup> The amount, however, is decreasing to 500 Billion in 2017. See: <http://nasional.kontan.co.id/news/dana-penanggulangan-kebakaran-hutan-di-2017-minim>.

<sup>10</sup> The President relaunch the Presidential Instruction No. 11, 2015 regarding Acceleration of Forest and Land Fire Control in 24 October 2015 and that public pressure is high at the time.

Despite the more active government in combatting Fire, there is lack of accountability in the contribution of such actions to the improvement of regulated actors' compliance to Fire regulatory objective<sup>11</sup>. The government claim that their action has been resulted to the decreasing number of burnt land and/or forest<sup>12</sup>. On the other hand, research conducted by Indonesian Center for Environmental Law reveals that the claim by MoEF is doubtful for only claiming the decreasing number of Fire and number of land burnt as single successful indicator. Based on ICEL research, enforcement of Fire regulation in terms of prevention, rehabilitation, and law enforcement is generally underperform. Moreover, the year of 2017 is considered to be a wetter year compare to 2015<sup>13</sup> which make the climate variable indicated to has played the more dominant role. The research then stimulates follow up question that is if the prevention, rehabilitation and law enforcement by the government is underperformed, to what extent it has changed the behavior of regulated actors? Whether the level of compliance in the field is really increasing or is it just a circumstantial compliance behavior or by luck that the number of Fire decreased? Up to now, there has been no reliable data on whether the raise of compliance level is the major trigger to the down-fall on Fire numbers.

In order to provide data and analysis on the contribution of current regulatory enforcement to obtain the Fire regulatory objective, this research will capture kinds of available and implemented regulatory instrument. It will also analyze whether the regulatory enforcement has met its utmost objective that is to stop the Fire.

Fully aware of the hard challenges in explaining gaps, the method of this research is inspired by the idea of Smart Regulation by Neil Gunningham and Peter Grabowsky, as one of regulatory theory which provide tools to analyze the design as well as improve enforcement strategy. Smart Regulation argue that single instrument usually is not sufficient to deal with specific environmental problems. It then suggests that the decision maker should design strategy to combine instruments and optimize public participation simultaneously. This research starts with a hypothesis that the current enforced instrument is not optimum for each instrument are enforced in scattered ways.

To limit the research, it will only focus the assessment on the instruments applied to plantation companies by arguing that expansive plantation is a significant contributor to Fire as stated in the beginning of the background.

There are two main questions of this research:

- How is Fire regulation for plantation activities stipulated?
- To what extent does the regulatory enforcement in Fire cases has met its objective?

To answer the questions, this paper will first explain the existing regulatory instruments to hold the plantation comply with the Fire regulation. In this section, the character of regulatory instruments will be described, including the objective of each instrument. The second section will be focusing on explaining how the Fire regulation enforced. The third section will escort the analysis on whether the Fire regulatory enforcement has been reaching its objective, before went to conclusion in the last section.

## 2. ANALYSIS AND RESEARCH

### The Fire Regulatory Instruments

Kagan stimulates the idea of assessing regulation not only as a mean to reach compliance but also whether it has been made to accommodate the socially desired goals. However, there is lack of assessment on whether the existing regulation has reflecting the desired goals because of the challenges

<sup>11</sup> The MoEF report only tells that number of Fire is decreasing in 2017 due to proactive joint forces. See: Tempo.co, "Titik Api Akibat Kebakaran Hutan Turun 88%", ("Hotspot is decreasing up to 88%"). Available at: <https://nasional.tempo.co/read/1043764/klhk-titik-api-akibat-kebakaran-hutan-turun-88-persen>

<sup>12</sup> Kumparan, "Mengapa Angka Kebakaran Hutan Indonesia di 2017 Turun Drastis", <https://kumparan.com/@kumparansains/mengapa-angka-kebakaran-hutan-indonesia-di-2017-turun-drastis>, accessed in 22 December 2017. The head of Information and Data and human Relation of National Disaster Mitigation Agency announced that numbers of land burnt because of Fire is decreased to 65,7% compare to 2016. He argues that this is the result of serious act to mitigate Fire as well as law enforcement. Tambahkan statement Jokowi.

<sup>13</sup> BMKG (Geo-physics, Climatology, Meteorology Agency), "Prakiraan Musim Hujan 2017 di Indonesia", ("the 2017 Rain Forecast in Indonesia"). Available at: <http://www.bmkg.go.id/iklim/prakiraan-musim.bmkg>

in reaching the objective data [23]. This idea then stimulates other scholars to conduct empirical study to deepen understanding on the background of regulatory framework and how then it was enforced. Ayres and Braithwaite, with his Responsive Regulation, did an empirical research on regulatory enforcement and found that the value of regulatory instrument is in its desired objective [1; p. 65]. Ayres and Braithwaite then use the objective as the standard of assessing level of compliance, of which once the level is not reached or violation occur, the regulator must think of responsive regulatory strategy, by escalating sanction, climbing to the more stringent instrument [1; p. 65]. Gunningham and Grabosky, who develop a theory of Smart Regulation then argue that identifying the desired policy goals as the first thing to do prior to assessing the ideal regulation strategy for particular problem [2; p. 14]. According to these analytical frameworks, it is necessary to assess the objective of each regulation as prerequisite to further characterize and describe the regulatory instruments.

This section will explain Fire regulatory objectives and how then it built the characteristic of regulatory instruments. In assessing the goal of regulation, however, this paper assume that the goals of regulatory instrument have been made by the policy maker so that it is reflected in the explicit norms of purposes or principles in the legal instrument<sup>14</sup>. The regulatory instruments are divided into two general types: command and control/direct regulation [2; p. 38] and alternative approaches [2; p. 38-85].

#### **a. Direct Regulation**

There are basically three Acts which regulates Fire control. They are Act No. 41, 1999 on Forestry (Forestry Act), Act No. 32, 2009 on the Environmental Protection and Management (Environmental Act) and Act No. 39, 2014 on Plantation (Plantation Act)<sup>15</sup>. Environmental Act is the one that explicitly entail Article 28H paragraph 1 of the Constitution, regarding the protection of the right to safe and healthy environment. The other two acts are entailed to Article 33 regarding natural resources utilization. In general, Fire regulatory objectives are to be understood as part of the implementation of the mandate on the protection of the right to safe and healthy environment and the obligation to ensure that utilization of natural resources shall be conducted for the people's welfare.

The Fire regulatory objective not explicitly stated in the three acts. Provisions related to Fire are just small part of the biggest aim of the acts. Forestry Act and Plantation Act are focusing more on the utilization of resources while Environmental Act is more on how to ensure that the utilization works in sustainable manner. Thus, to scrutinize the goals of the Fire regulation, we must look into the objective and principles of the act.

- Forestry Act

The objective of Fire regulation from the perspective of Forestry Act can be identified as to reach the first and second objective of Forestry Act itself, noting that this Act is only apply to fire occurs within forest area. The first is to guarantee that the forest is exist in sufficient area and is distributed proportionally<sup>16</sup>. Another objective is to optimize variety of forest functions covering conservation, preservation and production functions in order to gain balance and sustainable environmental, social, cultural and economic benefit<sup>17</sup>.

Generally, Forestry Act mandates government to define limitation for forest utilization by considering sustainability of the forest [6]. This is the utmost purpose of which then other provisions under Forestry Act entailed. The act then strengthening its spirit to halt forest fire by prohibit every person to burn the forest, regardless by intention or negligence. The Forestry Act also shares responsibility to protect forest to the one who possessed the land either through licenses or given by law (such as indigenous people within traditional land and government itself within areas with no licenses). The government plays his role to conduct monitoring on the protection over the possessed forest and protecting the forest in general.

<sup>14</sup> As Civil Law country, Indonesia regulatory style relies on the written norm. Base on The Act No. 12, 2011 on Regulation Making, the objective of the Act must be stated in the first chapter of each Act. However, there is no obligation to put the objective of each lower regulatory product although some of the policy maker copy the style of putting the objective in the first chapter of regulatory product.

<sup>15</sup> Translation by <http://www.indolaw.org/UU/Law%20No.%2039%20of%202014%20on%20Plantations.pdf> accessed at 8 August 2017.

<sup>16</sup> Translation by <http://www.flevin.com/id/lgso/translations/Laws/Law%20No.%2041%20of%201999%20on%20Forestry.pdf>. Article 3 Forestry Act, accessed 8 August 2017.

<sup>17</sup> *Ibid.*

Base on Forestry Act, the obligation to conduct prevention, mitigation and restoration within concession inside forest area applied to the license holder, while obligating the authority to monitor the compliance. The concept of forest protection from fire threats for private right owned forest is clear: right or license holder inside forest is responsible to forest burnt within the given area. The term 'forest burnt' in the stipulation indicates that it is not require active burning to call the right or license holder responsible to circumstances happen in the given forest area. This concept allows government to make sure that all forest is under best protection, including but not limited to conduct law enforcement to anyone breaching the responsibility to protect. This stipulation is applied to all kind of legitimate activities within the forest area, including plantation. Any business activities in the forest that found to be burnt will meet the legal consequences.

The Forestry Act then stipulates that monitoring should be further regulated through Government Regulation. However, the only existing related implementation regulation of Forestry Act is the Minister of Forestry Regulation on Procedures of Imposing Administrative Sanction for License Holder of Primary Industry Wood Forest Utilization, which is limited to one kind of forest utilization licenses. To cover the blank in the implementing regulation, there is clearer monitoring procedures through implementing regulation of Environmental Act. Although the authority to conduct the monitoring base on these two instruments can be different and thus has different ground, approaches, and consequences, both are the form of direct regulation to hold the license holder comply with the obligation to prevent and mitigate fire.

Besides monitoring, there is an explicit criminal stipulation for those who commit burning forest under the Article 78 paragraph 3 of Forestry Act [6]. Article 80 Forestry Act then opens room for imposing administrative sanction for infringement of stipulation on Forestry Act without mentioning explicitly the kinds of such infringement. Similar with stipulations for civil law enforcement, Forestry Act opens room for filing suit for any unlawful act which stipulates in Forestry Act. The provisions state that any unlawful act or infringement, which threatened by criminal penalty, can be imposed with administrative sanction and may become a subject to sue. These mean that burning forest is not only a criminal qualification but also subject to administrative sanction and civil suit.

- Environmental Act

The general objective for Fire regulation in the perspective of Environmental Act is basically reflected in the whole purpose of this act. Thus, the framework of this act related to Fire regulation can be construed as the framework of protection and management of environment from damages or potential damages derived from Fire. The framework is mainly to conduct prevention, mitigation and rehabilitation to the damaged environment.

The government and enterprises are responsible to conduct prevention, mitigation and rehabilitation of the Fire damage. Whereas, heavy responsibility to prevent and cease the Fire is given to enterprises within their concession. Government, in this regard, has the authority to set general rules and technical guidance to prevent and mitigate Fire. As for that, the enterprises are to create sound situation for preventing and mitigating Fire within their concession. The government then has the responsibility to monitor the compliance and impose sanction whenever it is necessary.

As a means to manage the excess of the Fire, Environmental Act order the authority to measure standard criteria for environmental damage related to Fire (Article 21 paragraph 3 c). The more specific provisions addressing the control over the damage and pollution related to Fire are settled in the Government Regulation No. 4, 2001 on Control over Environmental Damage and or Pollution related to Forest and or Land Fire (GR 4/2001). The preamble of GR 4/2001 considers Fire as a cause of environmental damage and or pollution which create severe loss, including ecology, economy, and socio-cultural loss nationwide and internationally. The scope of GR 4/2001 includes controlling, preventing and mitigating environmental damage and or pollution related to Fire. Although the GR was enacted far before the Environmental Act, the provisions are mostly still relevant.

Environmental Act considers open burning land as a crime. Article 108 jo. Article 69 paragraph (1) h stipulates the prohibition to conduct open burning land<sup>18</sup>. A sanction of minimum 3 years and maximum 10 years and fine of minimum three billion rupiahs and maximum of 10 billion rupiahs is imposed to everyone who commit the crime. However, special protection is given to those who conduct open burning in a manner which in line with the local wisdom<sup>19</sup>.

Environmental Act is also imposed criminal sanction for those who intentionally or by negligence committing action causing surpass of standard quality of ambient air standard criteria or standard of environmental damage. The convicted entity shall be subject to imprisonment for minimum 3 (three) years and maximum 10 years and a fine of minimum 3 billion rupiah and maximum 10 billion rupiahs<sup>20</sup>.

In the field of civil law enforcement, Environmental Act stipulates that suits can be filed for every personnel in charge of businesses and/or activities committing legal violation in the form of environmental pollution and/or destruction incurring losses on other people of the environment<sup>21</sup>. The alleged entity shall be obliged to pay compensation for the losses and/or take certain measures<sup>22</sup>. It also has special stipulation that apply strict liability, which refers to every action, business and/or activity using, producing and/or managing hazardous substances and/or causing serious threat to the environment. Those who met this qualification shall be responsible absolutely for the incurred losses without necessity to prove wrongful act. The latter is socially supported by CSOs to be conducted to plantation activities in the peatland for peatland naturally will be seriously damaged because of plantation activities<sup>23</sup>.

- Plantation Act

The objective of Fire regulation in the in the Plantation Act is reflected in seventh objective, that is, to manage and develop plantation in optimum, responsible and sustainable manner. Plantation Act focusing on regulating plantation activities notwithstanding the area: forest and land<sup>24</sup>. This act prohibits every plantation enterprises to open and/or cultivate land (including forest) by burning<sup>25</sup>. Further, the act also orders every plantation enterprises to have Fire control system, facilities and infrastructure<sup>26</sup>. It is in line with the aim of creating optimum, responsible and sustainable plantation<sup>27</sup>.

Plantation Act stipulates criminal penalty of imprisonment and fine for every plantation business who open or manage land by burning<sup>28</sup>. Another possible criminal enforcement can be construed through Article 109 Environmental Act which stipulates that plantation business who do not apply: a. environmental impact assessment or environmental management efforts and the efforts of environmental monitoring, b. environmental risk analysis; and c. environmental monitoring shall be punished with imprisonment and a fine<sup>29</sup>.

Stipulation on monitoring which tailored to enforcement is found in Plantation Act. Article 98 paragraph 1 of Plantation Act states that monitoring is conducted to ensure the enforcement and implementation of plantation businesses. Monitoring activities here comprises of reporting from plantation licenses holder of his business activities, and monitoring and evaluation through the process of examination (Plantation Examination)<sup>30</sup>. Hence, there is no direct stipulation for imposing

<sup>18</sup> Article 69 paragraph 1 h Environmental Act.

<sup>19</sup> The article further explain that the local wisdom means burning maximum of 2 hectares of land per-family to plant local variety plantation and provides firebreaks to prevent fire spread.

<sup>20</sup> Article 98 paragraph 1 (intentional) and Article 99 paragraph 1 (negligence) Environmental Act.

<sup>21</sup> intentionally or by negligence.

<sup>22</sup> Article 87 paragraph 1 Environmental Act.

<sup>23</sup> See for example: <http://www.mongabay.co.id/2017/06/08/asosiasi-usaha-coba-usik-uu-lingkungan-walhi-icel-masukkan-gugatan-intervensi/>

<sup>24</sup> According to Forestry Act and Plantation Act, plantation activities can be conducted within forest area (except for protected and conservation area) by getting license from Ministry of forestry.

<sup>25</sup> Article 56 par 1 Plantation Act.

<sup>26</sup> Article 56 par 2 Plantation Act.

<sup>27</sup> Article 3 g Plantation Act.

<sup>28</sup> Every plantation business which opens and/or cultivate land by burning shall be punished with imprisonment of 10 years and a fine of not more than 10 billion rupiah (Article 108)

<sup>29</sup> 3 years imprisonment and a fine of not more than 3 billion rupiah.

<sup>30</sup> Article 98 paragraph 2 Plantation Act.

administrative sanction for violation of Fire regulatory provisions<sup>31</sup>. However, the Ministry of Agriculture Regulation No. 98, 2013 stipulates that the license issuer can impose administrative sanction company who violate the obligation to have proper facility for non-burning land-clearing and fire control.

Unlike the previous two acts, Plantation Act does not have provision on subject of civil suit. It does not mean that no infringement on Plantation Act cannot be subject of civil suit for it is still possible by utilizing Indonesian Civil Code or by optimizing provisions under Environmental Act, which can be tailored with environmental permit.

#### **b. Alternative Instruments to deal with Fire problem**

The possibility of applying other instruments to meet Fire regulatory objective is intensified particularly in Environmental Act. There are at least four types of alternative approaches in which Fire regulation is included. The first is Economic Instrument which accommodated through Environmental Act. However, further enforcement of Economic Instrument under the Environmental Act is in the process of building the system as the implementing regulation has just enacted in September 2017. The second is education and information to regulated parties which was conducted as part of government obligation. The third type is more like the derivative of economic instrument which has been developed and enforced before the current Environmental Act enacted<sup>32</sup>: that is Environmental Performance Rating mechanism<sup>33</sup>. The last is also type of alternative approach which combining direct regulation and economic instrument essence which build under the Forestry Act: The Forest Legality Product Certification and Sustainable Forest Utilization Certification. Particularly for Palm Oil Plantation, there is also similar type of approach, that is, Indonesian Sustainable Palm Oil Certification.

- Education and Information

An example of complementary instrument is education and information<sup>34</sup>. Gunningham and Sinclair categorized education and information instrument into five, that is: education and training, corporate environmental reporting, community right to know and pollution inventories, product certification and award schemes. All of the schemes in the group have been implemented in Indonesian environmental regulatory activities.

#### **Training**

Training is of the most common mandate to be found in the Fire regulation. Environmental Act assigns government to provide education, training, fostering and appreciation for general entities. On the implementing regulation of Environmental Act, Ministry of Environment Regulation No. 10, 2010 explicitly states that government conducted fostering which includes training for the people and enterprises regarding environmental management of pollution and damage related to Fire<sup>35</sup>. In Forestry Act, the word training can be found in the explanation of the provisions on forest rehabilitation only. However, if we look into implementing regulation regarding the control of Fire, there are many stipulations on the obligation of government to give training to control Fire<sup>36</sup>. In Plantation Act, training is part of empowerment activities for plantation human resources<sup>37</sup>.

##### **a. Reporting**

Environmental reporting cannot be separated from monitoring mechanism in the desk of environmental compliance monitoring. Moreover, every license holder/enterprises is obliged to submit regular performance reports<sup>38</sup>. Related to performance report, Ministry of Environment and Forestry

<sup>31</sup> The Act only stipulates two kinds of behaviour that may be sanctioned with administrative sanction. See Article 15, 16, and 17.

<sup>32</sup> Indonesia has faced three periods of environmental act: the first is Act No. 4, 1982 on Key Provisions for Environmental Management; the second Act No. 23, 1997 on Environmental Management, replacing the Act of 1982; the 2009 Act is a replacement to the Act in 1997.

<sup>33</sup> The regulation has changed for four times: 2002, 2010, 2011, 2013 and the latest is 2014.

<sup>34</sup> Gunningham and Grabowsky, *op. cit.*, p. 60–61.

<sup>35</sup> Article 11 paragraph 2 section a Minister of Environment Regulation No. 10, 2010.

<sup>36</sup> Ministry of Environment and Forestry Regulation No. 32, 2016 on Forest and Land Fire Control.

<sup>37</sup> Article 51 paragraph 3 section a Plantation Act. Plantation human resources consists of officials, plantation enterprises, and people (see Article 88 paragraph 1 Plantation Act).

<sup>38</sup> The holder of environmental permit shall make and deliver report on the implementation of prerequisites and obligations given by such license (Article 53 paragraph 1 section b Government Regulation No. 27, 2012 on Environmental License). See also Article 36 paragraph 1 Environmental Act: "Every business and/or activity obliged to have Environmental Impact Assessment shall be obliged to

also held environmental performance rating in order to stimulate beyond compliant<sup>39</sup> of enterprises. This is where, the chance to use multi-approaches to meet the goal of Fire management or control may be reached by harnessing the best output from each approach.

Environmental Act mandated government to conduct persuasive approach through fostering and coercive approach through monitoring compliance<sup>40</sup>. The most significant differences between stipulations on fostering and monitoring is that the first does not equipped with strong provisions under Environmental Act whilst the latter has its own definitive chapter<sup>41</sup>. Compare to Forestry Act, monitoring is not stipulated in detail. Unlike Environmental Act, Forestry Act doesn't mentioning about fostering at all, whilst monitoring is mentioned in very general provisions. In Plantation Act, the stipulation on fostering and monitoring grouped under one specific Chapter on Fostering and Monitoring. It gives the same weight of guidance to the government regarding its responsibility to foster and monitor plantation activities

### c. Community Right to Know

Another form of education and information instrument based on Gunningham and Sinclair's category is community right to know and pollution inventory. Both instruments are provided under the Environmental Act. The provision of community right to know can be found in almost every section, for example the obligation to publish every issuance of environmental permit. For the pollution inventory related to Fire, the obligation to create inventory is mandated to government in the form of standard criteria for environmental damage related to Fire.

- Certification

Fire prevention and mitigation is included as point of assessment in either Forest Legality Product Certification (further will be mentioned as "FLP"), Sustainable Forest Utilization Certification (further will be mentioned as "SFU") or Indonesian Sustainable Palm Oil Certification (further will be mentioned as "ISPO"). These certification instruments are incentive based approach, which combine the essence of education and information, voluntary, and direct regulation for plantation company that includes the trigger to conduct compliance of obligation to control fire.

- FLP and SFU

Based on current regulation<sup>42</sup>, the FVLP and SFU is part of obligation of forest utilization enterprises. The assessment is conducted by assessment institution and independent verifier. Market who has concern to the legality of the product to environmental and human right requirement is foreseen to be more acceptable to products from enterprises holding the certificates.

The assessment to obtain FVLP and SFU also includes Fire regulatory compliance including the readiness of human resources to protect the concession from Fire, sufficient budget, existence of standard operating procedure, and complete and good facilities to prevent and control Fire. Each point then should be assessed till resulted into three general classification: Bad, Average and Good. The regulation doesn't have provision to connect the result of this assessment to forest utilization monitoring under the Forestry laws nor environmental monitoring under the Environmental laws.

- ISPO

have environmental permit". All kind of businesses which has a risk to run into Fire includes in the category of business which need to have environmental permit, be it plantation or forest utilization sector. Enterprises are also obliged to submit reports regarding the forest and/or land control (according to Ministry of Environment and Forestry Regulation No. 32, 2016) and control and restoration of environmental damage and or pollution related to Fire (according to Government Regulation No. 4, 2001).

<sup>39</sup> Beyond Compliance is articulated in some criteria include: implementation of environmental management system; energy efficiency; emission reduction; and implementation of hazardous waste Reduce, Reuse and Recycle. (Ministry of Environment and Forestry, "An Explanation of Environmental Performance Rating in Indonesia 2015", p. 22).

<sup>40</sup> Central government, Province government and District government by virtue of their authority shall be assigned and authorized to foster and supervise compliance of personnel in charge of businesses and/or activities to the provisions of environmental licensing and legislation (Article 63 paragraph 1, 2, and 3 section o Environmental Act).

<sup>41</sup> See Article 71 to Article 75 of Environmental Act. It clearly states who is responsible to conduct monitoring, what is the object and to what extent does monitoring should be enforced.

<sup>42</sup> The regulation regarding SFU and FVLP has just revised in 2016. See: Minister of Environment and Forestry Regulation No. 30, 2016 and Directorate General of Sustainable Forest Production Management Regulation No. 14, 2016.



The ISPO now is part of obligation for companies running Indonesian Palm Oil Activities<sup>43</sup>. The system positioned certificate as prerequisite to obtain guarantee of environmentally sound quality of palm product prior entering the market. This certification gives information to the buyers whether the product originated from legally clean and environmentally compliant activities. The point of compliance related to Fire prevention and mitigation including Standard Operating Procedure for non-burning land clearing, facilities such as Fire-fighting prevention and mitigation tools, drainage system, water management, human resources devoted to prevent and control Fire, emergency organization, and documentation of Fire prevention and Mitigation.

The provisions of ISPO does not state clearly how it relates with Plantation Examination and Monitoring. There is only one stipulation, which stated that companies who has not yet apply for the ISPO till the due date of 6 months since the regulation was enacted, they will get some consequences. The consequences are gradual, from downsizing Plantation Class, warning letter, to business license revocation. For those who already get the certificate, they were threatened with certificate suspension or revocation if they were found to have violate the points of obligation, including obligation to prevent and mitigate Fire. Since both the ISPO and Plantation Examination and Monitoring<sup>44</sup> stipulates obligation related to Fire control with no clear guidance on which instruments shall be prioritized, the government has choices of: (i) imposing under the ISPO system; (ii) imposing sanction under the Plantation Examination system; (3) imposing sanctions based on both system simultaneously. This condition is risking the consistency of enforcement.

The stipulations on Fire are generally attempt to prevent Fire. Both government and enterprises have distinct responsibility to mitigate the Fire and restore the damage it has caused. Everyone who commit burning land can be charged with criminal penalty whilst enterprises may be sued or imposed with administrative sanction.

Despite the almost complete approaches in the Fire regulatory framework, not necessarily all of them work perfectly. However, this article will not go further to assess the effectiveness of each of regulations in reaching the goals. It will only use the information of available approaches to assess whether Fire regulatory frameworks has accommodated various approaches which can be utilized to reach Fire regulation goals as has been explained in the beginning of this section. From the explanation above, it may be concluded that the goals of Fire regulation are to stop Fire from happen in order to fulfill the environment sustainability as well as ceasing any impact which may harm human right of people particularly those who were impacted by Fire [20]. However, each instrument has their own objective which is unable to stop the Fire reoccur again if it is not combined with other instruments. For example, the criminal sanction, which may not be work sustainably unless supported by training and compliance monitoring. Another example is the lawsuit which by nature is intended to get remedy rather than deterrent effect—though it might work as scary punishment when the ruling order expensive cost for remedy. Besides, each instrument has its own weaknesses<sup>45</sup>.

In seeking the proper strategy to reach the goals, Fire regulatory framework provides command and control approach from each sector (environment, plantation and forestry) with each own distinctiveness which can be a used as complementary or, if implemented inconsistently can be a threat to Fire regulatory goals itself. Meanwhile, some other approaches are also had chances to be utilized although mostly require commitment and innovative action by official in charge, though highly depends on innovative initiative.

### **The Assessment to Fire Regulatory Enforcement**

The Fire regulatory enforcement, as explained earlier, basically faced two kinds of challenges. The first is provisional problems and the second is problems in implementation. In provisional aspects, guidance on connecting the relation between each instrument is lacking whilst single instrument is insufficient to stop the Fire. The lack of clearance on connection among each instrument require

<sup>43</sup> Ministry of Plantation No. 11, 2015 on Indonesian Sustainable Palm Oil Certification System.

<sup>44</sup> Minister of Agriculture Regulation No. 98, 2013.

<sup>45</sup> This is what has been argued by Gunningham and Grabowsky.

initiative from the decision maker to maintain the quality of enforcement. Whereas, there are still other external factors influenced the quality of enforcement such as budget and resources issue.

In the level of provisions, there are two types of flaw. The first is the lack of guidance explaining connection among direct regulation and other approaches. This can be identified as an example of which the Smart Regulation principle pointing at, which is to prefer approaches capable of responding behavior of regulated entity. Single instrument has its own objective, which are mostly indirect to the ultimate objective of Fire regulation (see table 1). The second is inconsistency of the form of instrument. Some instruments are redundant with one another in terms of technical aspects such as implementing actor to enforce and the need of budgetary fund. The worst condition is when these instruments have also lead to different consequences [19]. The provisions tend to combine voluntary approach with mandated approach, with no clear boundaries and lack of inconsistencies.

The table below shows the objective of each Fire regulatory instrument and each position to the objective of each regulation they belong, and to the utmost, to stop Fire.

Instrument	Objective	Position to the Peak of Fire Regulatory Objective
Monitoring (Forestry Act)	License holder protects the forest (prevention and mitigation).  License holder does not open-burn the forest.	<p><b>Direct with requirement</b></p> <p>Monitoring by the license authority should be consistent, concise and responsive. The challenges in monitoring are: takes high cost, need skillful inspectors (government) and a concise tools and standard operating procedure (including that on cooperation among government institutions).</p>
Criminal Sanction (Forestry Act)	License holder does not open-burn the forest.	<p><b>Direct with requirement</b></p> <p>When open-burn is a common behavior of many companies as gambling risk they would have chosen rather than increasing productive cost for non-open-burn method, sanctioning small number of perpetrators with weak punishment will be counterproductive.</p> <p>Another thing is the chaotic land conflicts makes finding the real crime master-mind challenging. Data in Riau (see section three) shows that many perpetrators were individual whilst the crime occur inside the company's concession.</p> <p>It does not help to get remedy for the environment and the victims.</p>

Instrument	Objective	Position to the Peak of Fire Regulatory Objective
Civil Suit by Government Standing	Remedy to the environment which has been damaged or polluted because of the Fire.	<p><b>Indirect</b></p> <p>Big challenges in proofing evidences.</p> <p>It usually took long time before the rulings are final and binding (unless no further legal act to the higher court).</p> <p>Even if the plaintiff wins, the scheme for make sure that the defendant comply is now still not clear.</p>
Environment Performance Rating and Certification Model	Stimulates the regulated actors to perform beyond compliance.	<p><b>Indirect</b></p> <p>It does not apply to regulated actors who has no good faith.</p> <p>The implementation of this instrument can be counterproductive with the enforcement of direct regulation if between the authorities are not conducting good coordination and if the decision maker is not consistent with the choice of enforcement.</p>
Education and Information	To make the regulated actors educated.	<p><b>Indirect</b></p> <p>This instrument's character is as complement to the other instruments.</p>

The table shows that by enforcing all the instruments at once may lead to negative impact but the other may resulted to positive results. The sample of negative results is reflected once the government conduct environmental rating and focusing on enforcing certification whilst not enforcing administrative sanction in consistent manner [18]. This will make enforcement become weak and regulated actor with bad faith will not influenced with the act. On the other side, if the government set responsive strategy to each type of actor's behavior, the combination of the two types of instruments may resulted to positive impact. For example, if certification is only applying to those actors who already pass examination through monitoring this will ensure that those who are qualified to get the certificate are those who already comply with the obligation. This strategy may stimulate beyond compliance. Another way around, the government may enforce the certification first, but once the regulated actors violate the obligation, the authority must not hesitant to apply punitive enforcement. Another thing to consider is the involvement of broader regulated actors. This is a good point that has been proved in Indonesia. The participation of citizens and Civil Society Organizations has been giving a good insight and help in the effort to meet Fire regulatory objective.

### 3. CONCLUSIONS

As a part of the environment related regulation, including forestry and plantation sectors, existing Fire regulations accommodate options and even mixture among command and control instrument and alternative instruments. However, there are three challenges derived from the type of each provisions.

The first is not all of the instruments comprehensively resulted to zero burning activities and zero fire [16]. The second is that some instruments have redundant objectives with regards to Fire regulation especially those whose character is a combination between alternative approach and command and control, for example monitoring obligation related to Fire prevention under the Environmental Act and Plantation Act. The third is missing connection among instruments with sliced objectives and strategies, for example between sustainable palm oil certification monitoring and plantation assessment [23]. These conditions urge the government (the decision maker) to have a strong strategy combining political will, innovation, and creativity to choose the best instrument. Although the government has been more proactive, this paper finds that there is still no consistent action in enforcing the Fire regulation. As a result, some instruments are conducted just because it is an obligation of the government, not purely conducted to reach its goals. Moreover, some enforcement is not conducted in respond to misbehave nor it is to cease the Fire thoroughly. Even if the government become responsive, it was because the cases were captivating public attention or depending on complaint from the people.

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Фатіма Існа. Боротьба з лісовими пожежами в Індонезії: проблеми правового регулювання та реалізації. *Журнал Прикарпатського університету імені Василя Стефаника*, 5 (2) (2018), 198–210.

Неконтрольоване розширення діяльності насаджень в районах торф'яних районів є одним із головних факторів, що спричиняють в Індонезії лісовий та/або сухопутний вогонь (пожежу). Для вирішення таких проблем потрібно проаналізувати управління землекористуванням. Індонезійське законодавство передбачає різні варіанти регуляторних інструментів (пряме регулювання та альтернативні підходи до забезпечення відповідності). Після посилення пожеж у 2015 році, багато протестів від громадян, країн-сусідів і міжнародної спільноти закликали індонезійський уряд бути більш активним у застосуванні деяких регуляторних інструментів. Були введені адміністративні санкції та позов проти компаній протягом 2015–2017 років. Проте, регуляторне виконання не пройшло належної оцінки результатів. Це дослідження показує, що результат застосування примусових заходів щодо порушення положень про пожежу залишається невідповідним нормативним цілям, та стратегія виконання не є систематизованою.

**Ключові слова:** нормативно-правове забезпечення, пожежа, пряме регулювання, альтернативний підхід, регуляторні інструменти.