



**THE MINISTER OF ENVIRONMENT AND FORESTRY
OF THE REPUBLIC OF INDONESIA**

REGULATION OF THE MINISTER OF ENVIRONMENT AND FORESTRY
OF THE REPUBLIC OF INDONESIA

NUMBER P.15 / MENLHK / SETJEN / KUM.1 / 2/2017

CONCERNING

**PROCEDURES FOR THE MEASUREMENT OF GROUNDWATER
LEVEL AT PEATLAND ECOSYSTEM ORGANIZATION POINTS**

BY THE GRACE OF GOD ALMIGHTY

THE MINISTER OF ENVIRONMENT AND FORESTRY OF THE
REPUBLIC OF INDONESIA,

- Considering :
- a. Whereas in order to improve the efforts for protecting vulnerable and damaged Peatland Ecosystems, safeguard measures shall be needed to ensure the ecological functions of the Peatland Ecosystems in support of biodiversity conservation, water management, as carbon storage reserve, oxygen producers, and climate balancers can be maintained;
 - b. Whereas under the provisions of Article

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23 of Government Regulation Number 71 of 2014 concerning Protection and Management of Peatland Ecosystem, as amended by Government Regulation Number 57 of 2016 concerning Amendment to Government Regulation Number 71 of 2014 concerning Protection and Management of Peatland Ecosystem, in order to prevent damage to Peatland Ecosystems, shall be required the measurement of groundwater level at Peatland Ecosystem organization points;

- c. Whereas based on the considerations as referred to in letter a and letter b, it is necessary to stipulate Regulation of the Minister of Environment and Forestry concerning Procedures for the Measurement of Groundwater Level at Peatland Ecosystem Organization Points

- In view of : 1. Law Number 41 of 1999 concerning Forestry (State Gazette of the Republic of Indonesia of 1999 Number 167, Supplement to the State Gazette of the Republic of Indonesia Number 3888), as amended by Law Number 19 of 2004 concerning Stipulation of Government Regulation in Lieu of Law Number 1 of 2004 concerning Forestry as a Law (State Gazette of the Republic of Indonesia of 2004 Number 86, Supplement to the State Gazette of the Republic of Indonesia Number 4412);
2. Law Number 32 of 2009 concerning Environmental Protection and

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- Management (State Gazette of the Republic of Indonesia of 2009 Number 140, Supplement to the State Gazette of the Republic Indonesia Number 5059);
3. Law Number 23 of 2014 concerning Regional Government (State Gazette of the Republic of Indonesia of 2014 Number 244, Supplement to the State Gazette of the Republic of Indonesia Number 5587) as has been amended several times lastly by Law Number 9 of 2015 concerning Second Amendment to Law Number 23 of 2014 concerning Regional Government (State Gazette of the Republic of Indonesia of 2015 Number 58, Supplement to the State Gazette of the Republic of Indonesia Number 5679);
 4. Law Number 39 of 2014 concerning Plantations (State Gazette of the Republic of Indonesia of 2014 Number 308, Supplement to the State Gazette of the Republic of Indonesia Number 5613);
 5. Government Regulation Number 27 of 2012 concerning Environmental Permits (State Gazette of the Republic of Indonesia of 2012 Number 48, Supplement to the State Gazette of the Republic of Indonesia Number 5285);
 6. Government Regulation Number 71 of 2014 concerning Protection and Management of Peatland Ecosystems (State Gazette of the Republic of Indonesia of 2014 Number 209, Supplement to the State Gazette of the

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Republic of Indonesia Number 5580) as amended by Government Regulation Number 57 of 2016 concerning Amendment to Government Regulation Number 71 of 2014 concerning Protection and Management of Peatland Ecosystems (State Gazette of the Republic of Indonesia of 2016 Number 260, Supplement to the State Gazette of the Republic Indonesia Number 5957);

7. Presidential Regulation Number 16 of 2015 concerning the Ministry of Environment and Forestry (State Gazette of the Republic of Indonesia of 2015 Number 17);
8. Regulation of the Minister of Environment and Forestry Number P.18 / Menlhk-II / 2015 concerning Organization and Working Procedures of the Ministry of Environment and Forestry (State Gazette of the Republic of Indonesia of 2015 Number 713);

HAS DECIDED

To Stipulate : REGULATION OF THE MINISTER OF ENVIRONMENT AND FORESTRY CONCERNING PROCEDURES FOR THE MEASUREMENT OF GROUNDWATER LEVEL AT PEATLAND ECOSYSTEM ORGANIZATION POINTS

Article 1

Referred to herein as:

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1. Peatland shall be naturally formed organic materials of plant residues decomposed imperfectly with a thickness of 50 (fifty) centimetres or more and accumulates in a swamp.
2. Peatland Ecosystem shall be the combination of Peatland elements which shall be a whole unified entirety that influences each other in forming balance, stability, and productivity.
3. Peatland Hydrological Unity shall be a Peatland Ecosystem located between 2 (two) rivers, between a river and a sea, and / or at a swamp.
4. Waterworks shall be a structure that serves to control the flow rate of water.
5. Channel shall be a channel that receives runoff.
6. Channel Bulkhead shall be a form of waterworks in the form of bulkhead that shall be made in a channel that already exists in Peatland to prevent the subsidence of water surface in the Peatland so that the Peatland around it will remain wet and difficult to burn.
7. Environmental Permit shall be a permit granted to any person undertaking business and / or activities for which AMDAL or UKL-UPL (Environmental Impact Analysis) shall be mandatory in the framework of environmental protection and management as a prerequisite to obtain business and / or activity permit.
8. Organization Point shall be one or more locations as the basis for carrying out groundwater measurement on Peatland Ecosystems as the supervision control points.
9. Observation Point shall be a monitoring location conducted during the survey of characteristics of the Peatland Ecosystem including the monitoring of water level through grid systematic method composed of longitudinal and transversal transects.

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10. Monitoring Point shall be one or more locations designated for routine measurements of groundwater levels to determine the damage status of a Peatland Ecosystem.
11. Business Work Plan, hereinafter abbreviated as RKU (Work Planning), shall be a work plan for the entire IUPHHK (Licence for Industrial Plantation Forest Concession) working area for 10 (ten) years, covering aspects of forest sustainability, business sustainability, environmental balance and socio-economic development of the local communities.
12. Minister shall be the minister who conducts government affairs in the field of environmental protection and management.
13. Director General shall be the director general responsible for pollution control and environmental damage.
14. Person in charge of business and / or activity shall be the business permit holder, Head of Forest Management Unit or community group.

Article 2

- (1) Groundwater level measurement on a Peatland Ecosystem shall be determined at the control points called organization points.
- (2) The determination of the organization points referred to in paragraph (1) shall be carried out by the Director General.
- (3) The Director General in determining the Peatland ecosystem organization points as referred to in paragraph (1) shall refer to the following:
 - a. characteristic observation points at Peatland Ecosystems within the territories of the province and regency / city; and / or
 - b. groundwater level monitoring points of the business area and / or activity.

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- (4) The groundwater organization points as referred to in paragraph (1) shall be set minimally 15% (fifteen percent) of the total number of main crops or production blocks and shall be located in the centre of the main plant plots or production blocks.
- (5) The groundwater level organization points as referred to in paragraph (1) shall be the grounds of subsequent permit adjustment.

Article 3

- (1) The ground water level measurement shall be conducted by the person in charge of business and / or activity.
- (2) The measurement as referred to in paragraph (1) outside the business permit shall be conducted by the Head of Forest Management Unit and / or community group.

Article 4

- (1) The Groundwater level measurement at Peatland Ecosystem organization points shall be done to identify the damage of the Peatland Ecosystem with cultivation functions and protection functions.
- (2) The organization points as referred to in paragraph (1) shall constitute the groundwater monitoring point.
- (3) The Peatland ecosystem organization points as referred to in paragraph (2) may come from the following:
 - a. Peatland Ecosystem characteristics survey implementation observation points; and
 - b. points of monitoring of activities that have been done on the business and / or activity area.

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- (4) The groundwater level organization points as referred to in paragraph (3) shall be used as long as they are within a radius of 50 (fifty) meters calculated from the centre of the main plant plots or production blocks.
- (5) The distribution of the groundwater level observation points as referred to in paragraph (4) shall take into account the land characteristics, topography, water management zones, channels, and / or water structures.
- (6) The water management zone shall be determined from the grouping of water level with a range of 1 (one) meter difference based on the topography.

Article 5

- (1) At the organization points the following shall be measured:
 - a. location, coordinates, and elevation of the organization points;
 - b. water level;
 - c. rainfall data;
 - d. hours and date of measurement; and
 - e. Peatland subsidence rate.
- (2) The Groundwater level measurement shall be done by the following means:
 - a. manual; and / or
 - b. automatic.
- (3) The manual Groundwater level measurements as referred to in paragraph (2) a, may use measuring rods.
- (4) The automatic Groundwater level measurements as referred to in paragraph (2) letter b may use logger data.

Article 6

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- (1) The information as referred to in Article 5 paragraph (1) other than the height of the groundwater level shall be obtained from the observation at the organization points.
- (2) The Groundwater level measurement at the organization points as referred to in Article 5 paragraph (2) shall be conducted under the following provisions:
 - a. Manual measurement at least 1 (once) in 2 (two) weeks; and
 - b. Automatic measurement at least 1 (once) in a day.
- (3) The Groundwater level measurement as referred to in paragraph (2) letter b shall be done on at least 1 (one) logger data to represent each zone of water management.

Article 7

- (1) The organization points shall be equipped with rainfall gauge.
- (2) The 1 (one) rainfall gauge as referred to in paragraph (1) shall be installed to represent 20 (twenty) organization points at the surrounding.
- (3) The distribution of the rainfall gauges as referred to in paragraph (2) shall be adjusted to the water management zones.
- (4) The Rainfall observation shall be done daily.

Article 8

- (1) The information referred to in Article 5 paragraph (1), result of groundwater level measurement as referred to in Article 6 paragraph (2), and rainfall observation in Article 7 paragraph (4), shall be reported to the Director General every 3 (three) months starting from January of the current year in the form of softcopy and hardcopy.

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- (2) In addition to the information as referred to in Article 5 paragraph (1), the report referred to in paragraph (1) shall also be furnished with information on:
 - a. land cover, land use and condition;
 - b. existence of protected flora and fauna;
 - c. natural and artificial drainage conditions;
 - d. development of Peatland conditions or level of damage;
 - e. water quality;
 - f. environmental conditions; and
 - g. condition of other physical properties.
- (3) Under certain circumstances, the Director General may request the report in a period of less than 3 (three) months.

Article 9

- (1) The groundwater level measurement data as referred to in Article 5 paragraph (3) submitted by the person in charge of business and / or activity shall be verified by the Director General.
- (2) The made by the Director General as referred to in paragraph (1) shall be conducted by:
 - a. review of the data submitted; and / or
 - b. field check.
- (3) The field check as referred to in paragraph (2) letter b may be performed by an Environmental Supervisor or a Designated Official.

Article 10

The results of analysis on the groundwater level measurement at the organization points shall be used as the grounds for:

- a. issuing an order to carry out recovery to the person in charge of business and / or activity;
- b. conducting supervision; and / or

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- c. evaluating the functions of the Peatland Ecosystem.

Article 11

In the event that the person in charge of business and / or activity fails to perform the obligations as regulated in this Ministerial Regulation, he/she shall be liable to sanctions in accordance with the provisions of the legislations.

Article 12

- (1) The cost of implementing the groundwater level measurement at the organization points shall be borne by the person in charge of business and / or activity.
- (2) The cost of implementing the groundwater level measurement at the organization points outside the business permit area shall be charged to the State Budget (APBN), Regional Budget (APBD), or other legal sources in accordance with the provisions of the legislations.
- (3) The implementation as referred to in paragraph (2) shall be conducted by the Head of Forest Management Unit and / or community group.

Article 13

- (1) The person in charge of business and / or activity shall revise the RKU (Work Planning), Business Plan Document, Management Plan Document or the like to conform with this Ministerial Regulation.
- (2) The person in charge of business and / or activity shall be obliged to apply for revision to the Environmental Permit as a consequence of this Ministerial Regulation.

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Article 14

This Ministerial Regulation shall come into force as of its promulgation date.

For public cognizance, hereby ordering the promulgation of thus Ministerial Regulation by placing it in the State Gazette of the Republic of Indonesia.

Stipulated in Jakarta on February 9,
2017

THE MINISTER OF THE ENVIRONMENT
AND FORESTRY OF THE REPUBLIC OF
INDONESIA,

Signed

SITI NURBAYA

Promulgated in
Jakarta on February 27, 2017

DIRECTOR GENERAL OF LEGISLATION
OF THE MINISTRY OF LAW AND HUMAN RIGHTS
OF THE REPUBLIC OF INDONESIA,

Signed

WIDODO EKATJAHJANA

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HEAD OF THE LEGAL BUREAU,

Signed

KRISNA RYA

I, **Anang Fahkcrudin**, a sworn and authorized translator, by virtue of Jakarta Capital Territory Governor's Decree No. **2228/2011**, practicing in Jakarta, Jakarta, April 23, 2018 do solemnly and sincerely declare that the foregoing document is a true and faithful translation from Indonesian into English of the original version.

