

THE MINISTRY OF ENVIRONMENT AND FORESTRY OF THE REPUBLIC OF INDONESIA

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

NUMBER P.16 / MENLHK / SETJEN / KUM.1 / 2/2017

CONCERNING

TECHNICAL GUIDELINES FOR THE RESTORATION OF PEATLAND ECOSYSTEM FUNCTIONS

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 Peatland Ecosystem functions 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 26 and Article 30 paragraph (4) of

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Government Regulation Number 71 of 2014 concerning Protection and Management of Peatland Ecosystem, as amended by Government Regulation Number 57 2016 concerning Amendment to Government Regulation 71 of 2014 Number concerning Protection and Management of Peatland Ecosystem, in order to control Peatland Ecosystems, shall be required guidelines for the restoration of Peatland Ecosystem functions;

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 Measurement of Ground Water Front at Point Peatland Ecosystem Adoption

In view of

- 1. Law Number 41 of 1999 concerning Forestry (State Gazette of the Republic of 1999 Indonesia of 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 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 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 TECHNICAL GUIDELINES FOR THE RESTORATION OF PEATLAND ECOSYSTEM FUNCTIONS

CHAPTER I GENERAL PROVISIONS

Article 1

Referred to herein as:

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.

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- 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. Peatland Dome is an area of Hydrological Unity Peatland that has higher topography than the surrounding area, so it naturally has the ability to absorb and store more water, and supplies water to the surrounding area.
- 5. Protection Functions of Peatland Ecosystem shall be the structure of Peatland elements that have certain characteristics primarily functioning as water protection and balance, carbon reserve storage and biodiversity conservation in order to preserve the function of the Peatland Ecosystem.
- 6. Cultivation Functions of Peatland Ecosystem shall be the structure of Peatland elements that have certain characteristics with the functions to support the productivity of a Peatland Ecosystem through cultivation activities according to its carrying capacity to preserve the Peatland Ecosystem functions.
- 7. Restoration of Peatland Ecosystem Functions shall be an activity undertaken to restore the nature and function of a Peatland Ecosystem according to or to be close to its nature and function through natural succession, hydrological restoration, vegetation rehabilitation, and / or other means in accordance with the development of science and technology.
- 8. Hydrological Restoration shall be an effort to restore a Peatland water system to make the Peatland Ecosystem or parts of it become wet and function again as initially.
- 9. Vegetation Rehabilitation shall be an effort to restore and improve the function of a Peatland Ecosystem by planting vegetation so



that its productivity and role in supporting life support system can be maintained.

- 10. Natural Succession shall be restoration without human intervention.
- 11. Revegetation shall be an effort to restore land cover on a Peatland Ecosystem through the planting of native plant species in its protection function or with other types of plants adaptive to wetlands which has economic value on its cultivation function.
- 12. Environmental Permit shall be a permit granted to any person undertaking business and / or activities for which AMDAL or UKL-UPL shall be mandatory in the framework of environmental protection and management as a prerequisite to obtain business and / or activity permit.
- 13. Peatland Rewetting shall be a wetting activity of Peatland that dries up due to human activity causing the subsidence of the Peatland water level by the increasing water level and Peatland water level.
- 14. Business Work Plan, hereinafter abbreviated as RKU, shall be a work plan for the entire IUPHHK working area for 10 (ten) years, covering aspects of forest sustainability, business sustainability, environmental balance and socio-economic development of the local communities.
- 15. Waterworks shall be a building that serves to control the flow rate of water.
- 16. 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.
- 17. Any Person shall be an individual or a business entity, whether or not having legal entity.



- 18. Regional Government shall be the regional head as an element of the Regional Government organizing the execution of government affairs which shall be the authority of the autonomous regions.
- 19. Minister shall be the minister who conducts government affairs in the field of environmental protection and management.
- 20. Director General shall be the director general responsible for pollution control and environmental damage.

This Ministerial Regulation aims to provide technical guidance on the restoration of Peatland Ecosystem functions for:

- a. the Government;
- b. Local / Provincial Government;
- c. communities, including indigenous and tribal peoples; and
- d. person in charge of business and / or activity.

- (1) The restoration of Peatland Ecosystem functions shall be carried out for a Peatland Ecosystem which has been damaged in terms as follows:
 - a. Peatland ecosystems with protection functions; or
 - b. Peatland ecosystems with cultivation function.
- (2) The Peatland ecosystem with damaged protection functions shall as referred to in paragraph (1) letter a, if it exceeds the standard damage criteria as follows:
 - a. there is artificial drainage;
 - b. exposure to pyrite and / or quartz sediments under the Peatland layer; and / or
 - c. there is reduction in the area and / or volume of land cover.



- (3) The Peatland ecosystem with damaged cultivation function shall as referred to in paragraph (1) letter b, if it meets the criteria as follows:
 - a. the groundwater level in the Peatland is more than 0.4 (zero point four) meters below the surface of the Peatland at the organization points; and / or
 - b. exposure to pyrite and / or quartz sediments beneath the Peatland layer.
- (4) In addition to the criteria for damage to the Peatland Ecosystem functions as referred to in paragraphs (2) and (3), the damage criteria may also result from spatial analysis confirmed by field check activities.

- (1) The Peatland Dome shall be part of a Peatland Ecosystem having protection functions.
- (2) The Peatland Dome located in an undeveloped business area shall be maintained as a Peatland Ecosystem with protection functions.
- (3) The Peatland Dome located within a cultivated business area shall be a Peatland ecosystem with protection functions, can still be harvested, prohibited from replanting after harvesting, and must be restored.
- (4) The restoration as referred to in paragraph (3) shall be made by making channel bulkhead and restoration by natural succession.
- (5) In the event that the natural succession referred to in paragraph (4) is unsuccessful, on the order of the Director General shall be planted the original plant species as referred to in this Ministerial Regulation.



The restoration of the functions of Peatland Ecosystems as referred to in Article 4 shall be carried out by:

- a. The Minister for conservation forest areas not given business permit and / or activity in accordance with the provisions of the legislations;
- b. Provincial or Regency / City Government in accordance with their authority for:
 - 1. protected forest areas not burdened with business and / or activity permit;
 - 2. production forest areas not burdened with business and / or activity permit;
 - 3. forest parks not burdened with business and / or activity permit; and
 - 4. other use areas, including land managed by the community and / or indigenous and tribal peoples;
- c. The person in charge of business and / or activity, for business and / or activity areas.

Article 6

- (1) The person in charge of business and / or activity shall perform the restoration of the Peatland Ecosystem functions within 30 (thirty) days since the date of the damage.
- (2) The person in charge of business and / or activity shall perform the restoration of the Peatland Ecosystem functions due to fire.

- (1) The determination of the day of the occurrence of damage as referred to in Article 6 paragraph (1) shall be determined by the Director General after verification in accordance with the provisions of the legislations.
- (2) In the event of fire and / or damage as referred to in paragraph (1) caused by fire, the Director General shall stipulate the



beginning of the damage after the determination of fire start by the director general in charge of forest fires.

Article 8

- (1) The Restoration of Peatland Ecosystem by holders of Natural Forest Timber Forest Product Permit, Timber Forest Product Utilization Business Permit, or Utilization of Ecosystem Restoration Timber Forest Products Business Permit shall be made on the basis of spatial changes and changes in the Working Plan (RKU).
- (2) The order for the implementation of the restoration of the Peatland Ecosystem as referred to in paragraph (1) shall be made no later than 7 (seven) working days from the date of the date of the start of the damage as referred to in Article 7 paragraph (1).

Article 9

The restoration of the Peatland ecosystem in unpermitted areas shall be carried out by the Government, Provincial / Regency / City Government or the person in charge in accordance with its authority in a planned manner in consultation with the Director General.

- (1) In the event that the person in charge of business and / or activity fails to perform restoration after 30 (thirty) days since the stipulation as referred to in Article 6 paragraph (1) and Article 8 paragraph (2), the Minister, Provincial Government, or Regency / City Government in accordance with their authority shall designate a third party for the restoration of the Peatland Ecosystem functions at the expense of the person in charge of business and / or activity.
- (2) In the event that the person in charge of activity fails to perform the restoration after 30 (thirty) days since the designation as referred to in Article 9, the Minister shall order the



implementation of the restoration to the Provincial Government, and the Regency / Municipal Government at the expense of the person in charge of activity.

- (3) In the event that the provincial and regency / city governments fail to perform as referred to in paragraph (2), the Minister shall take measures in accordance with the provisions of the legislations.
- (4) The implementation of restoration as referred to in paragraph (1) and paragraph (2) shall involve the community around the business and / or activity area.

CHAPTER II PHASES OF THE RESTORATION OF THE PEATLAND ECOSYSTEM FUNCTIONS

Article 11

The Restoration of the Peatland Ecosystem functions shall be done through the phases as follows:

- a. planning;
- b. implementation; and
- c. assessment.

Article 12

(1) The planning for the restoration of the Peatland Ecosystem functions as referred to in Article 11 letter a shall be based on the results of the field survey or analysis results of spatial data as



- referred to in Article 7, and on the changes in the spatial plan and changes in the Working Plan (RKU) as referred to in Article 8.
- (2) If necessary for the planning of the restoration of the Peatland Ecosystem functions, other information than the information referred to in paragraph (1) may be used as supporting information.
- (3) The plan to restore the Peatland Ecosystem functions as referred to in paragraph (1) and paragraph (2) shall include the following:
 - a. restoration sites;
 - b. area of the restoration land;
 - c. restoration methods;
 - d. components and schedule of activities;
 - e. cost plan;
 - f. implementation management;
 - g. target achievement per 6 (six) months; and / or
 - h. techniques and monitoring schedules.
- (4) The restoration plan shall be prepared no later than 14 (fourteen) working days from the date of receipt of the determination of the day of the occurrence of damage from the Director General as referred to in Article 7 paragraph (1).
- (5) The Restoration Plan Document as referred to in paragraph (3) shall be submitted to the Director General.

- (1) Restoration of the Peatland Ecosystem function shall be carried out by implementing the following:
 - a. rehabilitation;
 - b. natural succession:
 - c. restoration; and / or
 - d. other ways in accordance with the development of science and technology.



(2) The period of restoration of the Peatland Ecosystem functions as referred to in paragraph (1) shall be no later than 14 (fourteen) working days since the submission of the restoration plan as referred to in Article 12 paragraph (5).

Article 14

- (1) The restoration by means of rehabilitation as referred to in Article 13 paragraph (1) letter a shall be conducted by revegetation or replanting in the following areas:
 - a. burned areas;
 - b. logged-over,
 - c. open to rare vegetation conditions;
 - d. burned areas that have undergone natural succession (according to need and after technical assessment); and / or
 - e. selective logging.
- (2) Rehabilitation activities shall be carried out by prioritizing native plant species and by taking into account the following:
 - a. land suitability;
 - b. environmental aspect;
 - c. social aspect; and
 - d. economic aspects.
- (3) The types of native plants as referred to in paragraph (2) that may be used for rehabilitation activities shall be listed in the Appendix which shall be an integral part of this Ministerial Regulation.

Article 15

The natural succession as referred to in Article 13 paragraph (1) letter b shall be made to a sequestered Peatland ecosystem with no interference from human activities.



The Restoration activities as referred to in Article 13 letter c shall be done to make the Peatland Ecosystem or its parts function again as originally, by building Peatland rewetting infrastructure covering:

- a. waterworks;
- b. water reservoirs;
- c. channel hoarding; and / or
- d. water pumping.

Article 17

- (1) The waterworks as referred to in Article 16 letter a shall include:
 - a. Channel Bulkhead;
 - b. ponds; and
 - c. other waterworks.
- (2) The construction of the channel bulkhead as referred to in paragraph (1) letter a shall take into account the following:
 - a. ground water level;
 - b. peak height of the channel and sewer, if the channel bulkhead is equipped with a sewer; and
 - c. differences in groundwater level in the upstream section of the channel and the downstream section.

CHAPTER III

ASSESSMENT OF SUCCESS IN THE FRAMEWORK OF RESTORATION OF FUNCTIONS OF PEATLAND ECOSYSTEM

- (1) The Restoration of the functions of a Peatland Ecosystem shall be declared successful in the events as follows:
 - a. There is no exposure of pyrite and / or quartz sediments below the Peatland layer at the organization points;



- b. The groundwater levels at the Peatland is less than 0.4 (zero point four) meters below the surface of the Peatland at the organization points;
- c. it is better than the standard criteria for Peatland ecosystem damage specified in the Environmental Permit;
- d. it is better than the damage standard of spatial analysis results from field survey activities or data analysis and information scaled 1: 250,000 (one in two hundred fifty thousand) or the results of monitoring of the organization points; and / or
- e. the minimum total healthy growing plants of at least 500 (five hundred) stems / hectare in the third year.
- (2) The water management systems and waterworks for the restoration of the Peatland Ecosystem shall be built in the first 6 (six) months.
- (3) The improvement of groundwater level to reach less than 0.4 (zero point four) meters below the Peatland surface shall be visible in 3 (three) months after the construction of the waterworks.

- (1) The person in charge of business and/or activity shall be responsible for the successful restoration of the Peatland Ecosystem functions.
- (2) The person in charge of business and / or activity shall submit the report of success in achieving the achievement targets in the restoration plan once every 6 (six) months to the Director General.
- (3) The Director General shall assess the success of the restoration of the Peatland Ecosystem functions.
- (4) For the assessment of the successful restoration of the function of the Peatland Ecosystem as referred to in paragraph (3), the Director General shall be assisted by a Technical Team appointed by the Minister.



- (1) Based on the report of results of the success assessment as referred to in Article 19, the Director General shall conduct an assessment which indicates a total or partial success.
- (2) With regard to the result declared unsuccessful in whole or in part, the Director General shall:
 - a. give warning;
 - b. take measures in accordance with the provisions of the legislations;
 - c. appoint other party to restore the Peatland Ecosystem functions at the expense of the person in charge of business and / or activity.

CHAPTER IV FINANCING

Article 21

The expenses for the restoration of functions of Peatland Ecosystem:

- a. in a Peatland ecosystem areas not burdened with business and / or activity permit shall be charged to the State Budget (APBN), Regional Budget (APBD), or other legal sources in accordance with the provisions of the legislations.
- b. in a Peatland ecosystem area burdened with business and / or activity permit shall be charged to the person in charge of business and / or activity.

CHAPTER V SANCTIONS



- (1) In the event that the person in charge of business and / or activity fails to carry out the restoration of the functions of Peatland Ecosystem, he/she will be subject to government coercion sanctions and the sanctions may be escalated based on the level of compliance with obligations in accordance with the provisions of the legislations.
- (2) In the event that the person in charge of business and / or activity neglects and does not fulfil the obligation as referred to in subarticle (1), he/she will be subject to the process of imposition of criminal sanction in accordance with the provisions of the legislations.

CHAPTER VI TRANSITIONAL PROVISIONS

Article 23

With the enactment of this Ministerial Regulation:

- a. The person in charge of business and / or activity must revise the Spatial Plan, Business Plan (RKU), Business Plan Document, Management Plan Document or the like to be adjusted with this Ministerial Regulation.
- b. The person in charge of business and / or activity must apply for revision to the Environmental Permit as a result of the changing of the Peatland Ecosystem functions in accordance with this Ministerial Regulation.

CHAPTER VII CLOSING PROVISIONS

Article 24

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

OFFICIAL GAZETTE OF THE REPUBLIC OF INDONESIA OF 2017 NUMBER 338

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HEAD OF THE LEGAL BUREAU,

Signed

KRISNA RYA



APPENDIX TO REGULATION OF THE MINISTER OF ENVIRONMENT AND FORESTRY OF THE REPUBLIC OF INDONESIA NUMBER P.16 / MENLHK / SETJEN / KUM.1 / 2/2017 CONCERNING TECHNICAL GUIDELINES FOR THE RESTORATION OF PEATLAND ECOSYSTEM FUNCTIONS TYPES OF PLANTS FOR THE RESTORATION OF PEATLAND ECOSYSTEM WITH REHABILITATION ACTIVITIES.

NO.	LOCATION CONDITION	TYPES OF PLANTS
1.	Areas that are: Lightly/moderately burned Logged over Open areas (rare vegetation)	■ Jelutung rawa (<i>Dyerapolyphylla</i>)
		■ Perepat (Combretocarpusrotundatus)
		■ Belangiran (Shoreabalangeran)
		■ Perupuk (Lophopetalum sp.)
		■ Pulai rawa (<i>Alstoniapneumatophora</i>)
		Rengas manuk (Syaygium sp.)
		■ Terentang (Campnosperma coriaceum)
2.	Areas that are: Burned but have experienced natural succession Selectively logged With moderate vegetation cover	■ Meranti rawa (Shorea pauciflora,
		 Shorea tesmanniana, Shorea uliginosa)
		Merapat (Combretocarpus rotundatus)
		■ Durian (<i>Durio carinatus</i>)
		■ Ramin (Gonystylus bancanus)
		■ Punak (Tetramerista glabra)
		■ Kempas (Koompassia malaccensis)
		■ Resak (Vatica rassak)
		■ Kapur Naga (<i>Calophyllum</i>
		macrocarpum)
		■ Nyatoh (<i>Palaquium spp</i> .)
		■ Bintangur (<i>CalaphyllumHosei</i>)
3.	Areas that are: Selectively logged That still have lots of trees	Meranti rawa (Shorea pauciflora,Shorea tesmanniana, Shorea uliginosa)
		Ramin (Gonystylus bancanus)



	 Vegetation cover 	■ Punak (Tetramerista glabra)
		■ Balam (<i>Palaquium rostratum</i>)
NO.	LOCATION CONDITION	TYPES OF PLANTS
	 Still high Has lost type of commercial plants (high value) 	 Kempas (Koompassia malaccensis) Rattan (Calamus spp) Gemor (Nothaphaebe spp., Alseodaphne spp.)

Table 2. Types of plants based on benefit groups

NO.	BENEFIT GROUPS	TYPES OF PLANTS
1.	Food crops (including fruits, source of carbohydrates, protein, spice and fat/oil)	 Sagu (<i>Metroxylon spp.</i>) Asam kandis (<i>Garcinia xanthochymus</i>) Kerantungan (<i>Durio oxleyanus</i>) Pepaken (<i>Durio kutejensis</i>) Mangga kasturi (<i>Mangifera casturi</i>) Mangga kueni (Mangifera odorata) Rambutan (Nephelium spp.) Nipah (Nypa fruticans) Kelakai (Stenochlaena palustris) Tengkawang (Shorea stenoptera, S. macrophylla)
2.	Producer of fibers (as the substitute of pulp and paper raw materials)	 Geronggang (Cratoxylum arborescens) Terentang (Campnosperma auriculatum) Gelam (Melaleuca cajuputi)
3.	Sources of bio- energy (wood pellet, bricket, bio-ethanol)	 Gelam (Malaleuca cajuputi) Sagu (Metroxylon sago) Nipah (Nypa fruticans)
4.	Producer of latex	 Jelutung (<i>Dyera polyphylla</i>) Nyatoh (<i>Palaquium leiocarpum</i>) Sundi (Payena spp., Madhuca spp.)
5.	Sources of medicine	 Akar kuning (Coscinium fenestratum) Pulai (Alstonia pneumatophora)



6.	Other associated forest products	 Gaharu (Aquilaria sp.) Gemor (Alseodaphne sp.) Purun tikus (Elaeocharis dulcis) Rotan irit (Calamus trachycoleus)
NO.	BENEFIT GROUPS	TYPES OF PLANTS
7.	Timber	 Ramin (Gonystylus bancanus) Meranti merah (Shorea macrantha, Shorea balangeran)

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HEAD OF LEGAL BUREAU ENVIRONMENT AND FORESTRY OF

THE REPUBLIC OF INDONESIA,

Signed Signed

KRISNA RYA SITI NURBAYA

I, Anang Fahkcrudin, a swom and authorized translator, by virtue of Jakarta Capital Territory Governor's Decree No. 2228/2011, practicing in 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.

