

Ministerial decree on Agriculture

(Peraturan Menteri Pertanian nomor: 14/Permentan/PL.110/2/2009)

Guideline on Oil Palm Plantation on Peatland

Considering:

1. Oil palm plantation is still one of the sources of national income.
2. Peatland has an important role in environmental sustainability which can be used to grow oil palm.
3. Converting peatland into oil palm plantation can be done, bearing in mind the characteristic of the peatland, preventing damage to the environment.
4. Based on the above mentioned it is essential to issue a guideline on peatland use for oil palm plantation.

Noticing:

1. Report of the Research Consortium on Ecological Suitability on Peatland for Sustainable Agriculture 2008

Decision:

1. The guideline, as attachment, on using peatland is part of this regulation.
2. This guideline is the legal base for the provincial government in the use of peatland for oil palm plantation.
3. The guideline is aimed to facilitate development of oil palm plantation on peatland and give a certainty in the oil palm business on peatland.
4. The companies that have been already practicing on peatland and got licenses are allowed to continue the activity. These companies must adapt their practice to this new guideline. The on-going requests or registrations on this activity must follow the new guideline.
5. This decree is executed on February 16th 2009

Attachment:

Guideline on Peatland Use for Oil Palm Plantation

Introduction

Background

1. Increasing agricultural production can be done by increasing the land use. However there are some limitations in land availability.
2. One way to increase the production can be achieved by building plantations on peatlands.

3. Peatland is a type of soil which is created due to the accumulation of organic matters. This organic matters contribute to 65% of the soil. This soil has accumulation of vegetation which degrades very slowly, a process happening in a hundreds of years, an anaerob process. Every peatland has its own characteristics, depending on the physical, chemical and biological feature of the sediments under it. These features determine the availability of the peatland as a growing media, biota habitat, biodiversity and hydrotopography.
4. Oil palm plantation is basically carried out on mineral soil. But due to the lack of land this activity can be done on peatland as long as it is done in accordance with the sustainability of peatland functions: (a) carried out only on community land cultivation land, (b) on peatland that has depth less than 3 meters, (c) the subsoil under the peatland is not silica sand or acid sulfate soil; (d) the maturity of the soil is sapric (the most decomposed) or hemic (somewhat decomposed); and (e) eutropic peatlands.
5. Peatlands are spread almost all over Indonesia, mostly on the coastal area and lowland. So far people have been growing on peatlands according to the characteristic of the land by planting pineapples, coconut and oil palm.
6. Guideline in cultivating on peatland is needed to sustain the function of this land.

Aim

The aim of this guideline on oil palm cultivation on peatland is to manage the peatland in a sustainable way considering the ecological function of peatland, with the following goals:

1. Developing oil palm plantation.
2. Maintaining the function of the peatland.
3. Increasing the production and the income of the oil palm producers.

Understanding

1. Peatland is a type of soil which is created due to the accumulation of organic matters. This organic matters contribute to 65% of the soil. This soil has accumulation of vegetation which degrades very slowly, a process happening in a hundreds of years, an anaerob process.
2. Every peatland has its own characteristics, depending on the physical, chemical and biological feature of the sediments under it. These features determine the availability of the peatland as a growing media, biota habitat, biodiversity and hydrotopography.
3. Peatland area is a peatland ecosystem, within forest or outside, with function as a protected area or cultivated area.
4. Cultivated peatland area is an area that has primary function as cultivation, outside the peat dome, has pyrite sediment layer, silica sand layer depending on the area potential.
5. Peatland field is a peatland area which can be used for oil palm cultivation.
6. Mineral field is made due to mineral decomposition with organic depth less than 50 cm and C organic content less than 20%.

Scope of this guideline

1. Peatland field criteria

1. On a cultivated area
2. Peat layer less than 3 meter; (1) on a surface that has less than 3 meter depth and (2) the field has to have minimal 70% of such a layer.
3. Mineral soil under the peat: it is not constituted of silica sand and acid sulfate soil.
4. Decomposition level : sapric and hemic. Soil on the fibric state is not allowed to be cultivated with oil palm.
5. Fertility level: eutropic.

2. Use of peatland

The management of peatland for the oil palm plantation by the producer includes planning, land clearing, planting, maintaining and conservation.

The land clearing will be done without burning. Basic rules of hydrology will be applied. An intensive and quick process of drying is not allowed to avoid irreversible shrinkage.

Drainage, vegetation cutting, roads, and compaction are regulated as followed:

- Periphere drain has a function as ground water level regulator and this is also the main channel. This periphere drian has top width of 4 meter, bottom width of 3 meter with depth of 2 to 3 meter.
- Land clearing on an area with bushes that have branches less than 2.5 cm diameter can be done manually or mechanically.
- Drainage consists of three different channels.

Channel	Top width (meter)	Bottom width (meter)	Depth (meter)
Primary	3.0-6.0	1.2-1.8	1.8-2.5
Secondary	1.8-2.5	0.6-0.9	1.2-1.8
Tertiary	1.0-1.2	0.5-0.6	0.9-1.0

Primary channel drains water directly to end stream, rivers or channels. This channel can be also a natural creek. On a tidal area a dike and a water gateway.

Secondary channel drains water to the primary channel. This channel catches water from the tertiary channel and it determines also the boundary of the blocks. The distance between the secondary channels is 400 m to 500 m.

Tertiary channel drains water to the secondary channel and it also captures water from the planting area. There is maximum 1 tertiary channel between two planting rows.

The water channels are aimed to manage ground water level of 60 cm to 80 cm depth, to maintain water availability and preventing fire.

- Roads are built on using dug soil as foundation, leveled and compacted using heavy equipment and laying logs. This foundation is covered by mineral soil with depth of 20 cm to 30 cm. Using geo-textile is an option.
- Compaction of planting area to give a proper rooting area is done mechanically.

3. Planting

Planting space differs depending on compacted (60x60x60 cm) or non compacted land (hole in hole planting, outer hole with dimension of 100x100x60 cm and inside hole of 60x60x60 cm)). Fertilizers are regulated as: 20 g CuSO₄, 20 g ZnSO₄, 20 g FeSO₄, 500 g RP and 250 g dolomite.

4. Maintenance and conservation

Maintenance and conservation are done in order to have a certain level of groundwater which is suitable for the plant rooting system.

Guidance and Inspection

Guidance is done by Directorate General of Plantation, governor and regents. Inspection is done once a year on the plantation, to avoid the damage of the peatland ecological function. A violation will be warned, three times with a period of 3 months one after another.

Closure

This guideline is dynamic, can be adapted to new technology and the need of the community.