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# MANAGEMENT OF RIVER RIPARIAN IN INDONESIAN PALM OIL PLANTATION

A Synthesis Report  
for management of River Riparian  
undetermined by Government

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By  
**Suer Suryadi, S.Si, SH, M.Si**  
**Drs. Darmawan Liswanto**

for RSPO Secretariat  
Jakarta, July 2022



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# 1

## INTRODUCTION

There are currently two sustainable palm oil certification systems adopted in Indonesia: the RSPO (*Roundtable on Sustainable Palm Oil*) and the ISPO (*Indonesian Sustainable Palm Oil*). The latter is developed by the Indonesian government. The systems provide Principles and Criteria (P&C) as verifying instruments for the application of the standard operating procedure for the production of sustainable palm oil for Growers and Independent Smallholders.

Both the RSPO P&C and RISS, which are global standards dedicated to Growers and Independent Smallholders, have been adapted and adjusted to be the Indonesia National Interpretation of the RSPO P&C (April 2020) and Indonesia National Interpretation of the RISS (February 2022) to ensure that they are aligned with the Indonesian laws and regulations. The RSPO also issues guidelines for the management of HCV areas. Two of these guidelines include Best Management Practices for the Management and Rehabilitation of Riparian Reserve (April 2017), aimed to assist Growers and Independent Smallholders to manage the riparian properly. The guidelines are then known as the RSPO BMP Riparian.

Indicator 7.8.2 of P&C Indonesia requires Growers to maintain and enhance the riparian during and prior to oil palm tree planting in accordance with the BMP Riparian guidelines. Indicator 4.7. of the RISS Indonesia, on the other hand, requires Group Managers to identify buffer zone and commit to not planting new palm oil trees at the riparian. Moreover, Indicators 4.7. MS A and 4.7 MS B oblige Independent Smallholders to own work plans to maintain and/or enhance landscape conditions across the riparian. The two Indicators are applicable for relevant riparian which has been determined by respective ministers, governors, mayors/regents.

Indonesian government has classified the riparian as a protection area since 1990 through a series of sectoral regulations. Both central government and local government have also issued regulations on the standard riparian width. However, there are numerous river banks, the riparian of which have not been determined since then. Oil palm plantation actors also found out that a large number of tributaries within a plantation area have not been depicted on the official map<sup>1</sup>. This circumstance made it challenging for the Growers and Independent Smallholders to collectively meet the RSPO P&C pertaining to riparian.

The above challenges have been discussed in *Studi Regulasi dan Implementasi Tata Kelola Sungai dan Sempadannya di Perkebunan Kelapa Sawit di Indonesia* (a study on regulations and management implementation of rivers and their riparian across palm oil plantations in Indonesia). The study mainly provides necessary information on legal framework and relevant

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<sup>1</sup>The official government maps include Peta Sungai RBI (the RBI river map) from the Geospatial Information Agency geoportal or Geoportal Kebijakan Satu Peta (the One Map Policy Geoportal); Map of the river area from the River Basin Center or Local Apparatus Organizations/Offices in charge of water resources management; RTRW (Spatial Plan) map with a scale of 1: 50,000 (district) or scale 1: 25,000 (city); Land map issued by the Land Office/Local Office of the National Land Agency;

stakeholders having authority to manage riparian as protection areas. The study, furthermore, presents a total of 31 regulations with their essential substance and 14 local regulations on rivers and their riparian. The study, in particular, describes some primary issues, including river definition, riparian determining norms, and their management system.

This report is a follow-up of the above technical study which will be used as the basis to formulate the guideline for Growers and Independent Smallholders to determine and manage riparian whose width has not been determined by the government in accordance with applicable regulations. The report has also captured suggestions and experiences of the Growers and Independent Smallholders shared in physical discussions on 27 June 2022 and 12 July 2022. In addition, this guidance is developed on the basis of applicable regulations in Indonesia and have taken the RSPO P&C, RSPO RISS, and the RSPO BMP Riparian into account.

# 2

## LEGAL FRAMEWORK OF RIVER AND RIPARIAN MANAGEMENT

### 2.1. Legal Principles

In order to ensure that each stakeholder is on the same page in terms of perceiving the laws and understanding the different laws as well as discrepancies and misalignments among the existing laws, it is essential to understand the following universal legal basis:

**First**, *Lex posterior derogat legi priori*. This means that a new law/regulation shall revoke an old law/regulation providing that the two laws/regulations comprise similar norms, contents, and hierarchy. For example, guiding criteria of the riparian width regulated by Government Regulation No.26/2008 (PP No.26/2008) are no longer applicable as the updated criteria are available in a newer regulation: Government Regulation No. 38/2011 (PP No.38/2011) which describes more comprehensive information on the riparian width.

**Second**, *Lex specialis derogat legi generali*. This implies that a specific law/regulation shall revoke a general law/regulation. For example, a government regulation on river shall exclude another regulation on spatial norms of the riparian line.

**Third**, *Lex superior derogat legi inferiori*. This indicates that a law/regulation with higher hierarchy shall revoke another regulation with lower hierarchy. In other words, the latter must not contradict the former. For example, district/provincial laws/regulations (Perda) must be aligned to governmental regulations or laws (PP or Undang-Undang). This condition is not applicable when there is a mandate to adjust the local/provincial law/regulation to get it relevant with local contexts.

**Fourth**, *non-retroactive*. This means any law/regulation merely applies when it is officially issued and documented. The law/regulation which is newly issued cannot be used to give penalty or assess noncompliance to any criminals whose crimes were committed when the law/regulation was not issued yet.

### 2.2. RSPO's General Principles

1. RSPO P&C apply for current, existing trees, planning, location determination, land clearing and development, expansion, and new trees planting.
2. Compliance with the normative RSPO P&C (Principle, Criteria, and Indicator) is a prerequisite for certification.
3. Auditor determines non-compliance on the basis of normative indicators. As the **Guideline** is informative and plays a key role in supporting the implementation of Indicators, it cannot be used as the foundation to determine non-compliance.

### 2.3. Legal Basis

This synthesis report focuses on legal basis for river and riparian as both a protection area (regulation) and an HCV area (RSPO P&C Indonesia). There are three laws, four government regulations, and one presidential regulation<sup>2</sup> on spatial planning, water resources, environment, and forestry that declares that riparian is a protection area. Based on its substantive functions for riparian, these regulations are classified into two categories: **Peraturan Utama (Main Regulation)** and **Peraturan Pendukung (Supporting Regulation)** (see Appendix 1).

According to a *spatial planning* regulation, land space comprises cultivation area and protection area. In the context of the protection area, any relevant matters pertaining to riparian are more comprehensively spelt out in a water resources regulation. These two regulations are main regulations which regulate rivers and riparian as protection areas. Norms corresponding with the study include planning, management, and enhancement of protection areas, particularly the riparian situated within APL (*Area Penggunaan Lain*)/Other Purposes Area. Spatial planning is done through a top-down approach from the central government to provincial/district governments, integrating varied analysis on different sectors, regulated by sectoral laws/regulations, which support spatial planning.

When a cultivation area is going to be converted to an oil palm plantation, a series of regulations on **Land, Plantation, and Environment** are relevant and need to be considered to ensure that it is converted properly. It is essential to take into account the norms of relevant regulations on Forestry, Natural Resources and their Ecosystem (KTA) when an oil palm plantation borders an HCV or protection area. These regulations are classified as supporting regulations

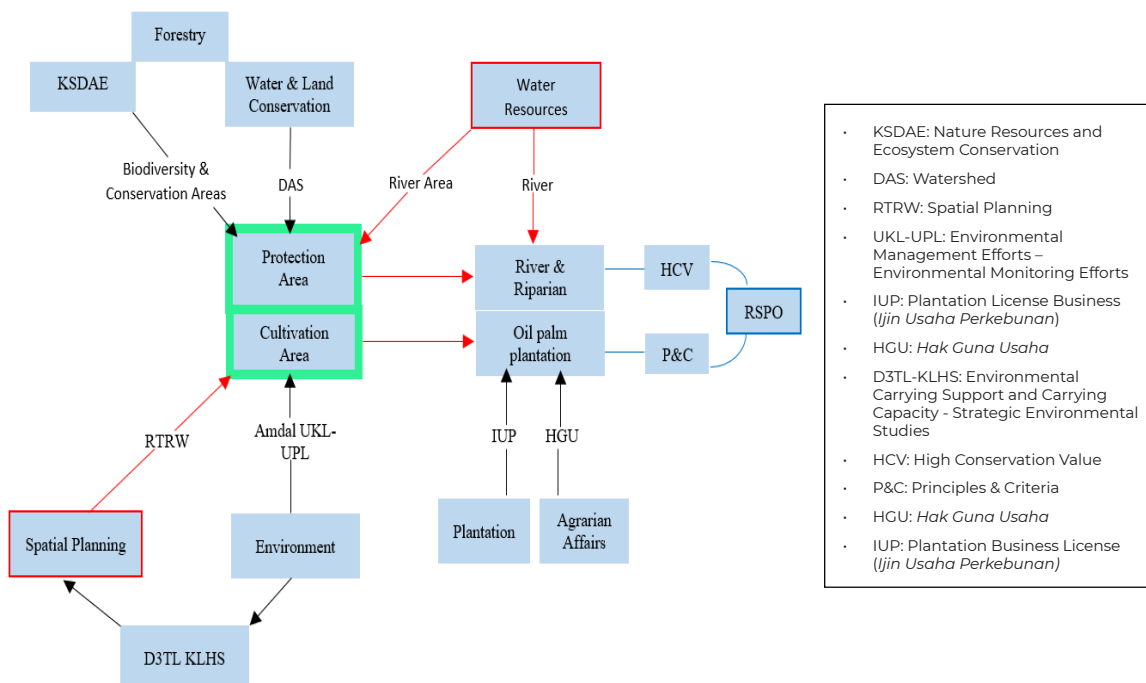


Figure 1. Diagram of inter-related sectoral regulations on river and riparian in a palm oil plantation

<sup>2</sup>UU No.26/2007, UU No.37/2014, UU No.17/2019; PP No.26/2008 juncto PP No.13/2017, PP No.38/2011, PP No.22/2021; Kepres No.32/1990.

Regulations on agrarian affairs, plantation, and spatial planning are the supporting regulations on rivers and riparian. On the other hand, those concerning environment and forestry are considered as the main supporting instruments for river and riparian management. For example, determination of the watershed (DAS) map is a supporting instrument for river and riparian management.

## **2.4. Legal Gap and Contradiction**

Our ground findings revealed that there is a legal gap between what oil palm plantation business actors need that is not yet accommodated and the existing regulations on rivers and riparian, particularly determination of rivers and riparian width. There is also a discrepancy between the Indonesian laws and the collective provisions agreed by RSPO members. More detailed findings on the issues pertaining to legal gap, legal conflict, legal norm interpretation, and regulation effectiveness as the results of our technical analysis and discussion with oil palm plantation business actors are briefly described below.

### **2.4.1. River Determination**

Indonesian regulations have provided specified definitions of River Area (WS), DAS, and river. There is no single regulation requiring the government to issue a decree on determining river name at one specific area or classifying water stream as either a river or not. Nevertheless, the Indonesian government has issued two regulations: the Ministerial Regulation of Public Works and Housing No. 4/2015 (Permen PUPR No.4/2015) and the Ministerial Decree of Environment and Forestry No.304/2018 (SK MenLHK No.304/2018) which determine a map of WS and DAS respectively, where water streams exist. The existence of river names and river locations on the WS and DAS map doesn't aim to determine river names<sup>3</sup> (DSDAN, 2014). In addition to the WS and DAS map, other official maps issued by the government such as Indonesian Terrain Map (Peta Rupa Bumi Indonesia), Spatial Map (Peta Tata Ruang Wilayah), and Agrarian Map (Peta Pertanahan) have depicted the existence of rivers.

An issue occurs when the rivers depicted on the maps do not exist in reality. In contrast, there are some water streams which meet the specific criteria and thus can be classified as rivers are unfortunately not depicted on the official maps. In accordance with current, applicable regulations, landowners are not required to report to a map issuer on the discrepancy between the reality and what is depicted on the map on water stream existence. This issue has newly been responded by Ministerial Regulation of Agrarian Affairs and Spatial Planning – National Land Agency No.18/2021 (Permen ATR-BPN No.18/2021), obliging the presence of a buffer area, riparian, and conservation land to be clearly presented and depicted on a Agrarian Map whenever land measurement is carried out.

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<sup>3</sup>National Water Resources Council (DSDAN). 2014. Potential of Water Resources of the Four River Basin Agencies. DSDAN, Jakarta.



### 2.4.2. Determination of a Water Stream as a River

Determining a water stream as either a river or not has been an issue for oil palm plantation business actors as it affects the management of the riparian. Indonesian regulations and the RSPO BMP Riparian (see Table 1) present different characteristics of a river; therefore, it is also essential to consider the RSPO General Principles to classify a water stream as either a river or not.

**Table 1. Comparison of Indonesian Regulations and the RSPO BMP Riparian on River Characteristics**

Criteria	Government Regulation 38/2011 (PP No.38/2011) & Ministerial Regulation of Public Works and Housing No. 28/2015 (Permen PUPR No.28/2015)	The RSPO BMP Riparian
River	Natural and artificial water stream	Natural water stream
Water stream per year	Permanent or regular (limitless)	Permanent if flowing more than 4 months
Water stream origin	Stream source/water source	Not determined
Water stream end	Another river, lake, or sea	Not determined

Based on the Table above, the RSPO BPM Riparian states that water stream is considered a river when it is a permanent water stream and flows more than 4 months in a year, with the width of over 1 meter. This approach is relatively simpler, easier, and more relevant to determine the width of the riparian as a way to protect natural ecosystem unity.

In contrast, Indonesian regulation such as Government Regulation No. 38/2011 (PP No.38/2011) affirms that a water stream is classified as a river whenever it is a permanent water stream or flows throughout the year without time limit. It also classifies man-made water streams as rivers. They include canals constructed for the purposes of transportation or flood mitigation and prevention. Another regulation: Ministerial Regulation of Public Works and Public Housing No. 8/2015 (Permen PUPR No. 8/2015) concerning determination of the riparian line of the irrigation network specifically regulates artificial water streams for the purpose of irrigation. In a nutshell, there is a possibility that a water stream is not classified as a river in accordance with the RSPO BMP Riparian due to the fact that it flows less than 4 months, but it is a river based on the Indonesian regulation.

### 2.4.3. Determination of Riparian Width

Indonesian regulations and the RSPO BMP Riparian pose distinctive criteria for determining the riparian width. The former considers a number of variables, including location (if or not the riparian is situated in urban areas or not), existence of river embankment, river depth, and river basin area width (DAS). On the other hand, the variables used by the RSPO BMP Riparian include river width, biodiversity, ecosystem, and social elements pertaining to HCV areas (Table 2).

Indonesian regulations tend to focus on physical and functional aspects of the river and DAS (landscape level). The RSPO BMP Riparian, in contrast, is more lenient toward conversion of biodiversity, land, river, and socio-economic elements of a river section in or around a certain plantation area. For example, the former sets that the minimum width of the riparian embankment is 3 meters (urban area) and 5 meters (non-urban area) without considering its land cover and biodiversity.

**Table 2. Comparison of Indonesian Regulations and the RSPO BMP Riparian on Riparian Width**

Criteria	PP No.38/2011 and Permen PUPR No.28/2015	The RSPO BMP Riparian
Riparian width determining criteria	River width, embankment existence, river location (urban or non-urban area), DAS width, non-biodiversity element	River width of 1 - > 50 meters, biodiversity element, HCV, socio-economic element of society
River and riparian width categories	7 categories	6 categories
Minimum range of the riparian width	3 – 100 meters	Standard: 5 – 100 meters
		Specific HCV area: 30 – 200 meters
Riparian width determining authority	Minister, Governor, Major/Regent	Business unit, assessor, auditor
River/riparian managing agency	River Area Agency ( <i>Balai Wilayah Sungai</i> ) or Relevant Provincial/District Agency	Business unit

Based on the Table above, it is obvious that Indonesian regulations are more relevant for the protection of river landscape. Nonetheless, the RSPO BMP Riparian plays a more essential role in protecting biodiversity and HCV areas in or around a plantation area. In conclusion, it is imperative to consider precautionary principles without ignoring the elements of environment and socio-economic as well as cultural aspects of society to determine the riparian width.

Regulation makers in Indonesia are aware of numerous variables affecting the riparian width; hence, it requires an analysis of the riparian line to determine the riparian width. The analysis result is mainly used as the sole basis for relevant ministers, governors, majors/regents to determine the riparian width of a particular river section at a certain river area under their jurisdiction.<sup>4</sup> The deadline to accomplish the analysis and determine the riparian width is five years and three years after the issuance of PP No.38/2011 and Permen PUPR No.28/2015 respectively. The deadline has passed now, but there are still many river sections whose riparian lines have not been determined yet.

Provincial/district governments, instead, issued new regulations with relevant Norms, Standards, Procedures, and Criteria (NSPK) elements whose substantial contents are precisely similar to those of PP/PermenPUPR. Exceptions are applicable to the West

<sup>4</sup>Article 16 of PP No.38/2011 and Article 13-16 of PermenPUPR No.28/2015

Sumatera Governor's Regulation and Central Sulawesi Governor's Regulation which had involved a study of the riparian line to determine the riparian and riparian width (See Appendix 2).

Article 28 of Permen PUPR No.28/2015 provides a room for each governor, major/regent to make necessary adjustments toward the riparian width in accordance with study findings on the riparian line which their study teams have conducted<sup>5</sup>. The study conducted must be compliant with scientific approaches and the study guideline of Permen PUPR No.28/2015 highlighted in its Appendix I. It is likely that the determined riparian width based on study findings is different from that based on standard norms. There is also possibility that the study findings determine the same riparian width as the standard norms do.

Riparian width determination on the basis of study findings is deemed important for other sectors as the foundation of spatial planning and development programs such as housing, agriculture, plantation, and infrastructure. The absence of this determination process allows the RSPO BMP Riparian to do their own determining process with Permentan No.38/2020 about ISPO as the legal basis.

#### **2.4.4. Riparian on the Spatial Planning Map**

The absence of the riparian determination has an impact on the arrangement of spatial patterns on the Spatial Planning Map. Based on several technical studies, it is found that there are several provincial/district spatial planning regulations which provide necessary guidelines for the determination of the riparian width using the norms of the minimal riparian width in accordance with PP No. 38/2011. Ideally, the riparian width is obtained after the determination of the riparian line. This is due to the regulations regarding the river being more specific (*Lex Specialis*) than spatial planning regulations in terms of determining the riparian width.

The emergence of the above provincial/district regulations on riparian width determination and spatial planning has potentially turned to be a new issue for plantation business actors. What is important is whether or not the regulations are aligned with the regulations issued by each relevant minister, governor, major/regent.

#### **2.4.5. River and Riparian Management**

As a river comprises riparian and riverbed<sup>6</sup>, it is important to consider their management when managing the river. River management is the responsibility of each relevant authorized minister, governor, major/regent<sup>7</sup>. Each of them delegates the management role to technical management/working agencies/units which handle water resources.

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<sup>5</sup>Chapter II – Norms and Conditions of Permen PUPR No.28/2015 which are *mutatis mutandis*, which means that changes can be made as necessary.

<sup>6</sup>Article 5 PP No.38/2011

<sup>7</sup>The minister manages rivers in cross-provincial river areas, cross-country river areas, and national strategic river areas; the governor manages rivers in cross-regency/municipal river areas; and regents/mayors manage rivers in river areas within one regency/city (Article 4, Article 19 of PP No.38/2011)

River/riparian management in an HGU land (land for business use)/Land owned rights is solely the responsibility of the landowner. Article 27 of PP No.18/2021 on cultivation rights, land ownership rights, flat unit and land registration, instructs HGU holder to manage and maintain their HGU in a such a way that its main function as a conservation area remains existent. The HGU holder is also responsible to maintain conserving functions of the riparian bordering with their HGU and comply with all conditions on spatial use in accordance with relevant provincial/district spatial planning regulations on protection and cultivation area.

In addition, the above requirements are also reiterated in Permen ATR-BPN No.18/2021 on the Procedures of Land and Land Use Rights Determination. Each individual applying for new Land Rights and extended Land Rights is required to manage, maintain, monitor, and ensure the original function of a highly conserving area, conserving function of the riparian. The commitment of the applicant to do so is stated in a letter of intent as a requirement to apply for new and extended Land Rights. The letter is then enclosed into Surat Keputusan BPN (BPN's Decree), confirming the individual to own a specified land and use it.

#### **2.4.6. Law Enforcement**

Law enforcement is one of the challenges in the river and riparian management. There are a number technical and strategical reasons why law enforcement in the river and riparian management is weak. First, Law No. 17/2019 (UU No. 17/2019) doesn't specifically mention any crime pertaining to riparian management. Second, sentencing is related to any activities damaging a river and its infrastructure, water polluting, and water resources utilization permit. Third, there has not been a comprehensive understanding of which relevant authorized institution plays a key role to solve the issue on the riparian when it occurs. This is due to the fact that there are varied regulations on forestry, agrarian affairs, and conservation having authority in riparian but do not involve in the determination of the riparian width.

The above circumstance allows the RSPO to play a key role in enforcing the laws and regulations pertaining to river and riparian through the strong enforcement of the RSPO P&C or RISS and BMP Riparian. This is applicable as they have the same goal as the laws and government regulations to protect rivers and riparian. RSPO does not aim to replace the government's role in sentencing, but it tries to support the river and riparian protection in oil palm plantation areas with RSPO certification.







## RIVER AND RIPARIAN

### 3.1. River Definition

**River** is a natural and/or artificial water stream or watercourse as a network of water drainage along with water in it, flowing from a stream source to a stream mouth, bordered by riparian line on its right and left sides (PP No.38/2011, Permen PUPR No.28/2015). PP No.22/2021 has adopted this definition and define “**river, tributary, and the like**” as part of **water body**. The terms “river, tributary, and the like” allow other identical terms such as *batang, krueng, lawe, kali, kanal* (canal), *parit* (ditch), or *alur air* (water stream) to be classified as a river. Based on these regulations, any water stream which flow regularly without time limit refer to a river, tributary, and the like.

As no regulation defines “source of the stream” and “mouth of the stream”, Indonesia Dictionary 5<sup>th</sup> Edition issued by Language Development and Book Agency, Ministry of Education and Culture, 2022 (*Kamus Besar Bahasa Indonesia Edisi Kelima*) and (*KBBI V Badan Pengembangan Bahasa dan Perbukuan-Kemendikbud, 2022*) is used to define them. According to the dictionary, source of the stream is defined as part of a river, whilst mouth of the stream is a place where a water stream ends (sea, lake, or another river). Therefore, a mouth of the stream is not always identical with a meeting spot of a river and sea.

### 3.2. Riparian Definition

As per PP No.38/2011, **riparian** is a space on right and left sides of a river, between a riparian line and a riverbed edge, or between a riparian line and outer edge of embankment. Presidential Decree No.32/1990 (Keppres No.32/1990), on the other hand, defines riparian as an area alongside the right and left of a river, inclusive of an artificial river/canal/primary irrigation canal, which contributes to the sustainable function of the river. The RSPO BMP Riparian defines riparian zone as an area around a lake, river, and natural water stream whose width is affected by the riparian management.

River riparian is also well known as water source riparian (as per UU No.17/2019) or water body riparian (as per PP No.18/2021, PP No.22/2021). Water resources include river, lake, swamp, and groundwater basin. Water body, on the other hand, includes river, tributary, and the like, lake and the like, swamp and other wet areas.

### 3.3. Riparian Width as per Regulation

Criteria and standards of the riparian width presented in Article 4-15 of Permen PUPR No.28/2015 have adopted those highlighted in Articles 8-17 of PP No.38/2011, which are also not different from those in Articles 5-8 of Permen PU No.63/1993 (see Table 3). The criteria and

standard of the riparian width as per these regulations are standard norms which require more comprehensive regulations issued by relevant minister, governor, and mayor/regent. Effectiveness and legal gap of these norms have been discussed in Section 2.4.3. With the criteria and standards of the riparian width presented in PP No.38/2011, other criteria and standards illustrated in PP No.26/2008 and Keppres No.32/1990 are legally no longer valid and applicable (see Legal Principles sub-section).

**Table 3. Minimum width of the riparian, lake, and water source as per PP No.38/2011 and Permen PUPR No.28/2015.**

Water Source	Criteria	Riparian Width
Rivers in urban areas	With embankment	3 m
	Without embankment, depth of ≤ 3 meters	10 m
	Without embankment, depth of 3-20 meters	15 m
	Without embankment, depth of ≥ 20 meters	30 m
Rivers outside urban areas	With embankment	5 m
	Without embankment, DAS width of > 500 Km <sup>2</sup> : big river	100 m
	Without embankment, DAS width of < 500 km <sup>2</sup> : small river	50 m
Lake	Highest water edge	50 m
Water Source	Spring center	200 m

Stages and procedures of the study of the riparian line determination are described and listed down in Appendix I of PermenPUPR No.28/2015 with details as follows:

- A. Decision of the riparian determination priority
- B. Formation of study teams: managing team, resource person team, and technical team
- C. Implementation of a technical study:
  1. Topography mapping, river cross section, around riparian
  2. Inventory of geomorphology characteristics of the river: river flow fluctuation, sediment content change, change tendency in river geometry
  3. Inventory of embankment data: length, dimension, embankment condition
  4. Inventory of data on socio-cultural elements of local society: the number and density of population, their education, and their livelihoods.
  5. Inventory of data on the maintenance of accessible roads/streets
  6. Inventory of the number and type of buildings around the riparian
  7. Determination of the edge of the riverbed
  8. Determination of the riparian line as per criteria stipulated in regulations
  9. Preparation of a study report outlining background of the riparian determination, cross-cutting analysis (legal, environmental, socio-economic, and technical), technical analysis and mapping, stages of land acquisition and estimated cost, recommendations on the orderly riparian management implementation
  10. Socialization of the study findings to community
  11. Proposal of the riparian line to relevant minister, governor, mayor/regent to be officially determined

The above stages are classified as NSPK which indicates that a riparian line study is a mandatory process prior to the official determination by the relevant government. It is not a problem when the result of the study determines the same riparian width as the standard norms, providing the entire study procedure is aligned with the applicable regulation. On the other hand, the absence of the riparian line determination will allow the determination of the riparian using other schemas.





# 4

## GUIDELINE FOR RIVER AND RIPARIAN WIDTH DETERMINATION

The guideline is developed to identify the presence of a river and riparian to meet Criteria 7.8 of RSPO P&C Indonesia NI (April 2020) and Criteria 4.7. of RISS Indonesia NI (Feb 2022). Certain criteria/elements of river creator as per applicable regulations or the RSPO BMP Riparian are utilized to identify whether or not a water stream can be classified as a river (See *Table 1*).

### 4.1. Guideline's General Principles

1. Collective criteria taken from applicable regulations and the RSPO BMP Riparian are used as a guideline which complements each other.
2. This guideline aims for water streams which are not depicted on the official maps or river sections, riparian of which have not been determined by the government.
3. The guideline is used as a medium to protect the riparian as a protection area and as a guiding document before new regulations on riparian are issued.
4. Any water stream/water course (either natural or artificial), which flows continuously/regularly, can be classified as a river as long as it originates from the stream source and ends at another river, lake, or sea.
5. Stream source and stream mouth are two important elements which collectively determine a water stream/water course to be classified as a river or not.

### 4.2. Stages of River and Riparian Determination

1. *Get river maps issued by the government*

The following is list of official maps issued by the government in the order of importance: *Peta Rupa Bumi Indonesia* (Indonesian Terrain Map) which can be accessed through a geoportal of *Badan Informasi Geospasial* (Geospatial Information Agency) or a geoportal of *Kebijakan Satu Peta* (One Map Policy); a map of the water stream within a river area issued by *Balai/Balai Besar Wilayah Sungai* (River Area Agency) or *Organisasi Perangkat Daerah (OPD)/Kantor Dinas* (Local Apparatus Organisation/Agency Office) which take care of water resource management; a spatial planning map with a scale of 1 : 50.000 (regency) or scale of 1 : 25.000 (city); a land map issued by *Kantor Pertanahan/Kantor Wilayah Badan Pertanahan Nasional* (Land Agency/National Land Agency).

*Recommendation:* It is imperative to get the best effort to get an updated edition of a digital/printed map issued by a relevant official government institution.

2. *Conduct a survey for the identification and mapping of the water stream at a plantation area*

The survey findings can be used as important data to verify the status of a water stream. The survey findings and mapping of the existence of the water stream are used as references for relevant government agencies looking after the rivers for water source management (See **Stage 10**);

3. *Compare the map resulted from the study and that issued by the government*
  - 3.1. When a water stream is not depicted on the official map issued by the government, proceed to **Stage 4**;
  - 3.2. When the water stream has been depicted on the official map, move on to **Stage 5**;
  - 3.3. When the water stream/river has been depicted on the official map but physically unavailable in the plantation area, carry on with **Stage 9**;

4. *Verify the water stream using the criteria from the government regulations and the RSPO BMP Riparian*

First, water stream verification is done by using the criteria which define a river as stipulated in the government regulations (4A). Whenever the water stream doesn't meet the criteria of the regulations, then other criteria stipulated in the RSPO BMP Riparian are used (4B).

Criteria	Indonesian regulation (PP No.38/2011)	The RSPO BMP Riparian
Water stream type	Natural and artificial	Natural
Flowing duration	Continuously or regularly (limitless)	Continuously if flowing more than 4 months
Water stream width	Not indicated	Over 1 m
Water stream origin	Stream source/water source: spring, river, lake, swamp	Not indicated
Water stream end	Mouth of stream: another river, sea, lake, swamp	Not indicated

- 4.1. When river characteristics **meet river criteria** as per the regulation, proceed to **Stage 5**;
- 4.2. When Point 4.1. is not relevant, see **Stage 4.3**;
- 4.3. **River verification is completed by using the RSPO BMP Riparian's criteria.**
  - 4.3.1. When the water stream's characteristics **meet the criteria**, move on to **Stage 5**;
  - 4.3.2. When the water stream's characteristics **do not meet the criteria**, carry on with **Stage 9**.

5. *Verify the existence of the riparian line determination to relevant government water resource/river managing agencies*

This includes a variety of activities ranging from searching relevant information through the central government/local government's webpages and sending letters to relevant government agencies taking care of water resource/river management to having formal/informal discussions with them. Riparian width determination is issued by relevant

ministries, governors, mayors/regents as stipulated in Article 16 of PP No.38/2011 and Article 13-16 of PermenPUPR No.28/2015.

- 5.1. When the riparian line has been determined by relevant ministries, governors, mayors/regents, proceed with **Stage 6**;
  - 5.2. When the riparian line has not been determined, **so Stage 7**.
6. *Use a determined riparian width for varied purposes, including land certification as stipulated in relevant laws. **Finished.***
  7. *Determine the riparian width using the following alternate mechanisms:*
    - 7.1. Use a special local government regulation on plantation and planting distance from the river. Barito Kuala District Regulation No. 5/2016 (Perda Kabupaten Barito Kuala No.5/2016) on palm oil plantation management prohibits palm oil tree planting in an area less of 50-100 m from a riverside. When this regulation is unavailable, proceed with **Stage 7.2.;**
    - 7.2. Refer to Agriculture Ministerial Regulation No.38/2020 (Permentan No.38/2020) on sustainable palm oil plantation certification implementation across Indonesia with details as follows: :
      - 7.2.1. When the Growers adopt conditions and criteria of the RSPO BMP Riparian to determine the riparian width, go on to **Stage 8**;
      - 7.2.2. For Independent Smallholders/scheme, criteria and conditions for the planting area distance from the riparian are still unavailable; however, Group Managers are advised to refer to the RSPO BMP Riparian to determine the riparian width. When this is completed, move on to **Stage 8**;
  8. Develop the Plantation SOP for the riparian width determination by adopting the RSPO BMP Riparian. **Finished** Develop the Plantation SOP for the riparian width determination by adopting the RSPO BMP Riparian. **Finished.**
  9. Water stream **does not meet river criteria**; thus, **the riparian is no longer necessary. Finished.**
  10. As part of the concrete contribution of the Growers, Smallholders, and RSPO to the management of the rivers and their riparian, it is advisable that they regularly provide written reports highlighting the following information to relevant agencies having authority to issue an official map and River Area Agency or Local Apparatus Organisation handling water resources with copy to Directorate General of Water Resources and RSPO Secretariat:
    - 10.1. The presence of the riparian line on the map but it is physically unavailable;
    - 10.2. There is a potential water stream which meets the criteria of a river but it is not depicted on the map.
  11. The water stream made by oil palm business actors as per the water use permit (Permen PUPR No.1/2016) for the purpose of plantation businesses cannot be classified as a river. It is recommended that they determine the riparian width using the norms of the irrigation-





Figure 2b. Diagram (Flowchart) of the riparian determination in accordance with Indonesian regulations and the RSPO BMP Riparian in oil palm plantations

The effectiveness of the above stages needs to be supplemented by further observation of the water stream situated in a plantation area. The following conditions **disallow a water stream to be classified as a river:**

- Water stream doesn't continue flowing due to the fact that it permeates into soil cavity at a particular plantation block or other causes. This circumstance disallows the stream to flow continuously to another river, lake, or sea;
- Water stream and drainage made by Growers and doesn't flow to another river, lake, or sea;
- Water stream made to hold rainwater, which later is stored in a water container and doesn't flow to another river or lake;
- The water stream made by oil palm plantation business actors as per the water use permit.



# 5

## RIVER AND RIPARIAN MANAGEMENT

In Indonesia, river is one of the water sources which is owned by the State; therefore, its management is handled by the government. Specific aspects of the river which the government manage are the **riverbed** and **riparian**, which are an inseparable part of the **river space**. Central government, provincial government, and district government are given full authority by Law No.17/2019 and Government Regulation No.38/2011 to manage all river areas under their jurisdiction. River management is done by involving relevant technical institutions/agencies and communities in accordance with the NSPK issued by the respective minister.

Central government is responsible for all the rivers situated in the national strategic river areas, cross-country river areas, and cross-province river areas. In technical implementation, river management in these areas is done by technical implementing units under supervision of Directorate General of Water Resources. The Ministry of Public Works and Housing. Provincial government is responsible for all the rivers situated in cross-district river areas, whilst district government is tasked to manage all the rivers across river areas in one particular district/city. The governor/regent/mayor delegates their technical management responsibilities to Regional Working Agency to look after water resources under their purview.

Some ministries have provided cross-sectoral supports to the management of rivers and riparian. One of them is the Ministry of Environment and Forestry with its 5 (five) Directorate Generals. The Directorate General of River Basin Area and Protection Forest Management along with its 34 (thirty-four) Technical Working Units of BPDASHL play a key role in the enhancement, maintenance, and recovery of the functions of DAS through controlling land utilization for the sake of the optimization of the functions of the rivers and riparian. Directorate General of Natural Resources and Ecosystem Conservation along with its 26 (twenty-six) Technical Working Units of KSDA is responsible for the conservation of biodiversity and its ecosystem inside and outside protection areas. Directorate General of Law Enforcement, on the other hand, is in charge of any violation of 6 (six) environment and forestry-related laws. Furthermore, Directorate General of Pollution and Environmental Damage Control is responsible for the river water pollution. Finally, Directorate General of Forestry Planning and Environmental Management (PKTL) is tasked to manage Environment Impact Assessment and Strategic Environmental Studies.

Ministry of Agrarian Affairs and Spatial Planning/National Land Agency has provided support through its policies on river and riparian management in 2 (two) aspects. The *first* aspect is spatial planning and spatial pattern planning in protection areas through national, provincial, and district spatial planning regulations. The *second* aspect is the delegation to National Land Agency which is the only official institution to issue land rights (See Section 2.4.5).



#### 4.1. River and Riparian Management Aspect

River and riparian management which is the mandate of a river managing agency includes river conservation, river enhancement, and river water damage control. The following activities can be categorized as parts of river conservation: river water pollution prevention and river protection, inclusive of riparian setting. These activities are aligned with Criteria 7.8 and Indicators 7.8.1. and 7.8.2 of the RSPO P&C Indonesia and Criteria 4.7 of the RSPO RISS Indonesia National Interpretation (See Table 4).

The alignment of the above activities allows RSPO and its members to directly and indirectly do active participation in the river and riparian management. This participation needs to be shared regularly with relevant authorized agencies in charge of water resource management for the sake of sync and synergized collaboration.

**Table 4. River Conservation Programs/Activities in accordance with PP No.38/2011 and their alignments to RSPO Criteria and Indicators**

River Conservation Programs			
Subprograms	Activities	RSPO P&C	RISS
River protection	1. <i>Look after riverbed dimension through mine control in a river</i>	Criteria 7.8	
	2. Use the riparian through a permit limited to the following activities/ aspects: <ul style="list-style-type: none"> <li>• Water resource infrastructure;</li> <li>• Dock and bridge facilities;</li> <li>• Drinking water and gas pipeline;</li> <li>• Telecommunication and electrical cable span; and</li> <li>• Other activities/aspects which do not potentially damage the functions of the river: vegetable planting</li> </ul>	Indicator 7.8.1 Indicator 7.8.2	Criteria 4.7
	3. In an embanked river, it is prohibited to: <ul style="list-style-type: none"> <li>• Plant other than grass</li> <li>• Build a building</li> <li>• Deduct river embankment dimension</li> </ul>		
	River maintenance flow protection through mainstay debit control to protect river ecosystem from its stream source to its mouth		
	<i>River restoration section protection through riverbed arrangement, <b>riparian setting</b>, river channel rehabilitation, and vegetation engineering to return a river to its natural condition</i>		Criteria 4.7 Indicator 4.7 MS B

River Conservation Programs			
River water pollution prevention	<ul style="list-style-type: none"> <li>determination of pollution load capacity;</li> <li>identification and inventory of sources of wastewater entering rivers;</li> <li>determination of requirements and procedures for waste water disposal;</li> <li>prohibition of dumping garbage into rivers;</li> <li>monitoring of water quality in rivers; and</li> <li>monitoring of wastewater entering rivers</li> </ul>	Criteria 7.3	
River Enhancement Program			
Subprogram	Activities	RSPO P&C	RISS
River utilization	Utilization for household purposes, agriculture; environment sanitation; industry; tourist; sport; defense; fishery; power plant; and transportation		
River Water Degradation Control Program			
Subprograms	Activities	RSPO P&C	RISS
Reducing the risk of flood magnitude	<i>Flood control infrastructure through activities to increase river capacity, build embankments/dams, flood spillways/pumps, improve drainage</i>		
	Surface flow control infrastructure through activities to make water catchments and flood reservoirs		
Reducing the risk of flood vulnerability	<i>Management of floodplains through: determination of floodplain boundaries, determination of land use zones according to flood risk, monitoring of land use in floodplains, preparation for floods, flood prevention; and recovery after flood</i>	Criteria7.6	

The above programs and activities are part of the water resources management plan for each river area prepared by the river management government agency. In river areas where there is no management plan, the river management program is prepared based on needs. The biggest challenge is how to involve plantation business actors in their planning and implementation.

The RSPO BMP Riparian document provides more complete and detailed guidance on riverbank management in oil palm plantation areas, starting from determining the width of the riparian, planning for management, maintenance, restoration, to monitoring and evaluating activities. Until now, regulations in Indonesia have not provided guidelines for managing riverbanks in plantation areas, so the use of the RSPO BMP Riparian document is a breakthrough to fill in the absence of guidelines.

## **5.2. Determining the Riparian Width**

Given the unequal distribution of resources and understanding of aspects of river and riparian management, systematic, measurable and continuous efforts are needed from plantation business actors to consult and coordinate with river management institutions. The consultation and coordination are carried out individually or jointly with government institutions in stages, starting from local governments to the central government which manages water resources/ rivers.

At the same time, to get certainty about the riparian width in oil palm plantation areas, plantation business actors can do several ways, including: *First*, voluntarily apply the standard norms for riparian widths in accordance with PP No.38/2011. *Second*, business actors apply for the determination of the riparian width on the river segment in and around the plantation area, if they object to the riparian width according to standard norms. *Third*, apply the stages of the Guidelines as presented in this report.

## **5.3. River and Riparian Protection**

The central/local government is the main actor in the management of the river and its riparian, including its protection and restoration efforts. However, the regulation allows the management to involve the relevant community in accordance with the NSPK set by the Minister who organizes the management of water resources. Therefore, in the programs that have been carried out by plantation business actors in the context of certification, it is necessary to develop a collaborative management pattern with relevant government institutions, village institutions and/or groups of surrounding village communities. The aim is to increase the effectiveness of the protection of rivers and their riparian, inclusive of those already planted with oil palm trees and those that have not been planted.

The collaborative management can be built since the preparation of the Medium-Term Development Plan (RPJM) of the Village which is valid for 6 (six) years. On the basis of this Plan (RPJM), it is possible to draw up a Village Regulation (Perdes) for the protection of rivers and riparian using a local traditional wisdom approach. It is hoped that there will be less pressure on HCV areas which certain people consider unutilized land by plantation businesses.

Plantation business actors are also strongly advised to report to government agencies that manage rivers about the presence of water streams on official government maps but not physically found in the field. They are also recommended to report the presence of water streams in the plantation area but not depicted on the map yet. This is the concrete contribution of business actors to improving river maps published by the government.

## **5.4. River and Riparian Utilization**

Utilization of rivers and riparian is limited as regulated in Article 22 of PP No.38/2011 (Government Regulation No.38/2011), which is reaffirmed in Article 22 of Permen PUPR No.28/2015 (the Minister of Public Works and Public Housing's Regulation No.28/2015) and Article 5 of Permen PUPR No.1/2016 (the Minister of Public Works and Public Housing's Regulation No.1/2016). This limited utilization of the rivers and riparian includes infrastructure (See Table 4). Meanwhile,

the utilisation of water sources (rivers) includes transportation and rafting; power plant; transportation; sport; tourism; or aquaculture in water sources

There is no single regulation from the central government that allows the planting of oil palm trees on riparian. For comparison purposes, the Barito Kuala District's Government through Perda No. 5/2016 (District Regulation No.5/2016) concerning Palm Oil Plantation Management – particularly Article 27, Paragraph 2 of the Regulation – expressly prohibits planting oil palm trees around water sources with a radius of up to:

- a. 500 (five hundred) meters from the edge of the reservoir or lake;
- b. 200 (two hundred) meters from the edge of the spring and left and right sides of the river in a swamp area;
- c. 100 (one hundred) meters from the left and right sides of the river bank;
- d. 50 (fifty) meters from the edge of a tributary;
- e. 2 (two) times the depth from the edge of the cliff;
- f. 130 (one hundred and thirty) times the highest tide and the lowest tide from the beach;
- g. 500 (five hundred) meters from the edge of the national road;
- h. 250 (two hundred and fifty) meters from the edge of the provincial road; and
- i. 100 (one hundred) meters from the edge of the district road.

### **5.5. River Embankment/*Bronjong***

Regulations regarding river embankments are limited. The current regulation regarding river embankments is PP No.38/2011 (Government Regulation No.38/2011). This regulation provides a simple definition of the embankment as a flood-retaining structure made of soil heap. As one of the flood control infrastructures, the embankment construction is carried out by the central/local government according to their authority in the river area.

At this time there is no scheme for the construction of embankments and/or *bronjong* on the river banks which can be done by community. However, the best efforts made by plantation business actors to protect rivers and their riparian are a form of real support for government programs. Another consideration is the limited resources of the government to make efforts to protect the entire river network. In the implementation of the *bronjong* construction, it is necessary to pay attention to the Indonesian National Standard regarding Technical Planning and Implementation of *Krib Bronjong Kawat*<sup>8</sup>.

In accordance with its norms and objectives, the construction of the embankment aims to be a flood control, not to reduce the width of riparian as a planting land. On that basis, as long as plantation business actors can prove the need of embankments and/or *bronjong* as flood control structures, they might be able to apply for permits to the relevant government agency responsible for the river segment.

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<sup>8</sup>National Standard Indonesia (SNI) Guidance on Construction and Civil No. Pd T-08-2003 (*Pedoman Konstruksi dan Sipil No. Pd T-08-2003*): Technical Plan and Implementation of *Krib Bronjong Kawat* (*Perencanaan teknik dan pelaksanaan krib bronjong kawat*). Department of Housing and Regional Infrastructure (*Departemen Pemukiman dan Prasarana Wilayah*). 2003.

## 5.6. River Diversion

The existence of the PUPR No.21/2020 (Ministerial Regulation of Public Works and Public Housing No. 21/2020) allows for activities to change or divert the river flow by building a new river channel which results in the diverted river channel not functioning permanently. The diversion of the river channel is accompanied by the obligation to replace the river segment with the same area as the river being diverted.

Applications for river diversion can be submitted by individuals, government agencies, business entities, or Indonesian legal entities to the Minister through the Director General of Water Resources. Approval or rejection is given by the Director General of Water Resources on behalf of the Minister after obtaining technical recommendations from the Head of the River Basin Center. The costs required for river channel diversion are borne by the applicant except for the cost of preparing technical recommendations. In the new river channel, land rights are used in the name of the Ministry of Public Works and Public Housing to be subsequently submitted to the Ministry and recorded as a state property.

Permen PUPR No.21/2020 (Ministerial Regulation of Public Works and Public Housing No. 21/2020) does not regulate the use of former river sections that have been diverted and even has revoked Permen PUPR No. 26/2015 (Ministerial Regulation of Public Works and Public Housing No. 26/2015) concerning River Channel Diversion and/or Utilization of Former River Sections. Given that the river is controlled by the State, it is very logical if the former river also belongs to the State. However, when a river channel diversion is requested and financed by an individual/business entity, a swapping scheme is opened between the new river channel area and the former river being diverted. This is in accordance with Article 75 paragraph (2) of PP No. 38/2011 (Government Regulation No. 38/2011) which states that the location of the former river can be used to build water resource infrastructure, as a replacement land for land owners whose land is affected by new river flows, cultivation areas and/or protection areas.



## APPENDICES

### 6.1. Main and Supporting Regulations for River and Riparian Management

MAIN REGULATION		
ASPECT	REGULATION	SUBSTANCE
Spatial planning	UU No.26/2007 (Law No.26/2007): <i>Spatial Planning</i>	Regulating cultivation areas and <b>protection areas</b> in Regional Spatial Planning <sup>(1)</sup>
	PP No.26/2008 (Government Regulation No.26/2008) Junto PP No.13/2017 (Government Regulation No. 13/2017): <i>National Regional Spatial Planning</i>	The NSPK (Norms, Standards, Procedures, Criteria) (2) on national spatial planning, attachment of National River Basin and National Protection Area
	PP No.21/2021 (Government Regulation No. 21/2021): <i>Spatial Planning Implementation</i>	Spatial planning document containing <b>policy directives</b> on spatial allocation on the riparian of rivers, lakes, ponds, reservoirs, and springs.
	Permen ATR/BPN No. 1/2018 (Ministerial Regulation of Agrarian Affairs and Spatial Planning/National Land Agency No.1/2018): <i>Guidance for Provincial and District Spatial Planning</i>	The provincial Regional Spatial Planning guideline regulates the <b>direction of the riparian boundaries</b> as the basis for the riparian determination by the district/city government; <b>Maps</b> of administrative boundaries, lakes, rivers and coastlines refers to river area and watershed maps.
Water Resources	UU No.17/2019 (Law No. 17/2019): <i>Water Resources</i>	The authority division of the central, provincial, district/city governments in the river area; The scope of natural resource management includes <b>riparian protection</b>
	PP No.38/2011 (Government Regulation No. 38/2011): <i>River</i>	The NSPK (Norms, Standards, Procedures, Criteria) on the management of the river space by the government, river definitions, and guidance for the riparian width; <b>Determination of the riparian line</b> by the Minister, Governor, Regent/Mayor in accordance with their river area authority
	PP No.121/2015 (Government Regulation No. 121/2015): <i>Water Resources Utilization</i>	The NSPK (Norms, Standards, Procedures, Criteria) on the utilization of surface water and groundwater, including river water for drinking, or production processing materials



MAIN REGULATION		
ASPECT	REGULATION	SUBSTANCE
	Permen PUPR No.4/2015 (Ministerial Regulation of Public Works and Public Housing No. 4/2015): <i>River Basin Criteria and Determination</i>	Central and local government reference for national water regulation; <b>river area management authority</b> between ministers, governors, and regents/mayors; and attachments to the determination of river areas throughout Indonesia based on river areas
	Permen PUPR No.28/2015 (Ministerial Regulation of Public Works and Public Housing No.28/2015): Determination of Riparian Line and Lake Riparian Line	The NSPK (Norms, Standards, Procedures, Criteria) whose substance includes <b>procedures for determining the riparian line</b> , utilizing the riparian line, and supervising the utilization of the riparian lines of the rivers, lakes, and springs; Providing Guidance for Compiling a Study on the Riparian
	Permen PUPR No.1/2016 (Ministerial Regulation of Public Works and Public Housing No.1/2016): Procedure for Licensing for Natural Resources Concession and Use of Natural Resources	The NSPK (Norms, Standards, Procedures, Criteria) as the reference for the licensing process for the utilization of water resources in rivers, lakes, swamps, and other surface water sources. Utilization of water, water resources as a medium or material
	Permen PUPR No.21/2020 (Ministerial Regulation of Public Works and Public Housing): <i>River Channel Diversion</i>	Procedures for the application and implementation of river channel drainage and ownership of former rivers
	Provincial, District/City Regulation	Provincial, district/city regulations that regulate spatial planning on the riparian, river and riparian management; Decree of the Provincial/District Head which determines the width of the riparian on the river section in the river area he/she manages

SUPPORTING REGULATION		
ASPECT	REGULATION	SUBSTANCE
Agrarian Affairs	PP No.18/2021 (Government Regulation No.18/2021): Management Rights, Land Rights, Apartment Layout, and Land Registration	The HGU (Business Using Rights) holder is obliged to manage, maintain, and supervise and maintain the function of the high conservation value area in the HGU area, maintain the <b>conservation function of the water body riparian</b> (including the riparian) bordering the HGU area, and comply with the provisions on spatial use in accordance with the spatial planning regulations related to protection areas and cultivation

SUPPORTING REGULATION		
ASPECT	REGULATION	SUBSTANCE
	Permen ATR-BPN No.18/2021 (Ministerial Regulation of Agrarian Affairs and Spatial Planning/ National Land Agency No.18/2021): <i>Procedures for Determining Management Rights and Land Rights</i>	The norms requiring the water body riparian, buffer zones or conservation areas to be depicted on the <b>Land Area Map</b> when measuring the plot of land; There is a requirement for land rights holders to be willing to manage, maintain, supervise and maintain the function of the HCV area, and the <b>conservation function of the water body riparian.</b>
Plantation	Perpres No.44/ 2020 (Presidential Regulation No.44/2022): <i>Indonesian Sustainable Palm Oil Certification System</i>	The NSPK (Norms, Standards, Procedures, Criteria) which includes procedures for applying for ISPO certification, ISPO certification bodies, and ISPO institutionalization. Valid from the date of promulgation for Growers, and valid after 5 (five) years from the date of promulgation, 16 March 2025 for independent smallholders
	Permentan No.38/2020 (Ministerial Regulation of Agriculture No. 38/2020): <i>Indonesia Sustainable Palm Oil (ISPO)</i>	The scope of this regulation includes ISPO principles and criteria; ISPO Certification requirements and procedures; supervision and monitoring; ISPO Certification fees and funding facilitation; and administrative sanctions; The Sub-criteria for Land Clearing of <b>Appendix I</b> (Principles & Criteria for plantation companies) requires land clearing at a certain distance from the river bank in accordance with established regulations. However, this provision is not found in <b>Appendix II</b> - Principles & Criteria for Smallholders
Forestry	UU No.5/1990 (Law No.5/1990): <i>Conservation of Natural Resources and their Ecosystems</i>	Its main substance is the <b>protection</b> of life support systems, the <b>preservation</b> of the diversity of plant and animal species and their ecosystems, and the <b>sustainable use</b> of living natural resources and their ecosystems.
	UU No.37/2014 (Law No.37/2014): <i>Water and Land Conservation</i>	Its substance is in the form of <b>Integrated Watershed Management</b> through the protection of land functions on lands situated in protection and cultivated areas through controlling prime land conversion, securing, and structuring the area by the government, land users, permit holders/land rights holders
	PP No.37/2012 (Government Regulation No.37/2021): <i>Watershed Management</i>	The legal basis for the determination of watershed boundaries and watershed maps through SK Menteri LHK No.304/ 2018 (Ministerial Decree of Environment and Forestry No.304/2018) concerning <b>Watershed Maps</b>

SUPPORTING REGULATION		
ASPECT	REGULATION	SUBSTANCE
Environment	UU No.32/2009 (Law No.32/2009): <i>Environment Protection and Management</i>	Legal instruments <b>to control the use of cultivated areas</b> and <b>protection areas</b> through Amdal (Environmental impact assessment), UKL-UPL (Environmental Management Efforts and Environmental Monitoring Efforts), water quality standards including river water pollution
	PP No.22/2021 (Government Regulation No.22/2021): Implementation of <i>PPLH</i> (Environment Management and Protection) <sup>(3)</sup>	15 (fifteen) appendices in the form of guidance for the implementation of instruments for controlling and preventing environmental damage, including the <b>List of Protection Areas</b>

Note: (1) RTRW (Regional Spatial Planning); (2) NSPK: Norms, Standard, Procedure and Criteria; (3) PPLH: Protection and Management of Environment.

## 6.2. Several Local Regulations related to Rivers and Riparian

No	Regulation	Regulatory Title	Substance	Riparian Width
1.	PermenPUPR No.28/2015	Determination of the River Riparian and Lake Riparian	Generic, NSPK	Identical with PP No.38/2011
2.	<b>Pergub Sumbar No.66/2018 (West Sumatera Governor's Regulation No.66/2018)</b>	<b>Determination of the Riparian Line of the Batang Painan River situated in Pesisir Selatan District</b>	<b>Specific</b>	<b>Identical with PP No.38/2011</b>
3.	Perda Prov. Sulawesi Tengah No.16/2014 (Central Sulawesi Provincial Regulation No. 16/2014)	River	Generic, NSPK	Modification of PP No.38/2011
4.	<b>Pergub Sulawesi Tengah No.49/2017 (Central Sulawesi Governor's Regulation No.49/2017)</b>	<b>Tuweley River Riparian Line</b>	<b>Specific</b>	<b>In accordance with study findings</b>
5.	<b>Pergub Sulawesi Tengah No.50/2017 (Central Sulawesi Governor's Regulation No. 50/2017)</b>	<b>Lakea River Riparian Line</b>	<b>Specific</b>	<b>In accordance with study findings</b>
6.	Perda Kab. Bangka Selatan No. 11/2009 (Bangka Selatan District Regulation No.11/2009)	Riparian Line	Generic, NSPK	<b>Different from PP No.38/2011</b>

No	Regulation	Regulatory Title	Substance	Riparian Width
7.	Perda Prov. Jawa Tengah No.9/2013 (Central Java Provincial Regulation No.9/2013)	Riparian Line	Generic, NSPK	Identical with PP No.38/2011
8.	Perda Kab. Klaten No.22/2014 (Klaten District Regulation No.22/2014)	Riparian Line	Generic, NSPK	Identical with PP No.38/2011
9.	Perda Kab. Tanah Bumbu No.3/2013 (Tanah Bumbu District Regulation No. 3/2013)	Riparian Line, Benefits and Control of the River and Former River	Generic, NSPK	Identical with PP No.38/2011
10.	Perda Kab. Bangka Tengah No.22/2014 (Bangka Tengah District Regulation No.22/2014)	River and Swamp Management	Generic, NSPK	Identical with PP No.38/2011
11.	Perda Prov. Jawa Timur No.18/2016 (East Java Provincial Regulation No. 18/2016)	River Management	Generic, NSPK	Identical with PP No.38/2011
12.	Perda Kab. Hulu Sungai Tengah 4/2015 (Hulu Sungai Tengah District Regulation No.4/2015)	River Management	Generic, NSPK	Waiting for study findings
13.	Perda Provinsi Bangka Belitung No.2/2014 (Bangka Belitung Provincial Regulation No.2/2014)	Spatial Plan of Bangka Belitung Province for the Year of 2014-2034	Generic	Identical with PP No.38/2011
14.	Perda Kabupaten Rokan Hulu No.1/2020 (Rokan Hulu District Regulation No.1/2020)	Spatial Plan of Rokan Hulu District for the Year 2020-2040	Generic	Unspecified

### 6.3. Fact Sheets on Regulation and the RSPO BMP Riparian

Regulations in Indonesia have defined the terms River Basin (WS), Watershed (DAS), and river. There is no regulation that requires the government to determine the name of a river in a certain area or to determine the status of a water stream as a river. What is determined by the government is a map of the WS (Permen PUPR No. 4/2015) and DAS (SK MenLHK No. 304/2018) in which rivers flow.

River is one of the water sources controlled by the State so that the central government (Ministry of Public Works and Public Housing), provincial, and district/city governments have the authority to manage rivers and their riparian in the WS according to their jurisdiction. The object of management is the riverbed and riparian as a single unit of the river space. Plantation business actors are also subject to the obligation to protect, maintain, and restore the quality of rivers and their riparian in a land they manage.

According to the RSPO, which is oriented towards sustainable palm oil plantations, rivers and their riparian are two important objects as areas of high conservation value. Under the RSPO certification scheme, plantation business actors are required to maintain, protect, and/or restore rivers and their riparian. This is an indication that there is an alignment of the objectives to be achieved by the regulations and provisions of the RSPO.

### **River and Riparian Management**

The following are 3 (three) aspects which are required to do prior to the river and riparian management:

1. ***Defining river and riparian***
2. ***Determining the river and riparian***
3. ***Managing the river and riparian***

#### **1 a. River Definition**

**River** is a natural and/or artificial water channel or container in the form of a water drainage network and the water in it, starting from its source to its mouth, bordered by riparian on the right and left sides of it (PP No. 38/2011, Permen PUPR No. 28/2015). The RSPO BMP Riparian defines river (stream) as a natural water stream that flows for more than 4 months each year with a water channel width of at least 1 (one) meter. Thus, artificial water streams or natural water streams which flow for less than 4 months are not considered as rivers which require riparian by the RSPO.

#### **1b. Riparian Definition**

**Riparian** is a space on the left and right of the river, located between the riparian line and the edge of the riverbed, or between the riparian line and the outer edge of the embankment foot (PP No. 38/2011, Permen PUPR No. 28/2015). The RSPO BMP Riparian defines riparian reserve as an area of natural vegetation maintained along rivers, streams, wetlands, springs and lakes in man-modified landscapes such as oil palm plantations. Riparian conservation is an obligation in accordance with the RSPO scheme as well as the Indonesian regulations in its status as a local protection area.

#### **2a. River Determination**

Indonesian regulations provide more detailed criteria for determining whether a stream can be called a river. If a water stream does not meet the river criteria according to regulations, the RSPO BMP Riparian criteria can be used instead. The riparian width is determined based on the river width class according to the RSPO BMP Riparian (See Figure 2).

#### **2b. Riparian Determination**

Regulations in Indonesia have set minimum standard norms for the riparian width, but the regulations also require the relevant minister, governor, regent/mayor to determine the riparian width on the rivers in the WS which they authorise. This determination is given after a study on the determination of the riparian line is carried out on the targeted river segment.

For the rivers whose riparian width has not been determined by the government, the provisions of the RSPO BMP Riparian can be used by business actors after adopting them into the Plantation SOP. This is regulated in the Permentan No.38/2020. The provisions for limiting planting distance from river banks have not been regulated for independent/scheme smallholders. However, group managers are advised to adopt the RSPO BMP Riparian to determine the riparian width and its management (See Figure 2).

### **3. River and Riparian Management**

According to Indonesian regulations, the central/local government manages rivers and their riparian, from planning to implementation. However, PP No.18/2021 and Permen ATR-BPN No.18/2021 require land rights holders to manage, monitor, and maintain the function of high conservation value areas, maintain the conservation function of the riparian, bordering with the land area under their control, and comply with the provisions on spatial use in accordance with the Regional Spatial Planning related to protection areas and cultivation. These provisions become requirements for applicants to get their land rights and extend them in the form of a statement letter.

Permentan No. 38/2020 provides a discretionary space for palm oil plantation business actors to determine the riparian width based on their own studies which is outlined in the Company's SOPs. The RSPO BMP Riparian document provides a fairly complete guidance for the riparian management in palm oil plantation areas, starting from determining the riparian width, management planning, maintenance, restoration, to monitoring and evaluating activities. Therefore, the use of the RSPO BMP Riparian is the most relevant option to fill in the absence of the guidelines for the riparian management in plantation areas.





## ABOUT THE WRITER



### **Suer Suryadi, S.Si, SH, M.Si**

Has studied on natural resources conservation since 1993. He then furthers study environmental law and conservation since 2006. He worked in Centre for Biodiversity and Conservation University of Indonesia, Conservation International and UNESCO. Since 2010 he has been serving as consultant/ legal adviser for some national and international agencies that focused on natural resources conservation.



### **Drs. Darmawan Liswanto**

He graduated from Faculty of Biology Nasional University, has over 25 years' experience working in Indonesia on nature conservation, particularly related to protected area management, species conservation, forest governance and law enforcement. Currently, Darmawan serve as a Biodiversity Conservation Lead of a USAID program on Sustainable Environmental Governance Across Regions (SEGAR) and responsible for delivering overall objectives of the program to improve sustainable management of forest and land and emission reduction of GHG of Jurisdictional partners. Prior to that he serves as a part time Senior Technical Advisor for RSPO Regional Office in Indonesia and as a Senior Landscape Management Advisor at Gaia Daya Buana Consulting and few independent consultant work on Biodiversity Conservation and Management and related technical and policy issue.

Since 2007, Darmawan has been actively promoted Public, Private and People partnership to strengthening biodiversity conservation efforts on the ground. To realizing strong partnership, He actively involved in RSPO discussions in Indonesia both with NGOs and Business communities. Darmawan served as an Expert Coordinator for the High Conservation Value RSPO Indonesia Working Group (HCV RIWG) to develop a HCVA Management Manual for Oil Palm Plantations.