

DEFINING & CALCULATING TRACEABILITY TO MILL

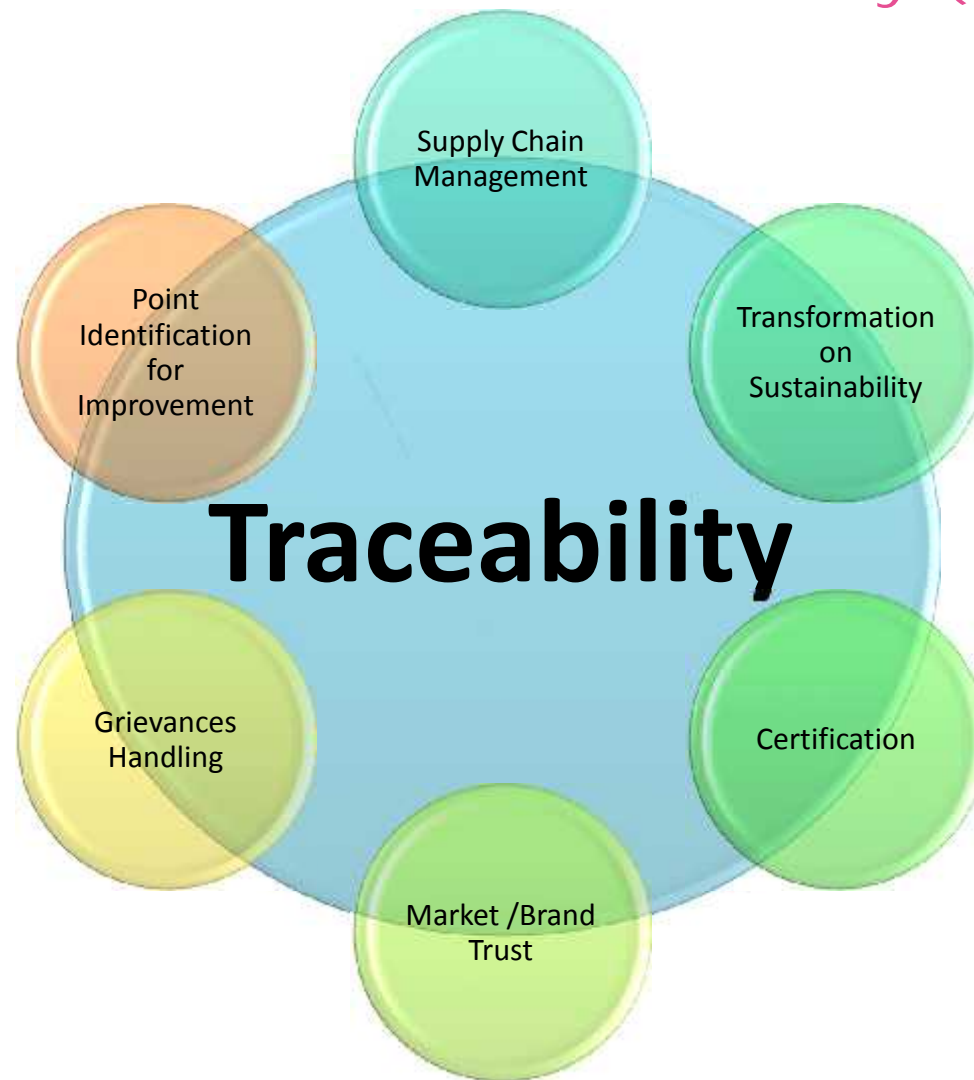


Contents

- a. Definition and Benefit of Traceability (Ketelusuran)
- b. Traceability Flow – in general
- c. Definition and Requirement of Traceability to Palm Oil Mill
- d. How to Calculate Traceability to Mill :
 - ❑ Mill Numeric Calculation method
 - ❑ Mill Volume Calculation method
 - ❑ Mill Per Batch System Calculation Method



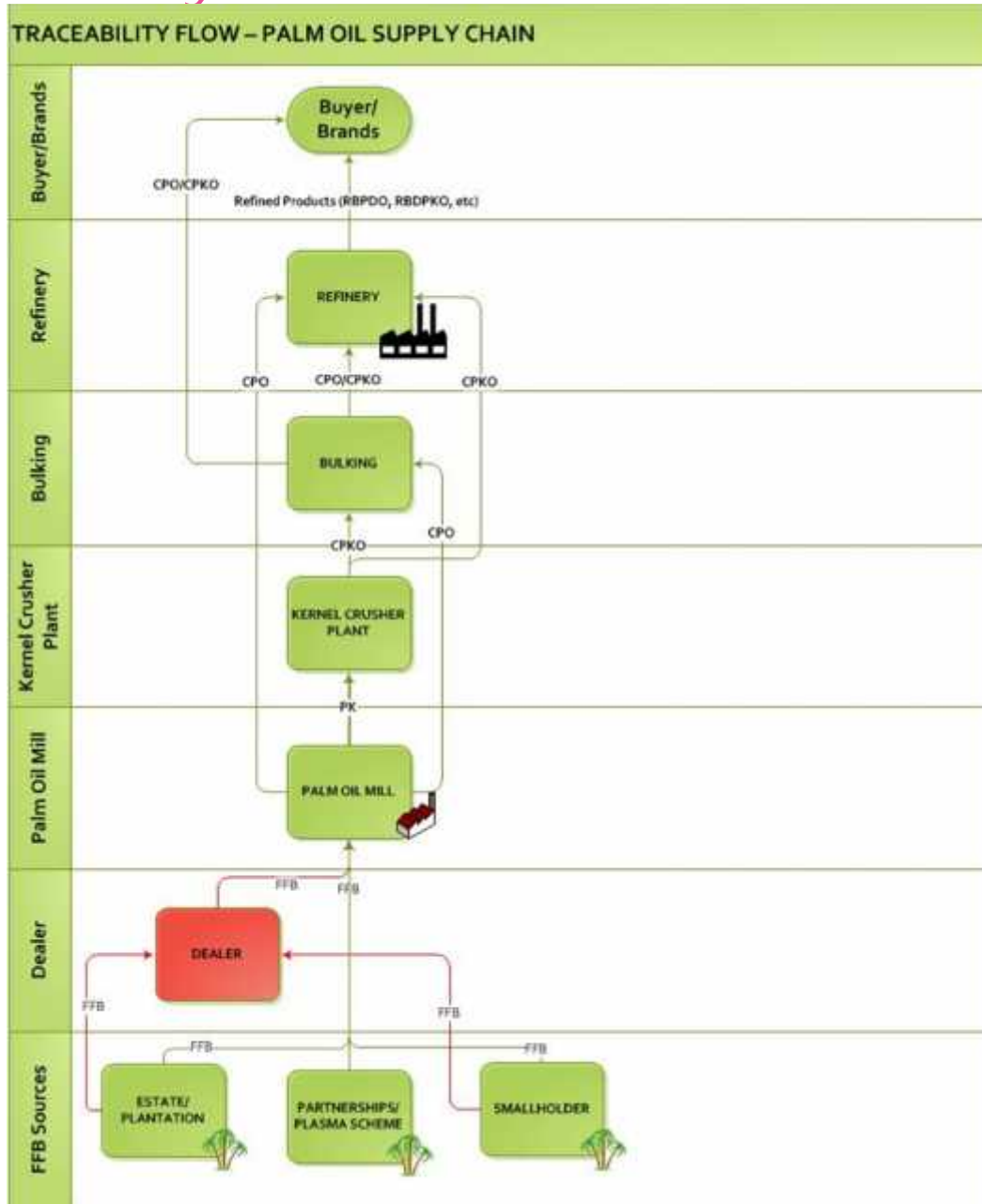
a. Definition and Benefit of Traceability (Ketelusuran)



Traceability is a method used to trace back, follow, understand and track the source of raw materials (FFB) of end product (CPO, CPKO, PK and other refined products).
(Sources : Peraturan Menteri Pertanian No 11 Tahun 2015)



b. Traceability Flow – in General



C. Definition and Requirement of Traceability to Palm Oil Mill

- Traceability Level : Refinery, Bulking and Per Batch System
- Scope : Palm Oil Mill - Producing CPO and PK

Traceable to Mill		
	Mandatory	Optional
Information required of mills	<ul style="list-style-type: none">• Company Name• Mill name• Mill Address and Location• Verified Latitude and Longitude coordinates• Volume Supply to Facility	<ul style="list-style-type: none">• Parent Group• Certification Status (RSPO/ISPO/ISCC)

Traceable to Mill (Refinery/Bulking/Batch level) is when the mill suppliers of CPO and/or CPKO product received by Refinery/Bulking can be traced and the mill's mandatory information, such as company's name, mill's name, mill's address, GPS coordinate (latitude and longitude), CPO and PK volume/quantity (tonnage) are available and verified.



d. How to Calculate Traceability to Palm Oil Mill :

1. *Mill Numeric Calculation method*

Mill Numeric Calculation Method is a verification process using palm oil mill's Company Name, Mill Name, Address/Location, GPS coordinates.

It can be declare 'traceable' once the all mandatory information are Verified

The Mill Numeric Calculation method should be applied as a minimum approach due to mill volume data being difficult to obtain in many cases.

Refinery/Bulking (%) Traceability to Mill = $\frac{\text{Total of 'traceable' supplying mills}}{\text{Total number of supplying mills}}$



1. Mill Numeric Calculation method (Continued....)

Refinery1/Bulking (%) Traceability to Mill = $\frac{\text{Total of 'traceable' supplying mills}}{\text{Total number of supplying mills}}$

Mills supplying refinery/Bulking	Minimum mill info obtained? Traceable/Untraceable
Mill A	Yes
Mill B	Yes
Mill C	Yes
Mill D	No
Mill E	No
Total Mills: 5	Total Traceable: 3

Refinery1/Bulking Traceability to Mill (Numeric Basis) = $3/5 = 60\%$



d. How to Calculate Traceability to Palm Oil Mill :

2. *Mill Volume Calculation method*

Mill Volume Calculation Method is a verification process using combination of Numeric calculation and volume. Once both are verified it can be declare traceable.

Refinery1/Bulking (%) Traceability to Mill= $\frac{\text{Total 'traceable' Volume Supplied}}{\text{Total Volume Supplied}}$



2. Mill Volume Calculation method (Continued...)

Refinery1/Bulking (%) Traceability to Mill = $\frac{\text{Total 'traceable' Volume Supplied}}{\text{Total number of Volume Supplied}}$

Mills supplying refinery	Minimum mill info obtained? Traceable/Untraceable	Volume Supplied
Mill A	Yes	100
Mill B	Yes	200
Mill C	Yes	110
Mill D	No	50
Mill E	No	100
Total Mills: 5 (560)	Total Traceable: 3 (410)	Total Volume : 560

Refinery1/Bulking Traceability to Mill (Volume Basis) = $410/560 = 73\%$



Mill Volume Calculation method (for R1- 1st Refinery to R2-2nd Refinery)

Traceable to Mill Oil – How to m

Mill :
A+B

Mill :
A+B+C+
D+E+F

Total traceable /
Total Refined
volume bough

16,000
X 79%

35,000/44,500

2nd Refiner				1st Refiner				Crude Oil Sources		
Refiner Name	Traceable % for Refinery	Traceable volume	Refined Volume bought	1st Refiner Name	Traceable % to Refinery	Traceable volume	Crude volume bought	Mill	Mill traceable	Crude volume supplied
A	81%	12,584	16,000	1st Refinery 1	79%	35,000	42,500	Mill A	Yes	20,000
								Mill B	Yes	15,000
								Mill C	No	1,000
		7,955	12,000	1st Refinery 2	66%	29,500	43,500	Mill D	No	3,000
								Mill E	No	2,000
						0	2,000	Mill F	No	1,500
								CPO Trader	No	2,000
		11,000	11,000	1st Refinery 3	100%	34,000	34,000	Mill G	Yes	11,000
								Mill H	Yes	9,500
								Mill I	Yes	9,000
						0	1,000	Mill J	No	5,000
								Mill K	No	7,000
								Mill L	No	2,000
								Bulk tank	No	1,000
								Mill M	Yes	10,000
								Mill N	Yes	2,000
								Mill O	Yes	3,000
								Mill P	Yes	8,000
								Mill J	Yes	1,000
								Mill K	Yes	10,000



d. How to Calculate Traceability to Palm Oil Mill

3. Mill Per Batch System Calculation Method

Mill Per Batch System Calculation Method is a verification process based on the shipment of CPO, PK and other palm oil product by Vessel.

At the level of Shipment, it is ' traceable ' to the mill if the CPO and / or CPKO loaded by Vessel / Ship can be traced which mill suppliers it came from and the related information on TDD which is mandatory fulfilled and verified.

This calculation is performed by using information such as Company Name mill, Mill Name , Address, GPS Coordinates and Volume verified or traceable. Percentage of traceability is calculated by dividing the total volume of the mill which is traceable with the total volume of the mill which supplies.

Calculation of traceability at the shipment level is calculated to palm oil product (CPO, CPKO and / or derivative product) which contained in the Vessel, that means in the case of shipment loading from the refinery / bulking or more in the particular vessel then the traceability calculated on the Vessel / boat not to Refinery / Bulking.



3. Mill Per Batch System Calculation Method (Continued...)

$$\text{Shipment (\%) Traceability to Mill} = \frac{\text{Total 'traceable' Volume Supplied}}{\text{Total number of Volume Supplied}}$$

Mills supplying Refinery/Bulking	Traceable (Yes)/Untraceable (No)	Volume/Quantity
Mill A	Yes	100
Mill B	Yes	200
Mill C	Yes	110
Mill D	No	50
Mill E	No	100
Total Mills: 5	Total Traceable: 3	Total Volume : 560

$$\text{Shipment Traceability to Mill (Volume Basis)} = 410/560 = 73\%$$





Thank you

References

Defining & Calculating Traceability Document Ver. 01 June 2015. Rob M. William, The Forest Trust.

Regulation of Ministry of Agriculture No. 98 Year 2013 on Plantation License Guidelines.

Regulation of Ministry of Agriculture No. 11 Year 2015 on Indonesian Sustainable Palm Oil Certification System (ISPO).

