



# *Defining & Calculating Mill Traceability*

**Version 1.0**

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### Introduction

Traceability is central to achieving transformation of the palm oil industry. Retailers, brands, refiners and traders are all working with their suppliers to identify where their raw materials are coming from and who is producing them. Answering these questions is central to starting the journey to meet a business's sourcing policies.

Traceability has many different meanings, some of which seek to trace oil in a chocolate bar back to the individual plantations where the oil was grown, requiring significant investment along the supply chain to ensure that the link to the plantation is maintained. Others define traceability more pragmatically, taking into consideration that palm oil is a traded commodity and efficiencies in the supply chain can co-exist with traceability.

TFT's approach is to use traceability as a way to capture all the palm oil mills in a supply chain to a refinery, since this is a key requirement for the transformation process. By knowing all the mills, refiners can start the process of identifying priority mills to commence the engagement and transformation process to address practices not aligned with sourcing policy requirements.

With the increasing attention on traceability and the commencement of public communication about levels of traceability in a business's supply chain, it is critical that there is a consistent approach being used to calculate traceability.

At TFT calculating traceability is firstly based on an approach that tests if the information on mills, self-declared by suppliers, meet mandatory criteria. TFT calls this the **Mill Numeric Calculation** method. The method is utilised when refineries cannot provide mill volume data as this information can be of a sensitive nature, particularly when requested by those further downstream, sometime competitors to those declaring the information. However, increasingly refineries are opening up to provide mill volume data alongside the mandatory information required under the Mill Numeric method, and TFT accommodates this under the **Mill Volume Calculation** method. In summary, the Numeric calculation identifies the proportion of the mills in a supply base that are traceable, while the Volume calculation identifies the proportion/quantity of product that is derived from traceable mills.

TFT members communicating on their supply chain traceability shall report based on the numeric method and where volume data is available then this should also be reported. While reporting both methods generates additional work it allows for downstream customers to ensure they use one or the other calculation methodology to ensure a consistent approach is taken to generating publicly reported traceability numbers. Both methods are explained below.



## Traceable Mills

- **Data Required**

A palm oil mill is defined as traceable when the following self-declared information is obtained and the latitude and longitude information of the mill is verified as accurate. While TFT performs this check today, suppliers are increasingly encouraged to engage an independent body to complete a traceability verification audit.

Table 1: Mandatory information to call a mill traceable under both the Numeric and Volume Calculation Methods

<b>Traceable to Mill</b>	
Mandatory information required of mills	<ul style="list-style-type: none"> <li>• Parent company name</li> <li>• Mill name</li> <li>• Verified Latitude and Longitude coordinates<sup>1</sup></li> <li>• Certification (RSPO) status</li> </ul> <p style="text-align: center;"><b>Mill = Traceable</b></p>
Frequency updated	Minimum once per year
Responsibility for obtaining information	Refinery to contact mills in supply shed

<sup>1</sup>Verified Latitude and Longitude coordinates requires cross checking the self-declared coordinates against various data sources, such as Google Earth, to confirm the presence of the mill at the location declared.

## Mill Numeric Calculation Method

- **Calculation Methodology**

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

1st refineries (refineries at origin) and CPO/CPKO bulkers may have multiple sources of crude oil (directly from mills, via CPO traders or even inter refinery transfers) and understanding the proportion that each of these sources represent is firstly required. Once this is understood and the mills linked to each source are checked for the mandatory information, the 1<sup>st</sup> refiner's traceability percentage to mill can be calculated. Calculating traceability to mill (%) is achieved by **summing the number of mills** that meet the above requirements for each source and dividing by the total number of mills declared. As such this method usually reports the % of the direct supplier mills that are traceable; where the number of mills supplying traders, bulkers etc is



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unknown, the volume from this source is considered untraceable until the data requirements are met.

The overall traceability at the 1st refineries or bulkers can then be used to calculate the overall % of oil that can be linked to traceable mills at the 2nd refinery, further downstream. The volume of supplies from each 1st refinery to the 2nd refinery is multiplied by the percentage traceable at each one. It is also possible to make the same calculation when the 2<sup>nd</sup> Refiner isn't able to or wishes not to disclose the actual volume purchased from the various 1<sup>st</sup> Refiners, by using the proportion of volume sourced from each 1<sup>st</sup> Refiner and multiplying this by the percentage traceable for each 1<sup>st</sup> Refiner.

Table 2: Example of Mill Numeric Calculation method from Crude Oil Source to 2nd Refiner

2nd Refiner				1st Refiner				Crude Oil Sources	
2nd Refiner Name	Traceable % for 2nd Refinery	Traceable volume from 1st Refiner	Refined Volume bought from 1st Refiner	1st Refiner Name	Traceable % for Refinery	Traceable % to Mill	% Sourced from Crude Oil Source	Mill Name	Mill traceable (Yes/No)
2nd Refinery A	56%	5,067	16,000	1st Refinery 1	32%	33%	95%	Mill A	Yes
								Mill B	Yes
								Mill C	No
		5,880	12,000	1st Refinery 2	49%	50%	98%	Mill D	No
								Mill E	No
						0%	5%	Mill F	No
								CPO Trader	No
		11,000	11,000	1st Refinery 3	100%	100%	100%	Mill G	Yes
								Mill H	Yes
								Mill I	Yes
								Mill J	No
								Mill K	No
						0%	2%	Mill L	No
								Bulk tank	No
								Mill M	Yes
								Mill N	Yes
								Mill O	Yes
								Mill P	Yes
								Mill J	Yes
								Mill K	Yes

With such data, the 1<sup>st</sup> Refiner 1 can report that 33% of the oil sourced from mills direct meet the traceability requirements and that overall 32% of the oil sourced by the refinery can be linked to mills that meet the traceability requirements. While this methodology is imperfect, it errs on the conservative side and is considered sufficient until the end of 2015.

At the 2<sup>nd</sup> Refiner A level, each of the 1<sup>st</sup> Refiner traceability scores are multiplied by the volume purchased from the 1<sup>st</sup> Refiner. The 2nd refiner is able to report that 56% of its oil is linked to mills that meet the traceability requirements.



### Mill Volume Calculation Method

As concerns over sharing volume data through the supply chain, especially to potential competitors, are overcome then more businesses can report using the Volume method.

The Volume Calculation method is similarly based on ensuring the mills meeting the mandatory requirements under the Numeric method above, but requires the additional provision of information of volumes supplied by the mills. Calculating the percentage of traceability to mill is this time achieved by **summing the volumes** supplied by the mills that meet the above requirements by source.

Table 3: Example of Mill Volume Calculation method from Crude Oil Source to 2nd Refiner

2nd Refiner				1st Refiner				Crude Oil Sources				
2nd 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		
2nd Refinery 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	1,000	Mill F	No	1,500
		11,000	11,000	1st Refinery 3	100%	34,000	34,000	CPO Trader	No	2,000		
										Mill G	Yes	11,000
										Mill H	Yes	9,500
								Mill I	Yes	9,000		
								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		

With such data, the 1<sup>st</sup> refinery 1 could report that 79% of its product is traceable to mill. Similarly 2<sup>nd</sup> refinery A could report that 81% of its products (approx. 31,000 t) are traceable to mill.

### Communicating Traceability to Mill

As companies make progress in mapping their supply chain, it is natural and commendable for them to share this progress with their stakeholders. However, it is critical that claims made about traceability reflect 1) the nature of the information collected and 2) the methodology used to calculate it.

1) Companies must be explicit that information collected is based on **self-declarations** by their suppliers and that in most cases third party verification of the data will not yet have been completed.



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2) Companies must be explicit in stating the methodology used to generate the traceable percentage.

### **Traceability in 2016 and beyond**

Over the last 5 years palm oil suppliers have become increasingly more comfortable with providing transparency of the supply chain to customers. Furthermore there are examples of suppliers providing transparency of their supply chains publicly. Suppliers are also increasingly willing to provide volume information linked to the mills they source from.

With the above increasingly comfortability and the additional work that calculating traceability to mill using two methodologies, TFT will be working with all its members over the remainder of 2015 to introduce the volume approach, if not already using the approach. Ideally from 1<sup>st</sup> January 2016 TFT members will be reporting traceability publicly using only the volume method.

