

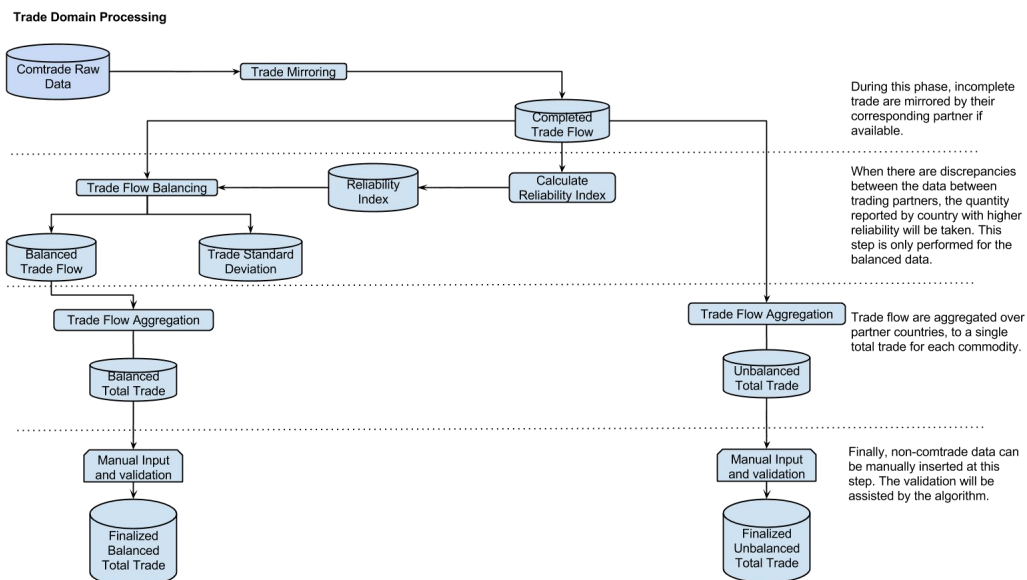
Trade Processing User Manual

Introduction

This document provides the step by step illustration of all the trade processing procedures required to derive the final trade dataset from the original Raw Comtrade Data.

The process

Shown below is the full trade procedure flow diagram.



In this document we will concentrate on the processing of the balanced branch.

1. Trade Mirroring
2. Calculate Reliability Index
3. Trade Balancing
4. Trade Flow Aggregation
5. Conversion from HS to CPC

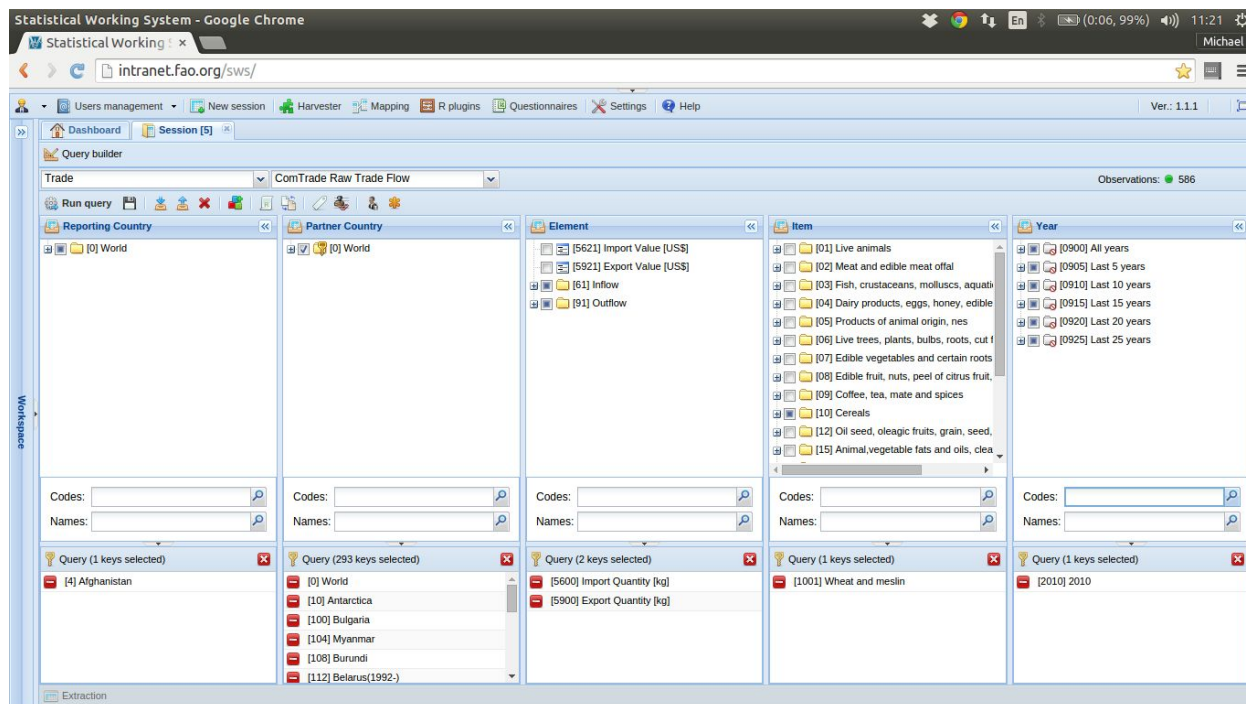
Illustration

Initial Data

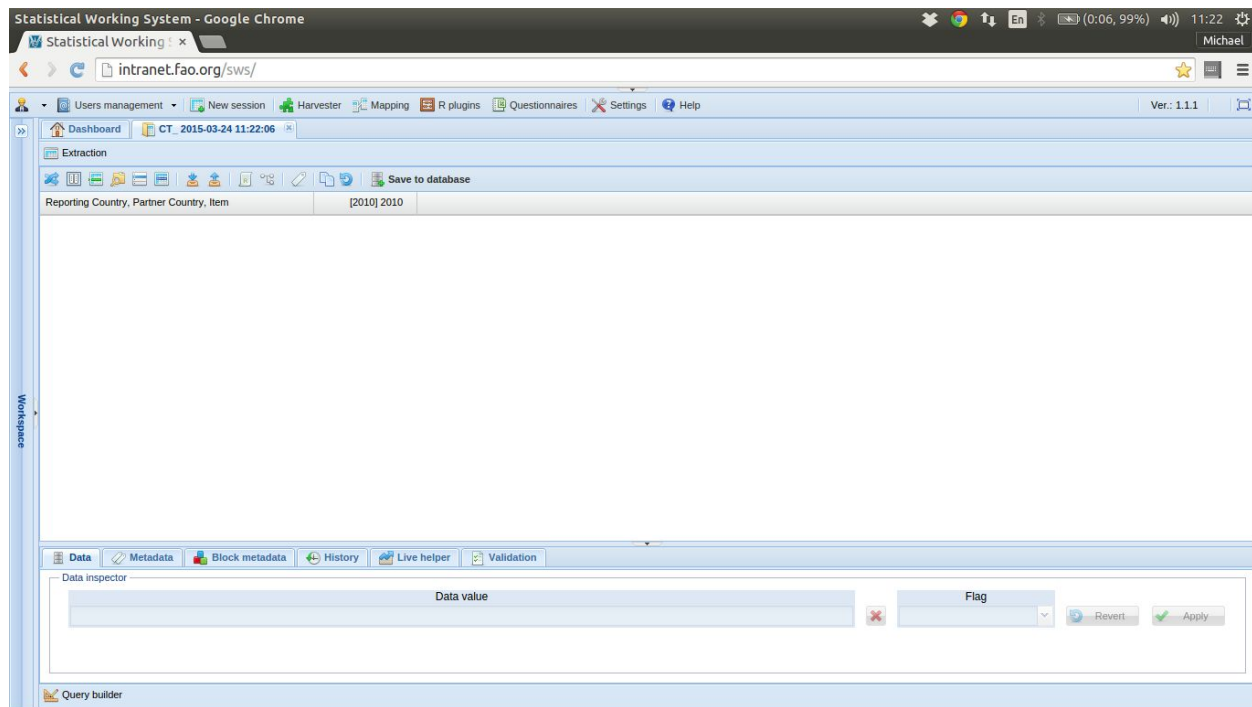
The initial dataset, the unprocessed Comtrade Raw Data can be browsed by selecting the **ComTrade Raw Trade Flow Dataset**.

One important point to notice is that the country code system the UNSD Comtrade has adopted is a modified system of the standard M49. The Comtrade specific country system is converted to the standard M49 classification in the trade aggregation system where trade flow are aggregated into total trade. This is a temporary status, the country classification will be converted directly after the Comtrade Harvester in the future.

To illustrate the processing, we will take the trade of wheat and meslin (1001) for Afghanistan in 2010 as an case study.



As we can see, there are no trade reported by Afghanistan.

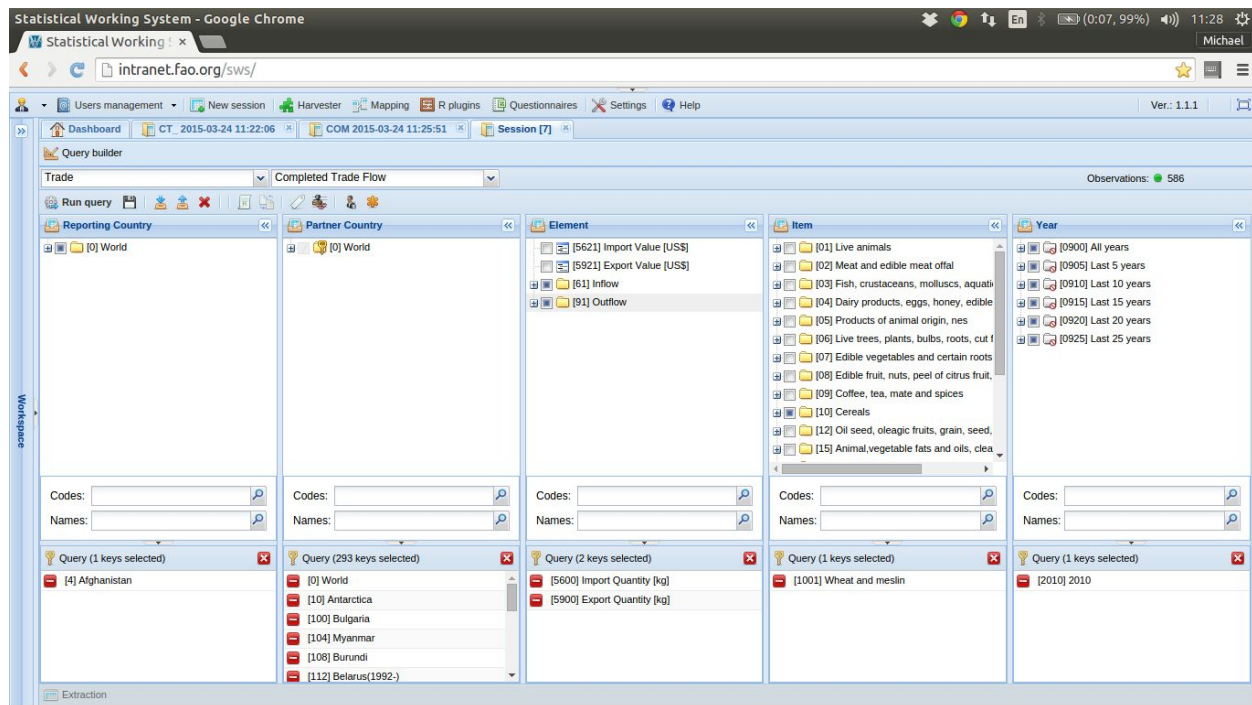


Trade Mirroring

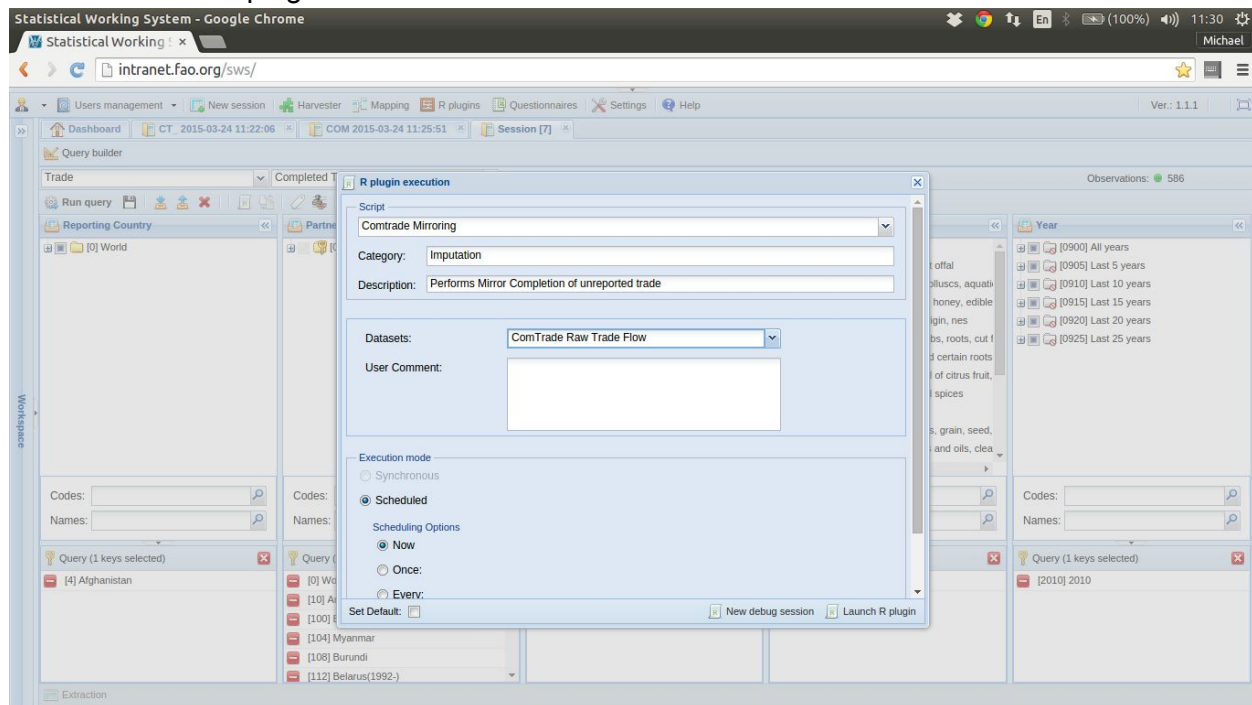
The process of trade mirroring is to complete and fill any non-reported trade flow based on the corresponding partner. Take for example, if Italy reported wheat export to Afghanistan but the corresponding import was not reported by Afghanistan in Comtrade, then the import of wheat of Afghanistan will be mirrored from the corresponding export of Italy.

However, this procedure requires that at least one of the trading partner reports. In the case where both trading partner fail to provide a value, then there is no way we can retrace the trade.

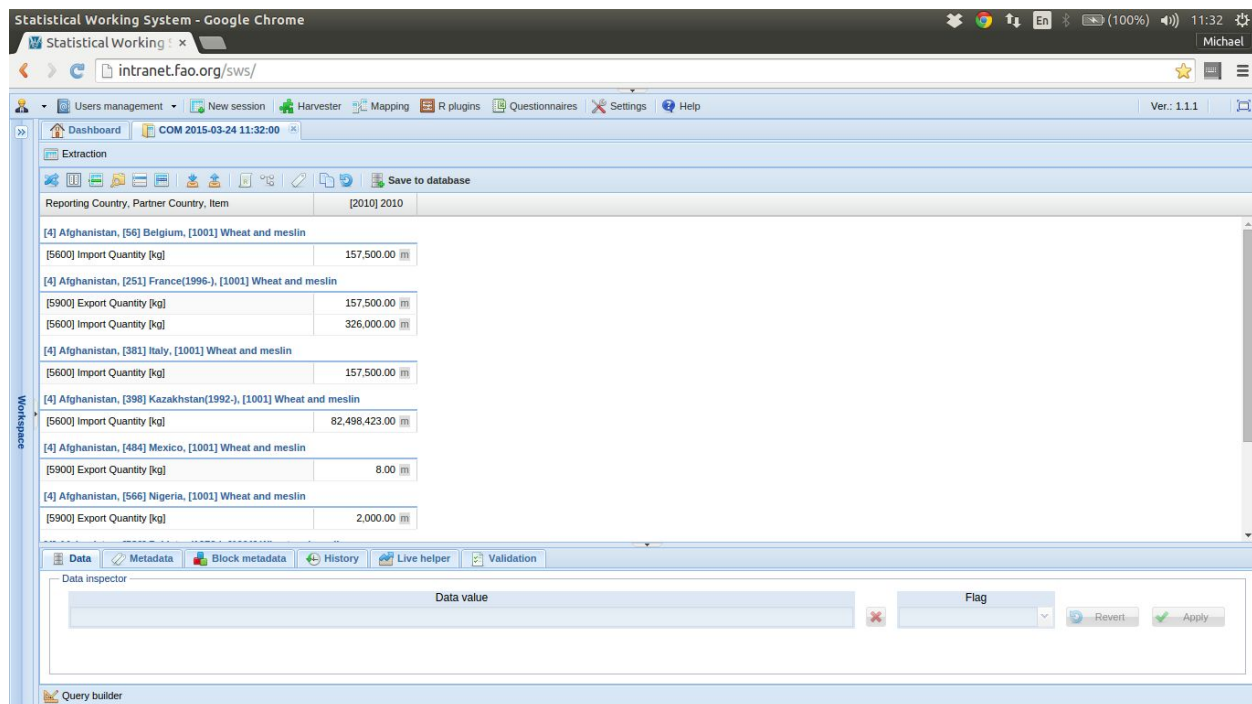
To perform the mirroring, we now select the dataset **Completed Trade Flow**.



Select the Comtrade Mirroring R plug-in and read the dataset from **ComTrade Raw Trade Flow** then launch the R plugin.



Upon receiving the email indicating the plug-in has been executed successfully, we can browse the result from the **Completed Trade Flow** dataset. Now we can see that the mirroring procedure has mirrored the trade for Afghanistan which were not reported with a temporary flag “m”.

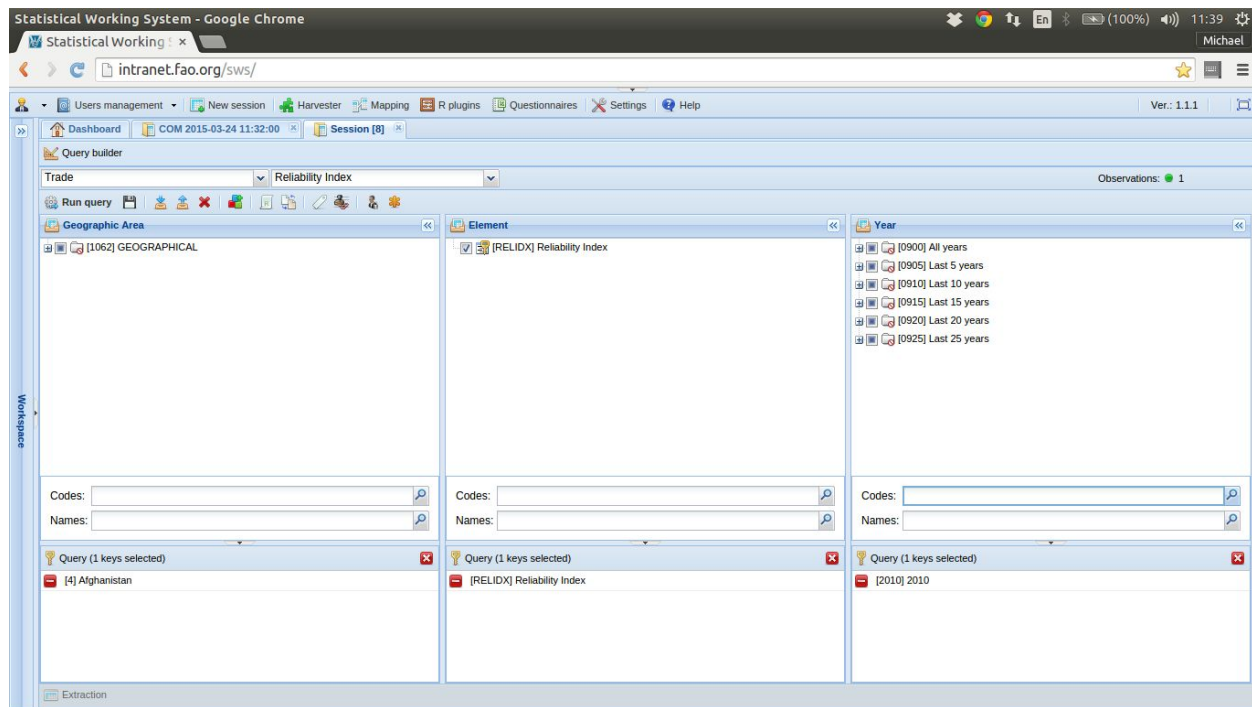


Reliability Index

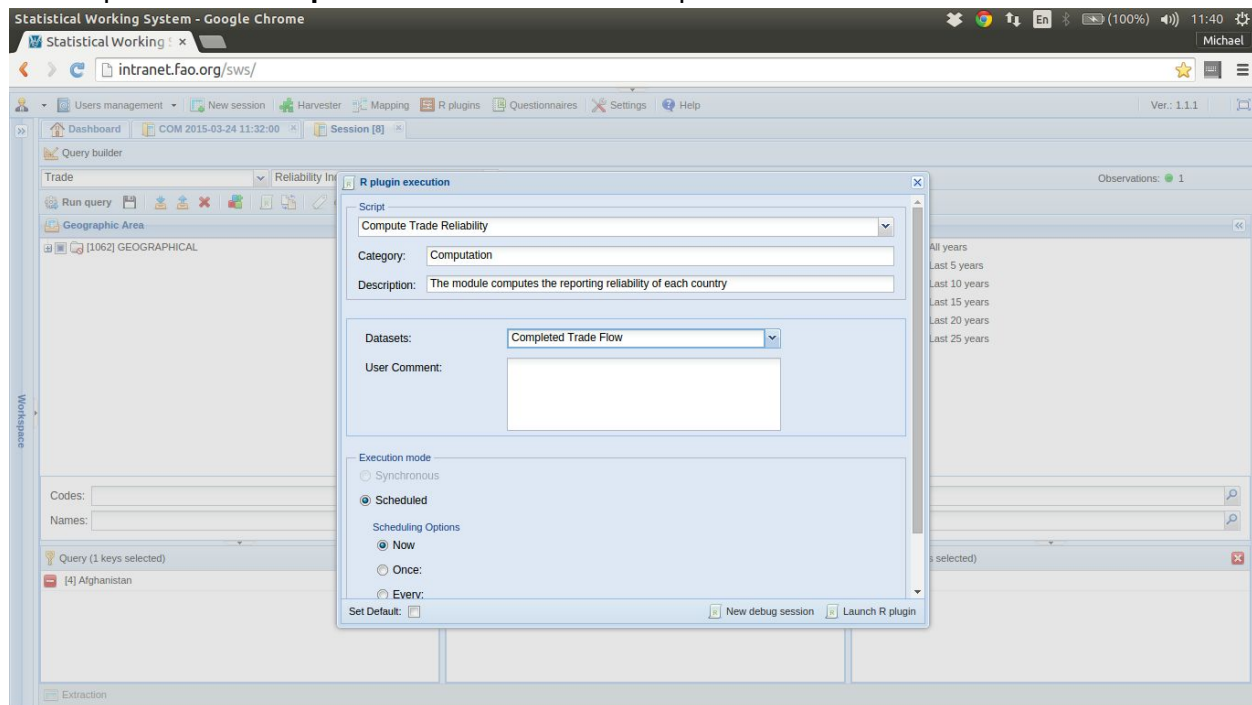
After the trade has been mirrored, we can proceed to trade balancing. The purpose of trade balancing is solely for analytical use, many models developed for trade by our end user requires the trade to be balanced. Although an unrealistic assumption and generates an artificial world, but it serves the need of our end users.

However, before we proceed with trade balancing it is necessary to compute the reliability index, the index captures the reporting reliability of each country and serves as the foundation of trade balancing.

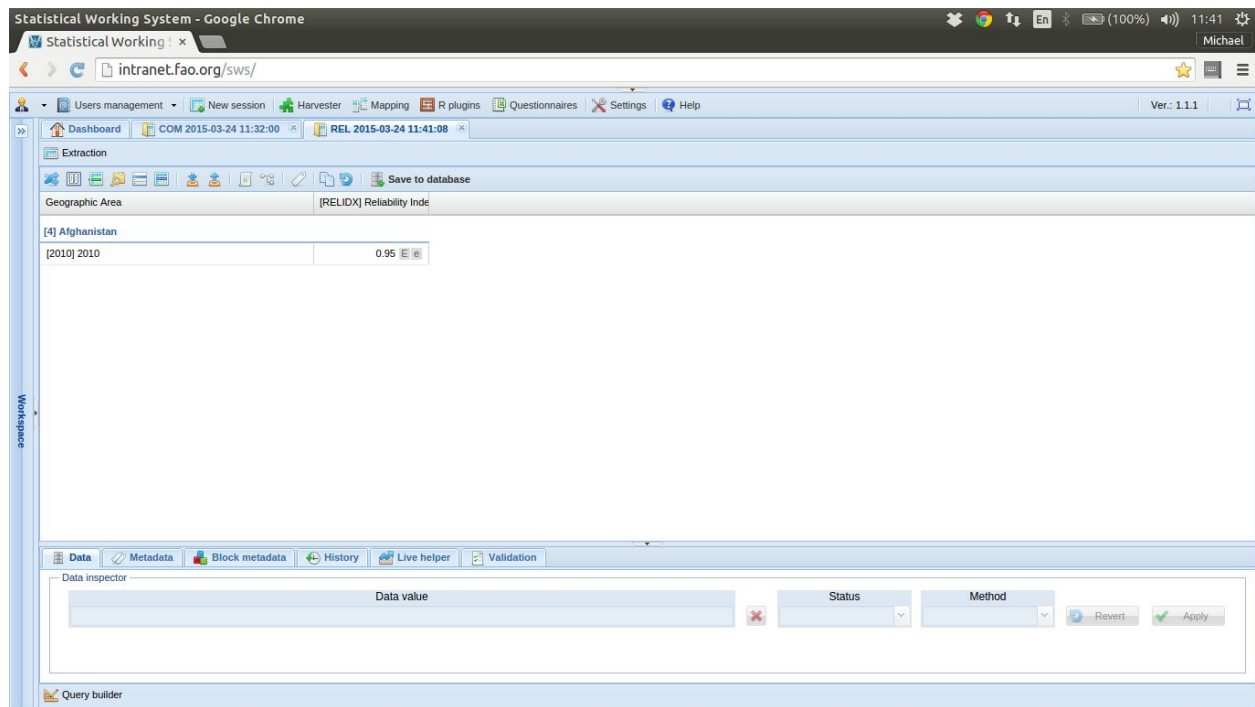
Opening the **Reliability Index** dataset in a new session.



Again, we open the R plug-in tab, and select the module “Compute Trade Reliability” and launch the script with the **Completed Trade Flow** as the input dataset.



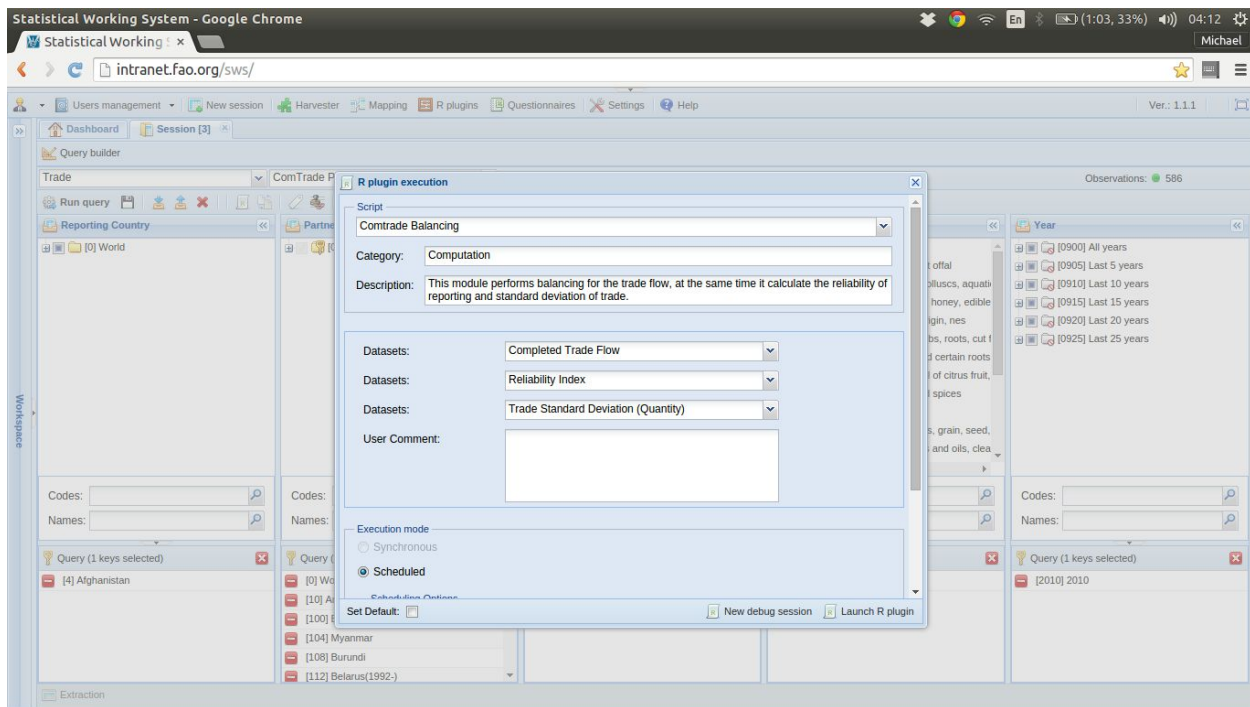
After the execution, we will have a value for reliability index. The value indicates the proportion of trade reported by Afghanistan agrees with it's corresponding trading partners. Countries that does not record a single trade will not have a reliability index.



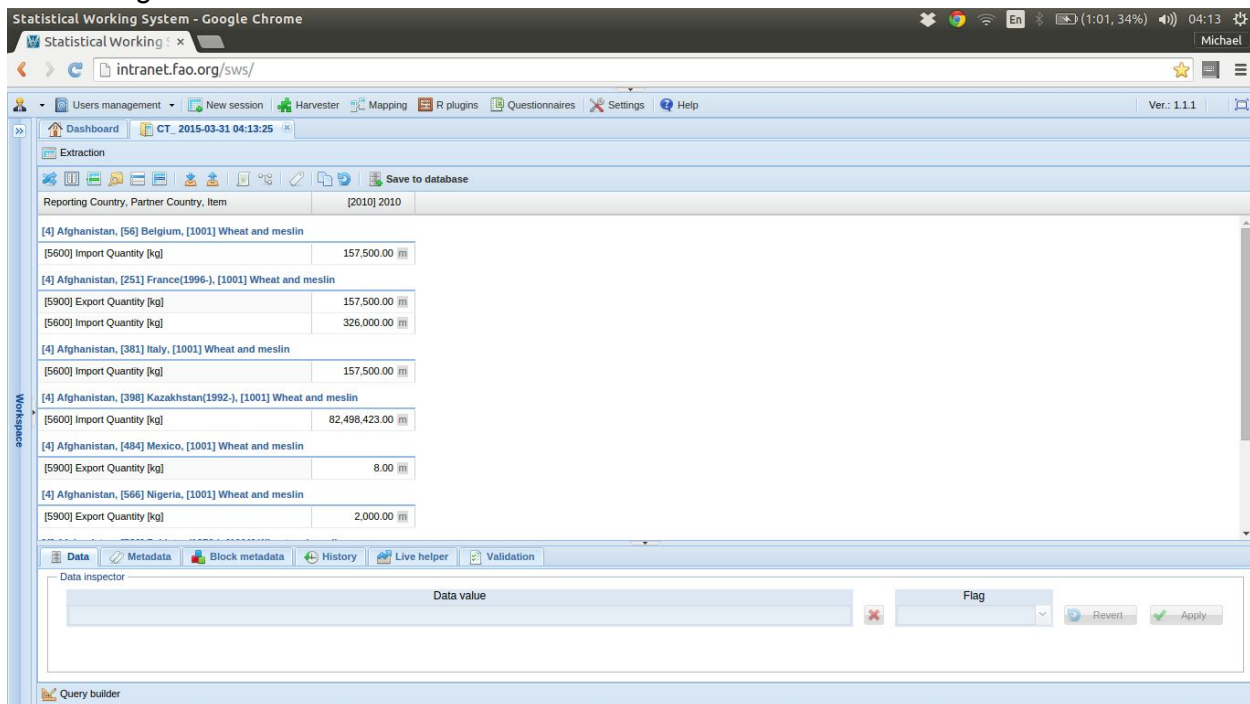
Trade Balancing

Now that the reliability index has been computed, we can proceed with trade balancing. Similarly, we open the **ComTrade Published Trade Flow** and then the R plug-in launch session.

This time, we need to select the Comtrade Balancing script, and two required dataset. The **Completed Trade Flow** and the **Reliability Index** calculated in the two previous section and also select the **Trade Standard Deviation (Quantity)** dataset to be also calculated along side of the balancing..



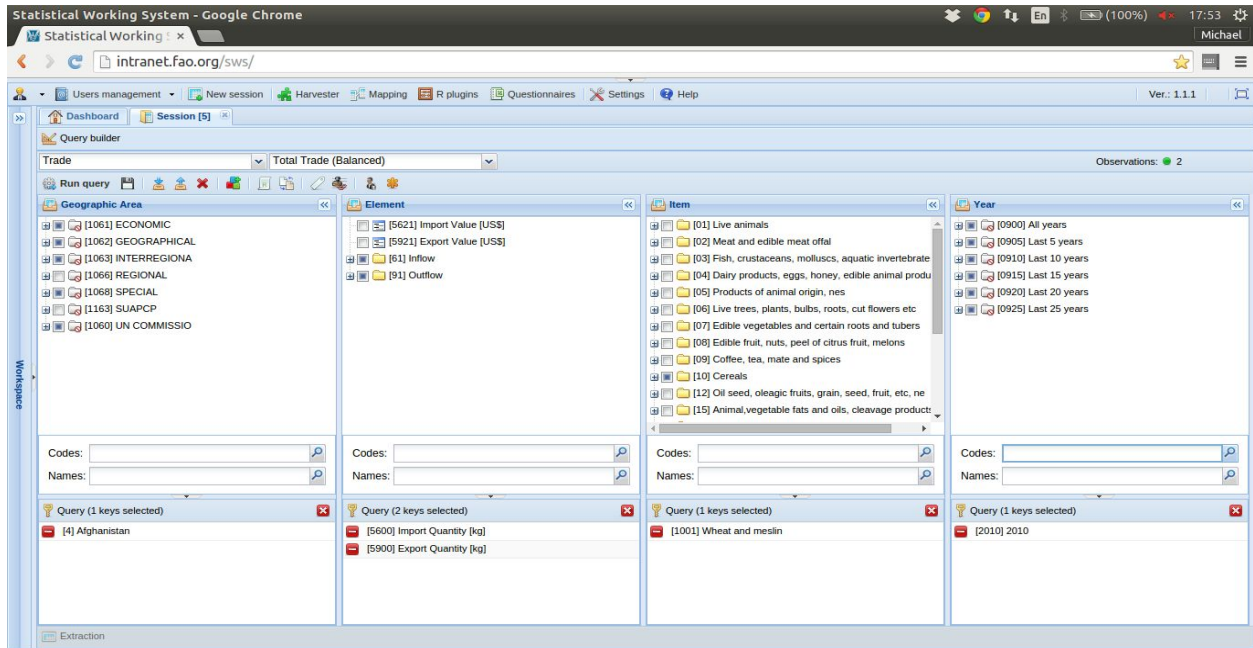
This then gives us the balanced trade which will be disseminated.



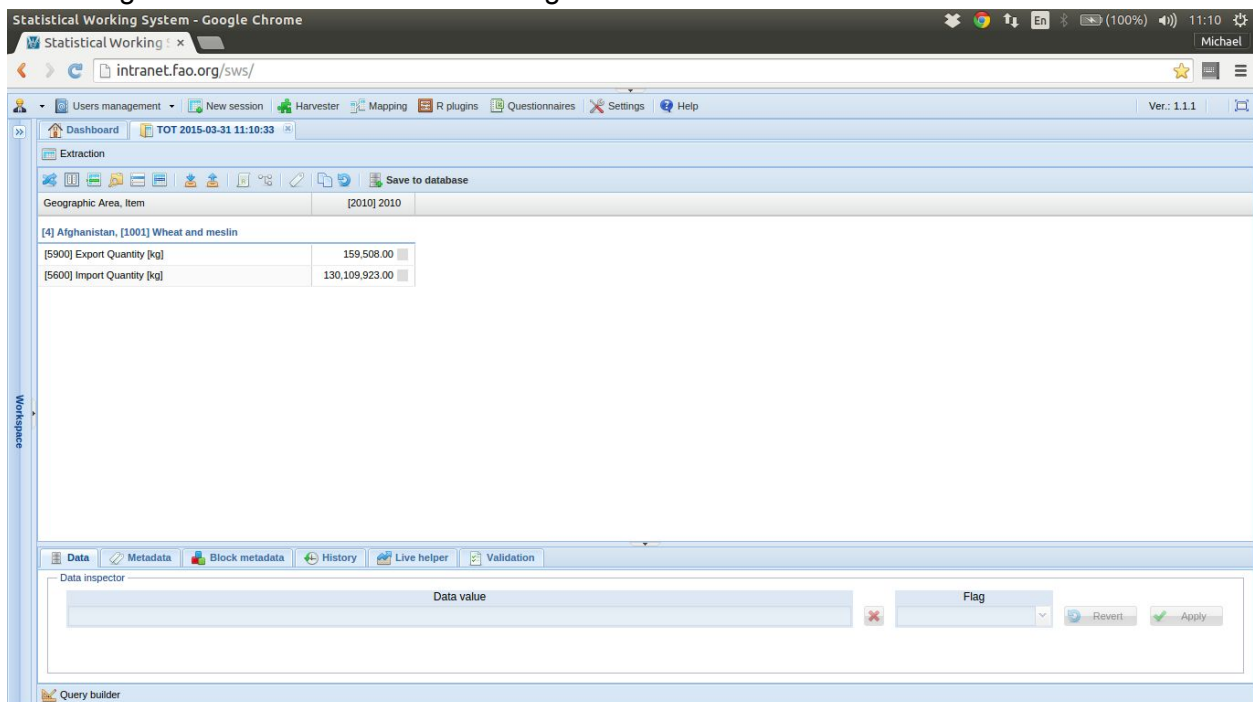
Trade Flow Aggregation

Finally, after all the trade flow has been mirrored and balanced, we can aggregate the trade flow to obtain the final total trade.

Select the Total Trade (Balanced) dataset, and execute the “Balanced Trade Flow Aggregation” with the **ComTrade Published Trade Flow** as input data.



Now we get the total trade of wheat for Afghanistan.



Conversion from HS to CPC

The final step in the trade processing is the conversion from HS to CPC, according to the current specification the conversion is performed at the end of the procedure. However, this

creates duplicate datasets and thus the step will eventually be processed right after the data has been harvested from Comtrade.