



Annex 11: Screenshots of the current IDH's Environmental Footprint Tools (example)

Hereby some screenshots from the Aquaculture (AWG) Tool (the input sheet), which is the most complex tool. The SIFAV (Fruits and Vegetables) and SSI (Spices) Tools are less complex (with less stages) and the Juice tool is in terms of complexity between the SIFAV and the Aqua Tool.

In order to fully understand how the Tool works, we have created screenshots for the Aqua Tool (the most complex tool) below.

There are 9 tabs (one introduction, two feed mills, one hatchery, farm, primary processing, secondary processing, distribution, and retail). Per tab it differs how much data a company needs to fill in, from 20-50 datapoints.

The screenshot displays the 'Feedmill (I)' tab of the 'Aqua Environmental Footprint Toolkit'. The interface includes a standard Excel ribbon with tabs like File, Home, Insert, Page Layout, Formulas, Data, Review, View, Automate, and Help. The main content area is divided into several sections:

- Introduction:** A text block explaining the tool's purpose and providing instructions for data entry.
- General information:** A sidebar on the right containing fields for Feedmill name, Species, Year, World region, Country, Region, Contact person, and Contact email.
- Feed composition:** A table with columns for 'Feed ingredient composition', 'Amount per kg feed (kg/kg feed)', and 'Country of Origin'. The table is split into 'Part 1' and 'Part 2'.
- Feed ingredient list:** A dropdown menu on the left showing a list of feed ingredients such as Fish meal, Fish oil, Fish meal, Atlantic salmon, etc.

The screenshot displays the 'Farm' tab of the 'Aqua Environmental Footprint Toolkit'. The interface includes a standard Excel ribbon with tabs like File, Home, Insert, Page Layout, Formulas, Data, Review, View, Automate, and Help. The main content area is divided into several sections:

- Introduction:** A text block explaining the tool's purpose and providing instructions for data entry.
- General information:** A sidebar on the right containing fields for Farm name, Species, Year, World region, Country, Region, Contact person, and Contact email.
- Farm information:** A table with columns for 'Farm information', 'Amount per kg feed (kg/kg feed)', and 'Country of Origin'. The table is split into 'Part 1' and 'Part 2'.
- Farm information list:** A dropdown menu on the left showing a list of farm information such as Farm name, Species, Year, World region, Country, Region, Contact person, and Contact email.



Aqua Environmental Footprint Toolkit

Distribution

Introduction

This page covers all activities related to distribution, starting with transportation from the previous stage, the processing facility. This distribution stage can be used for multiple different species since the reference unit is **per kg**. To ensure all calculations are performed correctly, please ensure data is ALWAYS entered relative to this reference unit, some pre-calculations may therefore be required (see the Aquaculture EFT Handbook).

Processing facility name: _____
Location: _____
Country: _____
Region: _____
Contact person (optional): _____
Contact email (optional): _____

Aqua product at distribution

Weight of single product (including packaging): _____ g (pieces)
Total amount of product handled at the distribution centre per year: _____ weeks
Number of weeks the product is typically stored at the distribution centre: _____
Losses: _____ %
Waste treatment of losses (select from drop down): _____

Inbound transport (processing facility to distribution centre)

Transport of the aqua product to processing: _____ g
Weight of single product (including all packaging): _____
Please select all modes which apply and enter the corresponding distance: _____
Distance: _____ km
_____ km
_____ km

Energy

This section is formed of two main parts:
1. Origin of electricity (purchased + self generated)
2. Amount of energy used at the distribution facility per year (for aqua products only)

1. Please indicate the origin of all the electricity used for the aqua product at this facility.
Purchased electricity
Include both purchased and own electricity generated from specific sources! please identify them in the list and indicate the contribution to your total usage.
Ensure the total of all energy sources identified including grid energy = 100%!
Ensure the total = 100%:
Electricity mix from the grid (average national mix only): _____ %
_____ %
_____ %
_____ %
_____ %
_____ %
_____ %
_____ %
_____ %
_____ %
2. Consumption of energy used for this product only at the distribution facility per year:
Electricity: _____ kWh/year
Natural gas (if applicable): _____ m3/year

Further guidance
(Please, additional information on the background calculations, methodology and tool capabilities can be found in the accompanying Aquaculture EFT Handbook)

Losses (events) refers to any fish material from distribution which is not sent to retail, e.g. it spoils. Please choose a waste treatment option which best reflects the typical handling of fish waste produced at this facility. If the fish material is sold for biogas please select over the losses to biogas, the biogas treatment option, please.

Distance between the processing facility and distribution centre (this value does not need to be divided by the reference unit).

In cases where you might both generate your own solar energy and also produce renewable energy from the grid (e.g. wind), then select and enter the applicable % under the solar and wind options only (ignore the grid option if 100% of the purchased energy has a generation of origin from a renewable source).

If the total consumption of energy for the entire distribution centre is known only, and if products other than this species than are also handled at this facility, please pre-calculate the share of energy which is used for this study product only, e.g. if the species other product makes up 30% of the total values handled by the distribution centre, multiply the yearly energy consumption by 0.7 and enter this value. However, we recommend you try and find more accurate product specific data here, since species-specific products are often drilled or broken down comparatively creating more energy.

Welcome | Feedmill (I) | Feedmill (II) | Hatchery | Farm (Pond) | Primary Processing | Secondary Processing | **Distribution** | Retail | +

Then there are hidden sheets for users. Those hidden sheets identify the data that is copied from the databases (from the AgriFootprint Tool and Ecoinvent). This allows the user to, for example, select a feed ingredient into the dropdown box in the feed sheet, and in the background, there is the emissions factor for that ingredient which is then used in the calculation. The same goes for things like diesel and country grid for electricity – if the user selects ‘Norway’ as country of origin, then in the hidden sheet there is a value of Co2e per Kwh for Norwegian energy from the Ecoinvent database.

The dashboard of the tool consists of several tabs, separated out per environmental impact category:

B21 V1.0.3 Added feed footprint per kg feed to carbon footprint results and improved some small issues.

How it works

The EFT Dashboard is the Excel file dedicated to data analysis and visualization. It is organized into multiple tabs, one per impact indicator. In each tab up to 10 different supply chains can be compared. The results can also be viewed on a more granular level per individual product.

Data can be imported from one or more EFT Input files using the button in the "Import data" tab. Note that the general data in each tab of the input sheet must be filled in else an error may occur. Importantly please also ensure 'macros are enabled'. Once the data is imported into the EFT Dashboard, it is hard-copied. This means that even if the original Input sheet is lost or its location changed, data will not be lost. However, we recommend you keep a copy of the original EFT Input Sheet to easily review your data input (especially important in cases where the results present outliers etc).

Every dataset imported from an EFT Input Sheet has an automatically assigned ID. This makes each dataset uniquely traceable. In the event a dataset is imported with an ID identical to an already existing dataset, the Dashboard will ask whether the existing dataset should be overwritten or whether the new dataset should be ignored. A maximum of 100 datasets can be uploaded in one EFT Tool. Deleting a dataset is not possible, but if some of its values are wrong, then the dataset can always be overwritten by updating the input file with the same ID.

Once you have imported the data, you can browse through the results for all available indicators.

The environmental indicators

CARBON FOOTPRINT
Climate change refers to long-term changes in average weather patterns, caused by natural processes and by anthropogenic activities. These human activities, such as burning of fossil fuels, lead to an increase in heat-trapping greenhouse gases (GHGs), which leads to an increase in radiative forcing and therefore rising global temperatures. These increased temperatures lead to damage to both human health and ecosystems, by amongst others more extreme events, changing weather patterns and damage to crops. Climate change is commonly quantified with an indicator referred to as carbon footprint. The carbon footprint quantifies the emissions of greenhouse gases, and it is expressed as Global Warming Potential (GWP). The GWP expresses the amount of additional radiative forcing over time caused by the emissions of a GHG relative to the radiative forcing of the same amount of CO2. Hence, the unit is CO2 equivalent [CO2-eq].

WATER FOOTPRINT
Globally, food production uses the majority of available freshwater, resulting in water scarcity in many regions worldwide. Quantification of water use is therefore of key importance in assessing the environmental impact of a product's supply chain. This is true not only at farm but at all stages where processing activities require water. LCA considers blue water use, thus water sourced from surface or groundwater resources which is evaporated, incorporated into a product or taken from one water body and returned to another, or returned at a different time. In this Dashboard, water-related impacts are quantified in two ways:
- Water use: the absolute water use per kg of product (in m3 or liter per kg product).
- Water scarcity: multiplies the water use by a factor representing water scarcity in an area. It is expressed as m3-world eq, a comparative unit representing the "average cubic meter consumed in the world".

NITROGEN & PHOSPHORUS FLOWS
Surplus of nitrogen and phosphorus in ecosystems. These nutrients accumulate in water bodies and lead to an excessive growth of algae and harmful bacteria. This mechanism results in reduced oxygen levels in the water, thus affecting fish and other aquatic fauna leading to poor water quality. The tool uses two indicators to represent the impact of nutrients on marine and aquatic ecosystems. Firstly, the additional burden of the hatchery/farm on the environment is expressed in the tool as kilograms of N/P additionally excreted from the system per kg of juvenile/fish at hatchery/farm production.

Welcome | Import data | Carbon Footprint | Water footprint | N & P flows | Plastic | Energy | Losses | Results Summary | +

Ready Accessibility: Investigate Display Settings

Companies can input up to 100 different input sheets into the same dashboard:



Load Data

Import data

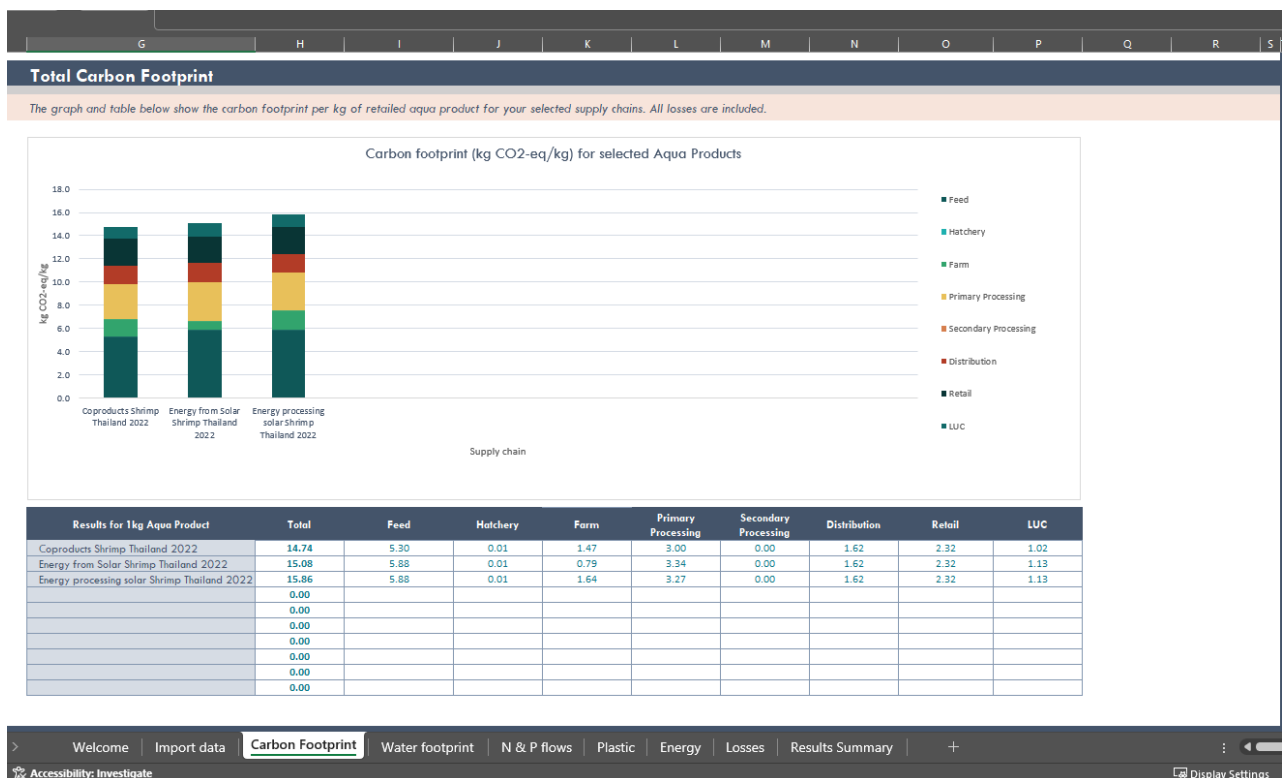
Please use this button to load your supply chain data.

This dashboard can support supply chain data from up to 100 different Aqua EFT input files.

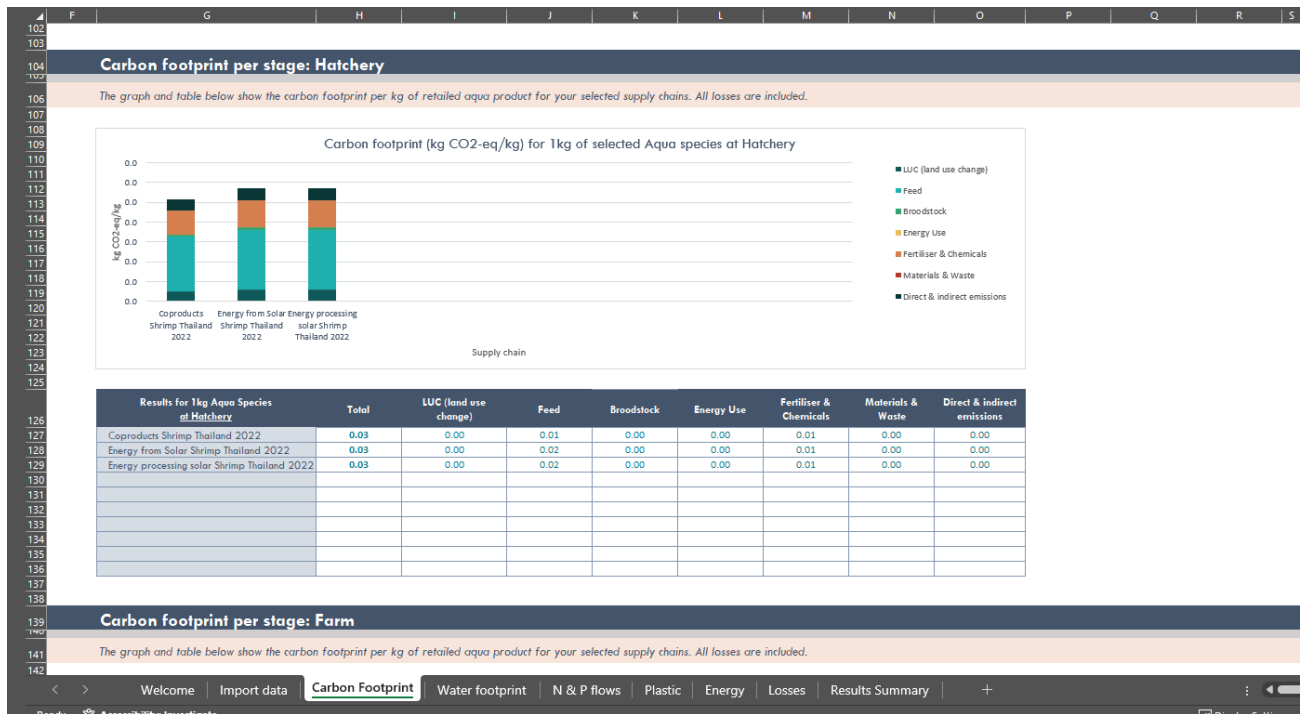
Welcome | **Import data** | Carbon Footprint | Water footprint | N & P flows | Plastic | Energy | Losses | Results Summary | +

Ready Accessibility: Investigate Display Settings

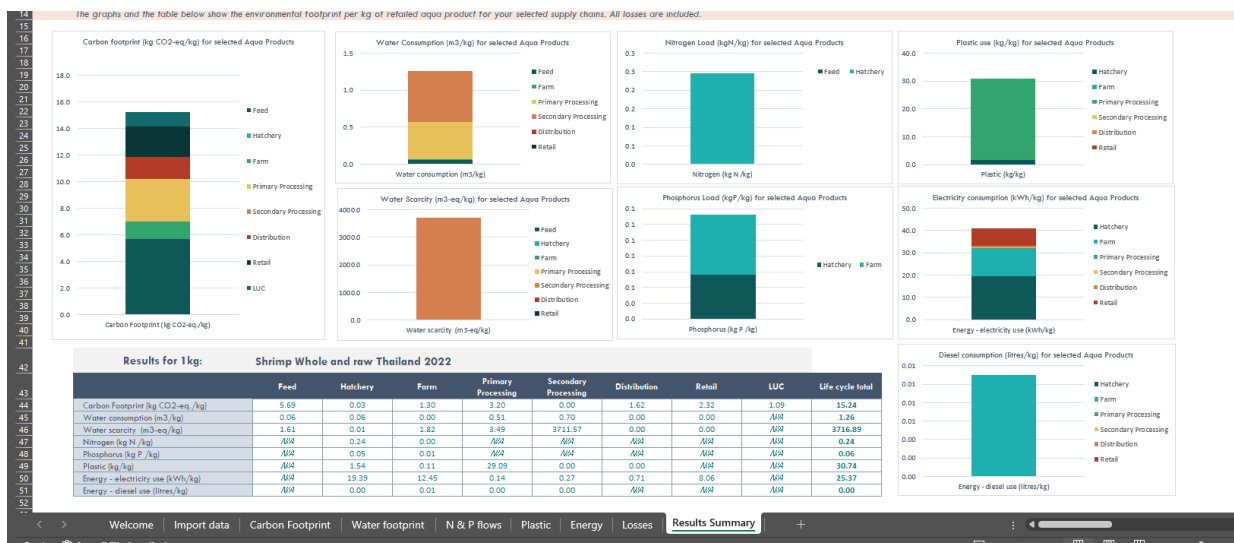
After selecting three (in this instance mock data) supply chains; companies can compare the footprints of the farms they selected:



Each environmental impact area includes a table and graph explaining the overall impact, separated out per stage, as well as a table and graph that is broken down per stage (e.g. at hatchery level)



Next to the topic specific dashboard and graphs, there is a summary tab that aggregates the information for all the impact categories; and splits it up per input sheet in a table.





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