

WATER FOOTPRINT FOR THE PRODUCTION OF CRUDE PALM OIL

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Water is one of the most important natural resources. In many regions, human well-being and ecosystem health are being seriously affected by changes in the global water cycle, caused largely by human activities. Although freshwater is a local resource, water scarcity is the leading threat of the global water crisis. To tackle this major environmental concern and in order to develop and standardise analytical tools to measure and assess freshwater use at regional and global scale; water footprint was introduced. Water footprint means the amount

of water that is needed to produce different goods and services. Water footprint accounts for the direct and indirect water used during the entire life cycle of the product, process or activity, encompassing extraction and processing raw materials, manufacturing, transportation and distribution, use, reuse, maintenance, recycling and final disposal. Just like carbon footprint, water footprint will identify the potential impacts caused by direct and indirect water consumption associated with the production of a product which in this case is for the production of crude palm oil (CPO) at the palm oil mill.



Figure 1. Water footprint of the production of crude palm oil (CPO).

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This water footprint is part of the recently completed cradle-to-gate water footprint study of the Malaysian oil palm industry starting from oil palm nursery to oil palm plantation up till the palm oil mill which was conducted by MPOB. The study was conducted following both the Water Footprint Network (WFN) methodology and the ISO standards 14046:2014.

MPOB is offering water footprint consulting service from cradle-to-gate starting from oil palm seedling, fresh fruit bunch and CPO production.

OBJECTIVES

- To quantify the water footprint of the production of CPO produced at the palm oil mill.
- To identify the hotspots where the most amount of (direct and indirect) water is consumed in the supply chain for the production of CPO.
- To evaluate opportunities and suggest mitigation measures to reduce the water footprint of the production of CPO, if any.
- To contribute to the sustainable development of the oil palm industry by identifying and addressing environmental hotspots related to water.

THE BENEFITS

- Compliance to sustainability criteria and regulations related to trade of goods.
- Water footprint is a recognised tool for gaining credibility on sustainability claims.
- Able to identify the areas that are contributing to the environmental impact which can be overcome by better utilisation of energy,

water and materials which will benefit the industry and to enable the industry to remain competitive in the global market.

TYPES OF SERVICES

- Setting of system boundary and functional unit for the study at the palm oil mill.
- Collection of inventory data for the stipulated system boundary to produce a Life Cycle Inventory (LCI).
- Calculation of water footprint for the production of CPO.
- Interpretation of results and suggestions of mitigation measures.
- Capacity building – a crash course on water footprinting using the LCA approach which will consist of a combination of lectures and case studies to get you started on water footprint.

SERVICES OFFERED

Services offered in Peninsular Malaysia, Sabah and Sarawak.

INDICATIVE COST

Depends on the type and extend of services required and subject to change. Estimation cost for gate-to-gate study (palm oil mill) is RM 12 000.

THE CLIENTS

The oil palm industry, scientific community, academics, government agencies, industries, *etc.*

For more information, kindly contact:

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