

WATER FOOTPRINT FOR KERNEL CRUSHING PLANTS

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MPOB INFORMATION SERIES • ISSN 1511-7871 • JULY 2017

MPOB TS No. 174

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. Today water scarcity is a serious issue facing our planet right along-side with climate change. Market barriers trends also have lately been geared towards environmental performance. With increasing attention on sustainable development, the environmental performance of palm oil production is now defining issues in trade. Recognising the importance of water, focus is now also given to water through water footprinting of products.

Life Cycle Assessment (LCA) is a method that is used to evaluate the potential environmental impacts for a product or process over its entire life cycle of a product or service. Water footprint is just a fraction of the whole LCA study. Water footprint

accounts for the impacts that are associated with the consumption and discharge of water as well as the availability of water for humans and ecosystem. Like carbon footprint, producers from all sectors have also started quantifying the water footprint of their products. This also includes the vegetable oil sector. Water footprint will identify the potential impacts caused by the direct and indirect water consumption associated with the production of a product which in this case is for the production of crude palm kernel oil (CPKO) at the kernel crushing plant.

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- oil palm plantation- palm oil mill - kernel crushing plants which was conducted by MPOB. The study was conducted following the ISO standards ISO 14046:2014: Environmental Management Water Footprint-Principles, Requirements and Guidelines.

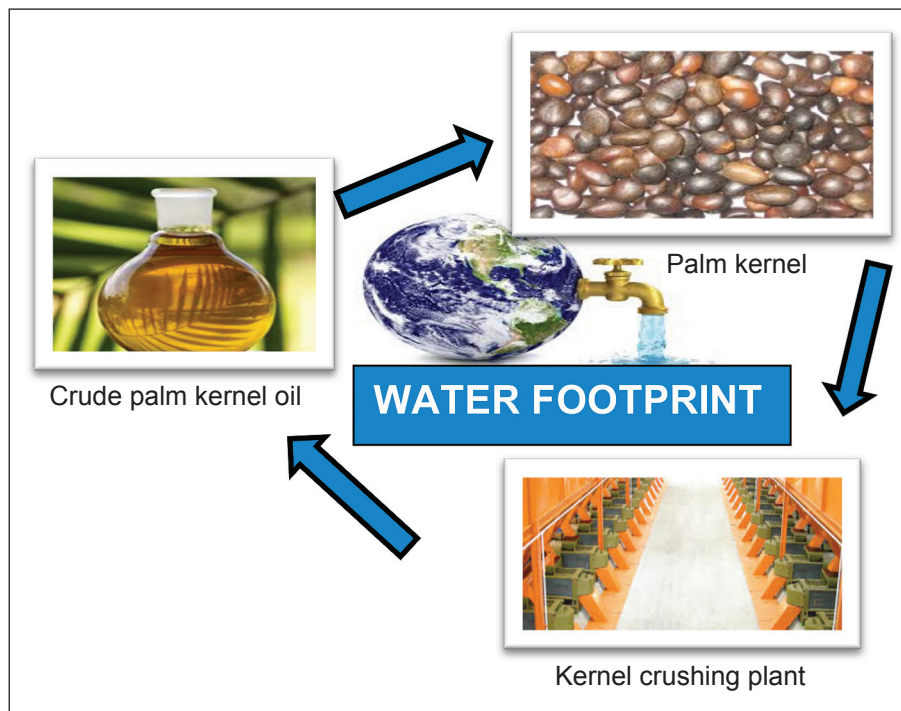


Figure 1. Water footprint for the production of crude palm kernel oil.

ISSN 1511-7871



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MPOB is offering water footprint consulting service from cradle -to-gate or even gate-to-gate.

OBJECTIVES

- To quantify the water footprint of the production of CPKO at the kernel crushing plants.
- To identify the hotspots where the most amount of (direct and indirect) water is consumed in the supply chain for the production of CPKO.
- To evaluate opportunities and suggest mitigation measures to reduce the water footprint of the production of CPKO, 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.
- Offers opportunities to defend and potentially improve the public and stakeholder perceptions of the Malaysian oil palm industry by demonstrating a proactive approach and by providing scientifically credible information.

TYPES OF SERVICES

- Setting of system boundary and functional unit for the study at the kernel crushing plant.
- Collection of inventory data for the stipulated system boundary to produce a Life Cycle Inventory (LCI).
- Calculation of water footprint for the production of CPKO and by-products.
- Interpretation of results and suggestions of mitigation measures.
- Capacity building – Training 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 IN

Peninsular Malaysia, Sabah and Sarawak and other oil palm producing countries.

INDICATIVE COST

Depends on the type and extend of services required and subject to change. Estimated cost for gate to gate study (kernel crushing plant) is RM 8000.

THE CLIENTS

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

For more information, kindly contact:

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