

COTTON
MADE IN
AFRICA

MINIMIZING THE FOOTPRINT

THE ENVIRONMENTAL BALANCE OF
COTTON MADE IN AFRICA

Photo credit: Paul Hahn for Aid by Trade Foundation,
Getty Images

SOCIAL ACTION AND ENVIRONMENTAL CONSERVATION


The **COTTON MADE IN AFRICA (CMIA)** initiative has been successfully campaigning for improvements in the living conditions of cotton farmers in Sub-Saharan Africa* since 2005.

The cotton is grown by smallholders in accordance with the Cotton made in Africa **SUSTAINABILITY STANDARDS**. The fields are irrigated solely by rainwater, for example, while the use of organic fertilizer made from compost is favored, and biological alternatives reduce the use of chemical pesticides. The crop is harvested by hand without using tractors and defoliants.

These measures all improve the **ENVIRONMENTAL TRACK RECORD** of Cotton made in Africa to such extent that it far surpasses that of cotton farmed in the conventional way. These were the findings of the Life Cycle Assessment (LCA) conducted by PE INTERNATIONAL on behalf of the Aid by Trade Foundation.

*The Sub-Saharan Africa region is comprised of 49 of the total 54 African countries, with the exception of the five predominantly Arab countries situated on the Mediterranean.





A RAW MATERIAL UNDER THE MICROSCOPE

Independent companies regularly verify that the sustainability criteria are being met in the Cotton made in Africa cultivation and ginning processes. Examples of exclusion criteria, and practices which are therefore strictly forbidden by CmiA, include artificial irrigation, the use of genetically modified seed, the deforestation of ancient woodland, and encroachment on conservation areas. Pesticides which are regulated by international conventions or classified by the World Health Organization (WHO) as extremely



or highly toxic are also excluded. In addition to the exclusion criteria, the standard also embraces development criteria. These measure the degree of development towards ecologically, socially and economically sustainable cotton cultivation. The smallholders are not required to meet all criteria immediately from the start but are expected to improve gradually over the course of time. The verification includes farm and gin level.



WATER – A PRECIOUS RESOURCE

Cotton cultivation can be highly water-intensive. A greater proportion of the global harvest is cultivated on artificially irrigated land. An important share of cotton traded on the world market is harvested in Sub-Saharan Africa where a **CAREFUL MANAGEMENT OF WATER AS A VITAL RESOURCE** is therefore key to local people's survival.

"BLUE", "GREEN", AND "GRAY" WATER

Consumption of 'blue water' was investigated as part of the Life Cycle Assessment (LCA) study. This refers to groundwater as well as fresh water from lakes and rivers, for example. This differs from 'green water' i.e. rainwater, and 'gray water' i.e. waste and/or polluted water. The Water Stress Index was applied to calculate water consumption: This determines the relationship between water requirements and the availability of self-replenishing fresh water. Water consumption in water-poor regions was therefore weighted more strongly than in water-rich regions.

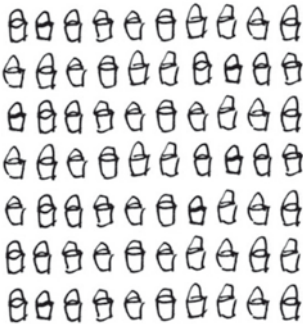


COTTON
MADE IN
AFRICA



SAVINGS THAT SAVE LIVES

In contrast to irrigation methods which are commonplace in many parts of the world, CmiA cotton is grown solely with the use of rainwater. This means that CmiA cotton uses **ZERO CONSUMPTION OF FRESH WATER**, therefore every kilogram (2.2lb) of cotton fiber represents a saving of 2,100 liters (554 gallons) of water in comparison with the global average.



WATER SAVINGS

In terms of the quantity of cotton required to manufacture a t-shirt, Cotton made in Africa already saves around 700 liters (= approx. 184 US gallons) of water thanks to the environmentally sustainable cultivation of its raw material.

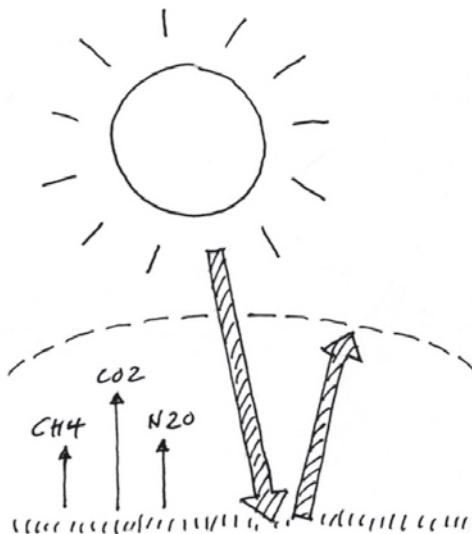


GREENHOUSE GASES – A THREAT TO OUR CLIMATE

Although cotton is a natural product, its cultivation, harvest, and processing can have negative effects on our climate.

CONVENTIONAL CULTIVATION IN PARTICULAR CAUSES THE RELEASE OF LARGE QUANTITIES OF GREENHOUSE GASES.

These gas molecules trap ever-increasing amounts of solar energy within the atmosphere and prevent it from escaping. The rising concentration of greenhouse gases thus leads to a rise in the temperature of our atmosphere.



INCREASED GLOBAL WARMING

Greenhouse gases are released in cotton cultivation through the use of fertilizers, certain tillage methods and the use of agricultural machinery, such as tractors. Besides carbon dioxide (CO₂) these emissions also include nitrous oxide (N₂O), and methane (CH₄).





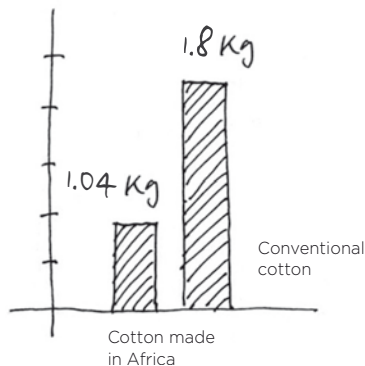
A REDUCTION WITH A MAJOR IMPACT

A significant reduction in greenhouse gas emissions is brought about by the production of **NATURAL FERTILIZER**, which is facilitated by trench composting, and by the fact that CmiA cotton is **HARVESTED ENTIRELY BY HAND**, eliminating emissions from gasoline engines or diesel-powered agricultural machinery.

By way of comparison, the use of tractors alone accounts for a third of the greenhouse gas emissions in conventional cotton farming.

GREENHOUSE GAS EMISSION

Cotton made in Africa causes 1.04 kilograms of greenhouse gases per kilogram of cotton lint. Conventional cotton causes 1.8 kilograms of these emissions per kilogram of lint and thus up to 40% more greenhouse gases in comparison to CmiA cotton according to PE INTERNATIONAL.





CmiA ORGANIC – GOOD FOR PEOPLE AND NATURE

The **CMIA ORGANIC STANDARD** is another member of the family of standards of the Aid by Trade Foundation. It builds on the existing organic standards set out in Council Regulation (EC) No 834/2007 and the Global Organic Textile Standard (GOTS) but it also includes the social and economic cultivation criteria of Cotton made in Africa.

In this way CmiA Organic not only adds **ECOLOGICAL VALUE** in many regions of Africa but the inclusion of social and economic components in the standard also helps to reduce poverty and improve food security for organic cotton farmers in Africa and to boost the competitiveness of organic cotton sourced from Africa.





AID BY TRADE FOUNDATION

The Aid by Trade Foundation was created in 2005 by Dr. Michael Otto, an entrepreneur from Hamburg, Germany and Chairman of the Otto Group's Supervisory Board. Since its inception, it has been an independent, non-profit organization. The foundation's goal is to use trade to help people help themselves, thereby supporting the preservation of vital natural resources and securing the livelihoods of future generations. The Aid by Trade Foundation is the umbrella organization of Cotton made in Africa and realizes its goals through this initiative.

Aid by Trade Foundation
Bramfelder Chaussee 105 · 22177 Hamburg · Germany
Tel. +49 40 6461-7971 · E-Mail: info@abt-foundation.org

www.cottonmadeinafrica.org