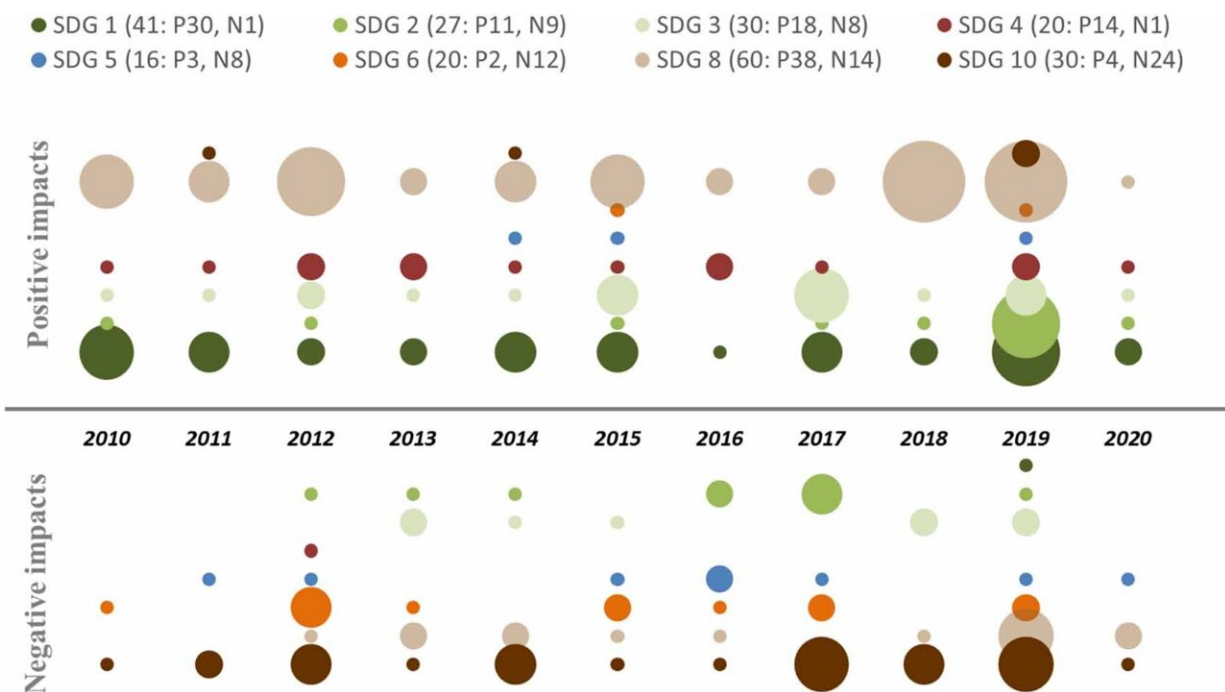


Palm oil's implications on the United Nations Sustainable Development Goals

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Distribution of studies according to year of publication and impact for each SDG: positive (above the line) or negative (below the line). For each SDG, the total number of studies as well as the selected number of studies reporting markedly positive (P) or markedly negative (N) effect are reported in brackets. Spheres of the same color refer to the same SDG. The size of the sphere is proportional to the number of studies. Distribution along the x-axis indicates the year of publication of the studies analyzed. Positioning along the y-axis is merely an expedient to minimize the overlapping of the spheres and does not indicate a greater or lesser positive or negative impact. Credit: *Environmental Research Letters* (2022). DOI: 10.1088/1748-9326/ac6e77

From the second half of the twentieth century onwards, there has been an exponential increase in the production of palm oil, which has proven to be very versatile; so much so that it has become a common ingredient in many food products, such as margarine, biscuits, bread, cakes, chocolate, ice cream and non-food products such as detergents and cosmetics. Palm oil has also historically been used as a lubricant for machinery and its use as a biofuel in the energy sector has been growing particularly rapidly.

Today, [palm oil](#) is at the same time the world's most-used vegetable oil—accounting for more than 35% of all vegetable oil production—and the most criticized: the issue of controversy that led to palm oil being at the center of the public and scientific debate in the last years is its [environmental impact](#) and particularly the link between its cultivation and the reduction in tropical forest areas over the past decades.

Albeit that the concept of "sustainability" is conceived of in terms of three dimensions—environmental, economic and social—usually the debate on palm oil focuses mostly on its effects on the environment and ecosystem services. A CMCC study published in *Environmental Research Letters* contributes to a more informed and comprehensive debate on palm oil, considering in particular the less investigated and discussed socio-economic aspects of its production.

Researchers conducted a systematic review of the relevant existing literature that has investigated the socio-economic implications of palm oil.

The review, involving 82 [scientific publications](#) on the topic published in the last 10 years, addresses for the first time the link with the United Nations Sustainable Development Goals (SDGs).

Results show that palm oil plays a crucial role in boosting the economy

and livelihoods of local communities in many developing producer countries, substantially contributing to poverty reduction and to food security.

However, the expansion of oil palm plantations has, in some cases, exacerbated gender and [social inequalities](#), the latter chiefly due to conflicts arising over access to land and ownership issues between local communities and the companies managing the vast plantation areas. Furthermore, according to the existing literature, the [economic growth](#) generated by the palm oil production chain is not always accompanied by decent working conditions: the work tends to be heavy and strenuous, harmful chemicals are used, workers are not protected, and the wages are poor.

"On a macroeconomic level, the economic growth associated with oil palm cultivation is factual," explains Matteo Bellotta of the CMCC Foundation and an author of the study.

"But in specific contexts, the shift to this type of cultivation may not always represent a benefit for farmers. For example, for those who previously used subsistence farming, growing different food crops to meet their own needs, the switch to monoculture increased uncertainty and dependence on the market. On the other hand, those who did not practice [subsistence farming](#) or were already cultivating under monoculture, have generally improved their economic condition by growing oil palm."

A major aspect emerging from the analysis is that the achievement of some SDGs (increased quality education (SDG 4), better health and well-being (SDG 3), and access to clean water and sanitation (SDG 6)) is often facilitated by the implementation of sustainable palm oil production practices, enhanced by the application of sustainability certification schemes.

Currently, 19% of the global production of palm oil worldwide are certified as sustainable. Indeed, the increasing demand for palm oil from the international market, together with the growing [public attention](#) as to its impact on the environment and society, has led to the development of a series of certification schemes and protocols, which have been expanded over the years to include both environmental and socio-economic principles and criteria for the sustainable production of palm oil.

"In general, the number of published studies on palm oil evaluating the effects of sustainability certifications is increasing," underlines Maria Vincenza Chiriaco, researcher at the CMCC Foundation and one of the authors of the study.

"In fact, among the scientific publications considered in our study, there has been an increase in recent years in the number of studies reporting positive socio-economic aspects related to palm oil production. This could plausibly be related to the increase in the volume of certified sustainable palm oil, which according to RSPO (Roundtable on Sustainable Palm Oil) data today represents 19% of total production."

More information: Maria Vincenza Chiriaco et al, Palm oil's contribution to the United Nations sustainable development goals: outcomes of a review of socio-economic aspects, *Environmental Research Letters* (2022). [DOI: 10.1088/1748-9326/ac6e77](https://doi.org/10.1088/1748-9326/ac6e77)

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