

The socio-economic aspects related to palm oil production and achieving the sustainable development goals

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Palm oil and socio-economic impacts

Review justification: the socio-economic impacts of palm oil production are little-known

Review method: analysis of existing literature of the last 10 years on the socio-economic implications of palm oil

Review objective: analyze the effects and/or contributions of palm oil production (sustainable and conventional) with regard to the achievement of the United Nations Sustainable Development Goals (**UN-SDGs**)



Sustainable production schemes

Increasing attention from public opinion and the scientific community

Actors in the supply chain start a more sustainable production

Roundtable on Sustainable Palm Oil (RSPO)	IS is a non-profit, multi-stakeholder initiative launched in 2004 with the aim of promoting the growth and use of sustainable palm oil products through credible global standards and the involvement of the stakeholders themselves, including producers, dealers, consumers of the goods produced, retailers, banks and investors, environmental and social non-governmental organisations. The global certification standard for sustainable palm oil production, RSPO, provides for operations in the field and supply chain management in compliance with regulations - with low environmental impact - that are economically and socially advantageous to the workers and local communities. Updated in 2018, the RSPO Principles & Criteria are based on 7 principles and 40 criteria (with respective indicators and guidelines) organised into three impact areas (Prosperity, People and Planet).
Indonesian Sustainable Palm Oil (ISPO)	Mandatory Indonesian certification standard for the production of sustainable palm oil, drawn up by the Government of Indonesia in 2011. ISPO criteria are aligned with existing legal and regulatory requirements in Indonesia; this is why it is also referred to as the 'standard of legality' for palm oil. ISPO provides for the application of 7 Principles, 28 Criteria and 15 sub-criteria, including a plantation licensing and management system, compliance with technical guidelines for cultivation and processing, environmental management and monitoring, respect for the conditions of the workers and local communities, the strengthening of economic activities in the communities and the development of a sustainable economy.
Malaysian Sustainable Palm Oil (MSPO)	Mandatory Malaysian certification standard for sustainable palm oil production, drawn up by the Government of Malaysia in 2013. The MSPO criteria are aligned with existing legal and regulatory requirements in Malaysia. MSPO contains 7 principles, each with specific criteria and indicators, based on the 3 pillars of sustainability, which guarantee economically viable, socially acceptable and environmentally friendly palm oil production.
Palm Oil Innovation Group (POIG)	A 2013 multi-stakeholder initiative that builds on the RSPO standard and promotes the adoption by key players throughout the palm oil production chain of more stringent and innovative sustainable and responsible practices in terms of environmental responsibility, partnership with local communities, protection of workers' rights and corporate and product integrity.
Rainforest Alliance: Sustainable Agriculture Standard (SAS)	Certification programme for producers who engage in sustainable agricultural production and responsible supply chains, including that of palm oil. It is based on 5 principles, with respective criteria, that provide for the drafting and application of a business and supply chain management plan aimed at preserving biodiversity and natural resources, improving the livelihoods and well-being of workers and their families, including appropriate working conditions, wages, healthcare, safety and the protection of relations with local communities.
Sustainable Agriculture Network (SAN)	International network of non-governmental organisations (NGOs) focused on helping farmers, workers and rural communities pursue their sustainability agenda in a practical and efficient manner. The network works alongside Rainforest Alliance, managing a global system to certify the sustainable agricultural production of responsible farm businesses and agricultural supply chains, including that of palm oil.
Roundtable on Sustainable Biomaterials (RSB)	Global, independent multi-stakeholder organisation set up in 2011 with the aim of encouraging the sustainable production of biofuels (including biodiesel from oil palm processing) and other biomaterials through sustainable practices, certification and cooperation partnerships. It is based on the application of a standard with 12 fundamental principles, each of which is supported by a variable number of criteria, requirements and indicators, covering 4 areas (legal, social, environment and management).
High Carbon Stocks Approach (HCS)	An approach designed to enable farm businesses in various sectors, including the oil palm sector, to fulfil their commitments against deforestation, both at the production stage in the field, and throughout the supply chain. It is not a stand-alone certification scheme and most palm oil companies that have applied the HCS approach have also subscribed to RSPO.
International Standard for Carbon Certification (ISCC)	Certification system oriented towards the reduction of greenhouse gas emissions, sustainable land use, protection of the biosphere and social sustainability, through the application of a standard all along the supply chain in 3 key areas: energy, industrial applications, food and feed.

Palm oil supply chain sustainability certification schemes and protocols



The 17 Sustainable Development Goals

SDGs

The 2030 Agenda for Sustainable Development is the plan for peace and prosperity for people and the planet to be achieved through 17 SDGs that aim to eliminate poverty and hunger, improve health and education, reduce inequalities and stimulate economic growth by addressing climate change and working to preserve oceans and forests



The 8 Sustainable Development Goals selected

The selected SDGs and the review

Analyzed 82 publications, mainly published since 2010

The 82 publications were reviewed and put in relation with the 8 selected SDGs



Methodology



Use of Google Scholar

Keywords and combinations used:

- ✓ *“Palm oil production”*
- ✓ *“Palm oil cultivation”*
- ✓ *“Social impact”,*
- ✓ *“Economic impact”*
- ✓ *“Sustainability of palm oil production”*
- ✓ *“Sustainable development goals”*

Publications on palm oil socio-economic impacts

82 Selected publications since 2010



Publications Analysis

Type

- ✓ Scientific articles (57)
- ✓ Reviews (9)
- ✓ Technical documents (16)

Production method

- ✓ Certified palm oil (18)
- ✓ Sustainable and conventional production (12)
- ✓ Conventional or unspecified production (52)

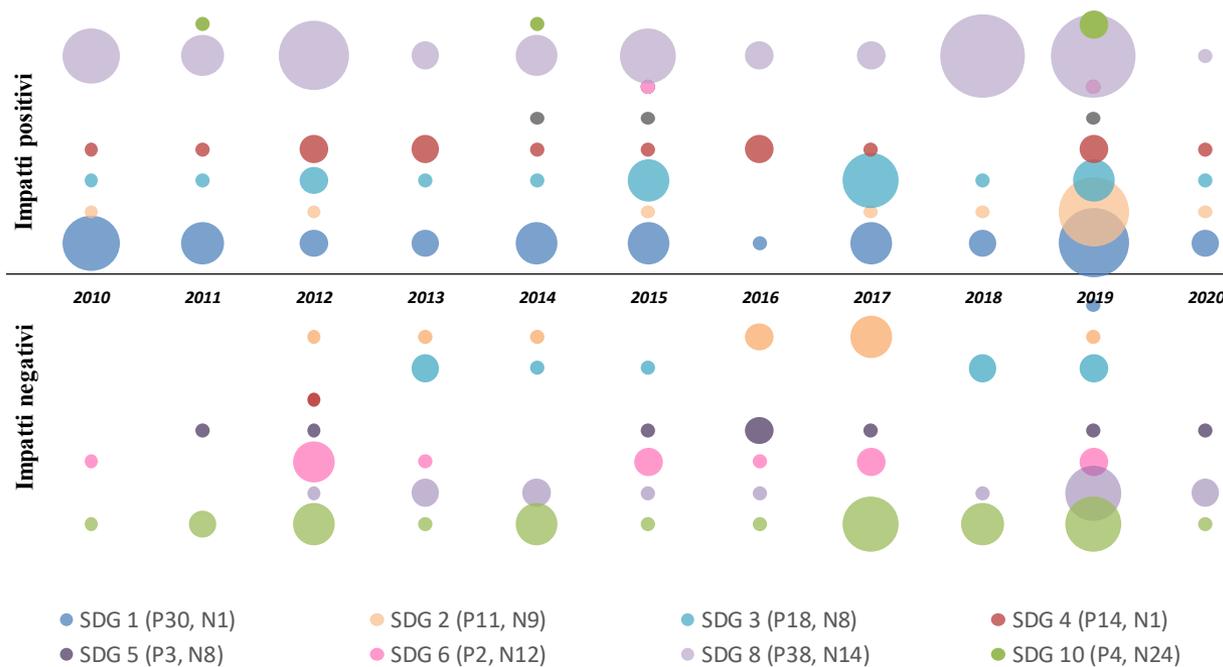
Production area

- ✓ Southeast Asia, especially Indonesia and Malaysia (55)
- ✓ Africa (12)
- ✓ Latin America (4)
- ✓ Global (11)



Temporal and numerical distribution of publications reporting positive or negative effects

Selection of the 82 studies analyzed: the graph shows only the studies that report an openly positive or openly negative impact for each SDG



- Number of studies considered in relation to the reported positive (P) or negative (N) effect
- Spheres of the same color refer to the same SDG
- The size of the sphere is proportional to the publications number
- Distribution along the abscissa axis indicates the year of publication of the analyzed studies.
- Arrangement along the ordinate axis does not express the greater or lesser impact P or N



Chart main results

✓ The topics related to SDG1, SDG2, SDG3, SDG8, SDG10 are the most addressed in the analyzed publications

✓ The spheres above the abscissa are larger, indicating a prevalence of studies reporting openly positive impacts

✓ This trend seems to increase in particular in recent years, with a significant concentration in 2019

✓ The greatest amount of positive impacts on socio-economic indicators is detected in the most recent publications which, it is assumed, could refer to sustainable production



Temporal and numerical distribution selection of publications reporting sustainable productions

30 publications analyzed:

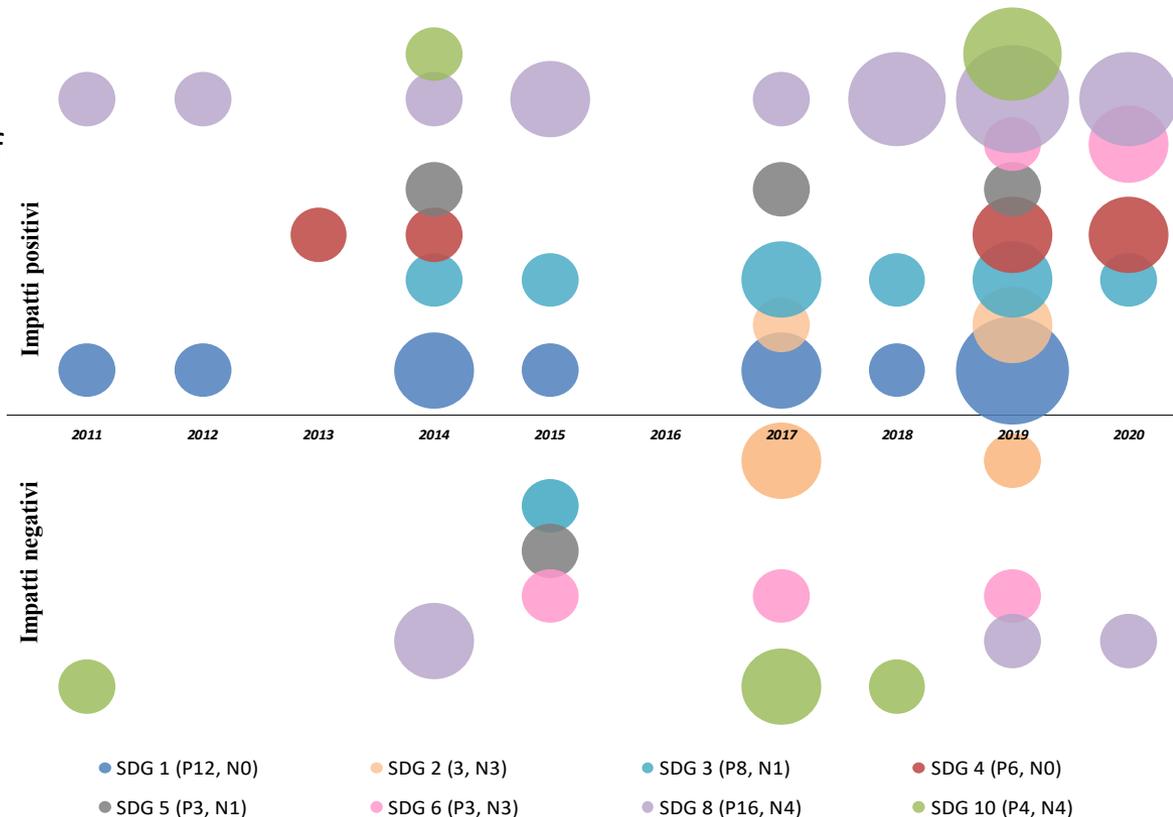
✓ 12: impact of sustainable production of palm oil on socio-economic aspects

✓ 18: impacts of sustainable and conventional production of palm oil on socio-economic aspects

Among the studies that consider sustainable production were selected those that report an impact :

✓ openly positive (P)

✓ openly negative (N)



- Spheres of the same color refer to the same SDG
- The size of the sphere is proportional to the number of publications
- Distribution along the abscissa axis indicates the year of publication
- Arrangement along the ordinate axis does not express the greater or lesser impact P or N



Chart main results

✓ The topics related to SDG1, SDG2, SDG3, SDG8, SDG10 are the most addressed in the publications analyzed

✓ The most recent publications report positive effects of sustainable production, especially in 2019 and 2020

✓ This trend would confirm what has been observed in relation to the increase in positive effects linked to the increase in the incidence of sustainable production and studies that evaluate its impacts.



Main considerations on SDG 1 - No poverty

- ✓ For small farmers, oil palm is an important source of income (half studies)
- ✓ Oil palm contributes to the socio-economic development of local communities
- ✓ The cultivation of oil palm alleviates the poverty of local communities, reducing the rate compared to the national average of the respective countries
- ✓ Degree of poverty reduction is influenced by the type of production and the basic socio-economic conditions of the local communities that grow oil palm
- ✓ The intercropping of oil palm with other species promotes greater economic and social growth for smallholders
- ✓ Certification schemes slow down the growth of poverty rates more
- ✓ Sustainable certification schemes are too costly for small farmers



Main considerations on SDG 2 – Zero hunger

- ✓ Improvement of food security for small farmers' families thanks to higher earnings
- ✓ The increase in oil palm-related income does not always lead to an improvement in food security levels which depends on many other factors such as the availability of food or the efficiency of markets.
- ✓ Sustainable oil palm crops intercropped with other species ensure better access to food and mitigate potential threats to food security
- ✓ Threat to food security in particular for communities heavily dependent on subsistence agriculture and which have converted agricultural areas into oil palm monocultures
- ✓ Risk of competition between land uses and land grabbing



Main considerations on SDG 3 – Good health and wellbeing

- ✓ Improvement of health and wellbeing (linked to the positive contribution on SDG 1 and SDG 2)
- ✓ Well-being in some rural communities depends on the basic socio-economic conditions that existed before the development of oil palm plantations
- ✓ Greater ability to access health services thanks to greater economic means
- ✓ Farmers linked to large producing companies benefit a better access to care due to the construction of health facilities and infrastructure for workers
- ✓ The Improvements are greater when sustainable production schemes are applied (specific principles and criteria for the protection of working conditions)
- ✓ Negative effects on health of workers involved in the conventional palm oil production chain (no protection for workers, harsh working conditions, use of dangerous chemicals, accidents at work)



Main considerations on SDG 4 – Quality education

- ✓ These impacts were rarely analyzed by the scientific literature
- ✓ Increase of school infrastructures, often associated with the development of plantations
- ✓ Sustainable palm oil certification schemes are identified as a possibility for the improvement of quality education
- ✓ Need to improve the level of literacy and professional training of plantation workers to enable the implementation of innovations, technologies and the application of sustainable certification schemes
- ✓ Improvement of children's access to education takes place as partial compensation provided by palm oil companies to the local population



Main considerations on SDG 5 – Gender equality

- ✓ Few publications and few improvements highlighted in gender conditions in relation to the palm oil supply chain
- ✓ Low involvement of women in the entire palm oil supply chain (occasional activities such as weeding or fertilizer application, with precarious conditions and lower wages)
- ✓ Difficulty in participating in the decision-making process for obtaining and managing oil palm plots
- ✓ Greater vulnerability to health due working conditions
- ✓ Restricting gender labor rights such as maternity leave and breastfeeding breaks
- ✓ Income and standard of living improvements for women involved in palm oil production in Africa and South America
- ✓ Sustainable certification schemes identified as a possibility for improving the condition of women



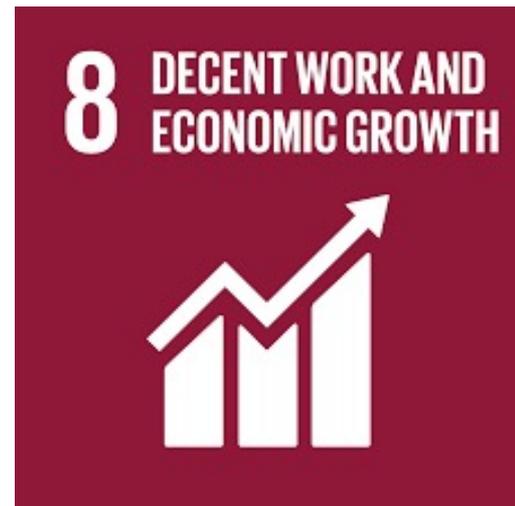
Main considerations on SDG 6 – Clean water and sanitation

- ✓ Few publications analyze the effects of palm oil production on water quality and sanitation (SDG 6)
- ✓ Negative effects on water and sanitation were reported due to the use of fertilizers and pesticides
- ✓ Palm Oil Mill Effluent (POME) is also a water-polluting discharge, degrading the aquatic ecosystems
- ✓ The expansion of the oil palm can decrease the availability of water for subsistence agriculture
- ✓ An association was reported between the expansion of the oil palm and the negative impact on the availability of drinking water for local populations
- ✓ Sustainable production provides, compared to the business-as-usual scenario, an integrated management and the use of technologies for water collection and storage and waste treatment, including for biogas
- ✓ The main certification schemes (RSPO, ISCC, SAN, ISPO) present criteria to protect water rights and shared use



Main considerations on SDG 8 – Decent work and economic growth

- ✓ Decent work and economic growth topic is widely covered in publications
- ✓ The contribution to economic growth of countries of palm oil production has been recognized, providing employment along the entire value chain
- ✓ Role of the oil palm in improving infrastructure and relaunching the local economy in the main producing regions, particularly in Southeast Asia
- ✓ Sustainable certification schemes identified as a possibility for improving working conditions and fair wages.
- ✓ Sustainable certification schemes identified as a possibility for improving the provision of basic social services for workers and families (strong link between SDG 8 and others)
- ✓ The publications generally report working conditions that are not always suitable: few protections, harsh working conditions, use of dangerous chemicals, high frequency of accidents, instability and seasonality of work and low wages

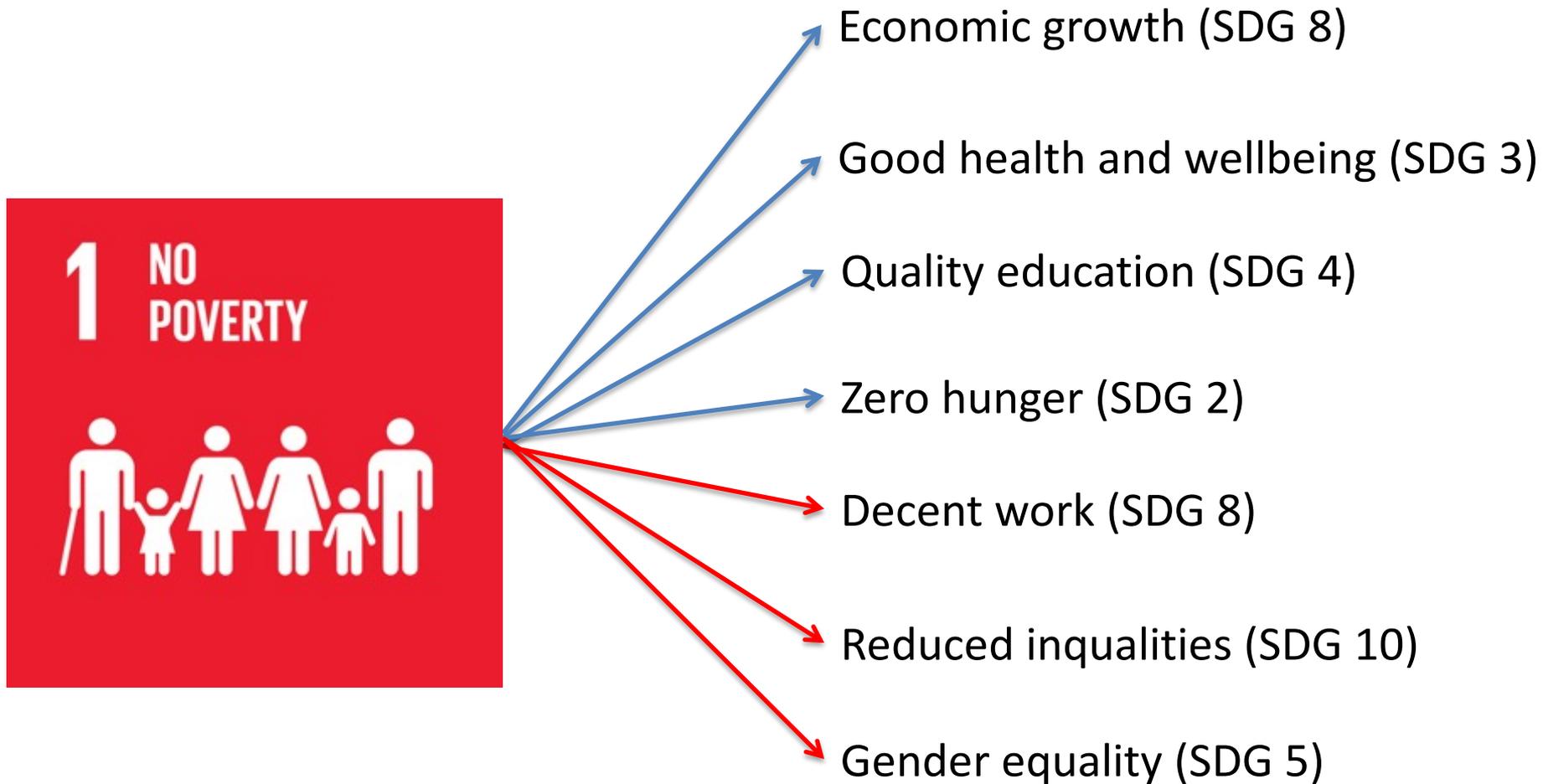


Main considerations on SDG 10 – Reduced inequalities

- ✓ Topic with reference to specific social conflicts: men VS women, smallholders VS big companies, local communities VS companies
- ✓ Price fluctuations of palm oil have a particular impact on small producers
- ✓ Disparity between smallholders and big producers in access to capital
- ✓ Increased conflicts between indigenous peoples and companies especially on land ownership
- ✓ Sustainable certification schemes identified as a possibility to balance the distribution of benefits



Interlinkages between SDGs



Interlinkages between sustainable production and SDGs

Sustainable production

Co-benefit

Good health and wellbeing (SDG 3)

Quality education (SDG 4)

Clean water and sanitation (SDG 6)



Final considerations on the OdP and SDGs

- ✓ Supports the economy and livelihoods of local communities in many developing producing countries
- ✓ Contributes to the reduction of poverty rates
- ✓ Improves physical, social and economic access to sufficient, safe and nutritious food

Critical issues:

- ✓ conflicts relating to land access and ownership
- ✓ gender inequalities
- ✓ decent working conditions



Sustainable certification schemes are identified as a possibility for improving the socio-economic impacts of the palm oil supply chain

Main findings emerged by the analysis must be contextualized to the countries in which the studies were conducted



Grazie



https://www.cmcc.it/lectures_conferences/145177-2



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Gli aspetti socio-economici connessi
alla produzione di olio di palma
e il raggiungimento degli obiettivi
di sviluppo sostenibile