

# Geo-information for sustainability assessments

Iris van Duren, 2017

# Earlier this year



ISCC System  
What is the ISCC System?

Certification Process  
How can I get a certificate?

Certificate Holders  
Who holds an ISCC certificate?

Stakeholders  
ISCC Association



## 7th ISCC Global Sustainability Conference and ISCC e.V. General Assembly

Wednesday, 15 February 2017 in Brussels

After the great success of the ISCC Global Sustainability Conferences in previous years, ISCC is very much looking forward to an illuminating upcoming conference. This important annual ISCC Conference is open to all interested parties and has been established as an important platform for industry, trade, NGOs, associations, research and authorities to present and discuss recent developments, challenges, opportunities and emerging trends in sustainability and sustainability certification.

The focus of this conference will be on the implementation of the Paris COP21 Agreement - Decarbonization and Sustainability

The conference will cover three main topics:

- ▶ Policy and Regulation
- ▶ EU Member States: Renewable Energy in Transport until 2020 and Beyond
- ▶ Innovative Solutions for Practical Implementation

High-ranking decision-makers from the European Commission and national authorities, industry and associations will approach the topics from different angles.

The attendance is free of charge.

General Assembly of the ISCC Association
Organisation
Statutes of the ISCC Association
Regional Stakeholder Dialogue
Membership list
Become a member



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08th February 2017

Institute of Computer Science, University of Osnabrueck, Germany  
Building 50, Room E09, Wachsbleiche 27, 49090 Osnabrueck

09:30 - 10:00	Registration (Room 32/109)
10:00 - 10:30	Opening & introduction "Contributions of remote sensing to support palm oil sustainability" by Dr. Christine Pohl, UOS
11:00 - 11:30	"The role of geo-information in palm oil research" by Dr. Iris van Duren, ITC
11:30 - 12:00	"International Sustainability and Carbon Certification and Global Risk Assessment Services in the context of palm oil" by Mohammad Abdel Razeq, GRAS/ISCC
12:00 - 12:30	"Monitoring smallholder oil palm plantations: A multi-sensor approach" by Ditte Trojborg, ITC
12:30 - 14:00	Lunch, Mensa UOS
14:00 - 14:30	"Detection of growth anomalies in oil palm plantations using high resolution optical and SAR remote sensing data" by Nils Schön, UOS
14:30 - 15:00	"Oil palm plantation mapping and monitoring using high spatial resolution remote sensing" by André Baldauf, UOS
15:00 - 15:30	Workshop Wrap-up - research and strategies for the future
15:30 - 16:00	Coffee Break
16:00 - 18:00	<b>GI Forum Presentations (Room 32/109)</b> 1. M. A. Razeq: "Mapping and monitoring zero-deforestation from policy to field" and "Detecting deforestation and grassland conversion for Sustainability Stockholders" 2. I. van Duren: "Geo Information in natural resources management including energy efficiency of canola derived biofuel in Europe"
> 18:00	Dinner

**There is no registration fee. For planning purposes it is necessary to register in advance by email.**

Contact & Registration: Dr. Christine Pohl  
christine.pohl@uos.de / Tel. +49 541 969 7216  
Institute of Computer Science, UOS

# Palm oil production and sustainability certification

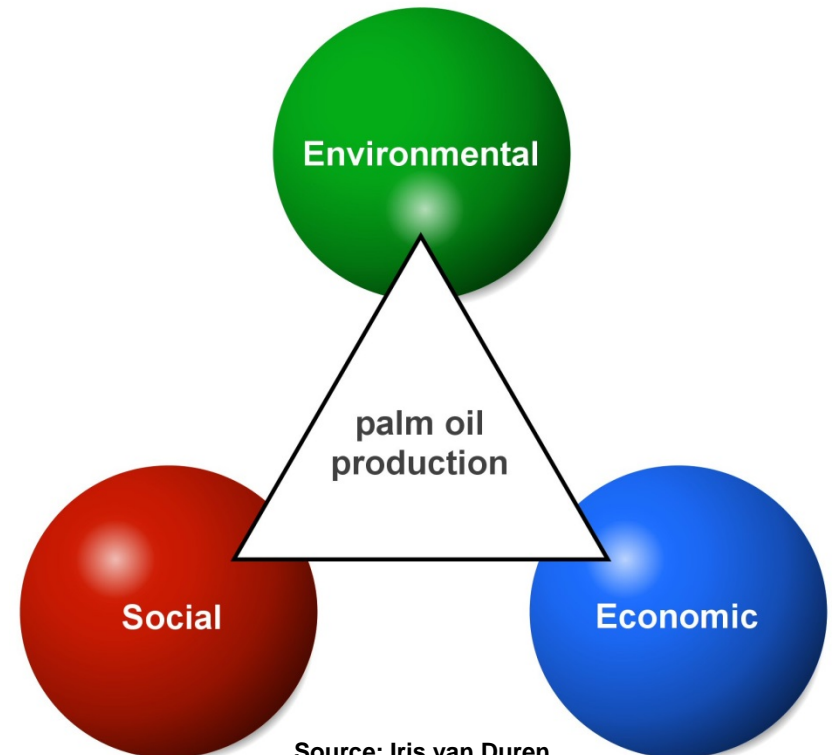
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What do we need to produce sustainably?

Land with suitable properties and a suitable climate

People and acceptance/ support by people

Finances, investments and profits



Source: Iris van Duren

# Palm oil production and sustainability certification

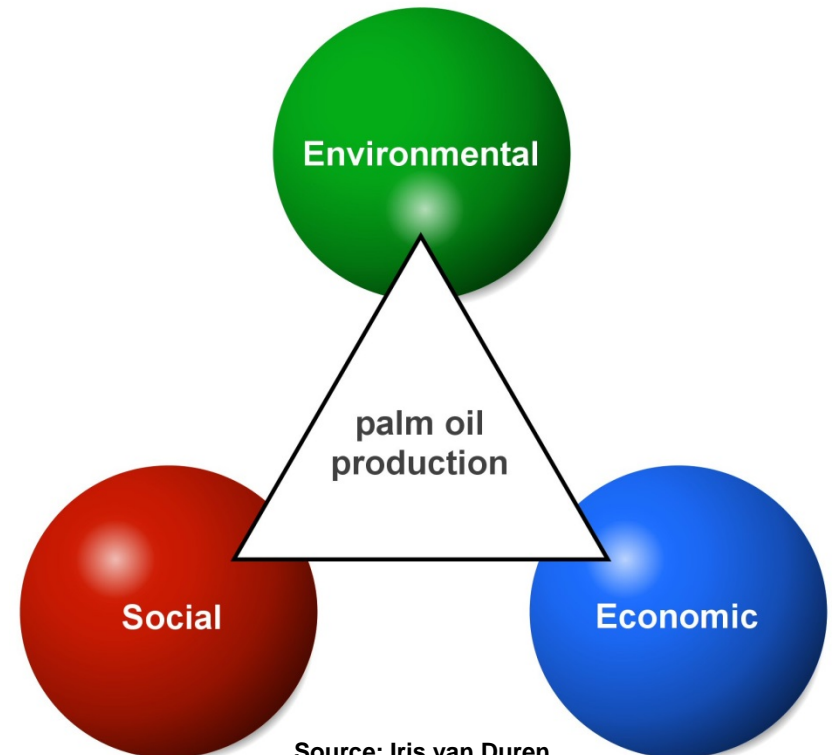
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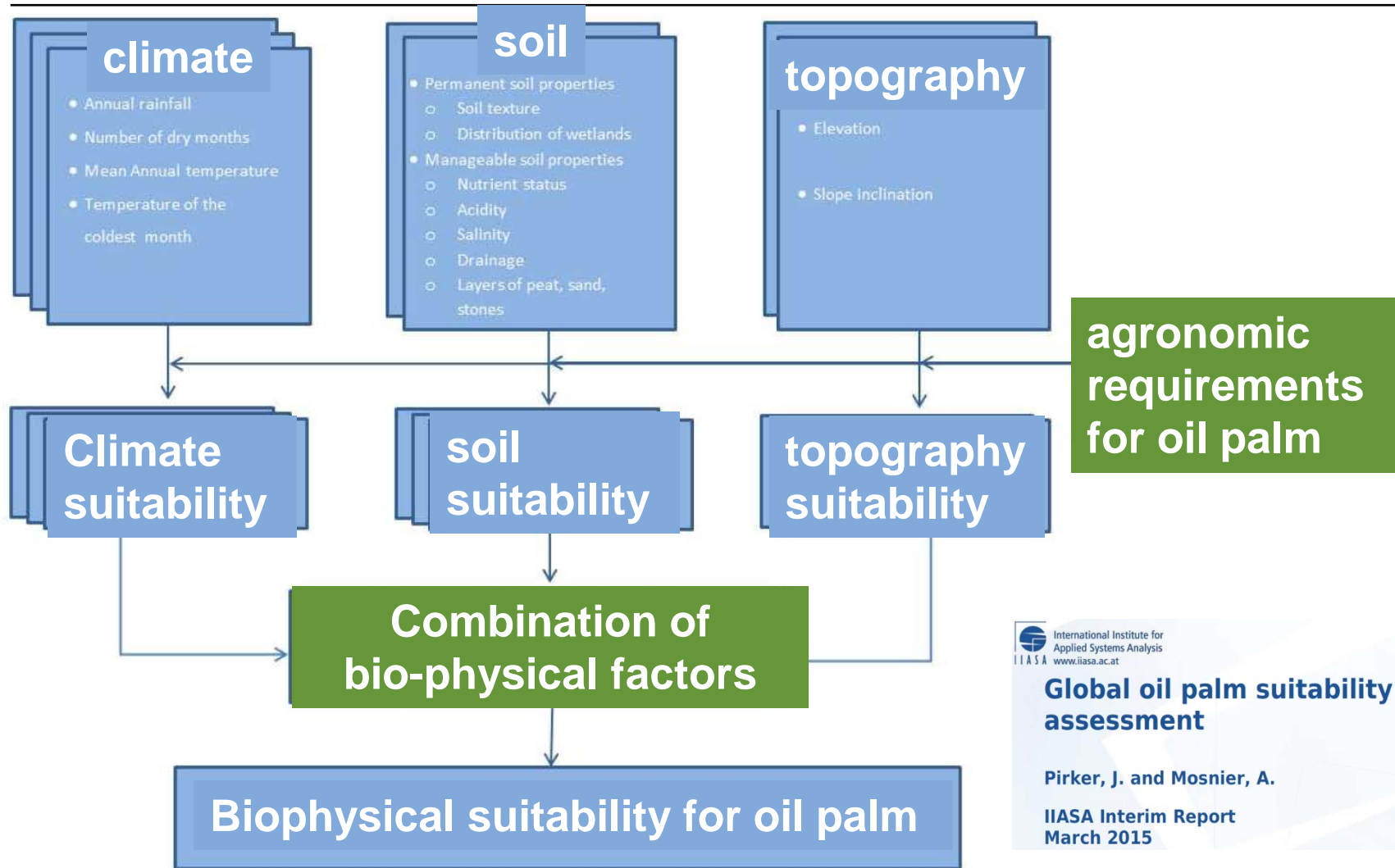
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# Palm oil production and sustainability certification



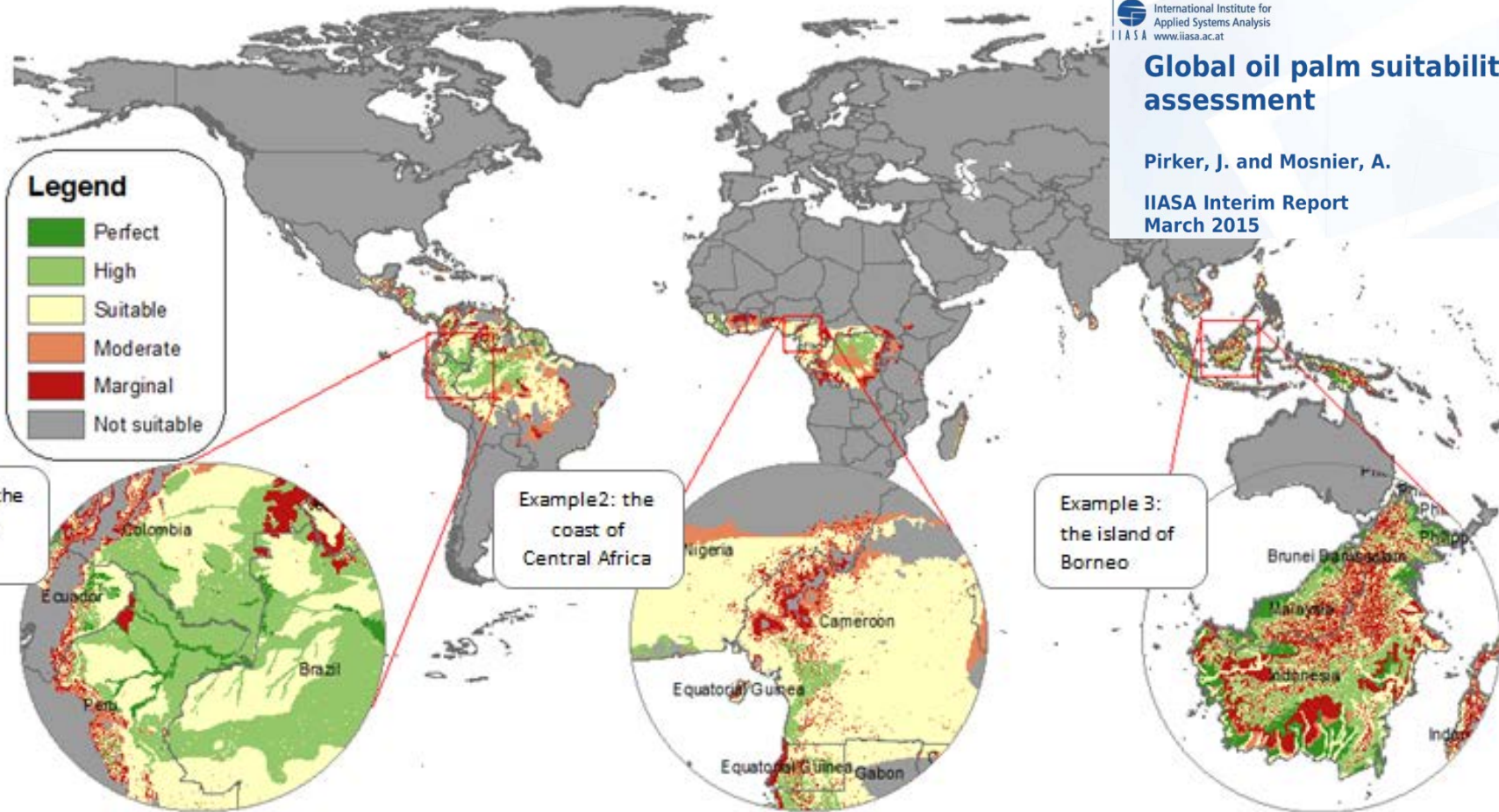
# Palm oil production and sustainability certification

International Institute for Applied Systems Analysis  
IIASA  
www.iiasa.ac.at

## Global oil palm suitability assessment

Pirker, J. and Mosnier, A.

IIASA Interim Report  
March 2015



# Palm oil production and sustainability certification

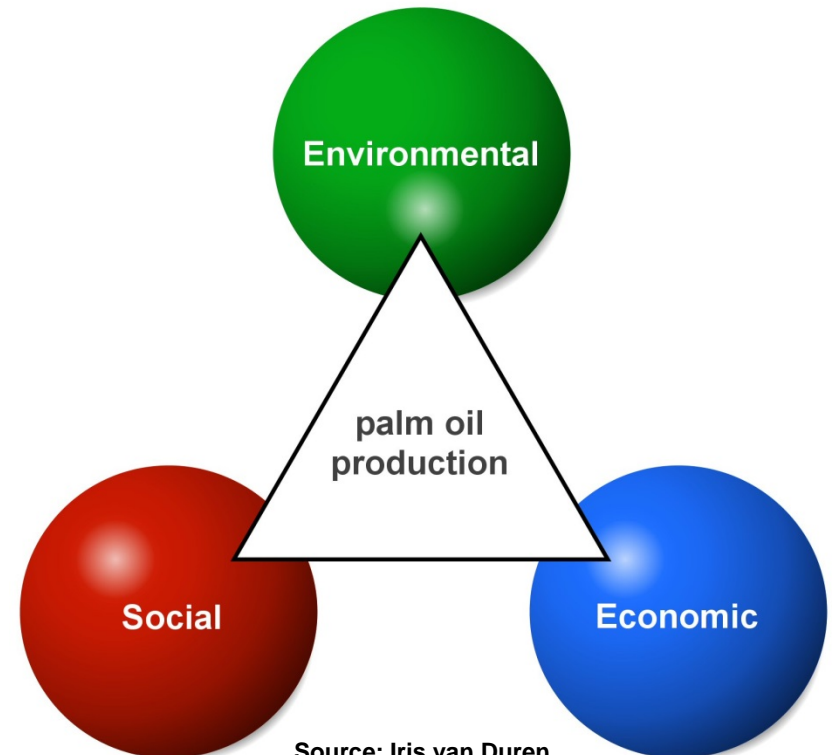
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Source: Iris van Duren

# Palm oil production and sustainability certification



Photo credit: JEWEL SAMAD/AFP/Getty Images)

no  
forest destruction,  
land grabbing,  
unsafe conditions  
pressure on people



Photo credit: Solidaridad)



Photo credit: Feri Irawan)

but  
supporting people,  
safe conditions



Photo credit: Leoni Rahmawati)



# Palm oil production and sustainability certification

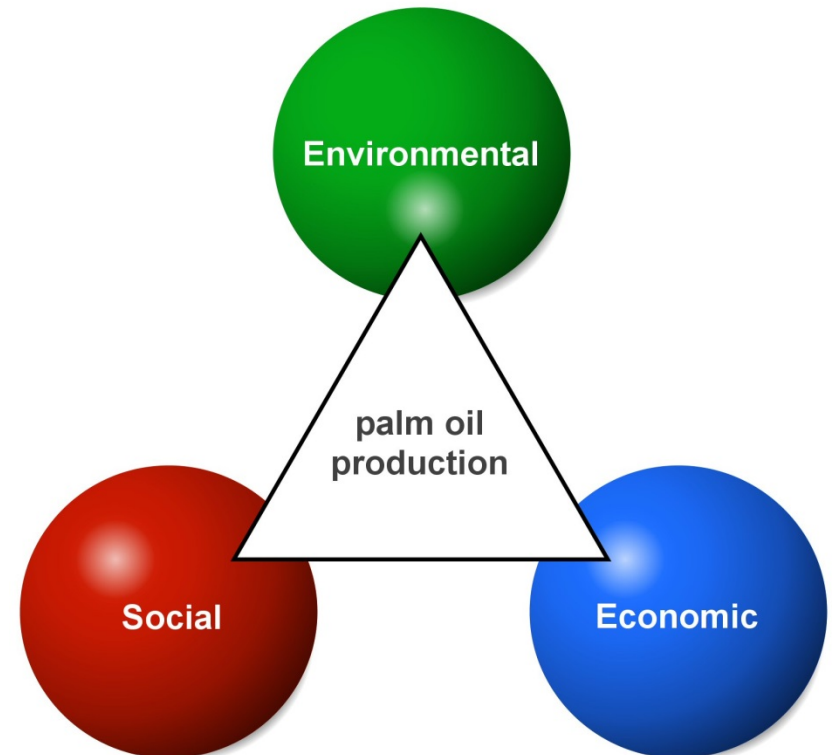
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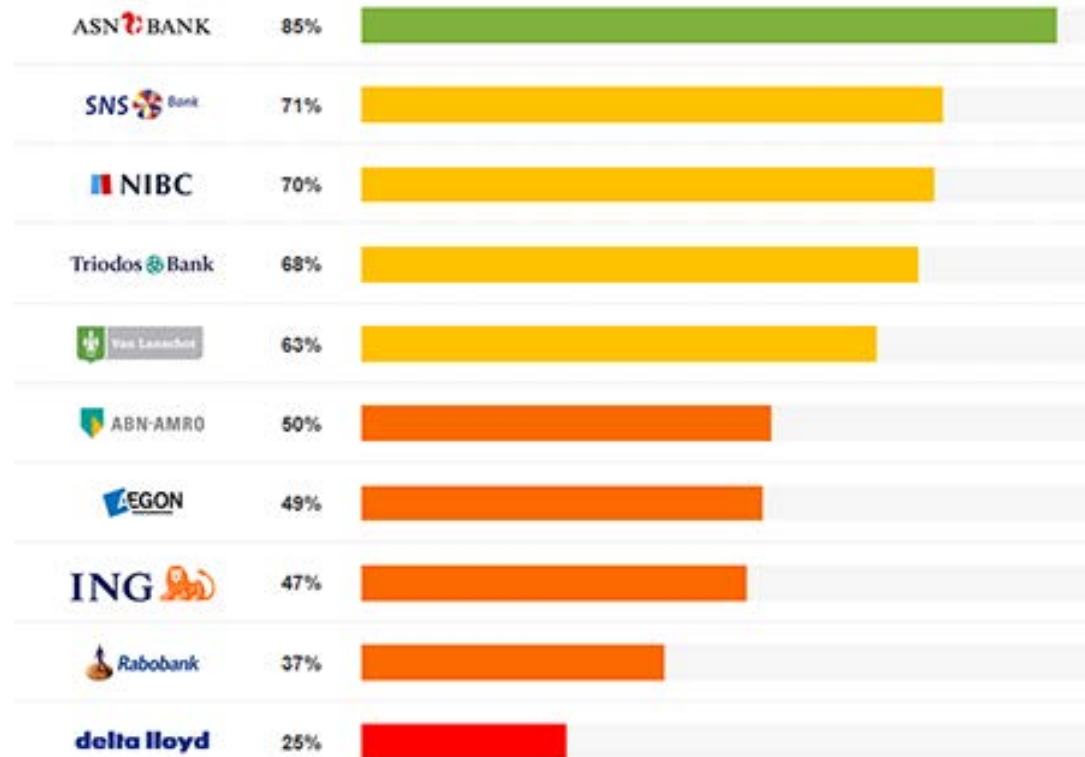
# Palm oil production and sustainability certification

Wilmar International has a track record of land-grabbing and deforestation.

In 2014, EU and US financiers together hold €371 million in shares in, and €1.1 billion in loans outstanding to, Wilmar.

Some of the banks involved:

ING  
Rabobank  
Deutsche Bank  
British bank HSBC  
BNP Paribas



# Palm oil production and sustainability certification

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## To allow:

- End users to have (a choice for) a sustainable product

## We need to push:

- Producers to produce according sustainability standards
- Financers to invest only in sustainable production
- Governments to put sustainable production in laws and regulations
- Control mechanisms to check sustainable production



# What do we need to know? What do we need to know it?

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**Producer's compliance with sustainability criteria**  
Standardised / transparent methods to assess  
compliance with sustainability criteria



**well-trained assessors**

# What do we need to know?

## What do we need to know it?

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**PRINCIPLE 1:** Biomass shall not be produced on land with high biodiversity value or high carbon stock. HCV areas shall be protected.

**PRINCIPLE 2:** Biomass shall be produced in an environmentally responsible way. This includes the protection of soil, water and air and the application of Good Agricultural Practices .

**PRINCIPLE 3:** Safe working conditions through training and education, use of protective clothing and proper and timely assistance in the event of accidents .

**PRINCIPLE 4:** Biomass production shall not violate human rights labour rights or land rights. It shall promote responsible labour conditions and workers' health, safety and welfare and shall be based on responsible community relations .

**PRINCIPLE 5:** Biomass production shall take place in compliance with all applicable regional and national laws and shall follow relevant international treaties .

**PRINCIPLE 6:** Good management practices shall be implemented .

# What do we need to know?

# What do we need to know it?

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## Producer's compliance with sustainability criteria



### Locate and quantify

- deforestation and other land conversions
- erosion and pollution
- loss of biodiversity and other ecosystem services
- land use rights and land grabbing
- climate change

Scientifically sound methods and tools

# What do we need to know? What do we need to know it?



## Geo-Information for Palm Oil Workshop

### Contributions of remote sensing to support palm oil sustainability

*Dr.-Ing. Christine Pohl*

University of Osnabrueck

Institute of Computer Science


Working Group Remote Sensing and Digital Image P

C.Pohl

08th February 2017


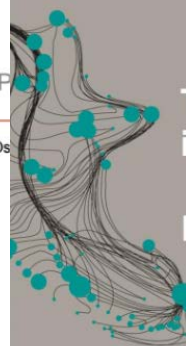
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### The role of geo-information in palm oil research

Iris van Duren, 2017



FACULTY OF GEO-INFORMATION SCIENCE AND EARTH OBSERVATION



ISCC – International Sustainability & Carbon Certification



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## Sustainability as a Success Factor for the Palm Oil Industry

ISCC System

Mohammad Abdel-Razek



# What do we need to know? What do we need to know it?



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13 June 2017

Room 4-004, ITC, Hengelosestraat 99, 7514 AE, Enschede.

10:00 – 10:30	Arrival / coffee and tea
10:30 – 10:45	Introduction by <i>Dr. Iris van Duren</i>
10:45 – 11:05	"ISCC: spatial information needs for certification" by <i>Prof. Dr. Gernot Klepper and/or Dr. Norbert Schmidt</i>
11:05 – 11:25	"GRAS, its use and further development needs" by <i>Dr. Mohammad Abdel Razek</i>
11:30 – 12:30	"Detecting Land Cover Change Related to Smallholder Oil Palm Plantations: An Automated Approach based on Hyper Temporal Landsat Imagery" by <i>Ditte Trojaborg</i>
12:30 – 13:30	Lunch
13:30 – 13:45	"Sentinel-2 time-series analysis and GIS for oil palm plantation monitoring in the context of sustainability" by <i>Dr. Christine Pohl</i>
13:45 – 14:00	"Biomass and carbon estimation using radar" by <i>Dr. Yussif Hussin</i>
14:00 – 14:15	"Biomass and carbon estimation using UAV and high resolution imagery" by <i>Ir. Louise van Leeuwen</i>
14:15 – 14:30	"Iso-data clustering based on NDVI time series" by <i>Dr. Kees de Bie</i>
14:30 – 14:45	"Assessing vegetation phenology from Sentinel-2 time series" by <i>Dr. Anton Vrieling</i>
14:45 – 15:00	"New opportunities: Data collection by crowd sourcing/ data analysis by cloud computing" by <i>Drs. Valentijn Venus</i>
15:00 – 15:15	"Remote sensing based essential biodiversity variables (EBVs)" by <i>Prof. Dr. Andrew Skidmore</i>
15:15 – 15:45	Tea break and networking
15:45 – 17:00	Plenary brainstorm and discussion on the way forward. Moderated by <i>Dr. Iris van Duren and Dr. Christine Pohl</i>
Afterwards	Possibility for dinner in town (own account)

**Aims of this workshop:**

**Present recent and current research and activities**

**Brainstorm on possibilities for future research and activities**

**Set priorities and see how we can produce output together**

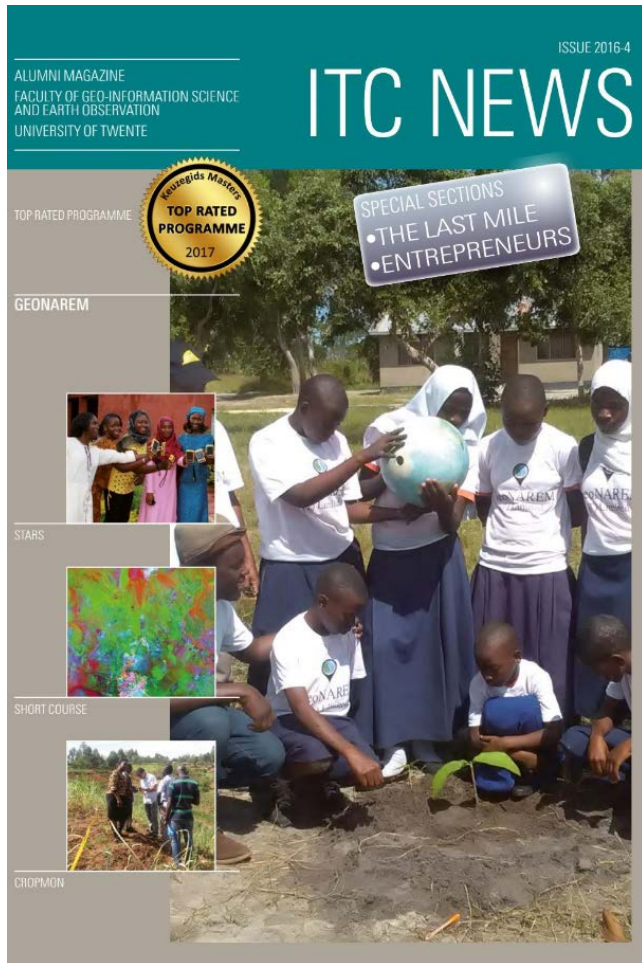
**Request to all presenters:  
Can I get your presentation?**



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# Special issue of ITC News



**Great opportunity to explain what we are doing to a large audience**

**You will receive instructions about length, format and deadline.**

# Lunch and dinner

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**Lunch in the ITC Restaurant**

**we go together**

**you take what you like**

**I'll pay with the representation card**

**there is a table reserved for us**



**Dinner in restaurant “ONS” (Walstraat 41)**

**We can walk from here**

**Options: - vegetarian rolls (fried)**

**- fish (mackarel) with beet root and quinoa**

**- beef (entrecote) with herb butter**

**- pork with an apple sauce**

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Have a  
great day!

