



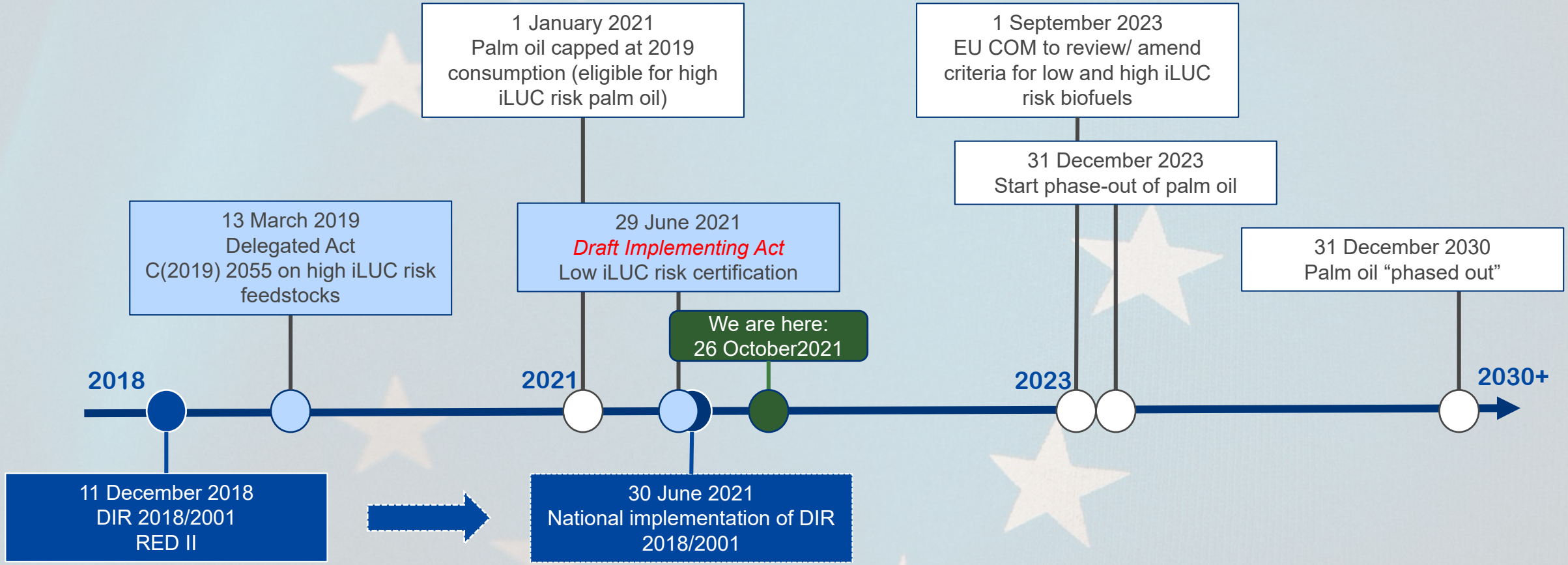


Assessment of Challenges and Opportunities associated with the Implementing Act on Low ILUC Risk Biofuels

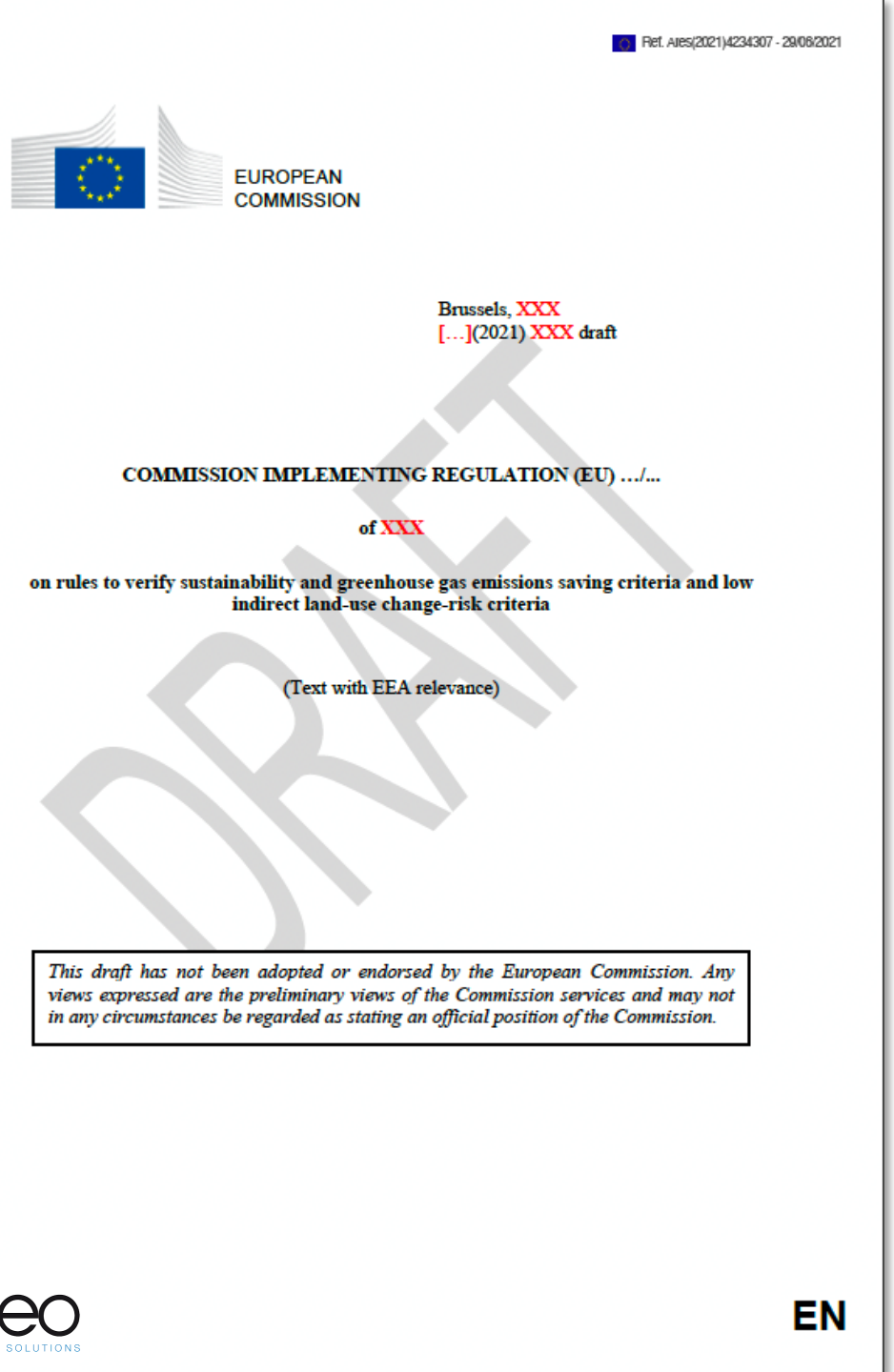
Meo Carbon Solutions, Dr Peter Hawighorst

11th ISCC Regional Committee Meeting Southeast Asia, 26 October 2021

Timeline of RED II implementation – Palm oil will be phased out starting end 2023



*DA = Delegated Act, IA = Implementing Act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on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria

(Text with EEA relevance)

DRAFT

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

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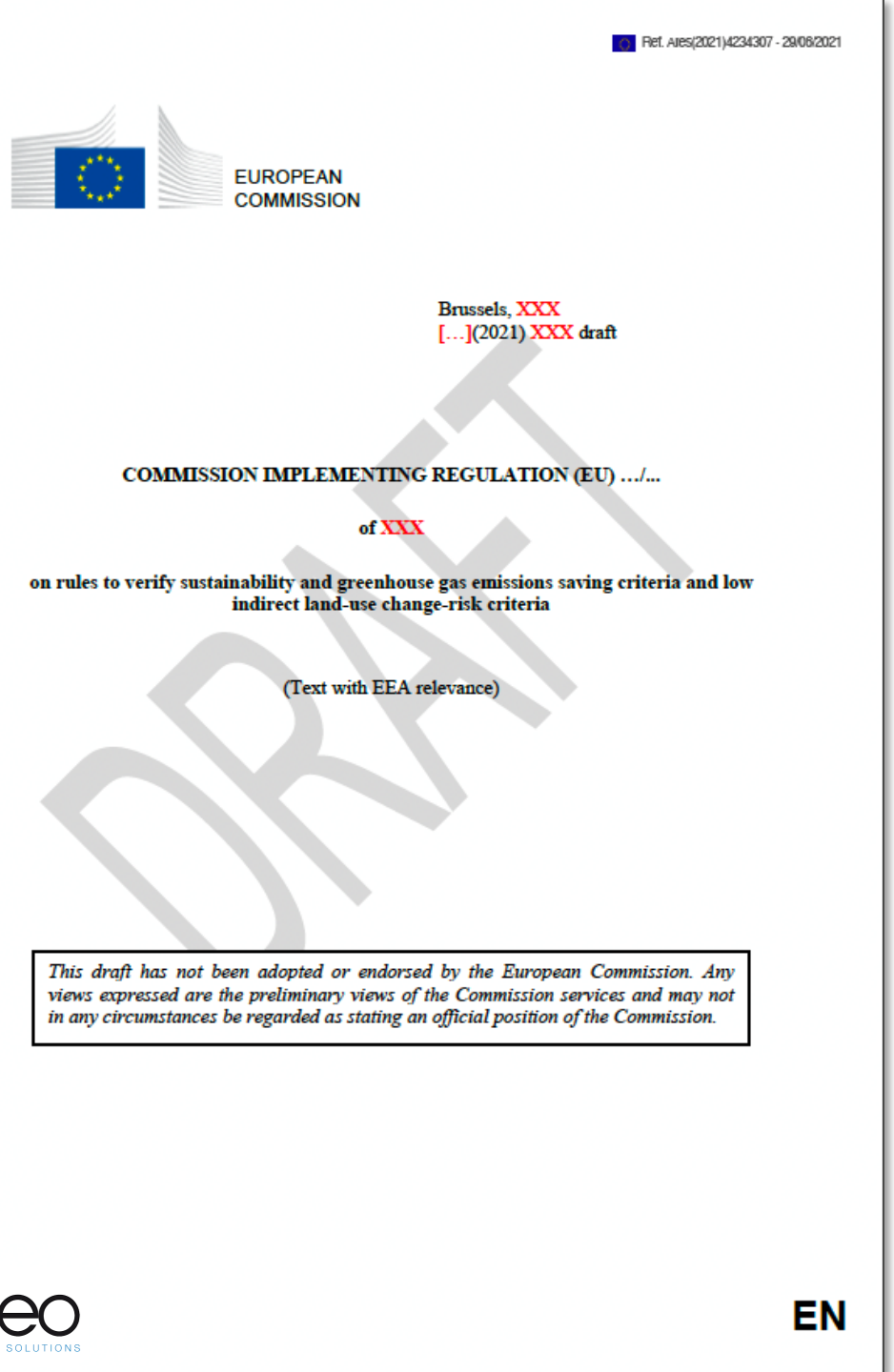
The draft IR sets out guidance for the certification of low ILUC-risk biofuels

- Published 29 June 2021 for public consultation
- The draft IR sets out guidelines and criteria for the certification of low ILUC-risk feedstocks – for economic operators as well as voluntary certification schemes:
  - Specific requirements for economic operators
  - Certification process
  - Management plan
  - List of additionality measures
  - Options to proof additionality
  - Guidelines and methodology for the determination of additional biomass for different crop types

Source: Draft Implementing Regulation on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria



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The IR provides information on the validity and timeframe of the additionality measure

Specific requirements for low ILUC-risk certification, e.g.:

- Validity of the additionality measure for ten years
- Implementation measure max. ten years ago implemented
- Only additional biomass eligible
- Two or more additionality measures – same dynamic yield baseline
- …

➢ Additionality: increasing feedstock beyond a business-as-usual scenario

➢ Proof of additionality must be passed by carrying out a financial attractiveness or barrier analysis assessment

Source: Draft Implementing Regulation on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria

Besides improved management practices, replanting for perennial crops is also listed as an eligible additionality measure in the IR…

Additionality category	Additionality measure	Example
Replanting (for perennial crops)*	Choice of crop varieties	Higher yield variety, better adaptation to eco-physiological or climatic conditions
Mechanisation	Machinery	Adoption of machinery that reduces/complements existing workforce input to boost output or reduce losses. This could include sowing, precision farming, harvesting machinery or machinery to reduce post-harvest losses
Multi-cropping	Sequential cropping	Introduction of second crop on same land in the same year
Management	Soil management	Mulching instead of ploughing, low tillage
	Fertilisation	Optimisation of fertilisation regime, use of precision agriculture
	Crop protection	Change in weed, pest and disease control
	Pollination	Improved pollination practices
	Other	Leaves room for innovation, combinations of measures and unforeseen developments

Source: Draft Implementing Regulation on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria

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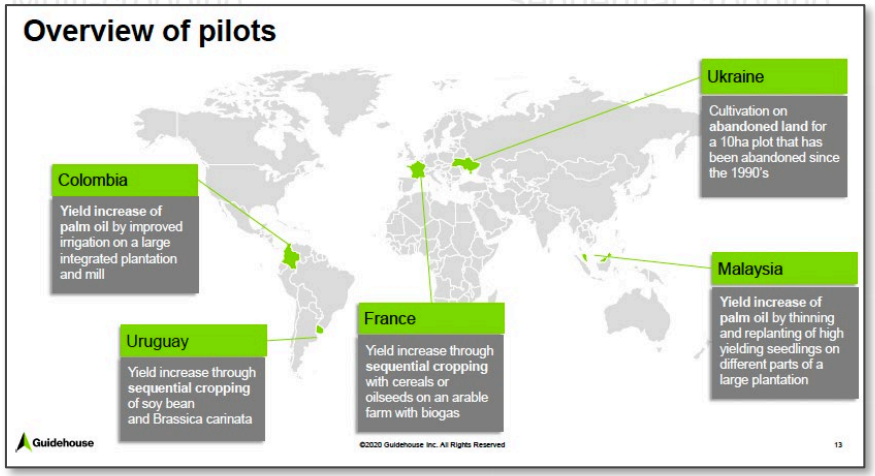
…but must demonstrate to go beyond “business as usual”. In a pilot conducted in Malaysia, replanting with clonal seedlings and “thinning” was eligible

Additionality category	Additionality measure	Example
Replanting (for perennial crops)	Change of crop varieties	Higher yield variety better adapted to agro-physiological and climatic conditions
Mechanisation	Machinery	Adoption of machinery that reduces/complements existing workforce input to boost output or reduce losses. This could include sowing, precision farming, harvesting
Multi-cropping	Sequential cropping	
Other		

*Replanting at the end of the crop lifetime is always necessary for a perennial crop. For replanting to count as an additionality measure, the economic operator must prove that their replanting goes beyond ‘business as usual



Malaysia

Palm yield increase

Additionality Measure

Oil palm yield increase through:

- Replanting with clonal seedlings
  - Replanted 2001 onwards (different blocks each year)
  - Applied to ~2500 ha (76 blocks)
- Thinning
  - Implemented 2015 onwards
  - Applied to ~3400 ha (102 blocks)

Low ILUC certification tested at subplot level

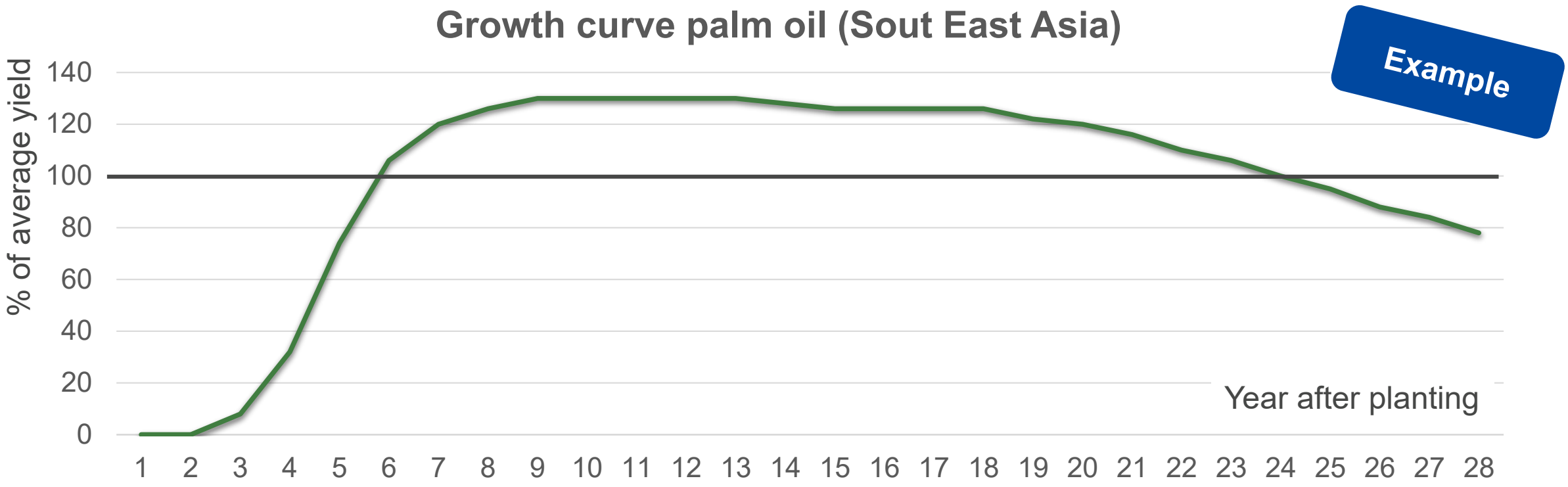
Pilot Partner

Large plantation company

- ✓ Located in Sabah region of Malaysia
- ✓ ISCC EU, RSPO, and MSPO certified
- ✓ 3600 ha plantation

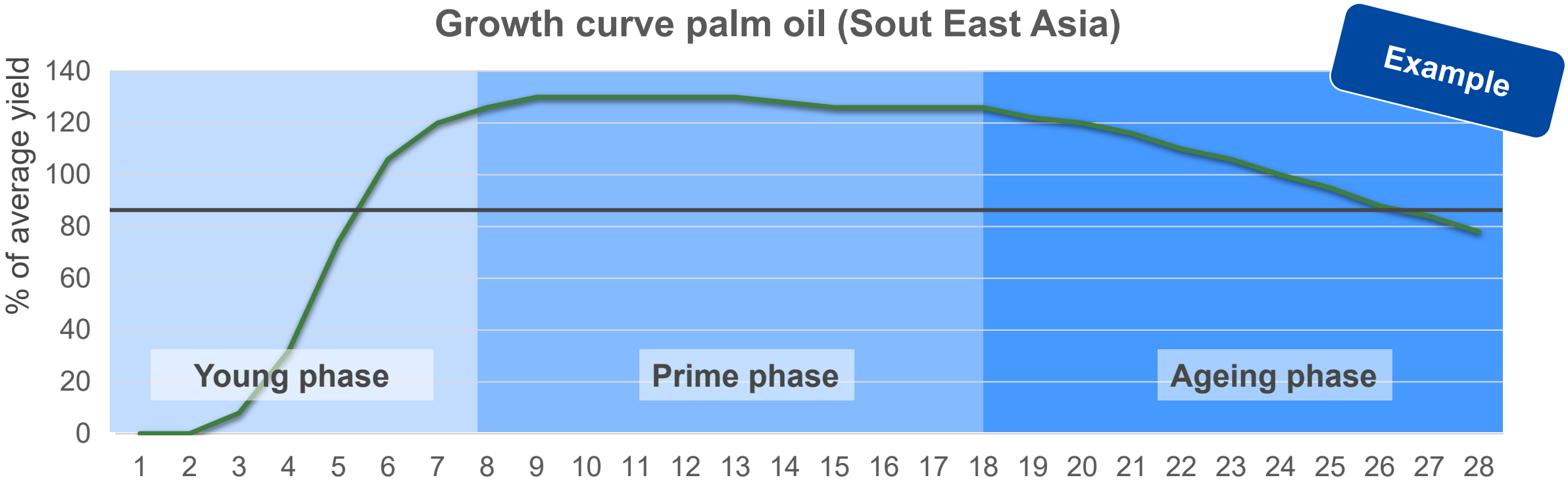
Source: Draft Implementing Regulation on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria; Guidehouse (2021): Low ILUC-risk certification – Update and learnings from low ILUC pilots, Stakeholder webinar, 19 May 2021, https://iluc.guidehouse.com

Palm must grow approximately six years to achieve for the first time the average yield of the crop over the span of its lifetime. This is the *young phase* of palm cultivation



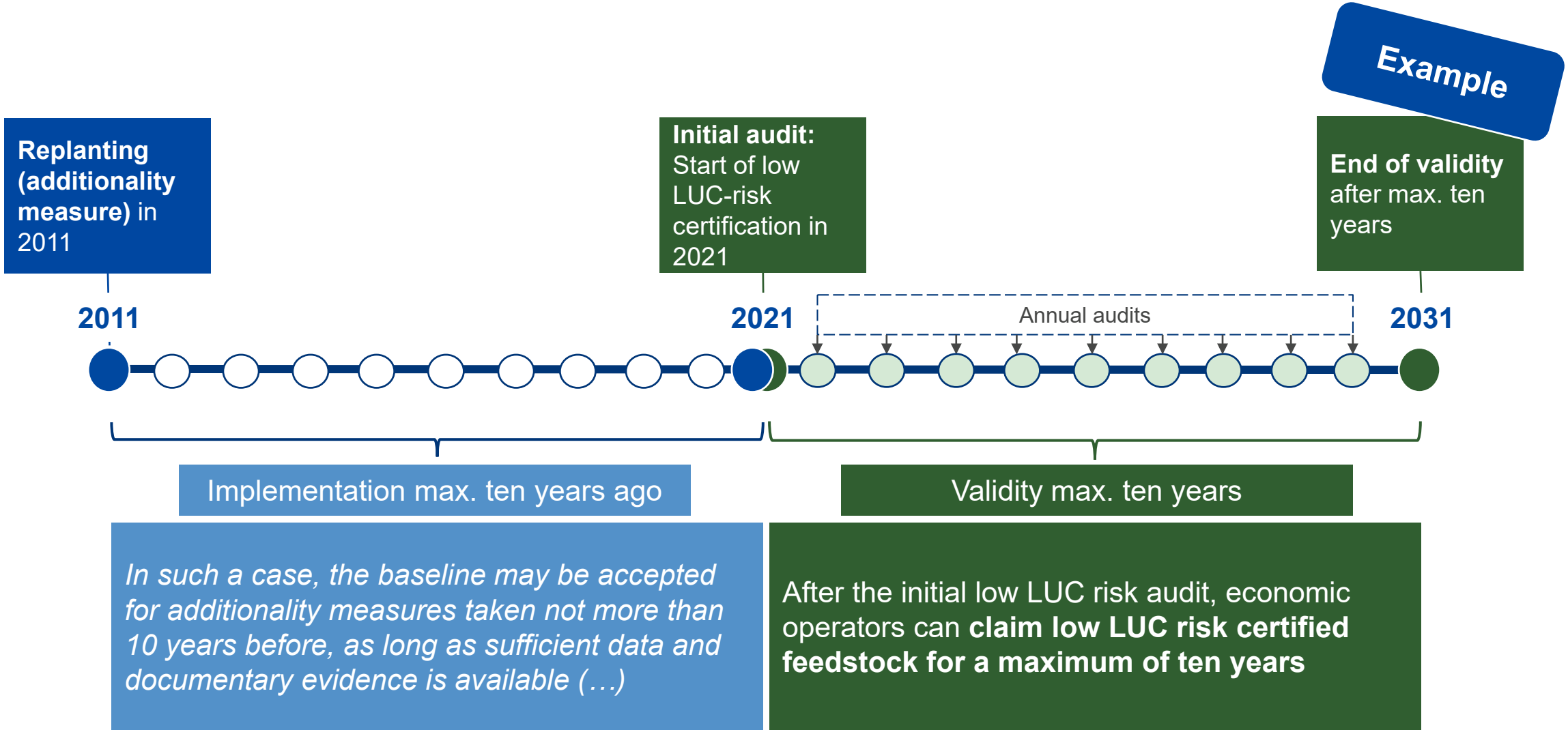
Source: Ling (2012)

During the *prime phase* palm producers achieve the highest yields in palm production. Thus, this phase also has the highest potential for yield increase



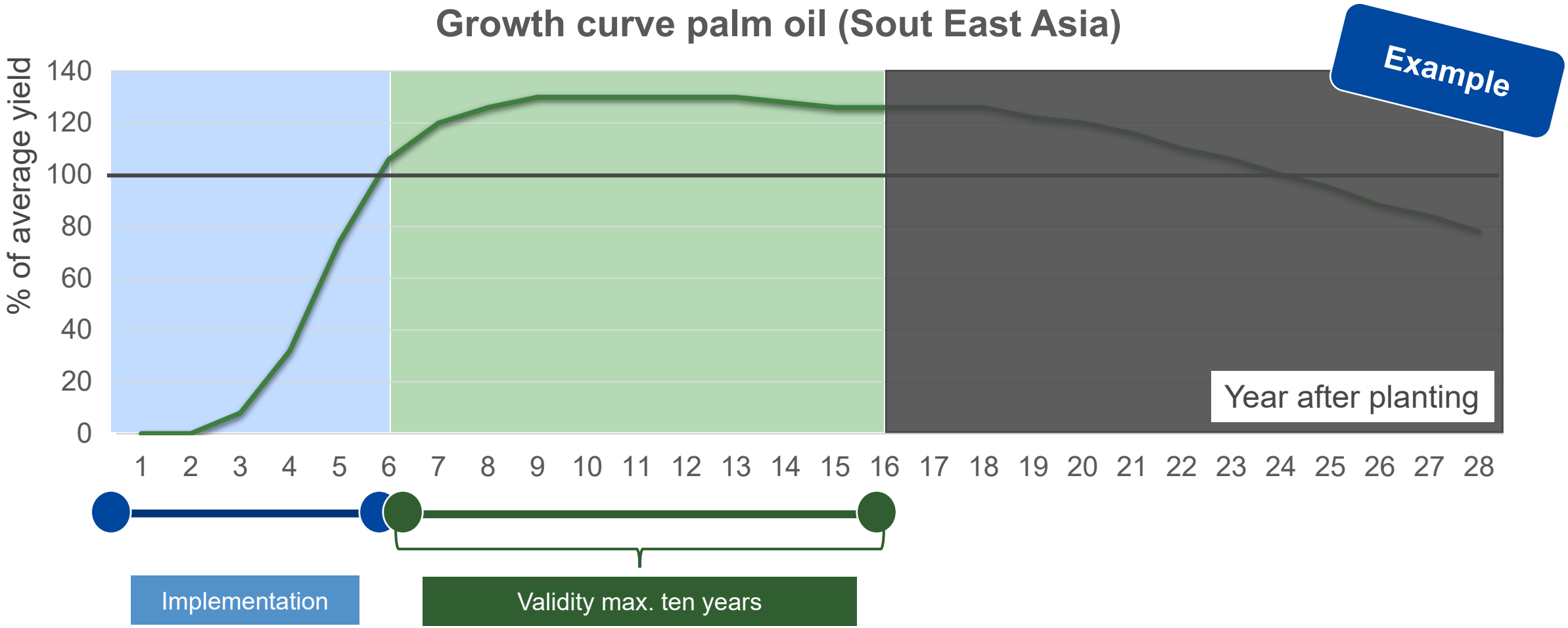
Source: Ling (2012)

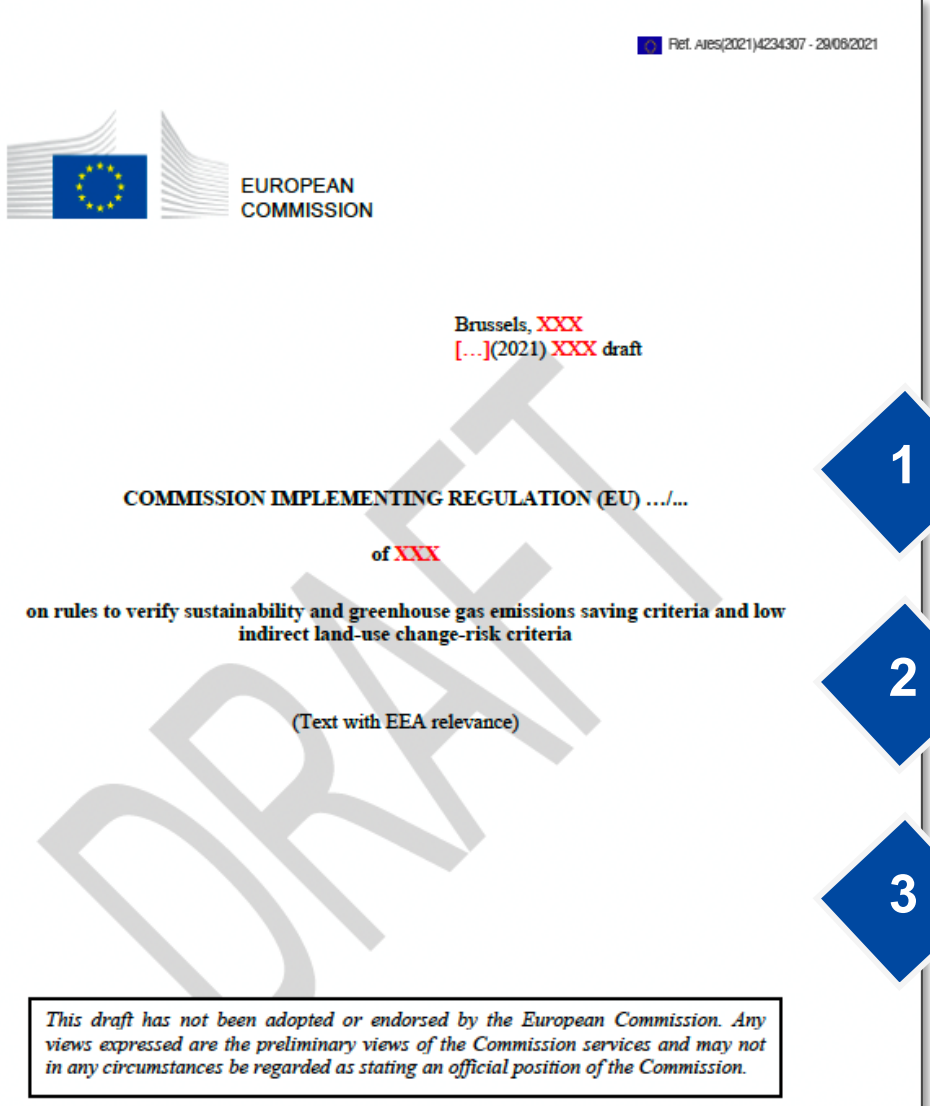
The draft IR allows to certify measures being implemented max ten years ago, providing some flexibility for palm growers…



Source: Draft Implementing Regulation on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria

…because this allows to start e.g. six years after replanting and ensure low ILUC-risk certification in the phase in which the highest (*additional*-)yield can be achieved





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Low ILUC-risk fuels must meet one of three different “Additionality tests”

1. Financial Attractiveness test or non-financial barrier analysis
2. Production on abandoned or severely degraded land
3. Applied by small holders

Source: Draft Implementing Regulation on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria

The determination of the NPV and passing the financial attractiveness test is a high hurdle for companies – none of the pilots passed the test

1

Information draft IR

Financial attractiveness test

- The financial attractiveness analysis shall demonstrate that the investment required for the additionality measure becomes financially attractive only if the resulting additional yield is certified as low ILUC risk.
- The analysis shall include only those costs and yields that are directly related to the additionality measure investment.
- The costs and revenues included in the analysis shall be related to the preparation, implementation, maintenance and decommissioning of the additionality measure that would not have been otherwise incurred.
- Financial attractiveness arises from a business case in which the net present value ('NPV') of the investment is positive, which means that the investment may be conducted by the economic operator itself. As a result, only measures for which the business case analysis is negative (without the inclusion of a premium) shall pass the financial additionality test and become eligible to be certified as low ILUC risk. Outcomes above zero (a positive NPV) may still be eligible only if they pass the non-financial barrier analysis.

Feedback pilots

- No negative NPV among pilots (no pilot partners passed the test)
- Variations in feedstock volume and prices make NPV analysis challenging
- Discount rates higher in reality
- Difficult forecasting cost of an additionality measure

Implication

Determination via non-financial barrier analysis

Source: Draft Implementing Regulation on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria; Guidehouse (2021): Low ILUC-risk certification – Update and learnings from low ILUC pilots, Stakeholder webinar, 19 May 2021, https://iluc.guidehouse.com

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Consequently, the non-financial barrier analysis is of very great importance providing an alternative option to proof “additionality”

1

Information draft IR

Non-financial barrier analysis test

- Shall only cover non-financial project barriers that prevent the implementation of the additionality measures in case of no low ILUC risk certification.
- Any barrier whose cost can be estimated shall be included in the financial attractiveness analysis rather than in the non-financial barrier analysis. The non-financial barrier test shall therefore be used only in very exceptional cases.

Feedback pilots

- Lack of clarity for auditors and economic operators
- More focus needed to develop the non-financial barrier test

Implication

Non-financial barrier challenging to implement by economic operators – more guidance needed

Source: Draft Implementing Regulation on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria; Guidehouse (2021): Low ILUC-risk certification – Update and learnings from low ILUC pilots, Stakeholder webinar, 19 May 2021, https://iluc.guidehouse.com

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The production of additional biomass on unused land is very attractive…

2

Unused Land		
No cultivation of food, feed, other energy crops, or significant amounts of fodder produced on the land		
Abandoned land	**Severely degraded land**	**Other unused land**
Land was used in the past for the cultivation of food and feed crops but where the cultivation (…) was stopped due to biophysical or socioeconomic constraints	Land that for a significant period of time, has either been significantly salinated or presented significant low organic matter content and has been severely eroded.	Other form of unused land
Requirements for eligibility of additionality measure		
• Land based sustainability requirements • Documentation additional biomass	• Land based sustainability requirements • Documentation additional biomass	• Land based sustainability requirements • Documentation additional biomass • **Additionality (financial or barrier analysis)**

Source: Guidehouse (2021): Low ILUC-risk certification – Update and learnings from low ILUC pilots, Stakeholder webinar, 19 May 2021, https://iluc.guidehouse.com

…because the whole biomass production can be claimed as “additional”

2

Unused Land

No cultivation of food, feed, other energy crops, or significant amounts of fodder produced on the land

Abandoned land	Severely degraded land	Other unused land
Land was used in the past for the cultivation of food and feed crops but where the cultivation (…) was stopped due to [illegible] socioeconomic constraints	Land that for a significant period of time, has either been significantly salinated or presented significant low organic matter content and has been severely eroded	Other form of unused land
Requirements for eligibility of additionality measure		
• Land based sustainability requirements • Documentation additional biomass	• Land based sustainability requirements • Documentation additional biomass	• Land based sustainability requirements • Documentation additional biomass • Additionality (financial or barrier analysis)

The “dynamic yield baseline” against which the harvested yield is being tested determining the additional biomass, is “zero” for unused land. This means that the whole biomass production on previously unused land can be claimed under low ILUC-risk certification

Source: Guidehouse (2021): Low ILUC-risk certification – Update and learnings from low ILUC pilots, Stakeholder webinar, 19 May 2021, https://iluc.guidehouse.com

Smallholder have a great potential for achieving additional biomass….

3

Opportunities

- Production of additional biomass by small holders meets the “Additionality test” – no “Financial attractiveness” test needed
- Huge yield increase potential with small holders (e.g. due to reduced fertilisation, suboptimal seeding material)

…but the definition for small holders set out in the DA limits this group and thus the potential

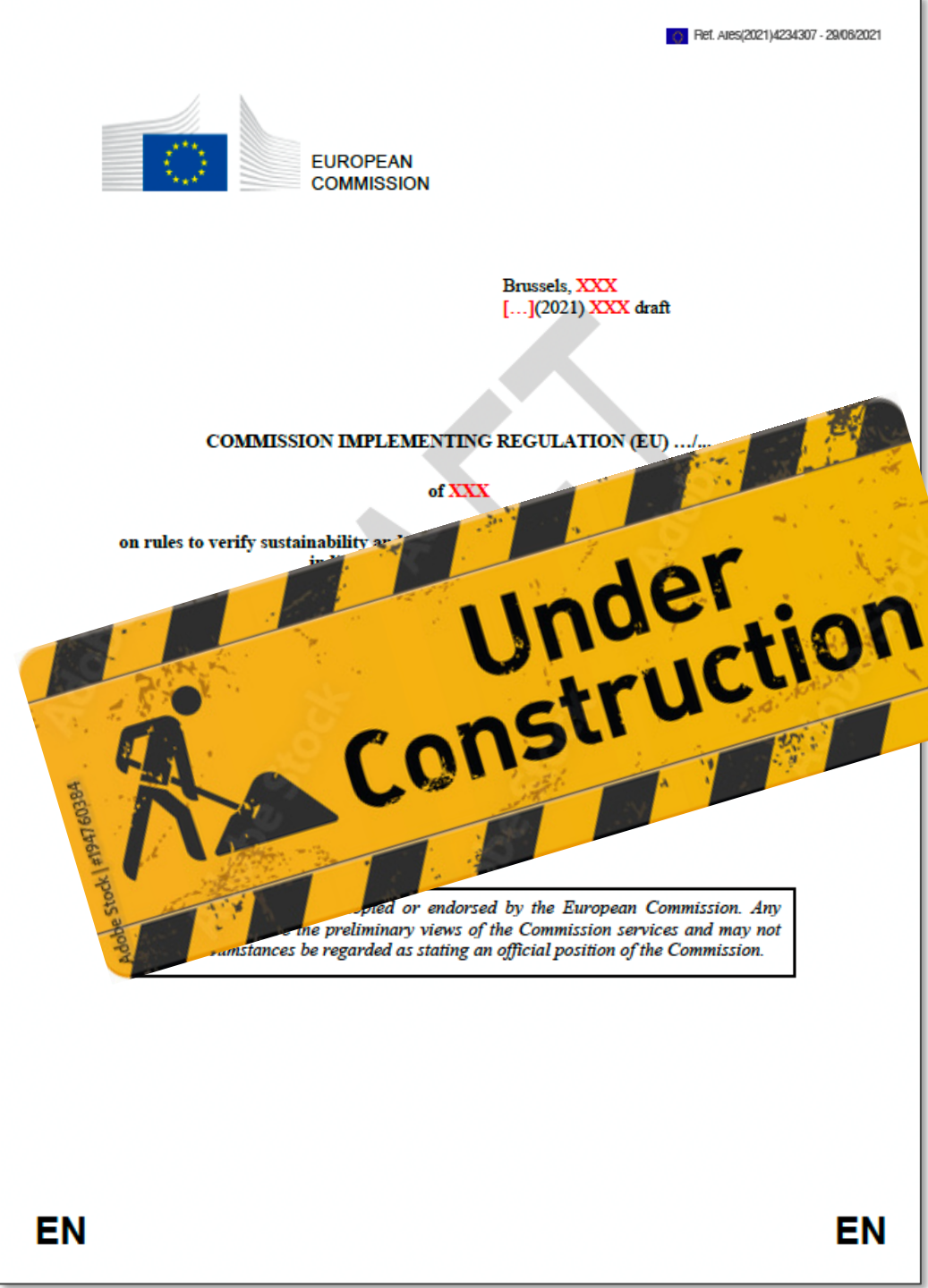
3

Opportunities

- Production of additional biomass by small holders meets the “Additionality test” – no “Financial attractiveness” test needed
- Huge yield increase potential with small holders (e.g. due to reduced fertilisation, suboptimal seeding material)

Challenges

- FAO definition of small holders included in EU regulation:
  - ‘*small holders’ means farmers who conduct* ***independently*** *an agricultural activity on a holding with an agricultural area of* ***less than 2 hectares*** *for which they* ***hold ownership, tenure rights or any equivalent title granting them control over land****, and who are* ***not employed by a company****, except for a cooperative of which they are members with other small holders, provided that such a cooperative is not controlled by a third party*; (DA 2019/807)



Conclusions

- The IR provides further guidance for future low ILUC-risk certification under the RED – but is currently only available in a **DRAFT** version
- Some flexibility is provided with respect to the “start” of low ILUC-risk certification. Currently, this opens up the opportunity to certify “replanting” (if it goes beyond “business-as-usual”) during the *prime phase* of palm cultivation with the highest potential for additional biomass production
- Low ILUC-risk smallholder certification is limited, due to the “strict” “smallholder” definition (max 2 ha). If this is not further adjusted, only in a few regions/ countries this approach will be of relevance
- The financial attractiveness test is crucial for low ILUC-risk certification, but was not passed by pilot partners (according to the draft requirements for this test). A “practical” approach would help economic operators

Many thanks for your attention!

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