

A satellite-style image of Europe and the Atlantic Ocean, showing the continent's green and brown terrain against the deep blue of the sea. The horizon of the Earth is visible at the top.

Trans Atlantic Policy Issues i.r.t. pellet trade for co-firing

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Prof. European Forest Resources

With material from Richard Sikkema

Athens, Georgia, 1 May 2019

Workshop risk assessments for
sustainable wood sourcing,

University Georgia

2. dat de grondbelasting voor rekening van Kooper is van
een Januari 1914.
3. de verkopers reserveeren: twee eiken, een
als het vijf en zes jarig hakhout en het na
"gras."

Antoon Nabuurs

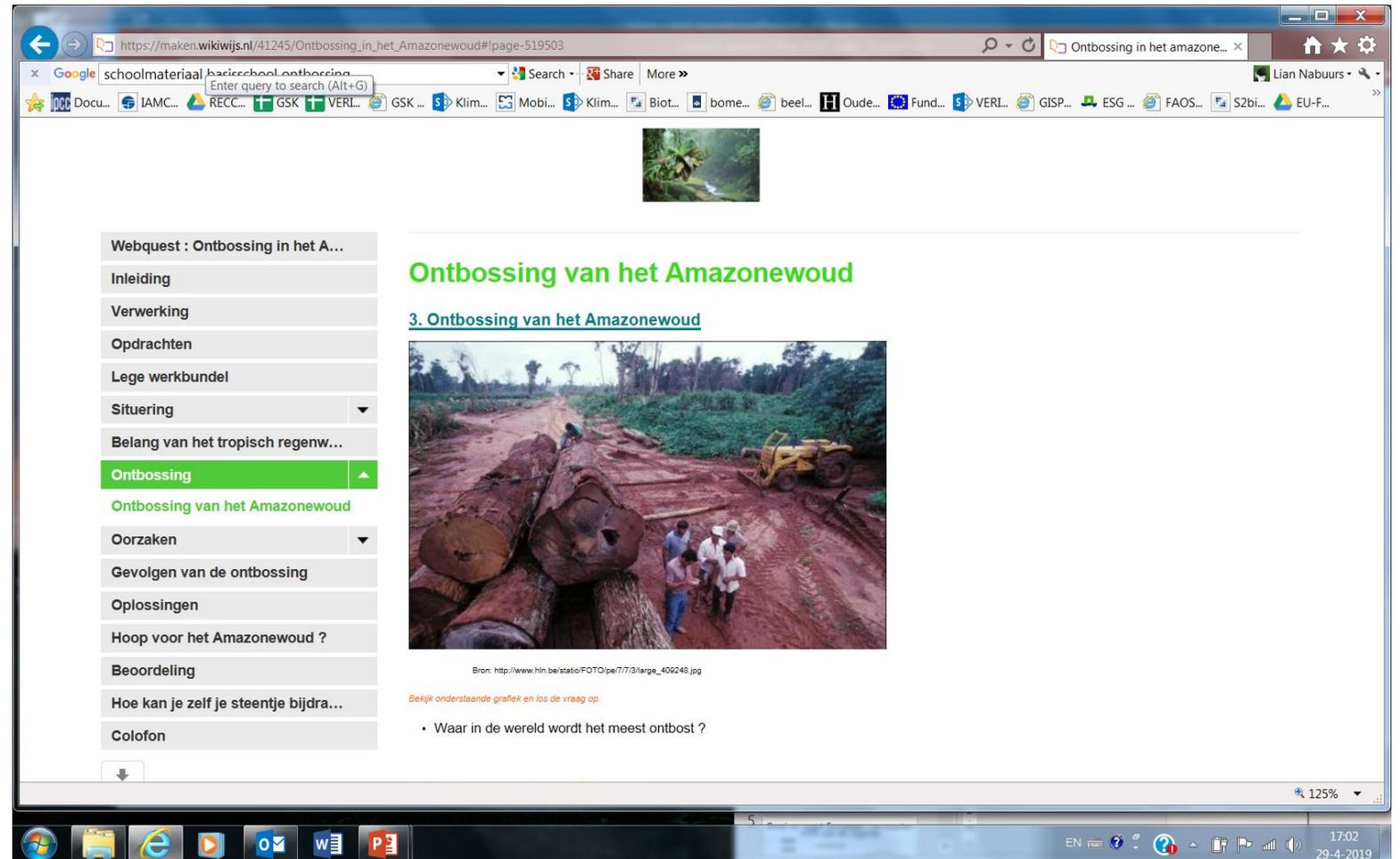


Step back in time: 1913.
Deed of purchase of my
grandpa's and grandma's first
farm.

Antoon Nabuurs buys his first (3ha) farm at edge of a
swamp in Netherlands. Times of wood scarcity. Those
who sell: "...reserve two oaks, one alder and five year
coppice..."

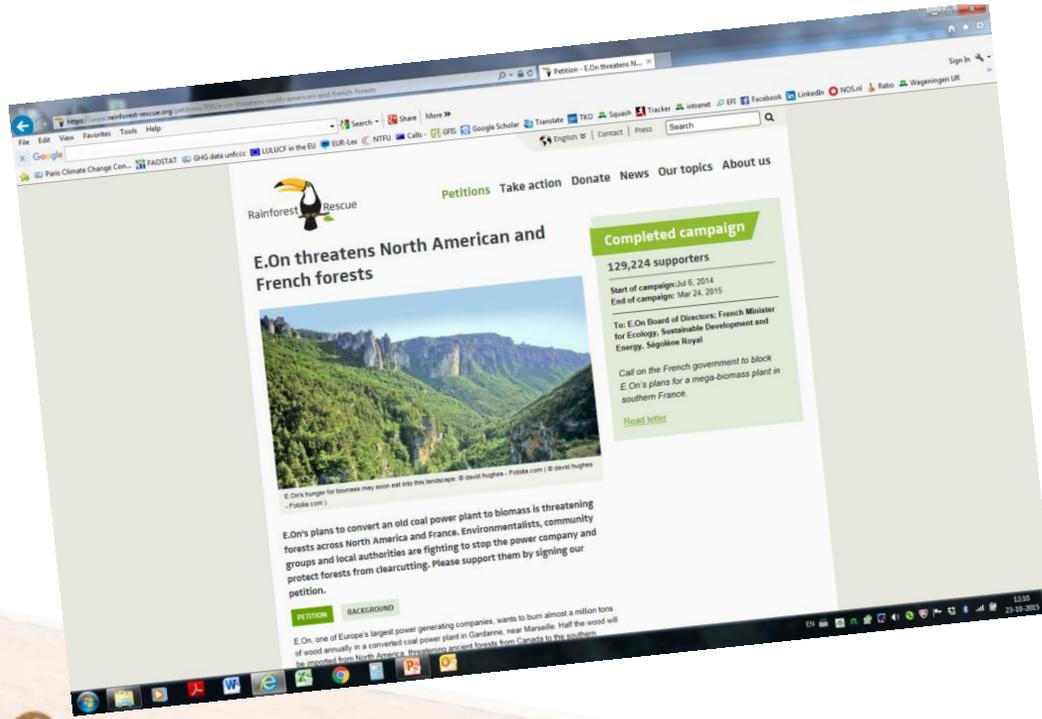
Europeans are constantly raised with the idea that there is little forest left in the world...

School material



The screenshot shows a web browser window displaying a Wikiwijs page titled "Ontbossing in het Amazonewoud". The browser's address bar shows the URL: https://maken.wikiwijs.nl/41245/Ontbossing_in_het_Amazonewoud#!page-519503. The page content includes a navigation menu on the left with items like "Webquest : Ontbossing in het A...", "Inleiding", "Verwerking", "Opdrachten", "Legte werkbundel", "Situering", "Belang van het tropisch regenw...", "Ontbossing" (highlighted), "Ontbossing van het Amazonewoud", "Oorzaken", "Gevolgen van de ontbossing", "Oplossingen", "Hoop voor het Amazonewoud ?", "Beoordeling", "Hoe kan je zelf je steentje bijdra...", and "Colofon". The main content area features the title "Ontbossing van het Amazonewoud" and a sub-section "3. Ontbossing van het Amazonewoud". Below this is a photograph of a dirt road in a deforested area with large logs in the foreground and a yellow tractor in the background. A small caption below the photo reads: "Bron: http://www.hln.be/stato/FOTO/pe/7/7/3/large_406248.jpg". Below the photo, there is a link "Bekijk onderstaande grafiek en los de vraag op." and a bullet point: "• Waar in de wereld wordt het meest ontbost ?". The browser's taskbar at the bottom shows various application icons and the system tray with the date and time: "17:02 29-4-2019".

The fight over the resources has begun



Volkskrant 13 January

1. European forests: short intro
2. Trade of pellets
3. Dutch scheme and criteria



European forests, 1x1 km, tree species map

Brus et al. 2011

161 Million ha
26 billion m³ GS

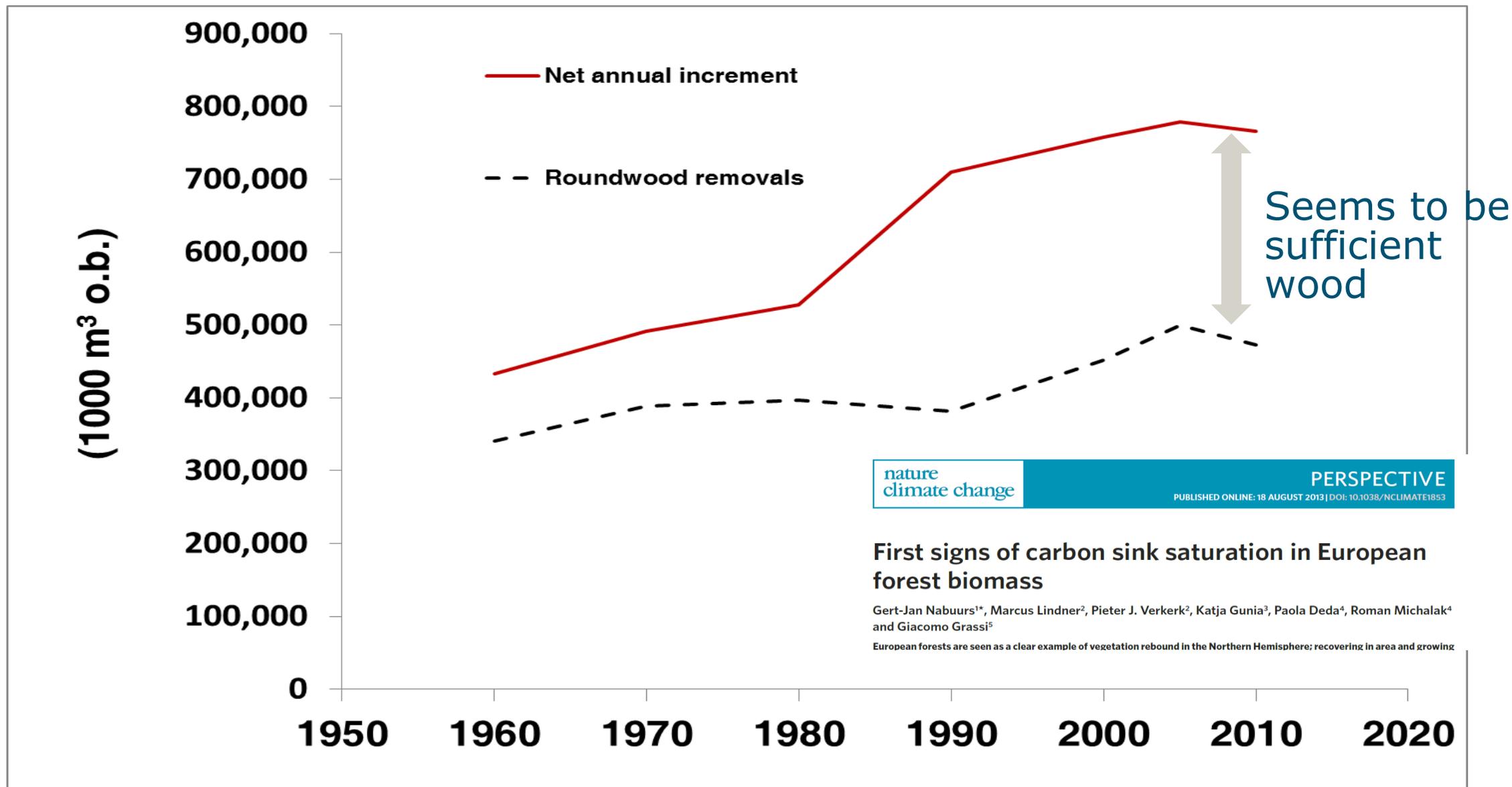
More forests than ever since Medieval times.
All managed !

> 16 million private owners.

Legend

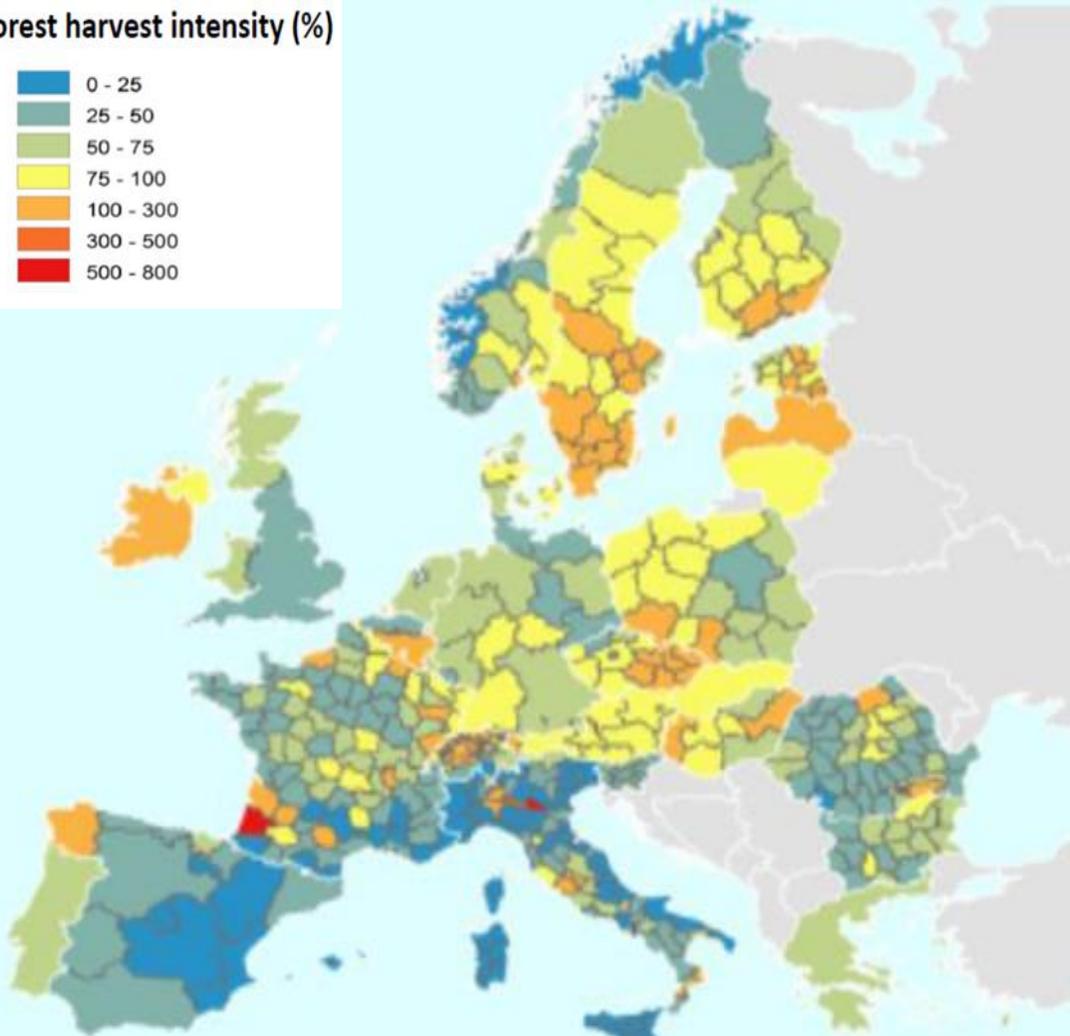
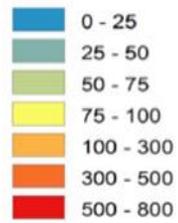
- 0
- Abies spp
- Larix spp
- Picea spp
- Pinus pinaster
- Pinus sylvestris
- other Pinus
- Pseudotsuga Mensziesii
- other Conifers
- Alnus spp
- Betula spp
- Carpinus spp
- Castanea spp
- Eucalyptus spp
- Fagus spp
- Fraxinus spp
- Populus spp
- Quercus robur / petraea
- other Quercus
- Robinia spp
- other Broadleaved

Growth & harvest at European scale



Our EFISCEN modelling approach; slightly aggregated forest resource model. Based on NFIs

Forest harvest intensity (%)



Harvesting intensity as % of increment

(Nabuurs, Karjalainen, Schelhaas, Verkerk, Levers)

Harvesting pressure is high local, and it is difficult to increase harvest in other regions



More recent: huge mortality in spruce in Central-Europe

Spruce with high stocking. Several dry & hot years
Bark beetle: in 2018, 90% of fellings was a sanitary felling.

Actuality: bark beetle in C Europe.

Kůrovec v českých lesích

2,67 mil.

hektarů tvořila výměra lesních pozemků v Česku v roce 2016, což je 33,9 procenta výměry státu.

50,5 %

stromů na lesních pozemcích byly smrky.

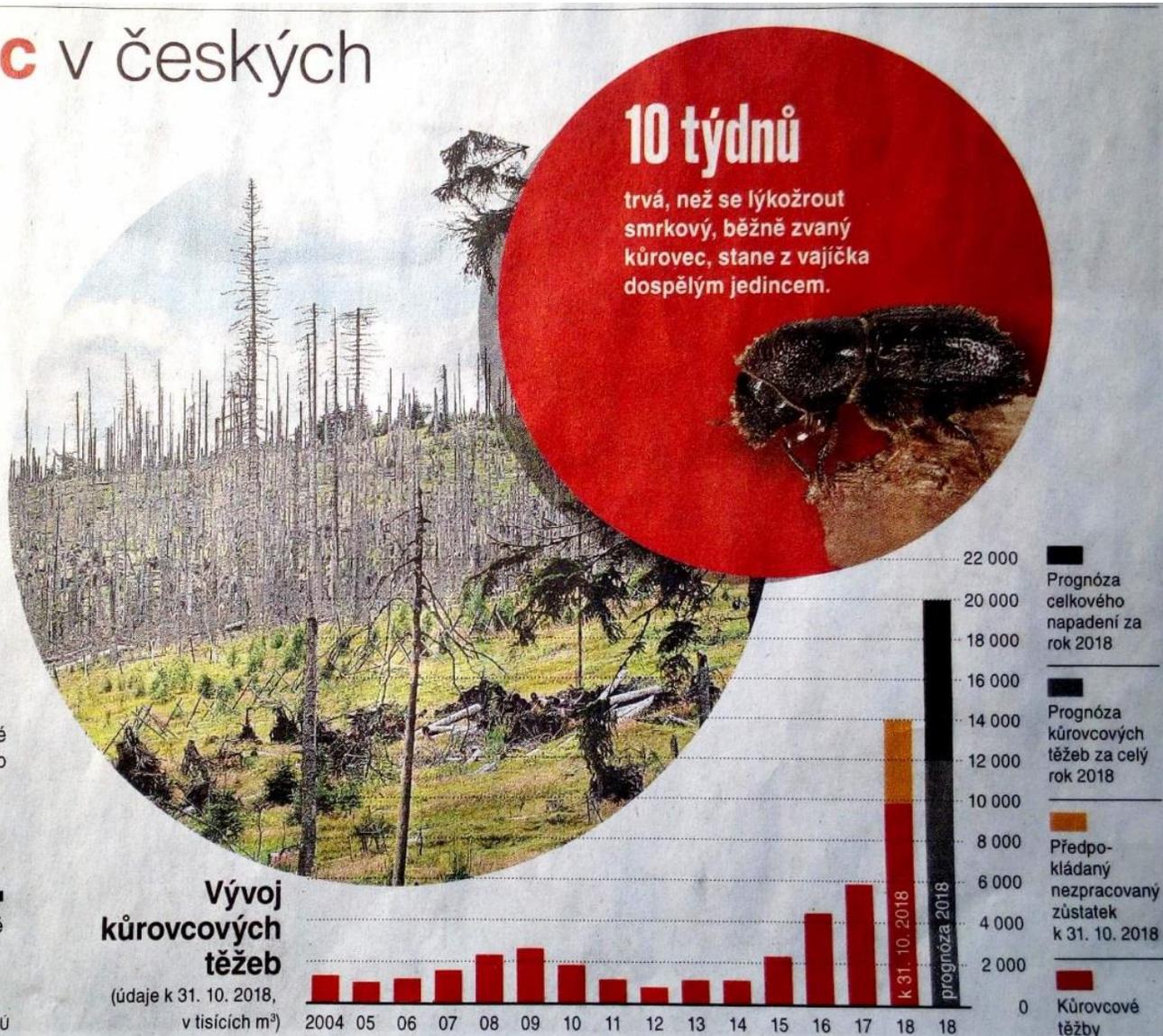
12 až 14 mil.

metrů krychlových kůrovcové hmoty se dle odhadů vytěžilo v minulém roce.

15 až 20 mil.

metrů krychlových kůrovcové hmoty se dle odhadů má vytěžít v tomto roce.

Pramen: ministerstvo zemědělství, ČSÚ

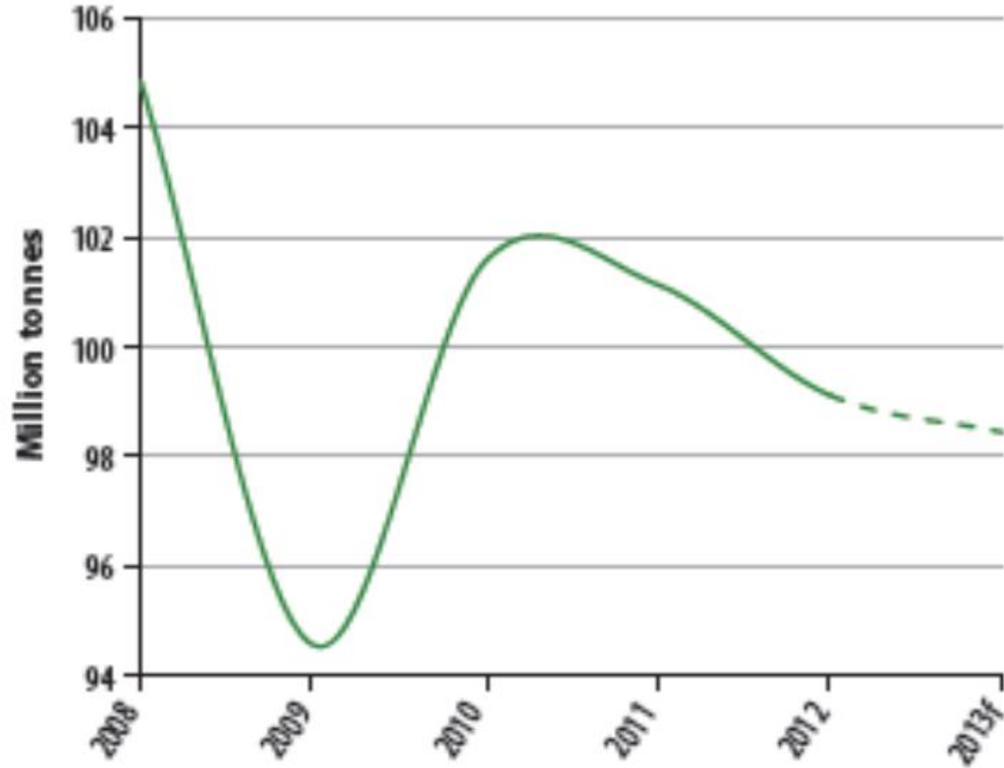


In 2018 in Cze: 20 Mm³ damage.
This year 30-40 Mm³ damage.

Same messages from Swi, Aut, Slr, Pol !

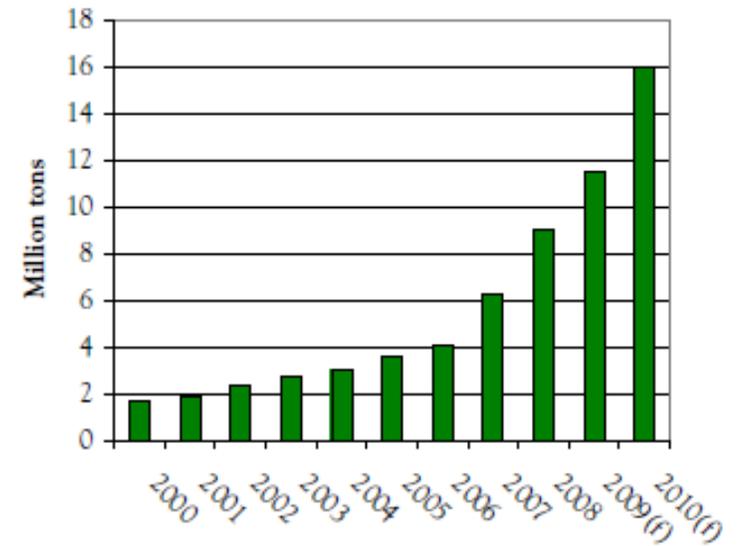
Schelhaas et al. European disturbance database. GCB 2003.

Trends in the European sector: bio-economy



Production of paper and paperboard in Europe (UNECE 2013)

Global production of wood pellets, 2000-2010

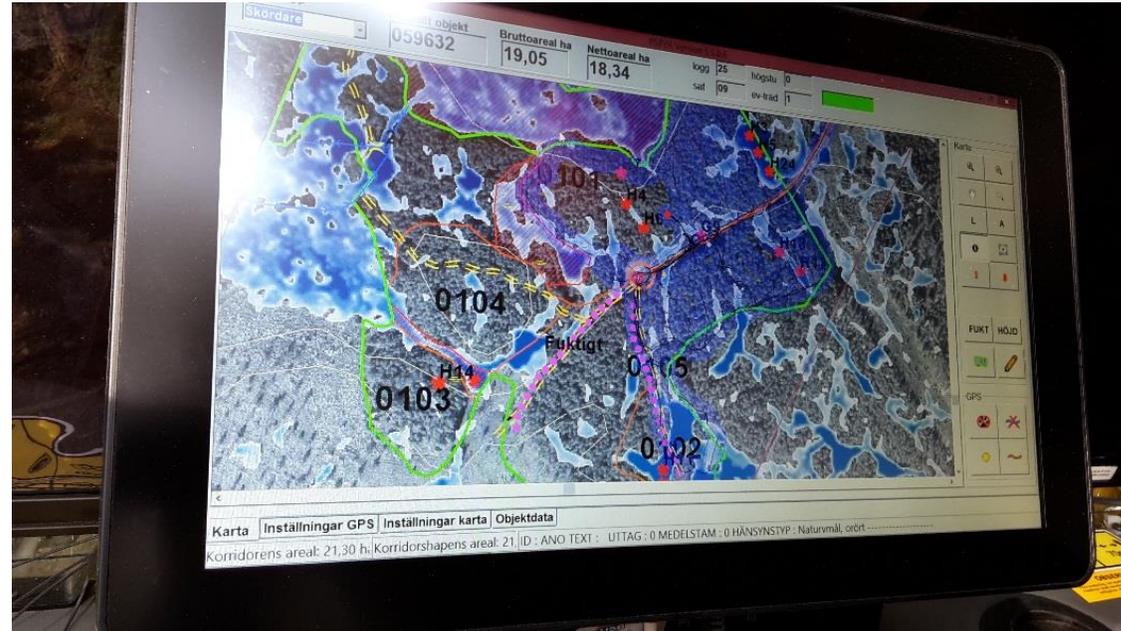


Pellets from Canada, USA (UNECE)



Biopolymers

All EU countries have a good NFI. Still, difficult to make good assessments. Creating uncertainty

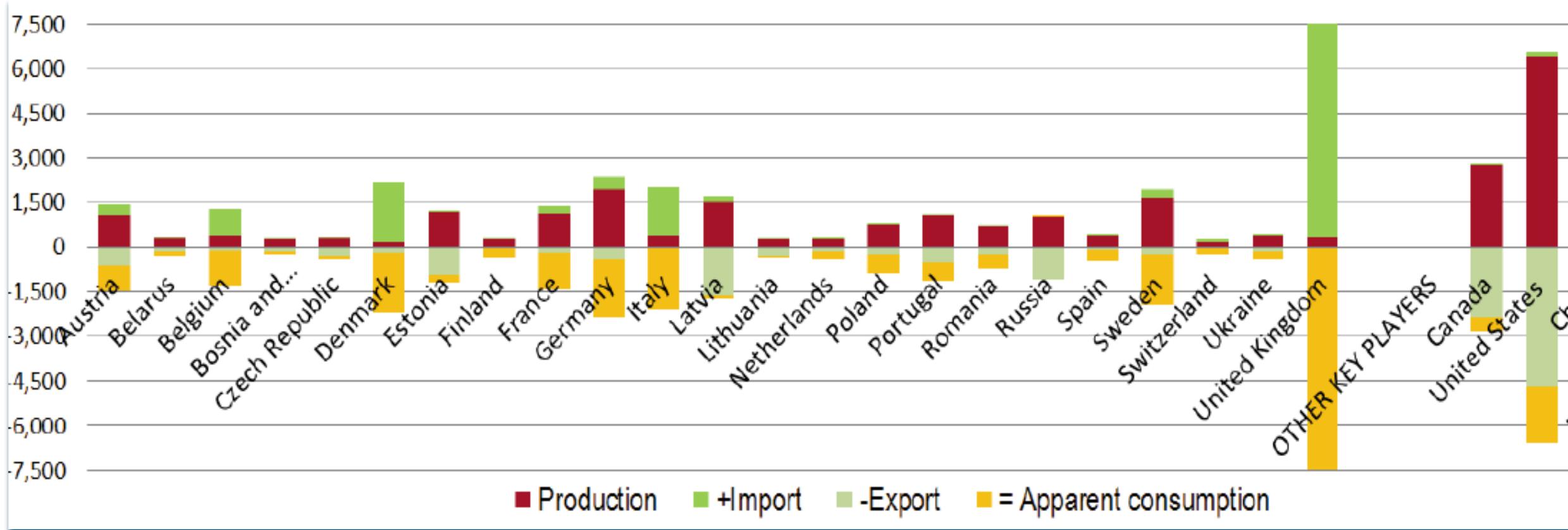


GIS in the harvester

European Commission tried to set up one harmonised system of data collecting and analysing (FISE). It failed since 1998

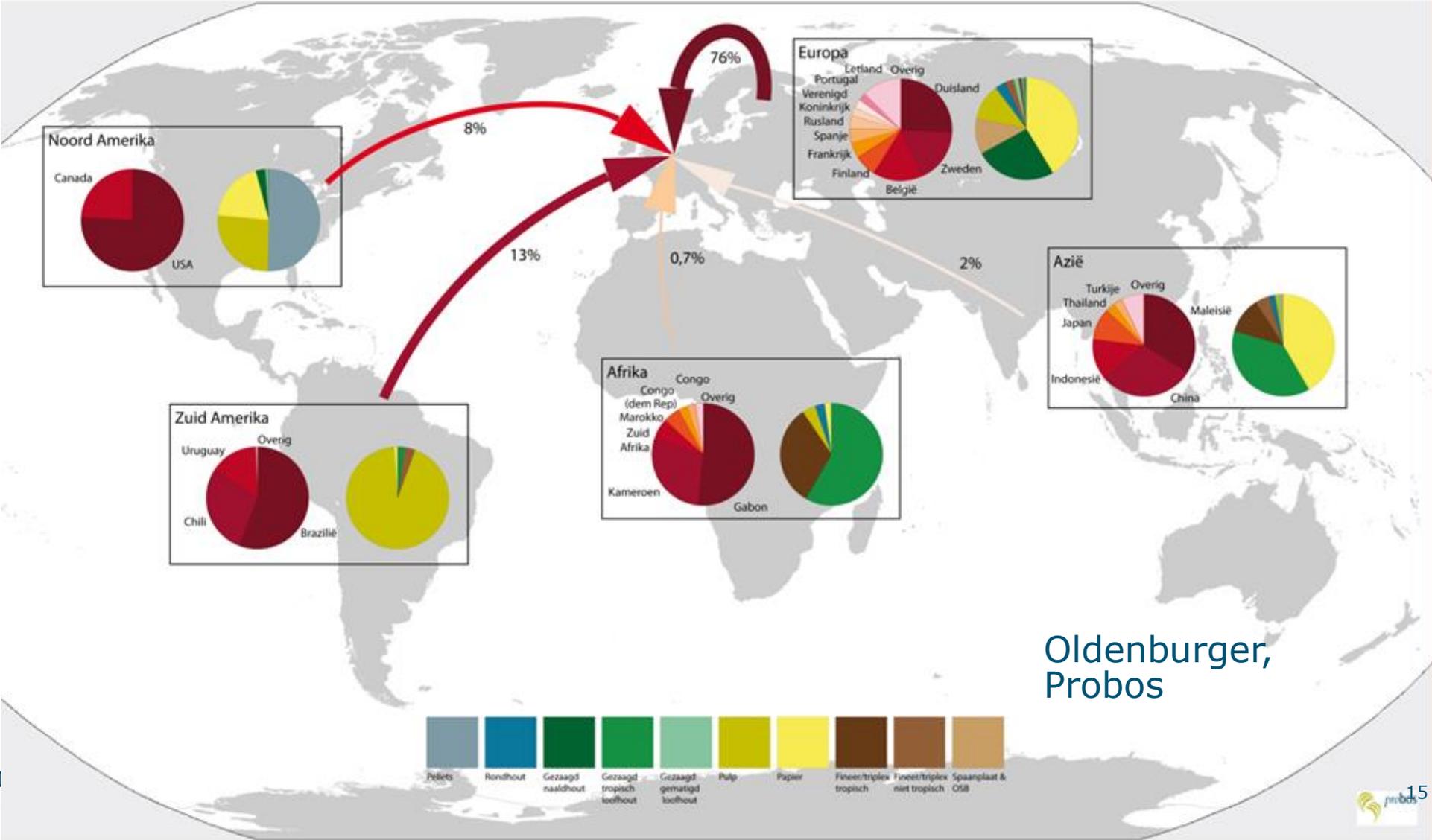
2. Trade of Pellets

All these challenges make some 10 EU countries net importers of pellets



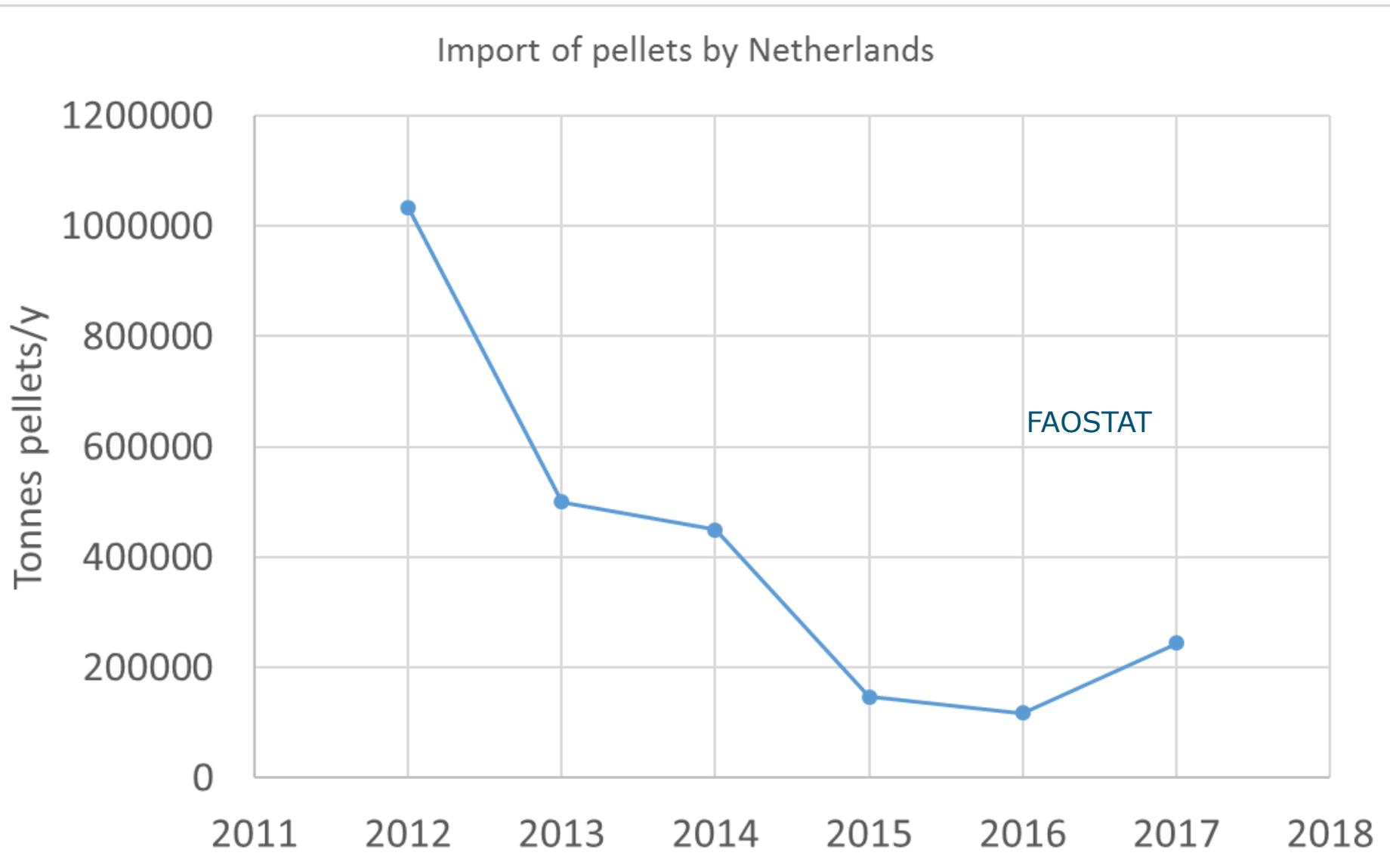
Flinkman, Sikkema, et al. Baltic Forestry 2018.
Based on FAOSTAT for 2015 year

Import to Netherlands of wood and wood products



Oldenburger, Probos

Netherlands became a small player



Imports will quickly rise now that SDE+ is in force and certification schemes have been evaluated

3. Dutch criteria and Committee

- Dutch Climate Accord aims for 49% emission reductions in 2030 ! (still in negotiations phase)
- Energy Accord from 2014 aimed at 16% renewables by 2023

- SDE+ (subsidy for sustainable energy)
- As part of the Energy Accord.
- Allows 25PJ co-firing: ~3.5 million tonnes pellets/y

Role of NGOs in policy making

Dutch 'Polder model': reaching consensus at stage of drafting legislation

- This means NGOs and all stakeholders, have a very big say



NGOs reluctantly accepted the co-firing as part of Energy Accord

- On the conditions that
 - All woody biomass comes from certified sources
 - FSC or equal
 - They would be involved in drafting criteria
 - A committee would be set up to check compliance of certification schemes against Dutch criteria

Extensive set of criteria negotiated and published Feb 2016



STAATSCOURANT

Nr. 10750

26 februari

2016

Officiële uitgave van het Koninkrijk der Nederlanden sinds 1814.

Regeling van de Minister van Economische Zaken van 24 februari 2016, nr. WJZ/16001395, tot wijziging van de Algemene uitvoeringsregeling stimulering duurzame energieproductie in verband met de aanpassing van de duurzaamheidseisen vaste biomassa

De Minister van Economische Zaken,

Gelet op artikel 31, negende lid, onderdeel d, van de Elektriciteitswet 1998 en de artikelen 15, tweede en derde lid, 23, tweede en derde lid, 32, derde lid, 40, derde lid, 48, derde lid, 55, derde lid, 56, derde lid, 62, vierde lid, en 63, tweede lid, van het Besluit stimulering duurzame energieproductie;

Besluit:

ARTIKEL I

De Algemene uitvoeringsregeling stimulering duurzame energieproductie wordt als volgt gewijzigd:

Committee on Sustainability of Biomass for Energy Purposes started June 2017

Task: check certification systems against Dutch criteria

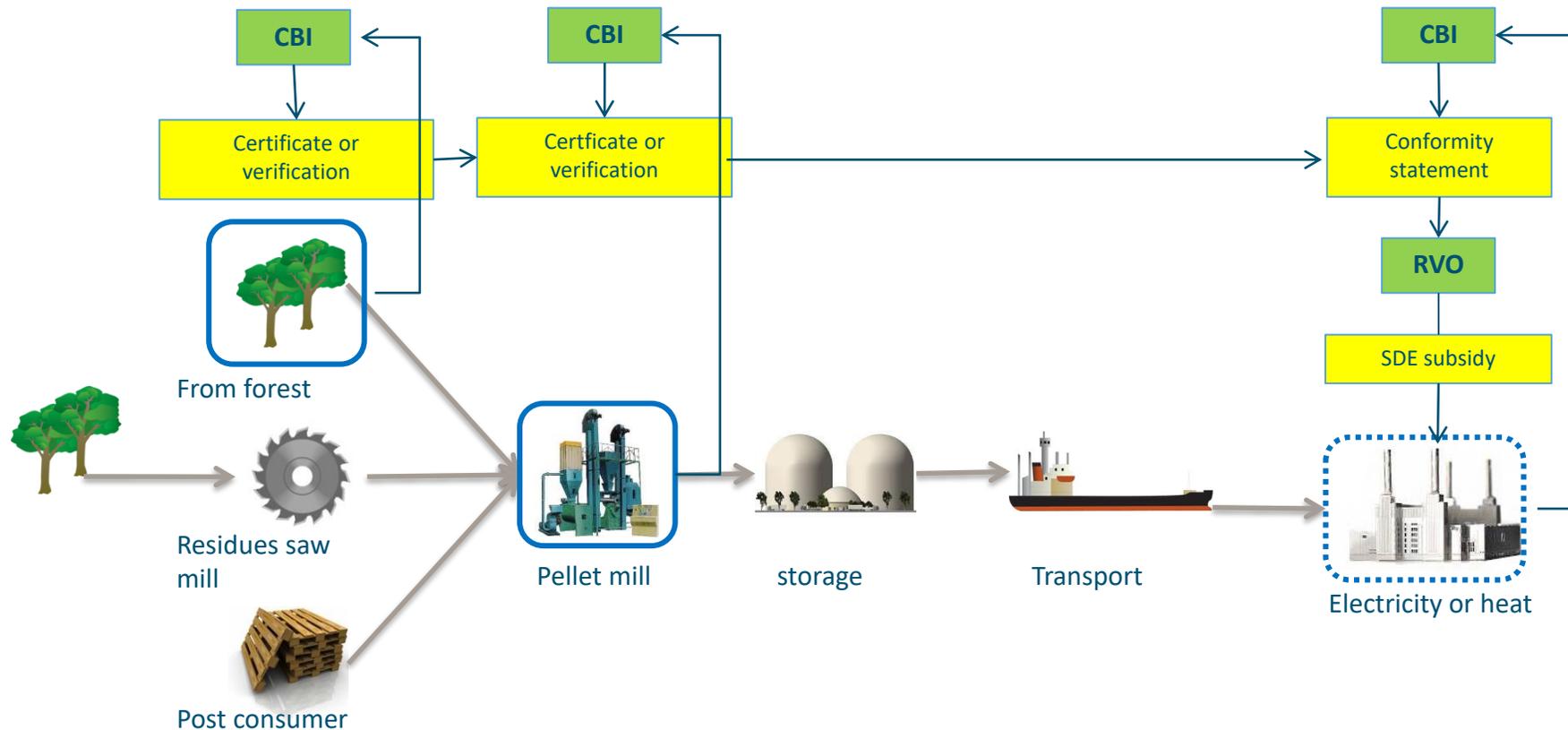
Now: April 2019: (Partial) approval of ATFS, SBP, FSC, Better Biomass, GGL & SFI.

<https://www.adviescommissie.dbe.nl/public-advisory-reports>



Dutch sustainability system

Either comply through certification (ex ante), or through verification (ex post) (CBI is conformity assessment body)



The 13 principles (43 criteria not shown)

Principle	Requirements applying to:	
	Economic operator	Biomass Category (page 5)
Requirements for greenhouse gas (GHG) emission savings and calculation		
Principle 1:	The use of biomass shall lead to a substantial reduction in greenhouse gas emissions calculated across the entire chain in comparison to the use of fossil fuels.	EP All categories
Requirements for soil management when using residues from nature and landscape management and agriculture		
Principle 2:	Soil quality shall be maintained and where possible improved.	FCP 3 & 4
Carbon and land use change requirements		
Principle 3:	Production of raw biomass does not result in the destruction of carbon sinks.	All FMUs 1 & 2
Principle 4:	The use of biomass does not result in long-term carbon debt.	All FMUs 1 & 2
Principle 5:	Biomass production does not result in Indirect Land Use Change (ILUC).	All FMUs 1

Principles (continued)

Sustainable Forest Management (SFM) requirements			
Principle 6:	Relevant international, national, regional and local legislation and regulations are complied with.	All FMUs	1 & 2
Principle 7:	Biodiversity is maintained and where possible enhanced.	All FMUs	1 & 2
Principle 8:	The regulating effect and the quality, health and vitality of the forest are maintained and where possible enhanced.	All FMUs	1 & 2
Principle 9:	The production capacity for wood products and relevant non-timber forest products is maintained in order to safeguard the future of the forests.	All FMUs	1 & 2
Principle 10:	Sustainable forest management is achieved through a management system.	All FMUs	1 & 2
Principle 11:	Forest management by a group or regional association offers sufficient safeguards for sustainable forest management.	All FMUs	1 & 2
Requirements relating to the Chain of Custody			
Principle 12:	A chain of custody system is in place for the biomass, covering the entire chain from the first actor to the energy producer, that links the source to the material used in the product or product group and provides the greenhouse gas emission data of each individual link.	All economic operators	All categories
Principle 13:	In case of a group management system for the Chain of Custody, the same requirements shall apply to the group as a whole as to individual businesses.	All economic operators	All categories

ADBE produces advice to the Minister

3.3.1 Findings for the claim "FSC 100%"

For the claim "FSC 100%", the table below summarises the findings of the advisory commission per individual sustainability criterion from the Dutch regulation for biomass categories 1 and 2.

Principle	Number of the criterion as related to the respective principle to the left							
	1	2	3	4	5	6	7	8
P1: GHG emissions	Grey							
P2: Soil quality	Red	Red	Light green					
P3: Carbon sinks	Light green	Red	Red					
P4: Long-term carbon debt	Grey							
P5: Indirect Land Use Change (ILUC)	Light green	Light green	Light green					
P6: Laws and regulations	Light green	Light green	Light green	Light green	Light green			
P7: Biodiversity	Light green	Light green	Light green	Light green	Light green	Light green	Light green	Light green
P8: Regulating effect and quality, health and vitality of forest	Light green	Light green	Light green	Light green	Light green	Light green	Light green	Light green
P9: Production capacity, safeguard future of forests	Light green	Light green	Light green	Light green	Light green			
P10: Management system	Light green	Light green	Light green					
P11: Forest management by a group or regional association	Light green	Red	Light green	Orange	Orange	Light green		
P12: Chain of custody system	Light green	Light green	Light green					
P13: Chain of custody system for a group	Light green	Light green	Light green					

Legend (scoring table)

Colour	Score	Meaning
Dark green	3	The sustainability criterion is fully addressed by FSC International.
Light green	2	The sustainability criterion is largely addressed the FSC International. Supplementary verification or another approved certification scheme is not needed.
Orange	1	The sustainability criterion is partly addressed by FSC International. Supplementary verification or another approved certification scheme is needed for those elements that are not addressed.
Red	0	The sustainability criterion is not or is insufficiently addressed by FSC International. Additional verification or another approved certification scheme is required for the entire sustainability criterion.
Grey		No request for approval.

We scored schemes against Dutch criteria

What did we run into ?

Different claims under a scheme

..complex

..careful weighing of words ..

Some examples of complexity

Eis
1.1
4.1
6.3
7.2
8.1
12.4
12.6
13.1

“Measures have been taken to protect endangered plant and animal....and if applicable to enhance their habitat ...”.

Definition: “endangered plant and animal...those that are minimally classified as threatened in the global red list of IUCN or the guidelines for IUCN for national lists...”.

This often meant that a reference to a national system in a scheme, meant it did not comply to Dutch criteria. (e.g. Endangered Species Act)

Stumps ...

“Biomass is not sourced from stumps ..unless these stumps had to be removed for other reasons..”

Eis
1.1
4.2
6.3
7.2
8.1
12.4
12.6
13.1

Most schemes do not mention anything on stumps..
So, they scored '0'.

Reply on draft was often that this is not economically feasible anyway and will not happen.
That may be true, but if not in the scheme, then '0'

Ecological cycles..

“Important ecological cycles present in the forest management unit are preserved, including carbon and nutrient cycles”

Eis

1.1

4.1

6.3

7.2

8.3

12.4

12.6

13.1

PEFC ST 1003:2010 (SFM Requirements): <https://www.pefc.org/>

5.1.9 Forest management practices shall safeguard the quantity and quality of the forest resources in the medium and long term by balancing harvesting and growth rates, and by preferring techniques that minimise direct or indirect damage to forest, soil or water resources.

5.1.10 Appropriate silvicultural measures shall be taken to maintain or reach a level of the growing stock that is economically, ecologically and socially desirable.
..and few more

Concluding

- The Netherlands has the strictest system of sustainability criteria in the world
- Some schemes now partially approved by Minister.
- Verification afterwards will play an important role.
- Many schemes withdrew halfway and improved their scheme ! Positive side effect

Concluding

- also new claims were set up: SBP-SDE+

Instruction Document
2D: SBP Requirements
for Group Schemes

Demonstrating Compliance with the
Netherlands SDE+ Sustainability
Requirements for Biomass
Categories 1 to 4

- now that the co firing starts, Greenpeace threatens with a law suit, because they say 'the system is not in place'

..if you burn oil, then you dont have to comply to anything...

Thank you !

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www.toerklub.nl