



BOS Briefing Session

4th Oct 2022

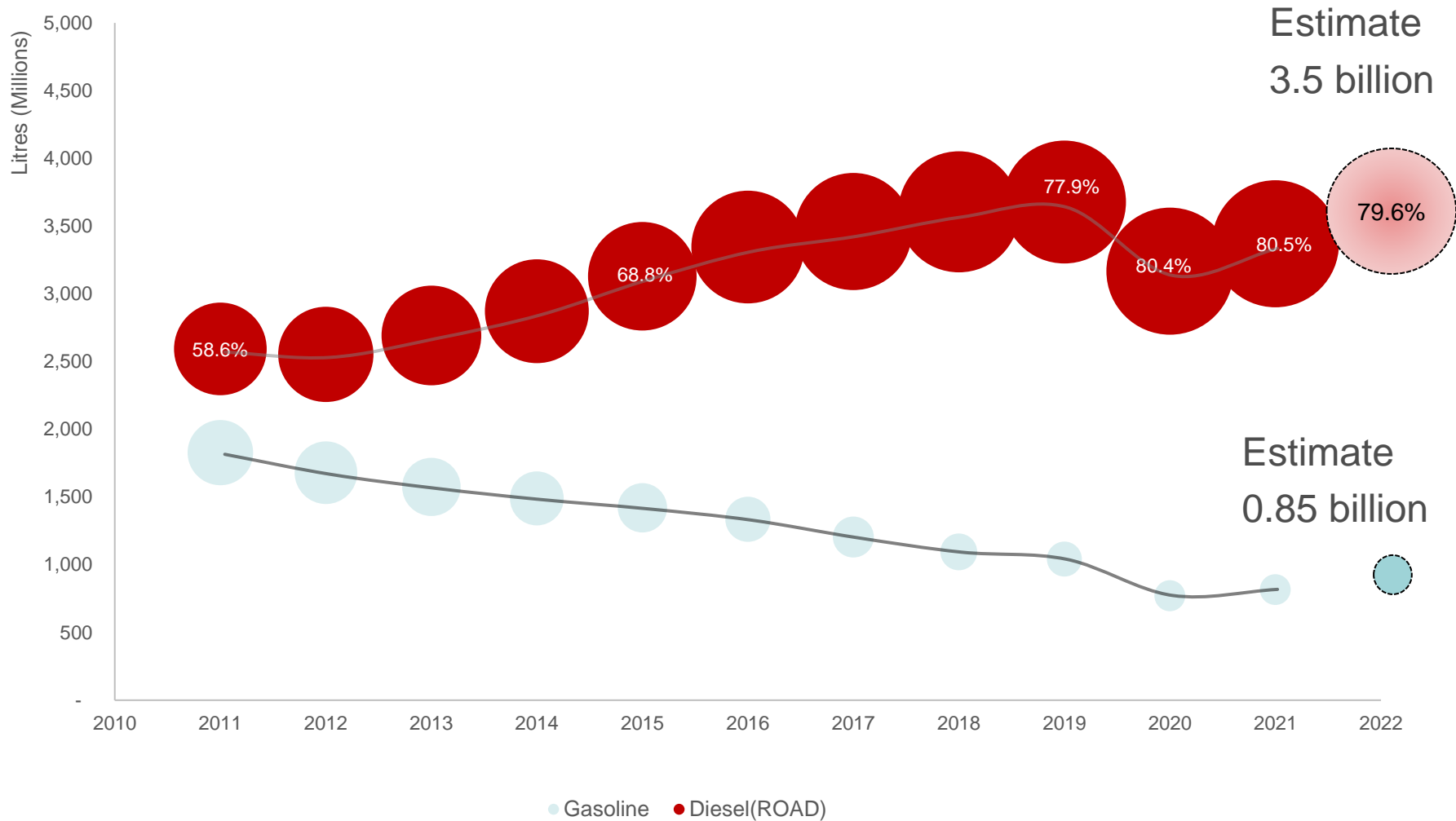
(Ref: 457-22P0887)

TODAY'S AGENDA

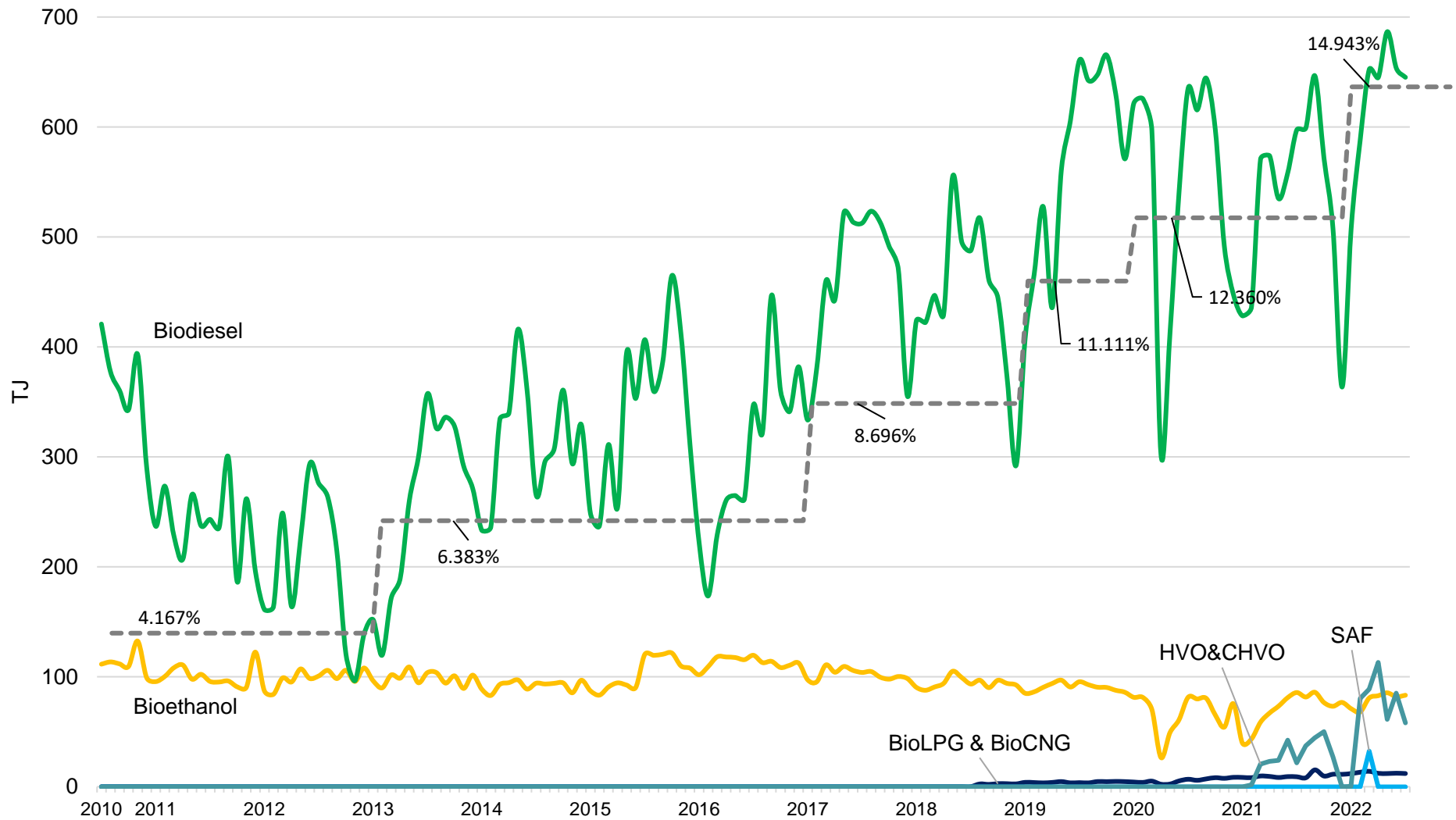
- Performance review
- DoT policy update
- SI 350 of 2022
 - Move to energy
 - Advanced obligation
 - Crop cap
 - Double counting
 - Revised determinations
- EU changes
 - EU database
 - Supervision of CBs



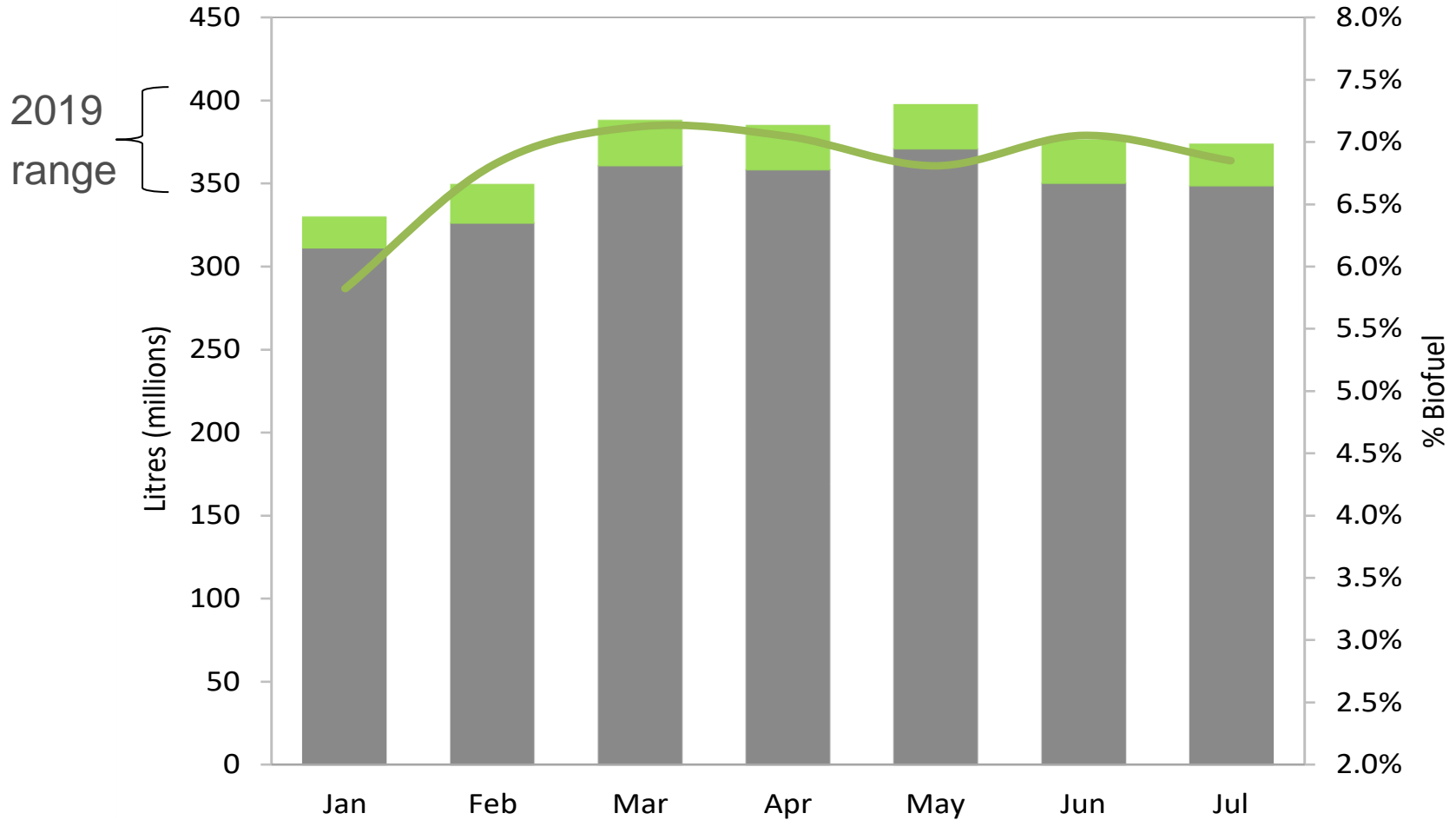
ROAD TRANSPORT VOLUMES



INCREASING BIOFUEL



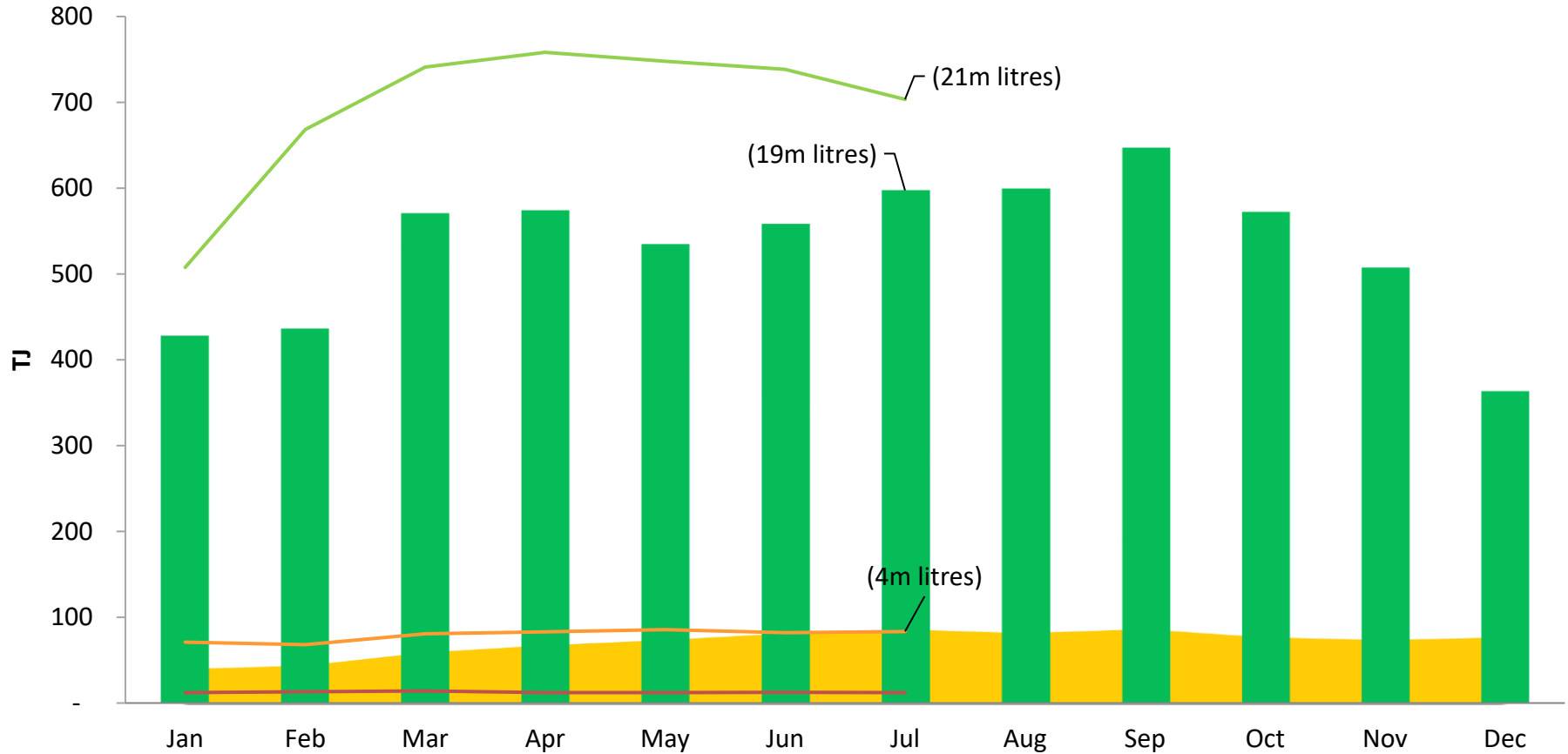
2022 PERIOD – FOSSIL & BIO



Diesel & Gasoline
 Biofuels
 % Biofuel (approx.)



2022 PERIOD – BIOFUEL



■ Ethanol (2021)
 ■ Biodiesel & HVO (2021)
 — Ethanol (2022)
 — Biodiesel & HVO (2022)
 — BioLPG & BioCNG (2022)

2022 PERIOD SO FAR

- The numbers (million litres):

- BOS fossil: 2,400
- Additional SI 160 (road, rail & NRMM): 463
- Biodiesel: 133
- Bioethanol: 26
- CHVO/HVO: 14
- BioLPG: 2.8
- SAF: 1
- BioCNG: 0.6 Nm³

(TJ)

85,316

16,671

4,378

553

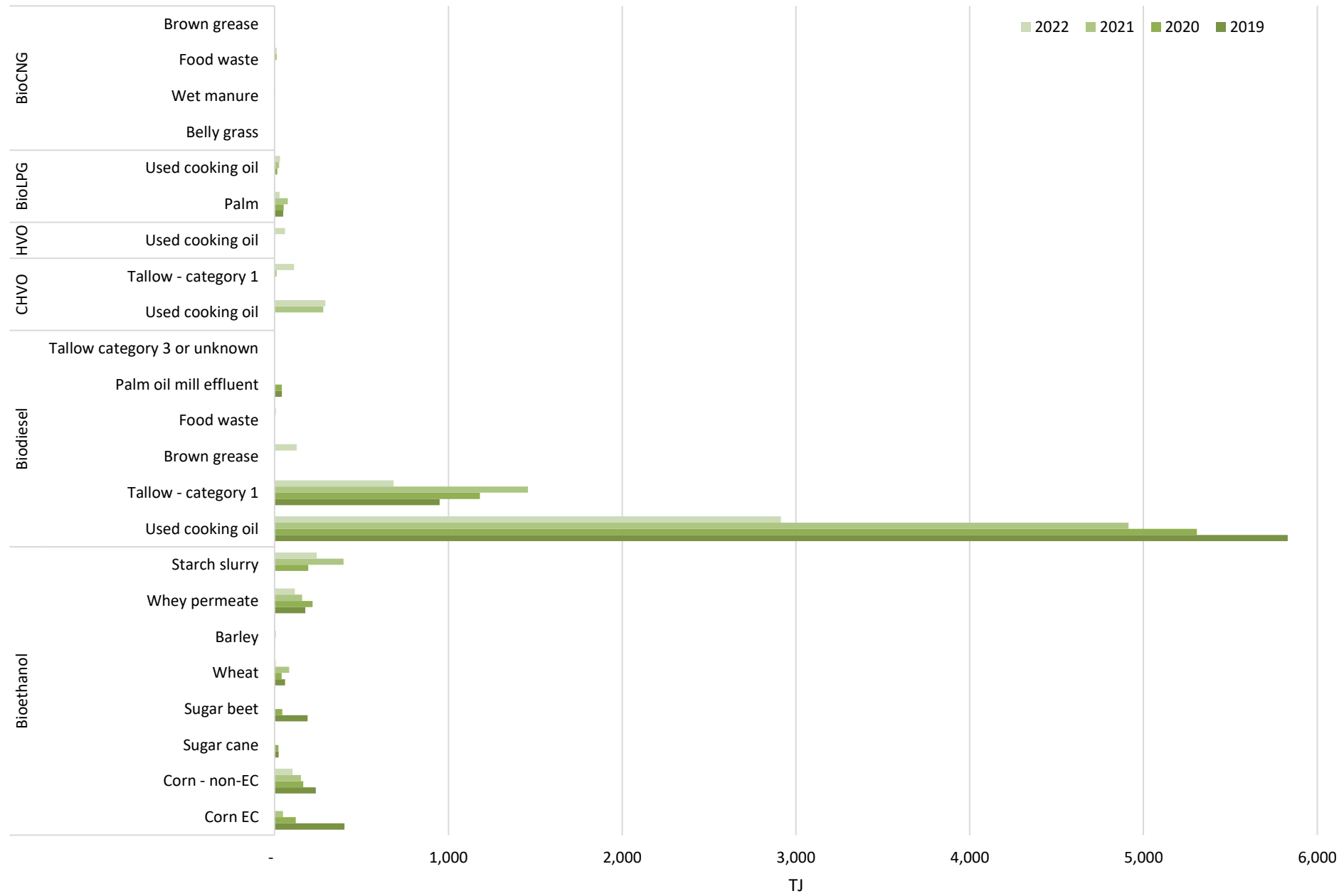
487

68

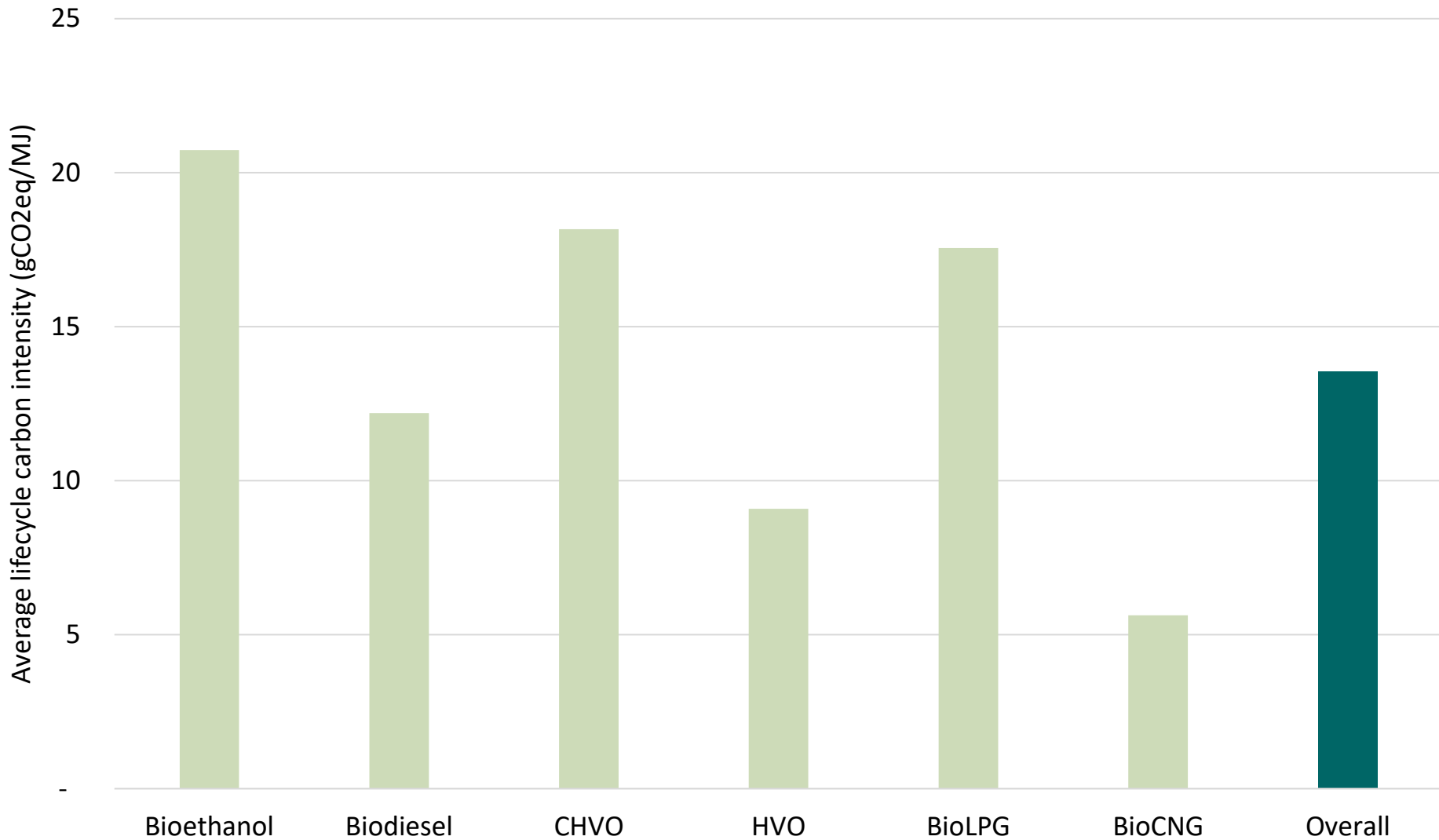
33

20

- Obligation 14.942% vs c.14.2% (estimated, ex '20 &'21 Certs)
- Approx 60 million BOS Cert carried forward to 2022



CARBON INTENSITY (PRELIMINARY DATA)



SI 160 COMPLIANCE

- Requires designated fuel suppliers to reduce the carbon intensity of fuels by 6%, relative to FBS (94.1 gCO_{2eq}/MJ)
- For H1 2022, 3.7% CI saving achieved, in aggregate

Fossil Fuel	Carbon Savings (ktCO _{2eq}) ¹
Gasoline	13
Diesel	(69)
LPG	<1
Gasoil	(16)
Rail Diesel	(1)
CNG	1
Total	(73)

1 Seven months data

Biofuel	Est'd Carbon Savings (ktCO _{2eq}) ²
Bioethanol	41
Biodiesel	396 (359, 35, 2)
BioLPG	5
Electricity	Assessed in early 2023
UERS	0
BioCNG	2
Total	443

2 Six months data

- Shortfall of 199 ktCO_{2eq} for H1



An Roinn Iompair
Department of Transport

Renewable Transport Fuels Policy

Andrea Lennon
4th October 2022

SI 350 OF 2022 – OVERVIEW

- Increases scope to ‘renewable fuels’
- Moves to energy
- Commences advanced biofuel obligation (**Green Certs**)
- Brings in crop cap (**Red Certs**)
- Annex IX determines double counting
 - Annex IX Part A, advanced & double counted (Green Certs)
 - Annex IX Part B, double counted (Orange Certs)
 - Existing double count – revised determinations needed



INCREASED SCOPE

- Currently biofuel (liquid and gaseous fuel produced from biomass)
- Distinguishes between biofuel, biogas and advanced biofuels
- Will include:
 - Recycled carbon fuels (RCFs)
 - Renewable fuels of non-biological origin (RFNBOs)
- Methodology for determining GHG savings for RCFs and RFNBOs being finalised by Commission – once complete, will be awarded Certs (new colour!)

MOVE TO ENERGY

- OLA reporting remains in litres / Nm³
- Applications for BOS Certs remain in litres / Nm³
- BOS will convert to energy for:

Renewable Fuel Obligation

$$((\text{vol}_{\text{diesel}} \times \text{NCV}_{\text{diesel}}) + (\text{vol}_{\text{gasoline}} \times \text{NCV}_{\text{gasoline}})) \times \text{obligation rate}$$

Advanced Biofuel Obligation

$$((\text{vol}_{\text{diesel}} \times \text{NCV}_{\text{diesel}}) + (\text{vol}_{\text{gasoline}} \times \text{NCV}_{\text{gasoline}})) \times \text{advanced obligation rate}$$

No. of Certs to be awarded

$$(\text{vol}_{\text{biofuel}} \times \text{NCV}_{\text{biofuel}}) \times \text{appropriate multiplier}$$



MOVE TO ENERGY

- Certs per megajoule (MJ)

Fuel Type	No. of Certs per litre	
	If <u>single</u> counted	If <u>double</u> counted
Biodiesel	33	66
Bioethanol	21	42
HVO (diesel)	34	68
CHVO (diesel)	36	72
BioLPG	24	48
BioCNG	35.8 (per Nm ³)	71.6
SAF	34	68
Biomethanol	16	32
BioLNG	20.3	40.6

- (Slide 27 – additional multipliers)

MOVE TO ENERGY

Fuel	Volume	Obligation (10%)
Diesel	80	8
Gasoline	20	2
Total	100	10

Fuel	Volume	Blend %
B'diesel	9	10%
B'ethanol	1	5%
Total	10	

Fuel	Energy	%	Obligation (9%)
Diesel	2,880	82	
Gasoline	640	18	
Total	3,520		318

Fuel	Energy	%	Blend %
B'diesel	297	93	9.3%
B'ethanol	21	7	3.2%
Total	318		

- Future obligation to be expressed as % of fossil energy
- In 2023, Certs awarded per MJ of sustainable renewable fuel

ADVANCED BIOFUEL OBLIGATION

- Obligation for sustainable biofuel and biogas produced from feedstocks listed in Annex IX Part A: 1% in 2025 & 3.5% in 2030
- To be 'translated' into BOS advanced obligation (i.e. expressed as percentage of fossil diesel and gasoline)
- Discharged with **Green Certs**
- 15% limit on Green Certs from previous periods towards advanced obligation
- Green Certs also used to meet renewable fuel obligation
- Legislation pending on 2023 advanced obligation & buy-out charge

CROP CAP

- Biofuels and biogas produced from food and feed crops limited to 2% in 2023 and thereafter
- To be ‘translated’ into a BOS equivalent limit (i.e. expressed as percentage of fossil diesel and gasoline, c. 2.3%)
- Compliance with limit measured using **Red Certs**

DOUBLE COUNTING (FOR 2023 AND ON)

- All renewable fuels produced from Annex IX (Part A and Part B) feedstocks double counted
 - Part A advanced feedstocks, x2 **Green Certs** per MJ
 - Part B feedstock, x2 **Orange Certs** per MJ
- All other renewable fuels produced from other feedstocks that meet the sustainability criteria, **single** counted – could be **Red Certs** (crop-based feedstock) or **Orange Certs** (not crop-based & not on Annex IX)

REVISED DETERMINATIONS

- *44G (2B) (1) In respect of feedstocks which were previously determined eligible for two certificates per litre prior to the enactment of the Regulations of 2022, which are **not explicitly listed in Annex IX**, and for which revised determinations under 44G (11) are required –*
- *(a) The Agency shall make determinations, in accordance with the provisions of 44G(11), as soon as reasonably practicable following enactment of these Regulations;*
- *b) Following completion of the determinations at subsection (1)(a), the Agency shall publish a notice on its website of the revised determinations;*
- *(c) The determinations made by the Agency under subsection (1)(a) **shall come into effect** for applications made under 44G (1) for the **obligation period commencing 1 January 2023***

REVISED DETERMINATIONS

Feedstock	Revised Determination?	Note
UCO	X	Part B (a)
Cat 1 tallow	X	Part B (b)
POME	X	Part A (g)
Sewage sludge	X	Part A (f)
Animal manure	X	Part A (f)
Crude glycerine	X	Part A (i)
SBE	✓	Underway
Whey permeate	✓	Underway
Waste starch slurry	✓	Underway
Brewer's spent yeast	✓	Underway
Brown grease	✓	Underway
Belly grass (paunch)	✓	Underway
Food waste not fit for use in the food or feed chain	✓	Underway

REVISED DETERMINATIONS

Feedstock	Position	Next Step	Est. publish proposed determination	Est. final determination
SBE	With consultees	Prepare proposed determination	Wk 41	Wk 45
Whey permeate	Awaiting applicant	Issue to consultees	Wk 44	Wk 48
Waste starch slurry	With consultees	Prepare proposed determination	Wk 42	Wk 46
Brewer's spent yeast	With consultees	Prepare proposed determination	Wk 41	Wk 45
Brown grease	With consultees	Prepare proposed determination	Wk 42	Wk 47
Belly grass (paunch)	With consultees	Prepare proposed determination	Wk 42	Wk 47
Food waste not fit for use in the food or feed chain	With consultees	Prepare proposed determination	Wk 42	Wk 47

DETERMINATIONS (FOR 2023 AND ON)

- Feedstocks not explicitly listed may fall under the following:

- (b) Biomass fraction of mixed municipal waste, but not separated household waste subject to recycling targets under point (a) of Article 11(2) of Directive 2008/98/EC;
- (c) Biowaste as defined in point (4) of Article 3 of Directive 2008/98/EC from private households subject to separate collection as defined in point (11) of Article 3 of that Directive;
- (d) Biomass fraction of industrial waste not fit for use in the food or feed chain, including material from retail and wholesale and the agro-food and fish and aquaculture industry, and excluding feedstocks listed in part B of this Annex;
- (o) Biomass fraction of wastes and residues from forestry and forest-based industries, namely, bark, branches, pre-commercial thinnings, leaves, needles, tree tops, saw dust, cutter shavings, black liquor, brown liquor, fibre sludge, lignin and tall oil;
- (p) Other non-food cellulosic material;
- (q) Other ligno-cellulosic material except saw logs and veneer logs.

DETERMINATION PROCESS

- Determinations required for feedstocks for which two BOS Certs per MJ are being sought and determination not previously carried out
- Biofuel must be placed on the market – advise a small volume initially
- Advise the BOS Team you intend to apply for BOS Certs for a feedstock not listed in Annex IX and not previously determined

DETERMINATION PROCESS

- Application submitted as normal on the BOSOS, but additional information needs to be submitted by email:
 - The Annex IX Part A description you believe the feedstock meets
 - Justification for this claim, i.e. set out the rationale / logic / argument / supporting documentation or opinion, to convincingly demonstrate that the feedstock meets the description

DETERMINATION PROCESS

- Consult with:

- SEAI
- NSAI
- EPA
- DoT
- DECC
- And others we consider appropriate



NSAI

National Standards Authority of Ireland
Údarás Um Cha



- Examine position of other Member States and UK

- Review data gathered (from applicant, from consultees, from BOS Team research)



DETERMINATION PROCESS

- If feedstock is listed, no need for determination
 - (a) Algae if cultivated on land in ponds or photobioreactors;
 - (e) Straw;
 - (f) Animal manure and sewage sludge;
 - (g) Palm oil mill effluent and empty palm fruit bunches;
 - (h) Tall oil pitch;
 - (i) Crude glycerine;
 - (j) Bagasse;
 - (k) Grape marcs and wine lees;
 - (l) Nut shells;
 - (m) Husks;
 - (n) Cobs cleaned of kernels of corn;
 - (a) Used cooking oil;
 - (b) Animal fats classified as categories 1 and 2 in accordance with Regulation (EC) No 1069/2009.

ADDITIONAL MULTIPLE COUNTING (DEVELOPMENT FUELS)

- Provisional, to be set by DoT

Fuel	Proposed multiplier
RFNBO	4
BioCNG	1.5
HVO / CHVO blended in diesel/gasoil	1.5
Sustainable aviation fuel	1.5
Renewable fuel used in maritime	1.2

- These are in addition to double counting
- E.g. 1 MJ of bioCNG produced from crude glycerine (listed in Annex IX Part A) will be awarded: $1 \text{ MJ} \times 2 \times 1.5 = 3 \text{ Green Certs}$

RECONCILIATION

- Need to keep the following in mind for 2023 period:
 - No. Red Certs to be discharged against the renewable fuel obligation is limited (c. 2% of road transport fuel)
 - 15% limit on Certs (all types) from previous periods to be discharged against renewable fuel obligation
 - All Certs can be transferred between BOS Account Holders

RECONCILIATION

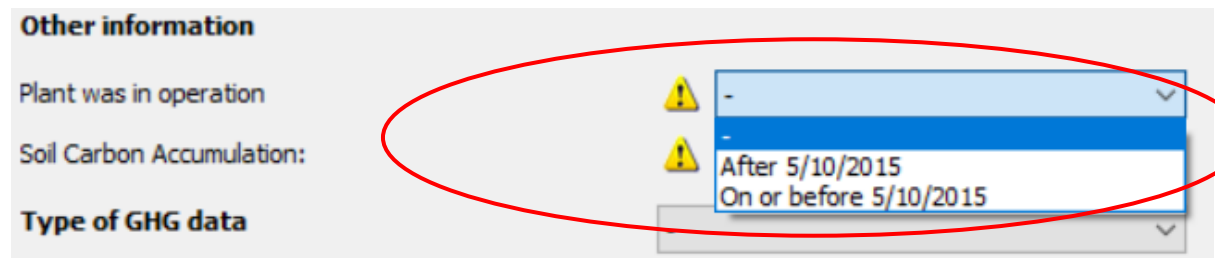
- Need to keep the following in mind for 2023 period:
 - The advanced biofuel obligation and renewable fuel obligation are separate obligations
 - Only Green Certs can be discharged against the advanced biofuel obligation (Green Certs also contribute to renewable fuel obligation)
 - 15% limit on Green Certs from previous periods to be discharged against the advanced biofuel obligation
 - Will be separate buy-out charges for both obligations

RED II – FOSSIL FUEL COMPARATOR

- RED fossil fuel comparator: 83.8 gCO_{2eq}/MJ
 - Installations operating prior to Oct '15, 50% GHG savings required = CI of 41.9 gCO_{2eq}/MJ
 - Installations starting operation after Oct '15, 60% GHG savings required = CI of 33.5 gCO_{2eq}/MJ
- RED II changes the fossil fuel comparator to 94 gCO_{2eq}/MJ
 - Installations operating prior to Oct '15, 50% GHG savings required = CI of 47 gCO_{2eq}/MJ
 - Installations in operation after Oct '15, 60% GHG savings required = CI of 37.6 gCO_{2eq}/MJ

RED II – FOSSIL FUEL COMPARATOR

- RED II also introduces new category:
 - installations in operation after Jan '21, 65% GHG savings required = CI of 32.9 gCO_{2eq}/MJ
- Carbon calculator currently:



The screenshot shows a form titled "Other information" with the following fields:

- Plant was in operation
- Soil Carbon Accumulation:
- Type of GHG data

A dropdown menu is open next to the "Type of GHG data" field, showing three options: a dash "-", "After 5/10/2015", and "On or before 5/10/2015". The "After 5/10/2015" option is highlighted in blue. A red oval is drawn around the dropdown menu.

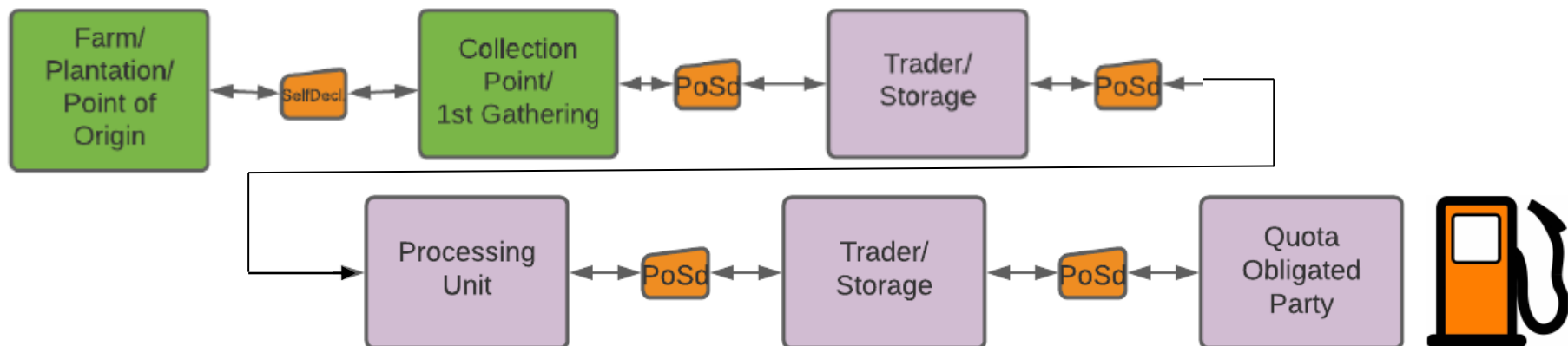
- Calculator will be modified to enable third option

RED II – UNION DATABASE

- Article 28 (2) and (4):
 - *The Commission shall ensure that a Union database is put in place to enable the tracing of liquid and gaseous transport fuels that are eligible for being counted towards the numerator... Member States shall require the relevant economic operators to enter into that database.. sustainability characteristics... including life-cycle greenhouse gas emissions...*
- Commission preparing database – officially, to be ready by end of 2022 (unlikely)
- Implementing Regulation ([link](#)) published. Deals with certification and rules for Voluntary Schemes to support UDB – stipulates legal obligations for economic operators, certification bodies, voluntary schemes and Member States

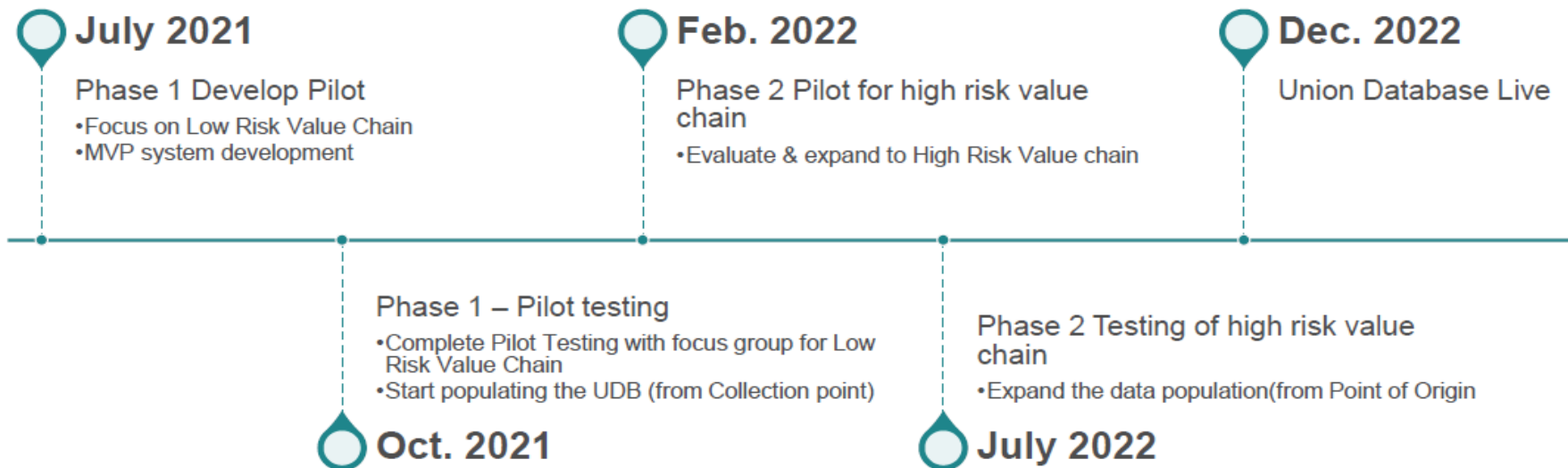
RED II – UNION DATABASE

Possible Scope



Indicative schedule

Consumer



IMPLEMENTING REGULATION – ANNEX I

DATA TO BE TRANSMITTED THROUGH THE WHOLE SUPPLY CHAIN AND TRANSACTION DATA

1. Data to be transmitted through the whole supply chain
 - (a) name of the voluntary or national scheme;
 - (b) proof of sustainability number;
 - (c) sustainability and GHG emission savings characteristics, including:
 - (i) statement on whether the raw material or fuel complies with the criteria set out in Article 29(2) to (7) of Directive (EU) 2018/2001;
 - (ii) GHG emission data calculated according to the methodology set out in Annexes V and VI to Directive (EU) 2018/2001 Delegated Regulation (EU) 2019/807;
 - (iii) description of when the installation started operation (for fuels only);
 - (d) name of raw material or name of raw material that the fuel is produced from;
 - (e) waste or animal by-product permit number (if applicable);
 - (f) fuel type (for fuels only);
 - (g) country of origin of raw material;
 - (h) country of fuel production;
 - (i) statement on whether the raw material or fuel complies with the criteria set out for low indirect land-use change-risk biofuels;
 - (j) information on whether support has been provided for the production of that consignment, and if so, the type of support scheme.
2. Transaction data
 - (a) supplier company name and address;
 - (b) buyer company name and address;
 - (c) date of (physical) loading;
 - (d) place of (physical) loading or logistical facility or distribution infrastructure entry point;
 - (e) place of (physical) delivery or logistical facility or distribution infrastructure exit point;
 - (f) volume: For fuels, the energy quantity of the fuel must also be included. For the calculation of the energy quantity, conversion factors in Annex III to Directive (EU) 2018/2001 must be used.

Not clear on level of
granularity

SUPERVISION OF CBs

Formal Cooperation Framework

MSs **shall**: 17 (3)

- exchange info on supervision in a *formal cooperation framework*

SUPERVISION OF CBs

17 (2)

Establish and manage CB register

17 (1)

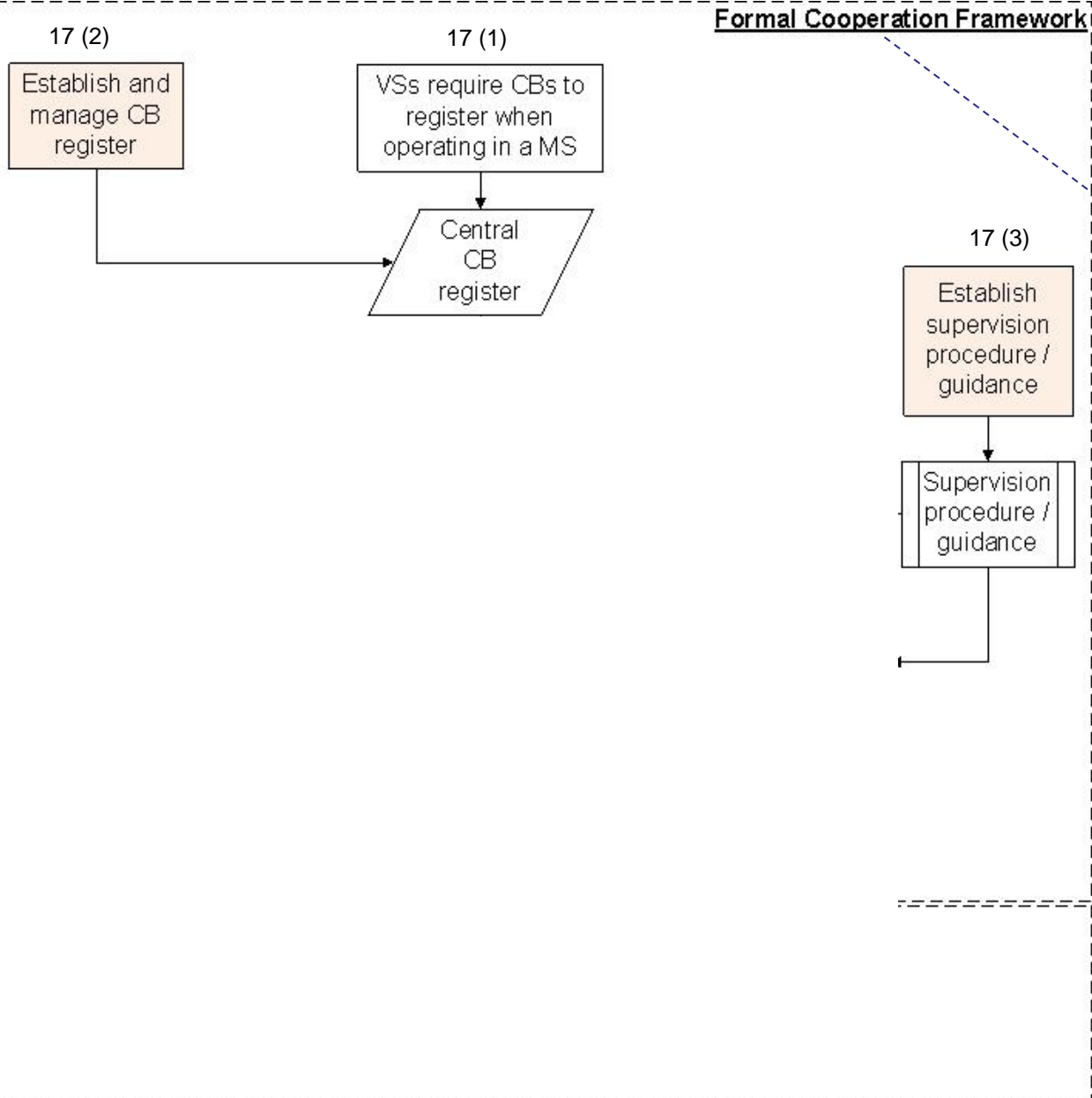
VSs require CBs to register when operating in a MS

Formal Cooperation Framework

MSs **shall**: 17 (3)

- exchange info on supervision in a *formal cooperation framework*

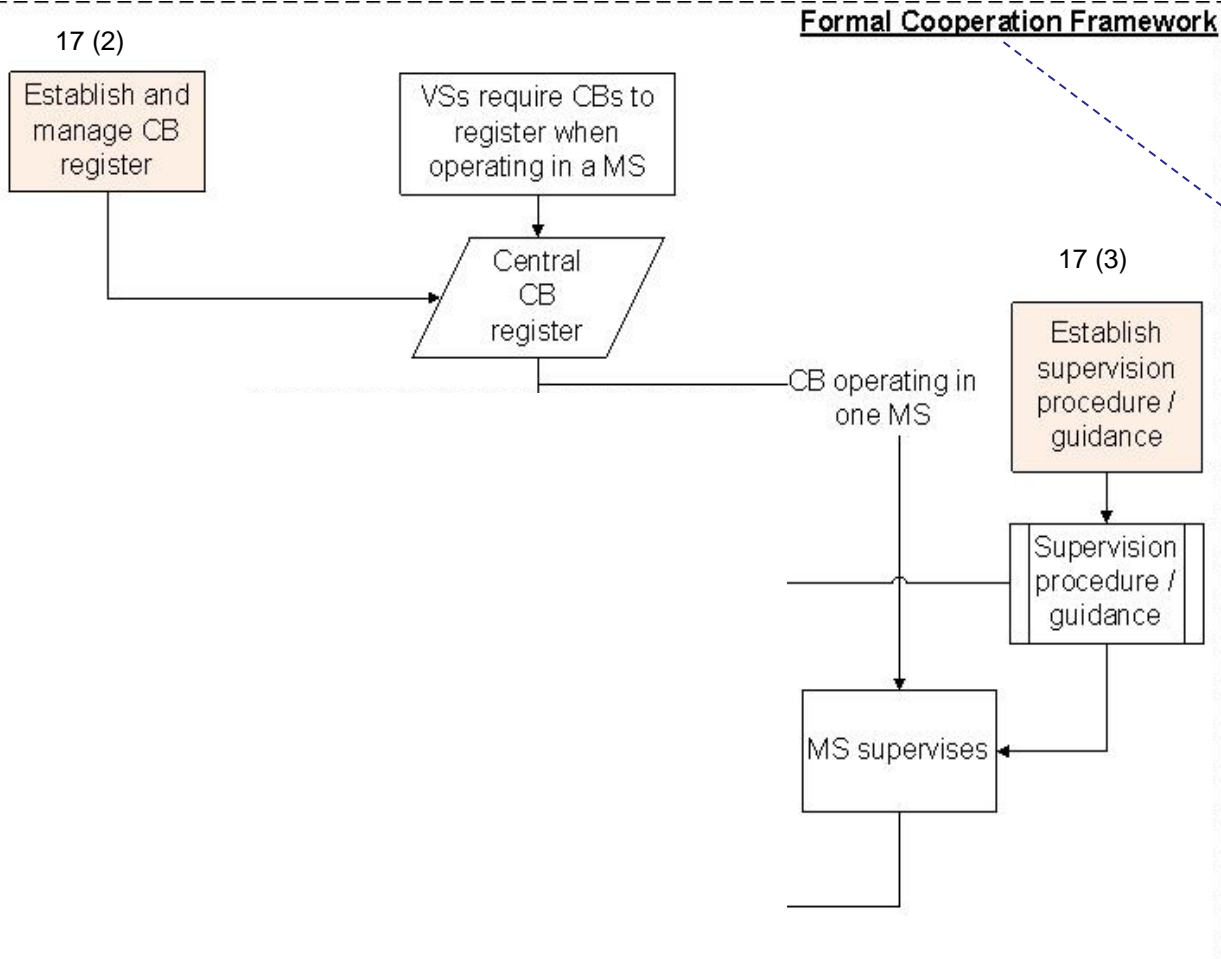
SUPERVISION OF CBs



MSs **shall**: 17 (3)

- exchange info on supervision in a *formal cooperation framework*

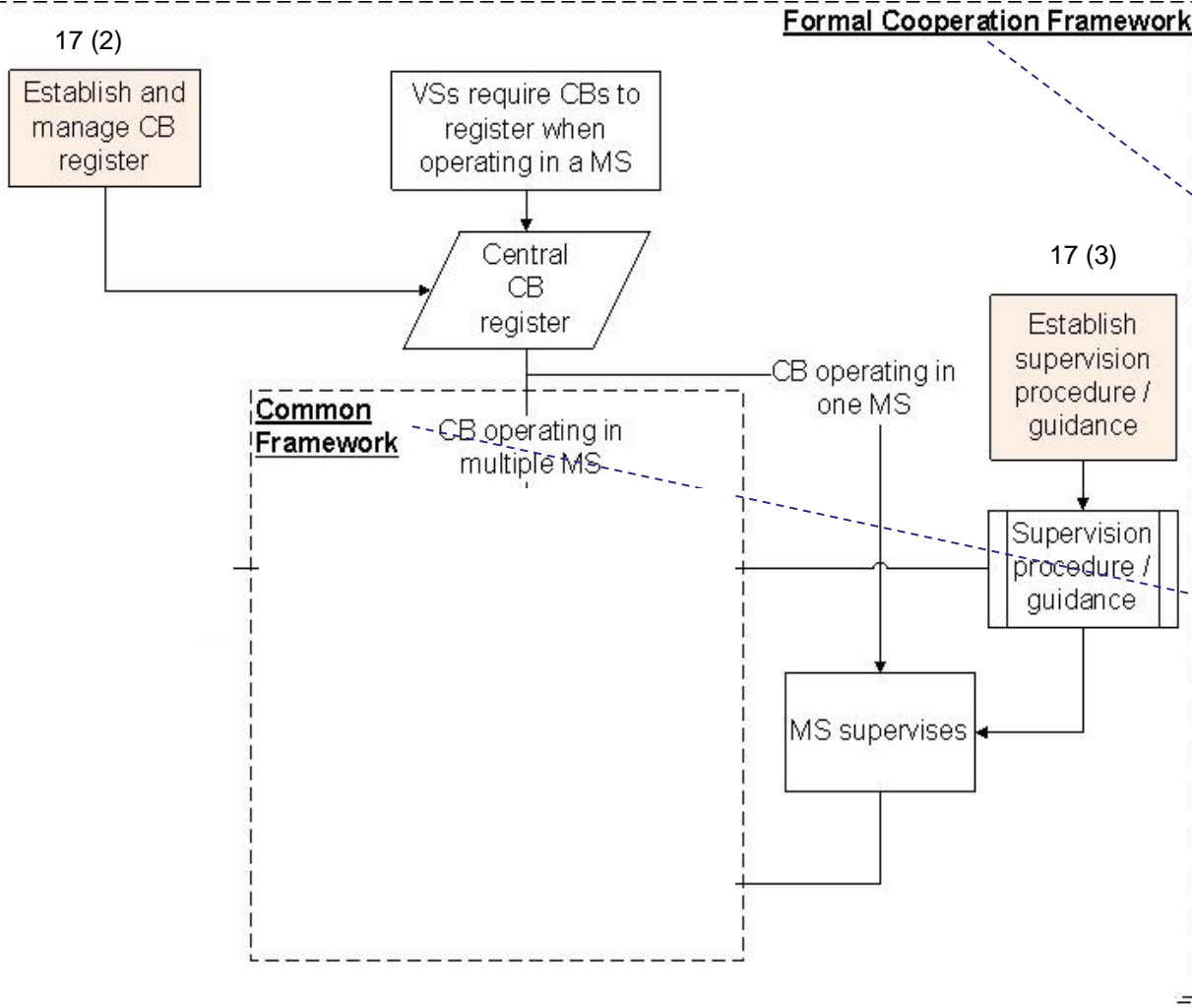
SUPERVISION OF CBs



MSs **shall**: 17 (3)

- exchange info on supervision in a *formal cooperation framework*

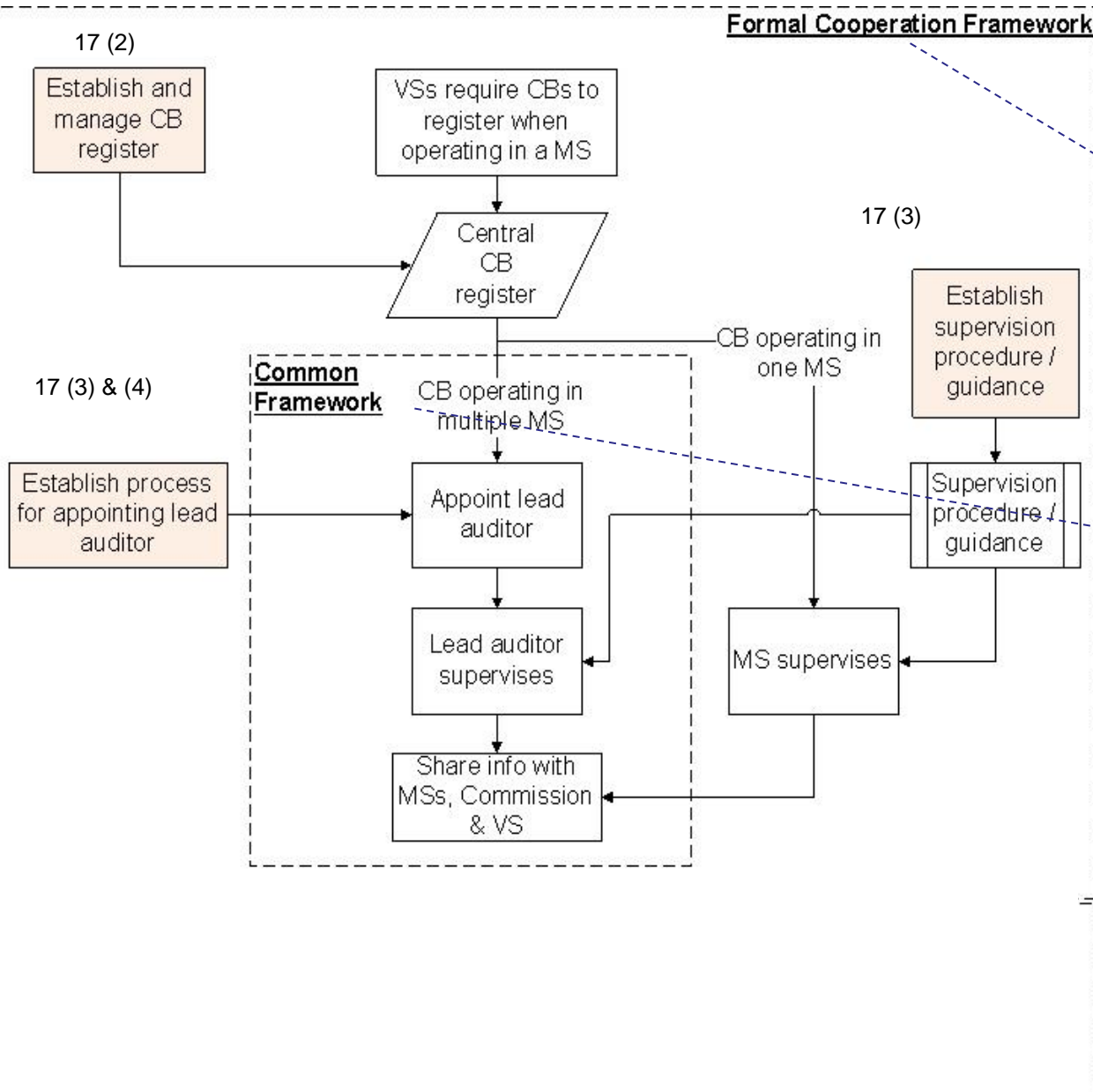
SUPERVISION OF CBs



MSs **shall:** 17 (3)

- exchange info on supervision in a *formal cooperation framework*
- 17 (3)
- Setup a common framework for supervising CBs operating in more than one MS

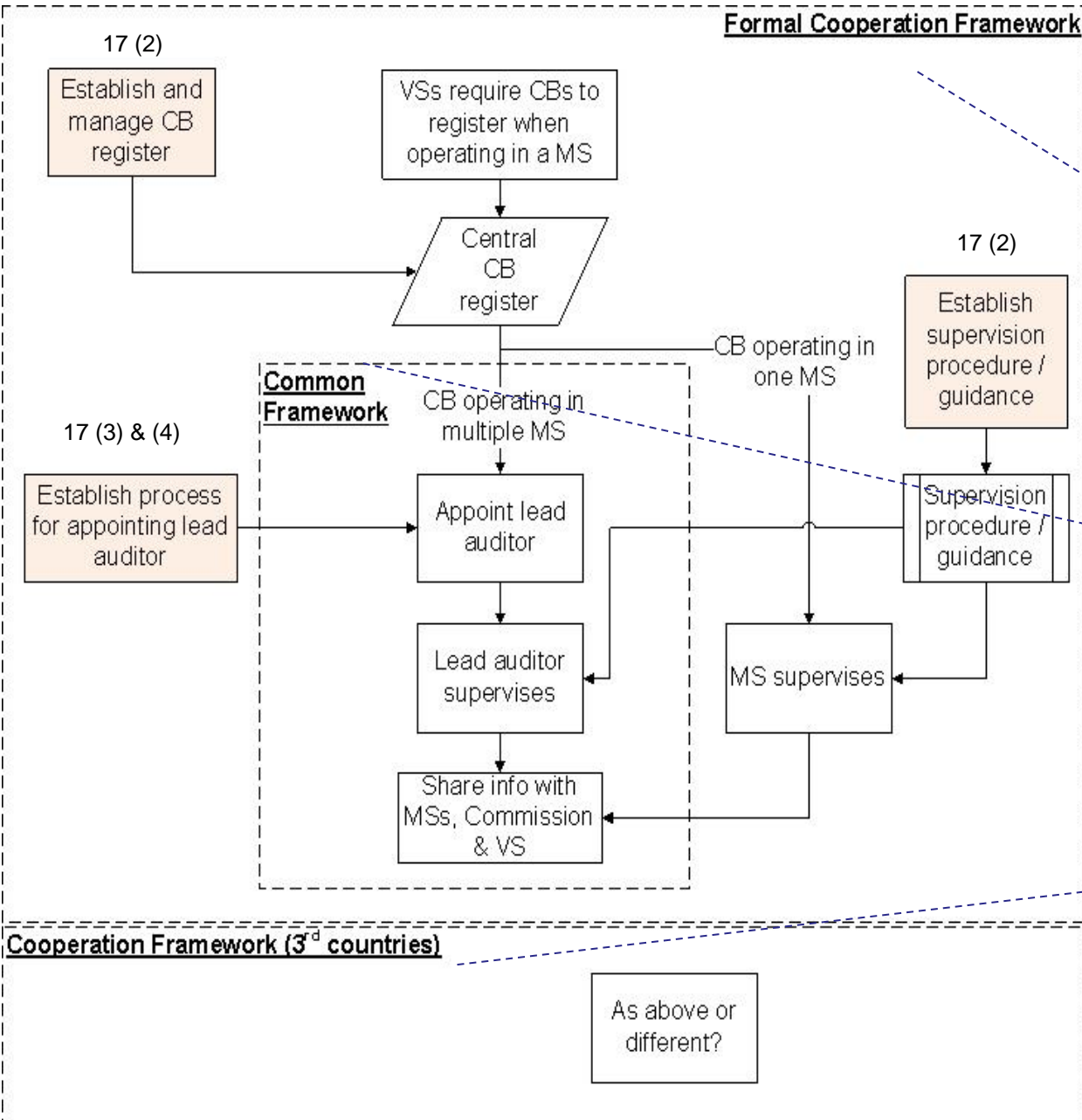
SUPERVISION OF CBs



MSs **shall:** 17 (3)

- exchange info on supervision in a *formal cooperation framework*
- Setup a common framework for supervising CBs operating in more than one MS

SUPERVISION OF CBs



MSs **shall**: 17 (3)

- exchange info on supervision in a *formal cooperation framework*

17 (3)

- Setup a common framework for supervising CBs operating in more than one MS

17 (5)

- Establish, the extent possible, cooperation frameworks with 3rd countries

NEXT UP



-- Thank you for your attention --