

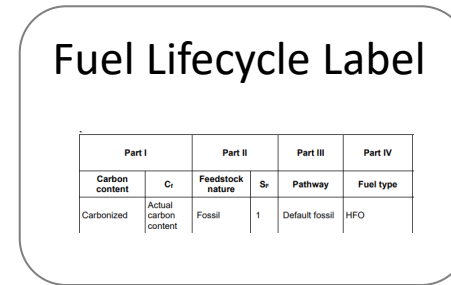
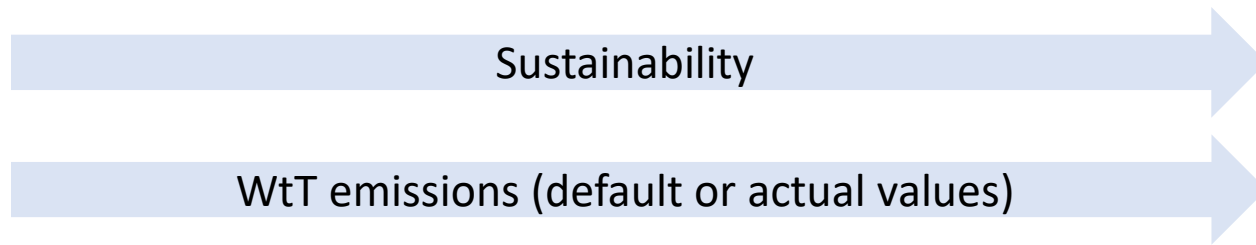
Fuel Lifecycle Label and certification schemes

ISWG-GHG 11/2/3 - Updated draft Lifecycle GHG and Carbon Intensity Guidelines for
marine fuels, submitted by Australia et al

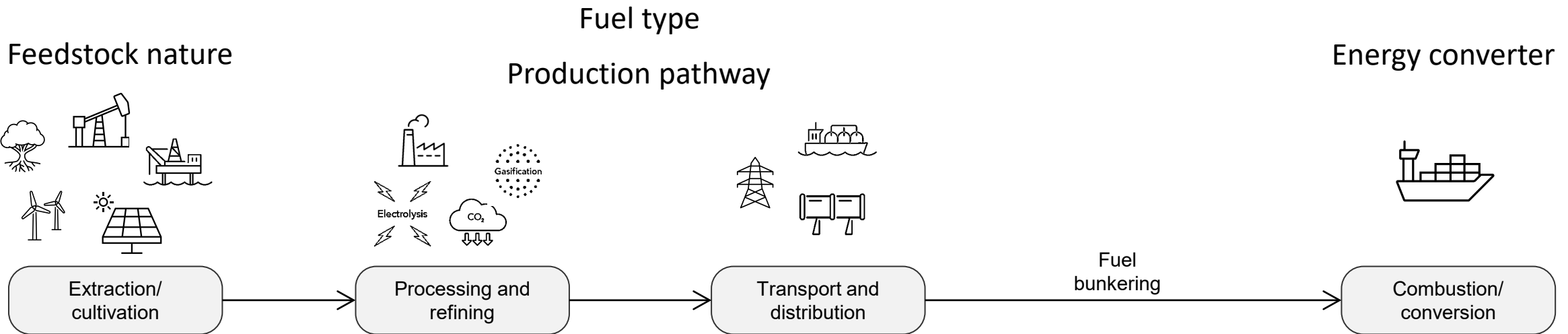
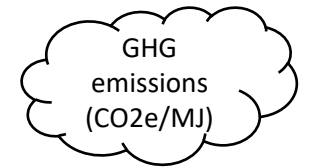
JTTRI International Webinar, 24 February 2022

Tore Longva, DNV

The purpose of the FLL is to convey standardised information about the fuel to evaluate its sustainability and lifecycle emissions



Information from the FLL and onboard converter enable calculation of WtW and TtW emissions



Example of content

Part I: Carbon content	Part II: Feedstock Nature	Part III: Production pathway	Part IV: Fuel type	Region of the world(*)	GHG _{CO2eq} [gCO _{2eq} /MJ]	S _F
Carbon	Biogenic	Main products / wastes / Feedstock mix	HVO		-20.7	0
Carbon	Captured carbon	Captured carbon/ Electrolysis/ electricity mix	Diesel		-47.6 ⁵	0

The fuel is certified as a biofuel from a waste stream

The fuel is certified as synthetic fuel made from captured carbon and hydrogen from electrolysis

Default emission factors and carbon source factor based on the FLL information. Defaults to fossil if not certified

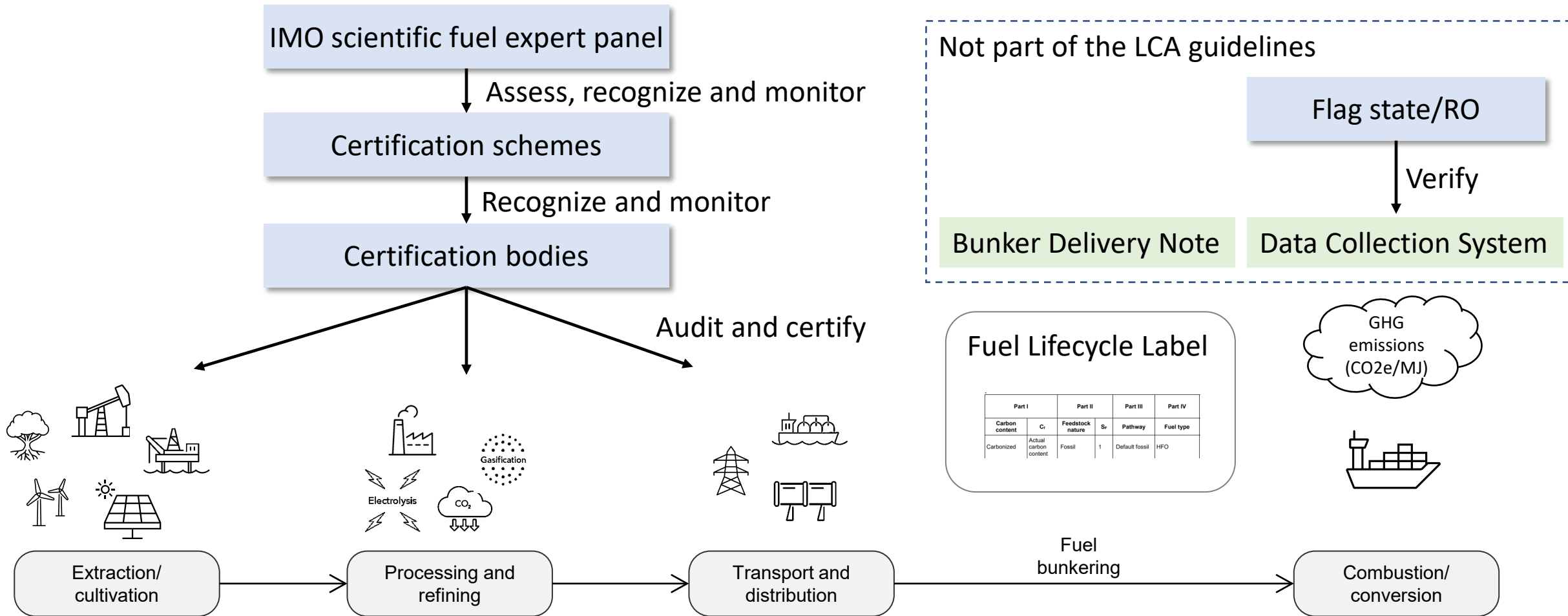
Certified values by means of laboratory testing or direct emissions measurements should be allowed

Example of similar concept: class notations

- DNV: +1A1 Tanker for chemicals and oil E0 ESP Ice(1A*) NAUTICUS(Newbuilding) SPM TMON VCS(2)
 - LR: + 100 A1 Double Hull oil tanker :ESP :LI:ShipRight (SDA, FDA, CM) :Ice Class 1A
 - ABS: A1, Oil Carrier, ESP, AMS, ACCU, CPS, CPS-COT, CSR, CRC(I), POT, RRDA, UWILD, Ice Class IA 11199 kw, NBLES, VEG-L, BWE, BWT, IHM, SPMA, TCM
- The class notations signify that the ships fulfil certain design criteria – for example Ice Class 1A – surveyed and certified by the classification society
 - Each society has slightly different rules, but are comparable

For the Fuel Lifecycle Label, the criteria will be defined in the LCA guidelines, but the detailed audits and certification requirements are defined by each certification scheme recognized by the IMO

Certification – conceptual outline



Outstanding issues

- Deciding on parts and categorisation, e.g.:
 - sustainability criteria part
 - production pathway categories
 - use of grid/renewable electricity including consideration of national and regional variations
 - carbon capture and storage: specific certification or default values?
- Criteria and instructions for verification and certification schemes