



International Partnership  
for Hydrogen and Fuel Cells  
in the Economy

## Webinar

### **IPHE Hydrogen Certification Mechanism Task Force**

### **Presentation of online inventory of Certification Mechanisms**

International Partnership for Hydrogen and Fuel Cells in the Economy

September 2025

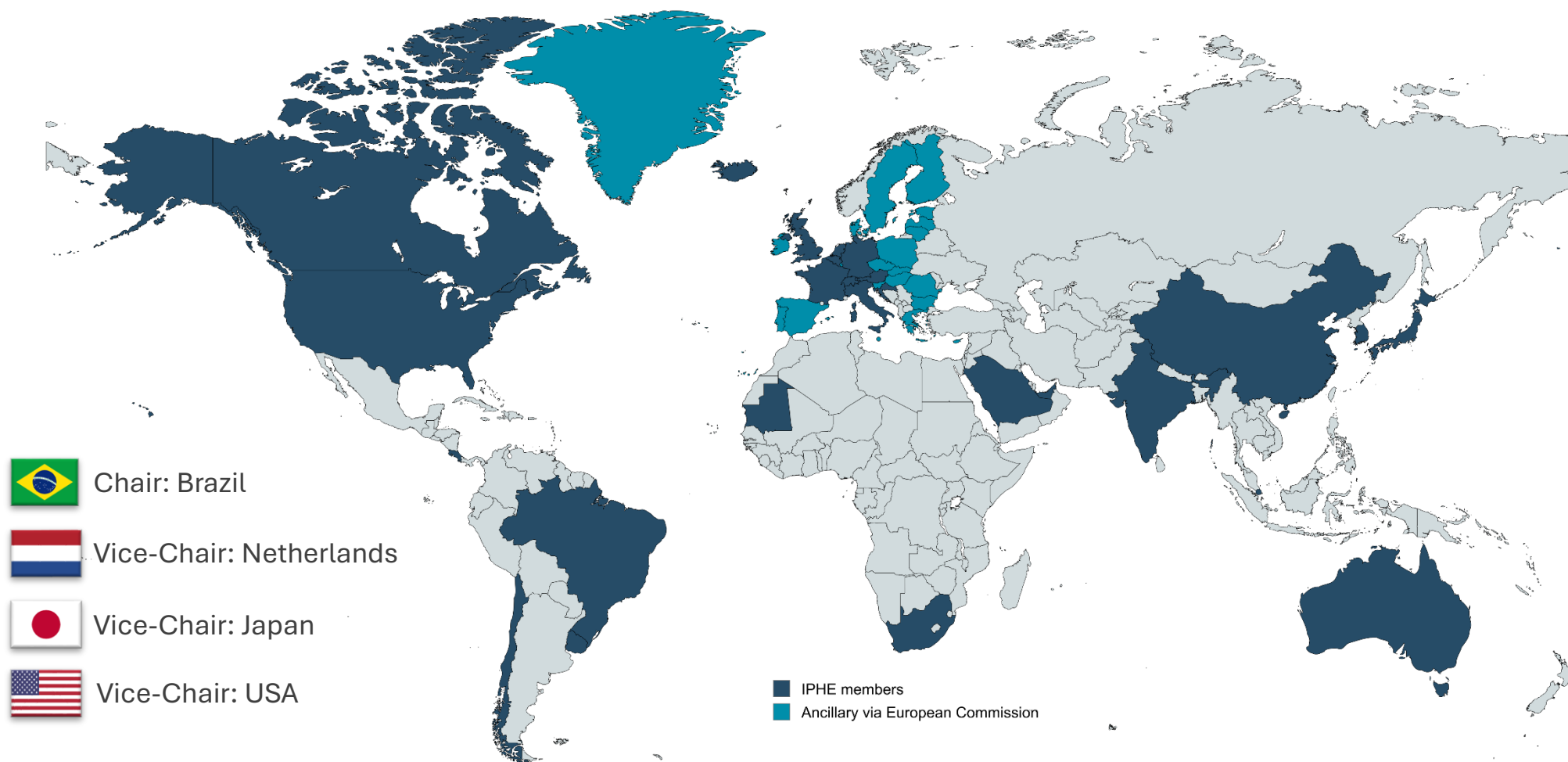
# Housekeeping



- Please stay on mute during the presentation.
- Questions will be taken at the end of the presentation in the dedicated Q&A section. Please feel free to put them in the chat during the presentation.
- The session is being recorded and will be put on the IPHE website – but the Q&A will not be to allow for open discussion.



# IPHE: A Government-to-Government Partnership



26 Countries & European Commission | Founded in 2003

# IPHE priorities: Provide



It's in IPHE's DNA to monitor information, perform gap analysis and subsequently produce and publish reports, databases, etc.

Most of this work is done within our **Working Groups** and **Task Forces**. They are platforms where IPHE members can meet to discuss and work together. Each group is co-led by at least two members of IPHE.

There are currently 2 Working Groups (WG) and 5 Task Forces (TF), addressing transversal and non-technological issues, with a global perimeter:



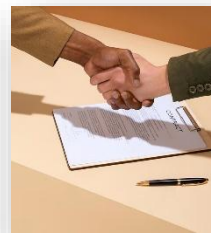
RCS & Safety  
WG



Education &  
Outreach  
WG



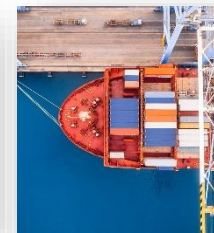
H2  
Environmental  
Impact  
Analysis  
TF



Certification  
Mechanisms  
TF



Trade Rules  
TF



Maritime  
TF



Permitting  
TF



Bulk Storage  
TF

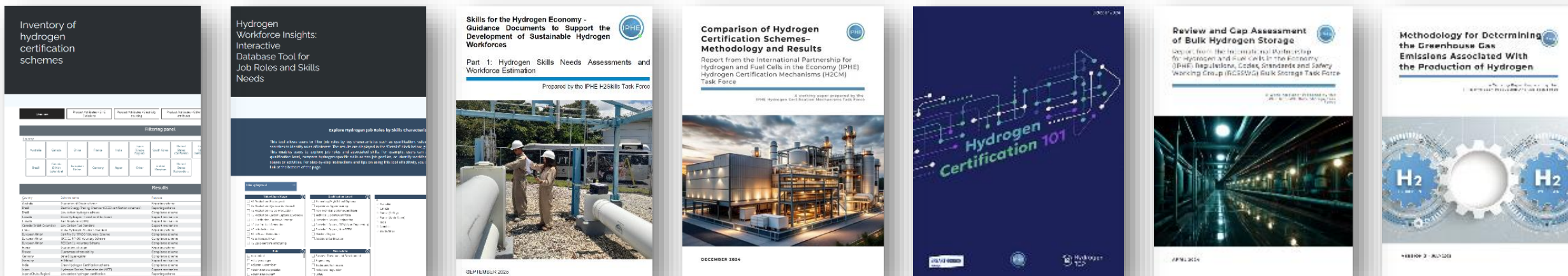


Skills  
TF

# IPHE priorities: Provide



All documents produced by the task forces and working groups of IPHE stem from government-to-government exchanges and work **exclusively**. They are **publicly available**. They are often presented through dedicated webinars.



The IPHE Secretariat maintains database listing **national hydrogen strategies** and technology **deployments** as well.

All resources are available here: <https://www.iphe.net/intelligence>

# Agenda



- Presentation of Inventory and Demonstration
- Q&A



## H2CM task force

- Task force was created after COP27 at 38<sup>th</sup> IPHE Steering Committee in San Jose in December 2022.
- Under the coordination of the Hydrogen Breakthrough Agenda, other international organisations also work on hydrogen certification, complementing the work of IPHE.
- The Task Force is co-led by Australia, France, Germany and the United Kingdom with 20 countries participating.



# Deliverables



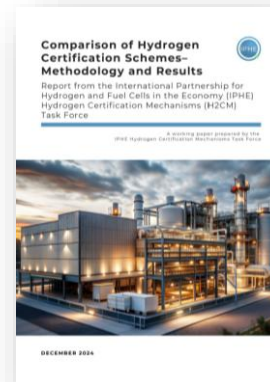
## Hydrogen Certification 101

- Reference for broader audience, not a technical guidebook for experts
- Definitions of terminology and concepts
- Information on design of certification schemes and their key elements



## Comparison Report

- Comparison of 21 certification schemes across 11 countries/regions
- Comparison of:
  1. Product attributes
  2. Chain of custody model
  3. Operational setup & procedures



## Inventory

- Systematic collection and mapping of hydrogen certification schemes
- Excel tool with results informing comparison report

The screenshot shows the 'Inventory' Excel tool interface. It features a 'Filtering panel' at the top with tabs for 'Countries', 'Product attributes', 'Chain of custody model', and 'Operational setup & procedures'. Below the filtering panel is a table with columns for 'Country', 'Scheme name', 'Product attributes', 'Chain of custody model', and 'Operational setup & procedures'. The table lists various certification schemes from different countries, including Australia, Canada, China, France, India, Japan, South Korea, Switzerland, and the United Kingdom. The 'Results' section on the right provides a summary of the data, including the number of schemes, countries, and product attributes.



# Results of comparison and interoperability assessment



## Principal findings and recommendations

1. The more detailed the assessment, the more differences between schemes can be found
2. Considerable differences between certification schemes for hydrogen, many of which are expected to have negative impact on trade of certified hydrogen
3. Modular approach to address the differences and improve tradability of certified hydrogen, with common modules and modules specific to individual jurisdictions or certification schemes
4. The more common modules, the higher the benefits for trade of certified hydrogen
5. Regardless of the level of ambition, modular approach could be implemented in the form of a digital hydrogen passport

# Transitioning the inventory online

- Make information available to the wide public.
- Continuous process of updating and formatting the data for publication the IPHE website.
- New schemes came forward to be added – these are still pending full analysis but were added to the inventory.
- Information Technology shows too many gaps and incomplete results to be published at this time.

# Overview of the inventory



- 28 hydrogen certification mechanisms included
- 7 of these are pending analysis
- Information up to date as of Sep 2025
- Information covering 5 different areas
- Online, easily navigable tool

Product Attributes  
– GHG Emissions

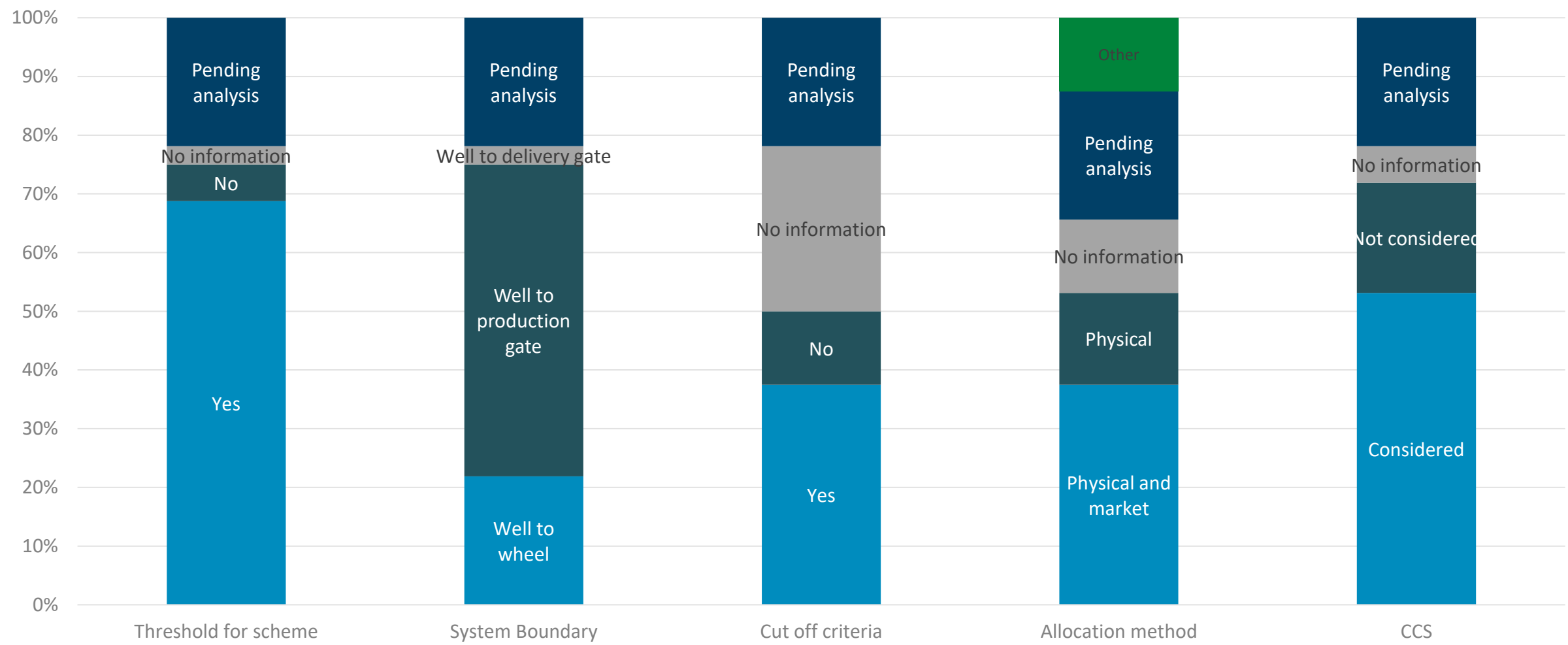
Product Attributes  
– Electricity  
Sourcing

Product Attributes  
– Other Attributes

Chain of Custody  
Model

Operational Setup  
& Procedures

# Product Attributes – GHG emissions



# Product Attributes – GHG emissions

## Information on system boundary for GHG emissions

Country/Schemes	Raw material extraction	Production	Conditioning (on site)	Conversion (on site)	Storage (on site)	Transport and distribution	Conditioning	Conversion	Storage	Use
Australia, Product Guarantee of Origin scheme										
TÜV Austria										
Canada, Clean Hydrogen Investment Tax Credit										
China Hydrogen Alliance's Standard										
EU, CertifHy										
EU, ISCC										
EU, REDCert										
France, Guarantees of origin										
France, Guarantees of traceability										
Germany, dena Biogasregister										
Germany, H2Global										
TÜV Süd										
Japan Basic Hydrogen Strategy										
Japan, Low-carbon hydrogen certification										
Korea, Clean Hydrogen Certification Scheme										
UK Low Carbon Hydrogen Certification Scheme										
UK Renewable Transport Fuel Obligation										
US (California), Low Carbon Fuel Standard										
US, Clean Hydrogen Production Tax Credit (45V)										
US, Colorado clean hydrogen tax credit										
GH2 Green Hydrogen Organisation										

# Product Attributes – Electricity sourcing

Data gathered on schemes requirements on;

Temporal  
correlation

Additionality

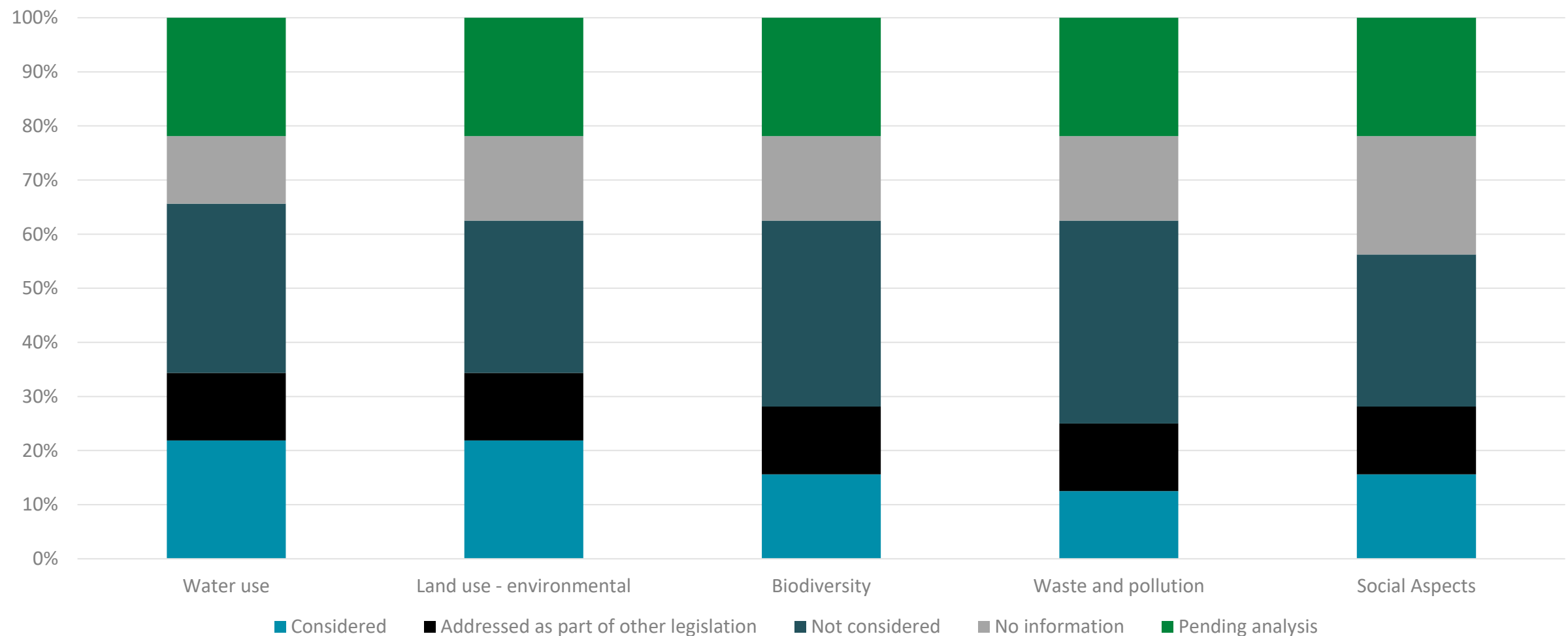
Geographic  
correlation

Financial aid

Excess  
electricity

Battery  
storage

# Product Attributes – Other attributes

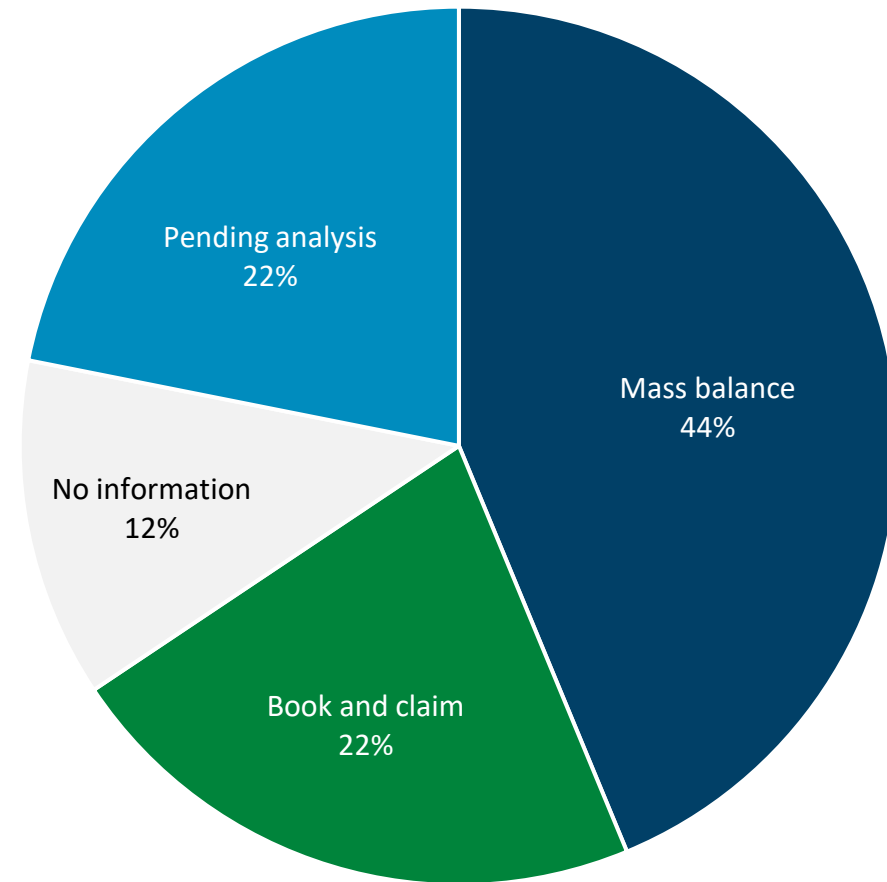




# Chain of Custody Model



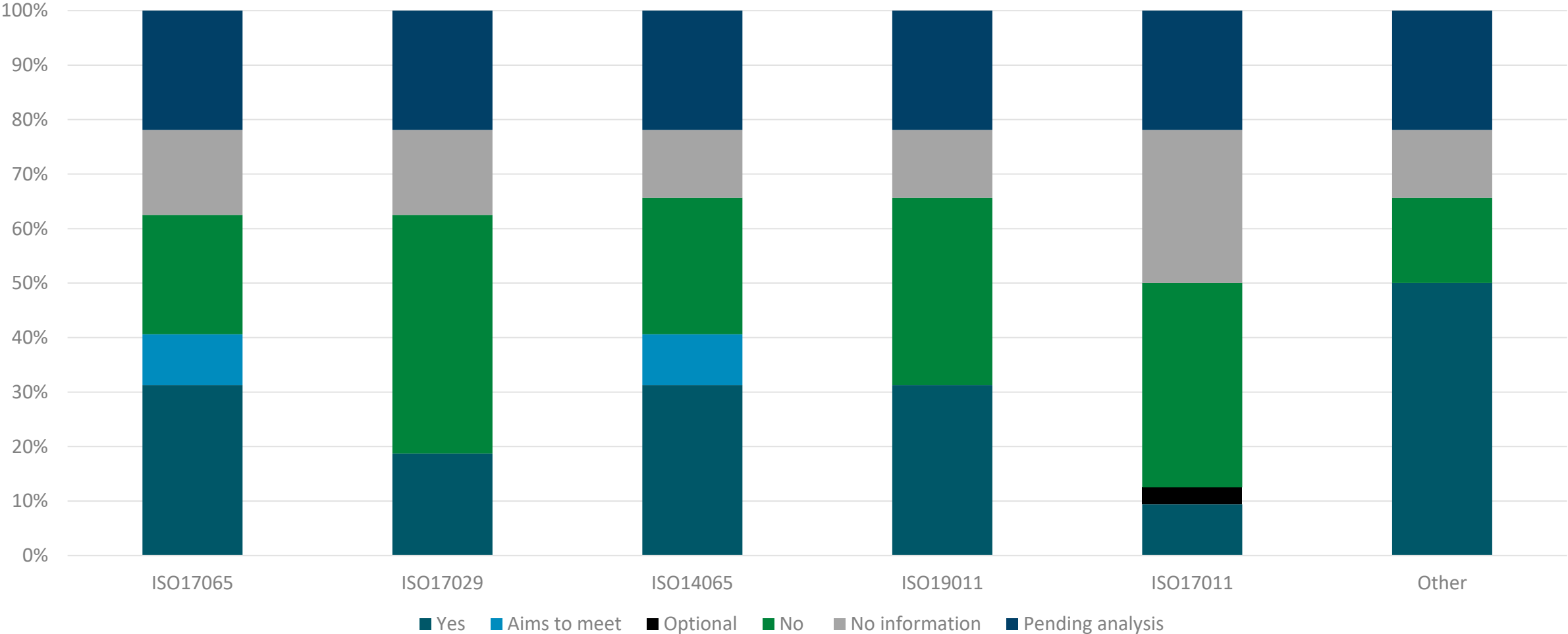
- Limited information as many schemes still under development
- Both models are fundamentally different as mass balancing requires a reasonable physical link between product and certificate that book and claim does not provide



■ Mass balance ■ Book and claim ■ No information ■ Pending analysis



# Operational setup & procedures



# Demonstration



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# Next steps for the inventory



Regular updates will be made to the inventory

The seven additional schemes will be analysed

This new information will inform the next version of the Comparison Report

# Thank you

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