



## **BSI Webinar**

# **ISO14068-1 Climate Change Management – Transition to Net Zero**

Part 1: Carbon Neutrality

**BSI Thailand**



Conférence sur les Changements  
COP21/CMP11

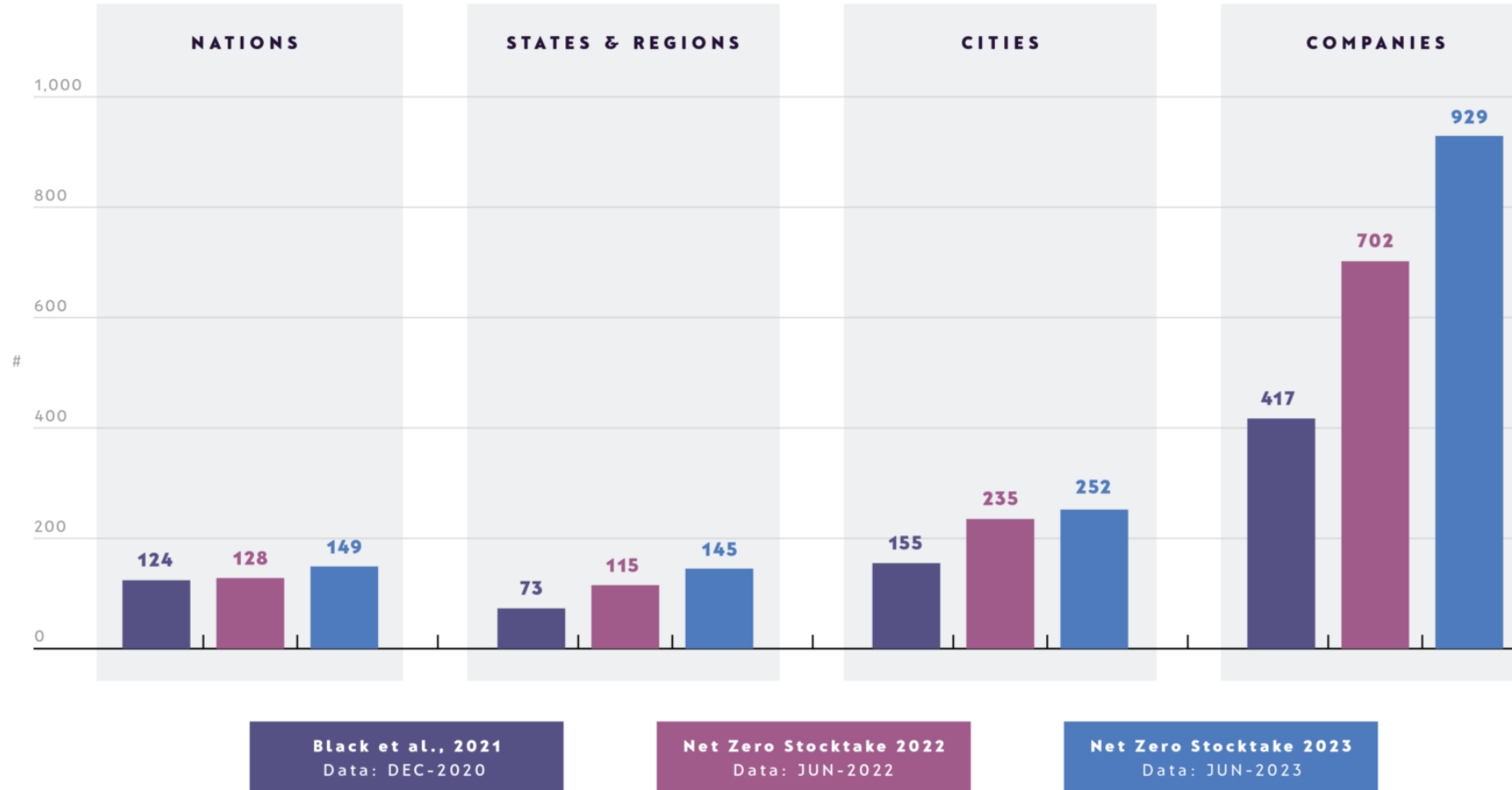
Paris, France



• **Long-term temperature goal** (Art. 2) – The Paris Agreement, in seeking to strengthen the global response to climate change, reaffirms the goal of limiting global temperature increase to well below 2 degrees Celsius, while pursuing efforts to limit the increase to 1.5 degrees.

## NET ZERO TARGET SETTING

Comparing net zero target numbers over the last two and a half years.



- Largest growth (123%) in net zero target setting by companies from 2021-2023
- Rate of growth for nations, states&regions, and cities has slowed
- Net zero targets for nations now represent 88% of global GHG (greenhouse gas) emissions

# Net Zero job impacts

การเปลี่ยนแปลงไปสู่ Net Zero สามารถสร้างงานได้ประมาณ 200 ล้านตำแหน่ง และแทนที่ตำแหน่งงานประมาณ 185 ล้านตำแหน่ง ซึ่งอาจส่งผลให้มีการจ้างงานเพิ่มขึ้นประมาณ 15 ล้านตำแหน่ง ภายในปี 2050

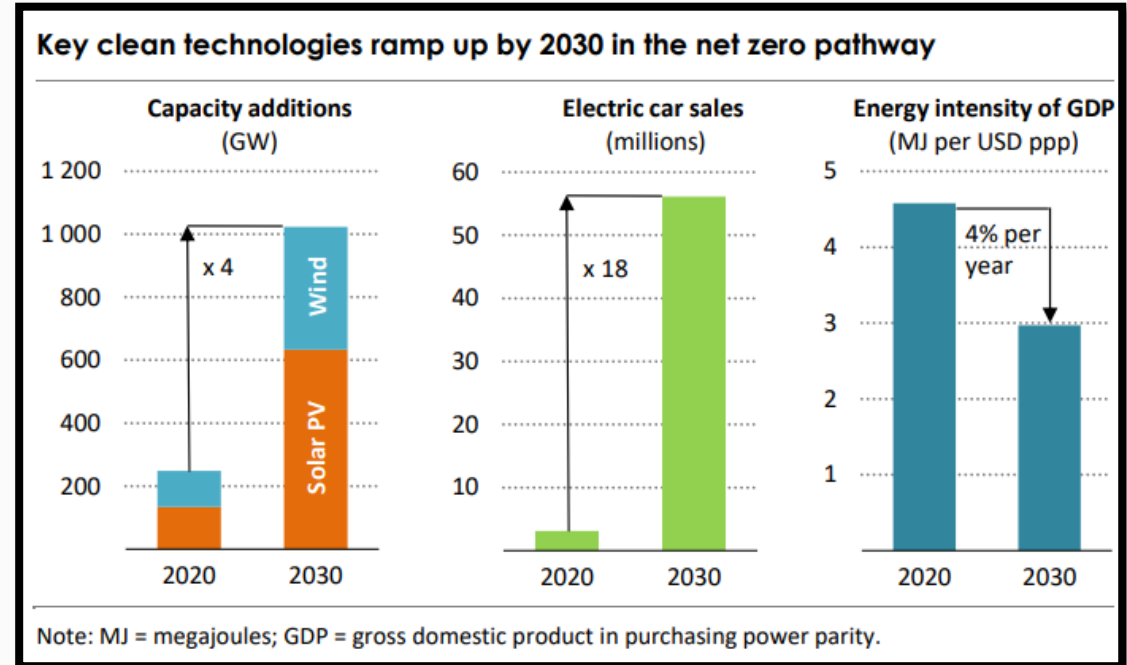
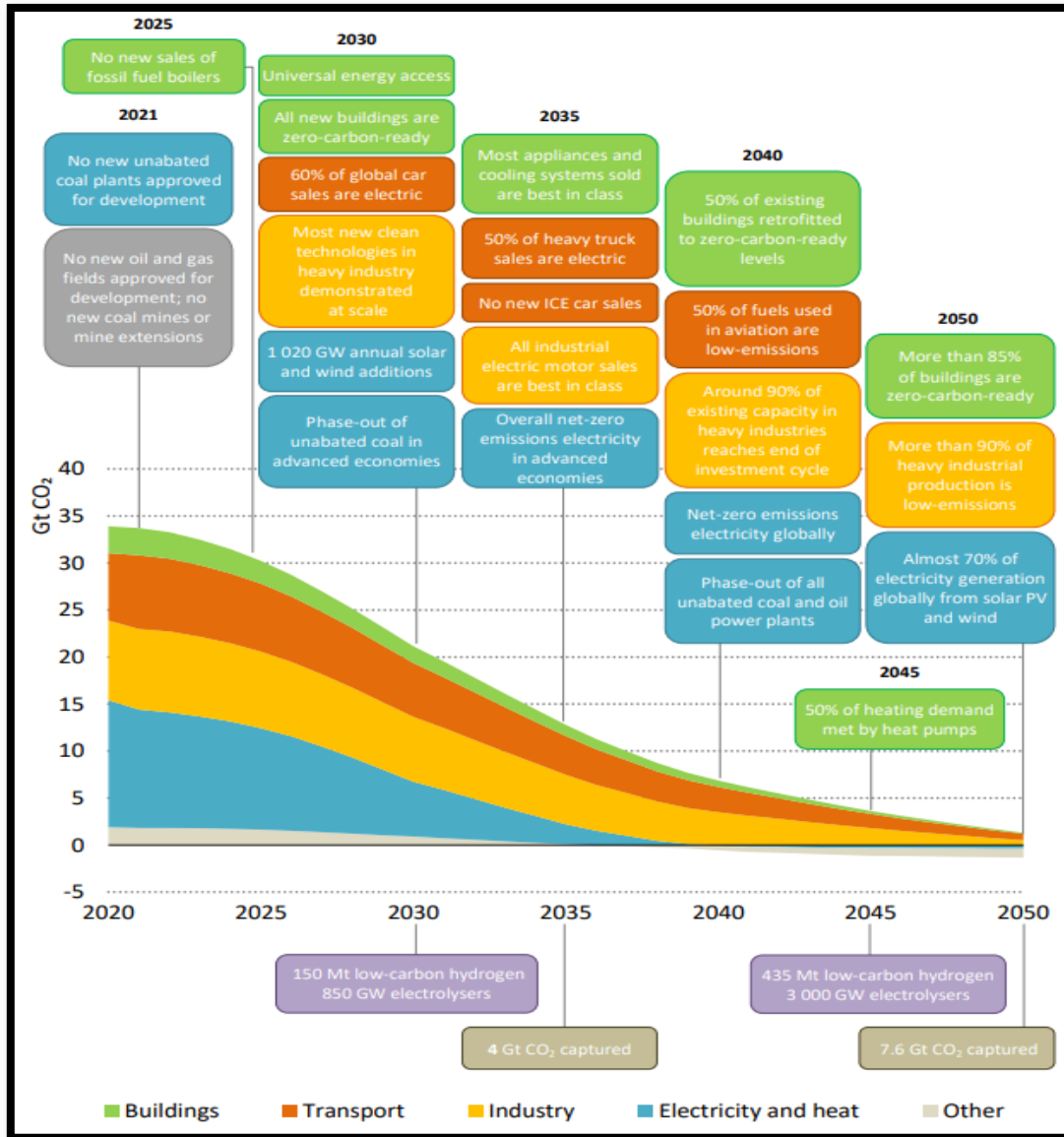
Most of the job creation from the energy transition:

- Construction
- Electrical machinery manufacturing
- Copper mining
- Renewable energy production
- Biomass crop cultivation

Source: [World Employment and Social Outlook 2018 – Greening with jobs \(ilo.org\)](https://www.ilo.org/global/publications/new-releases/2018/05/05/World-Employment-and-Social-Outlook-2018-Greening-with-jobs)



# New Innovation – New Technology



Source: IEA. Net Zero by 2050 A Roadmap for the Global Energy Sector.  
[https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroBy2050-ARoadmapfortheGlobalEnergySector\\_CORR.pdf](https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroBy2050-ARoadmapfortheGlobalEnergySector_CORR.pdf)

# Key concern about Carbon Neutrality

Lots of diverse initiatives with many questions for transparency and comparing progress

Setting the scope right

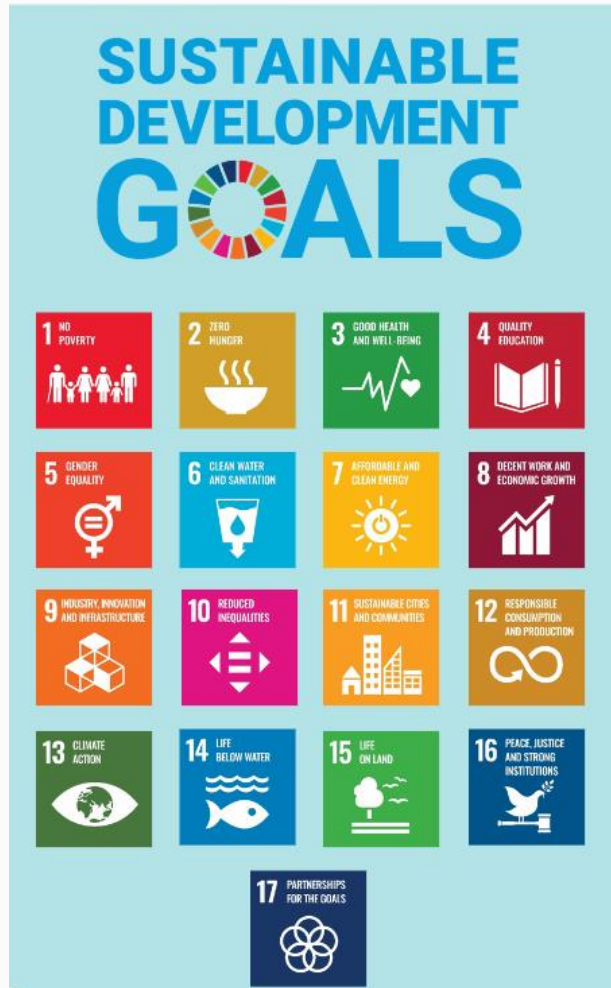
A methodological approach based on benefits and not on the activity and the value chain

A CO<sub>2</sub> equivalent or a strategy per gas: the problem of methane



# ISO14068-1:2020

## Climate Change Management Transition to Net Zero: Part 1 Carbon Neutrality



- ISO14068-1 เป็นมาตรฐานสากลฉบับแรกเกี่ยวกับความเป็นกลางทางคาร์บอน
- แนวทางที่เป็นมาตรฐานในการบรรลุและแสดงให้เห็นถึงความเป็นกลางทางคาร์บอนหน่วยธุรกิจ
- หน่วยธุรกิจอาจเป็นองค์กรหรือผลิตภัณฑ์ (เช่น สินค้าและบริการ รวมถึงกิจกรรมและอาคาร)

← Contributes 16-17 sustainable developments goals (SDGs)

## Why ISO14068-1 important ?

Carbon Neutrality efforts are true.



Fair



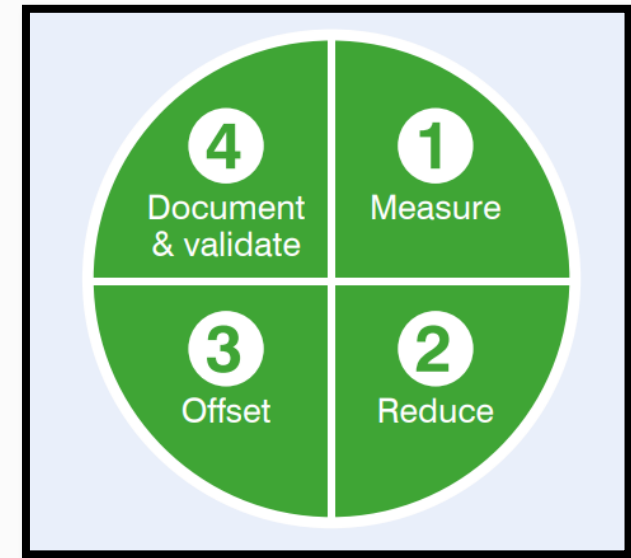
Scientifically valid



Transparently

ประโยชน์ของมาตรฐาน ISO14068-1

- ✓ สนับสนุนหน่วยงานต่างๆ ในการบรรลุความเป็นกลางทางคาร์บอนอย่างแท้จริง
- ✓ เพิ่มความน่าเชื่อถือและความไว้วางใจในการกล่าวอ้างความเป็นกลางทางคาร์บอน
- ✓ ส่งเสริมกลยุทธ์การลดการปล่อยก๊าซเรือนกระจกที่มีพื้นฐานทางวิทยาศาสตร์และมีความทะเยอทะยาน
- ✓ ส่งเสริมแนวทางห่วงโซ่คุณค่าและวัฏจักรชีวิตที่ครอบคลุมในการจัดการคาร์บอน






# ISO14068-1 Structure

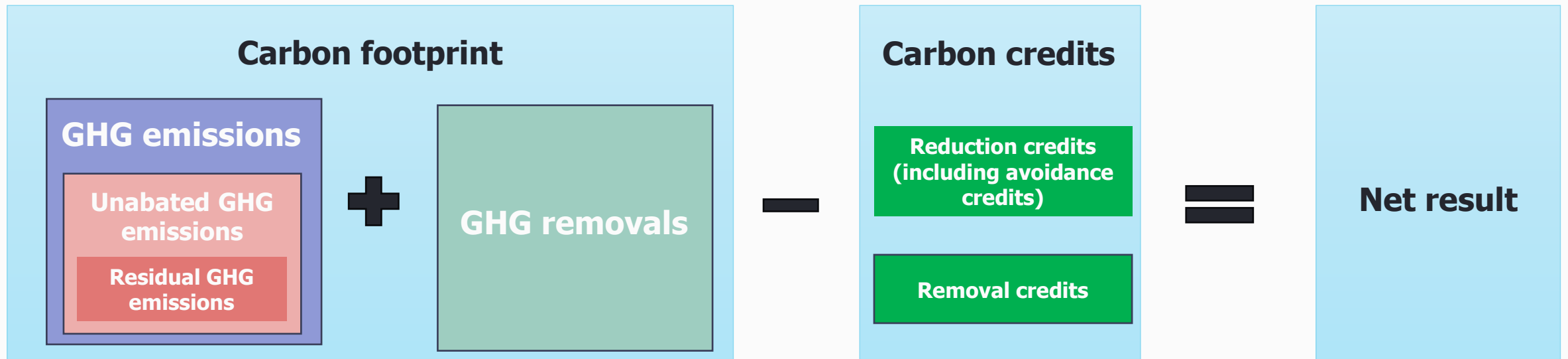
ISO14068-1 แบ่งข้อกำหนดออกเป็น 13 ข้อ ได้แก่

1. ขอบเขต (Scope)
2. อ้างอิง (Normative References)
3. คำจำกัดความ (Terms & Definition)
4. หลักการ (Principles)
5. วิธีการ (Approach)
6. ความมุ่งมั่นต่อความเป็นกลางของคาร์บอน (Commitment to Carbon Neutrality)
7. การเลือกหน่วยธุรกิจและขอบเขต (Selection of the subject and its boundary)
8. การประเมินการปล่อยก๊าซเรือนกระจกและการดูดกลับ  
(Quantification of greenhouse gas (GHG) emissions and GHG removals)
9. แผนการจัดการความเป็นกลางทางคาร์บอน (Carbon neutrality management plan)
10. การลดการปล่อยก๊าซเรือนกระจกและการเพิ่มการดูดกลับก๊าซเรือนกระจก  
(Greenhouse gas (GHG) emission reductions and GHG removal enhancements)
11. การชดเชยคาร์บอน (Offsetting the carbon footprint)
12. รายงานความเป็นกลางทางคาร์บอน (Carbon neutrality report)
13. การอ้างความเป็นกลางทางคาร์บอน (Carbon neutrality claims)



# Carbon Neutrality & Net Zero

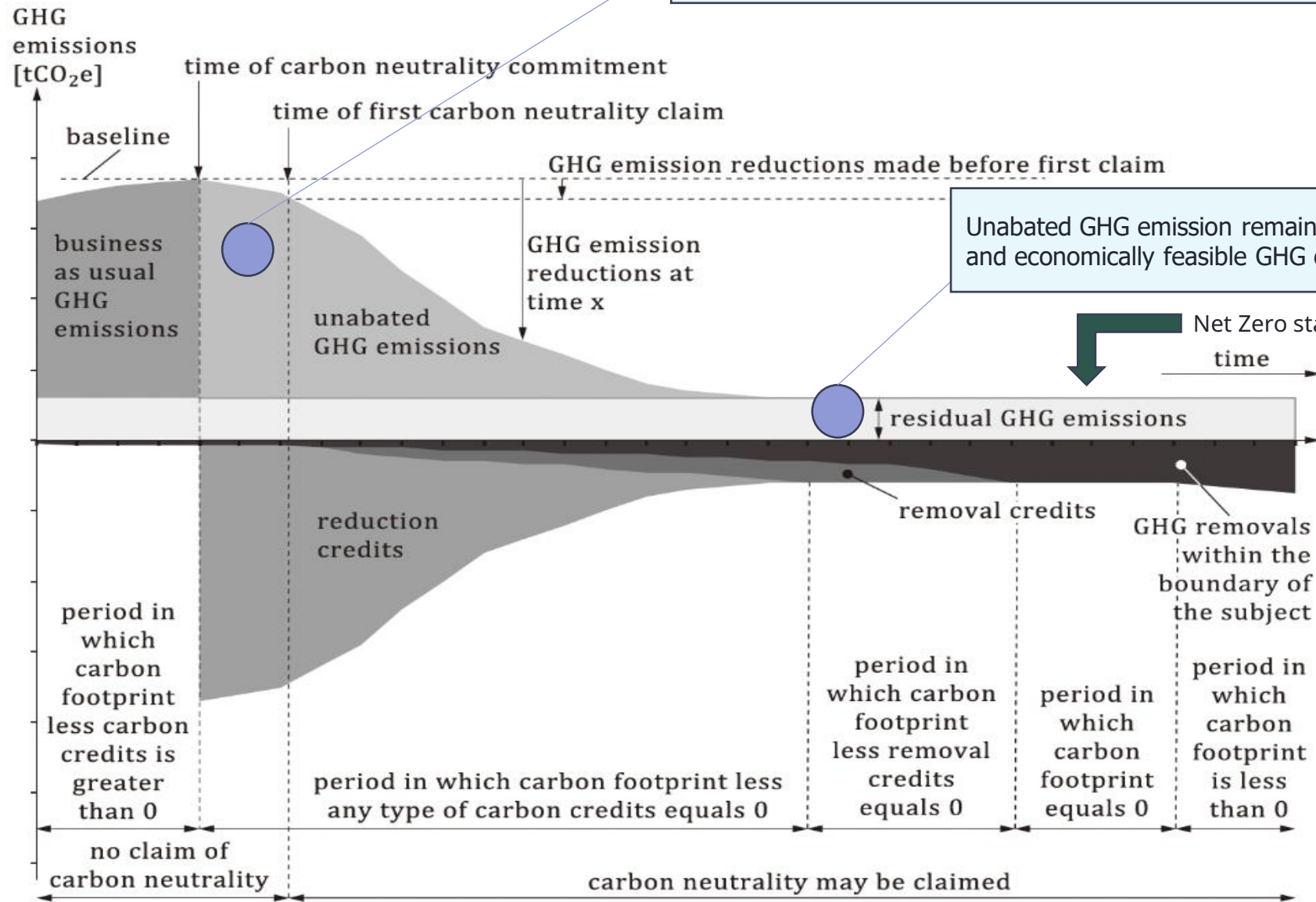
Carbon neutral  as a condition in which, during a specified period of time, the carbon footprint has been reduced as a result of GHG emission reductions or GHG removal enhancements and, if greater than zero, is them counterbalanced by offsetting.



Global net zero GHG emissions occur when **global anthropogenic GHG emissions are counterbalanced by global anthropogenic GHG removals over a specified period.**

# ISO14068-1:2020

Unabated greenhouse gas is GHG emission of the subject remaining after activities resulting in GHG emission reductions, within the boundary of the subject.



Unabated GHG emission remaining after implementing all technically and economically feasible GHG emission reductions.

Net Zero state (IPCC definition)



# ISO14068-1:2020

## Climate Change Management Transition to Net Zero: Part 1 Carbon Neutrality

Transparency

Conservativeness

Hierarchy Approach

Supporting Transition

Ambition

Urgency

Science based approach

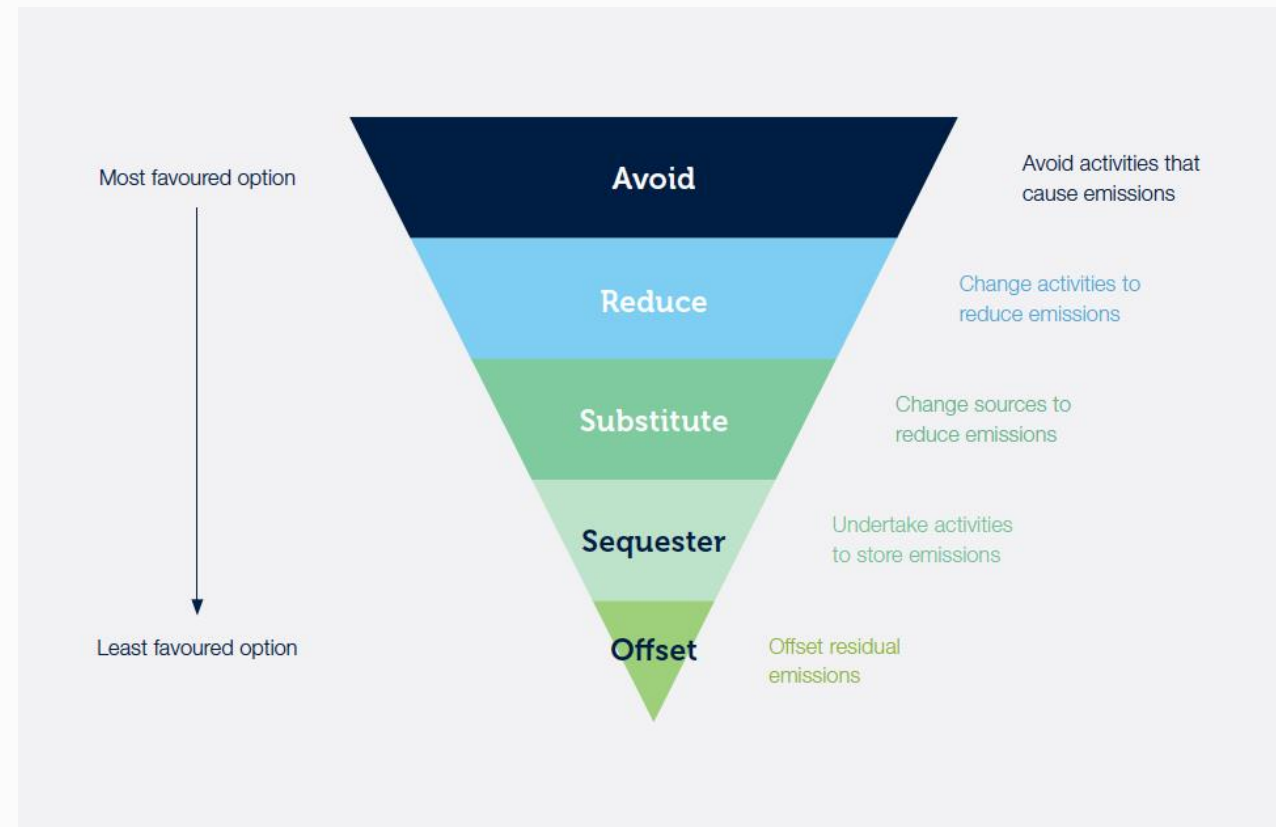
Avoiding adverse impacts

Accountability

Value chain and life cycle approach

ปัจจุบัน

ใหม่



Source: RMIT University Carbon Management Plan in [Carbon management: a step by step guide - Paia Consulting](#)

## Ambition (Examples)

Setting wide subject boundaries

Achieving carbon neutrality for a whole organization

Achieving carbon neutrality for all of an entity's products

Planning and acting to achieve deep and fast GHG reduction & removal

Rapidly reducing reliance on fossil fuels

Always adopting best available technologies



# Urgency

องค์กรมีการดำเนินการในทันทีและต่อเนื่องเพื่อสนับสนุนความสำเร็จในการปล่อยก๊าซเรือนกระจกสุทธิเป็นศูนย์ของโลก

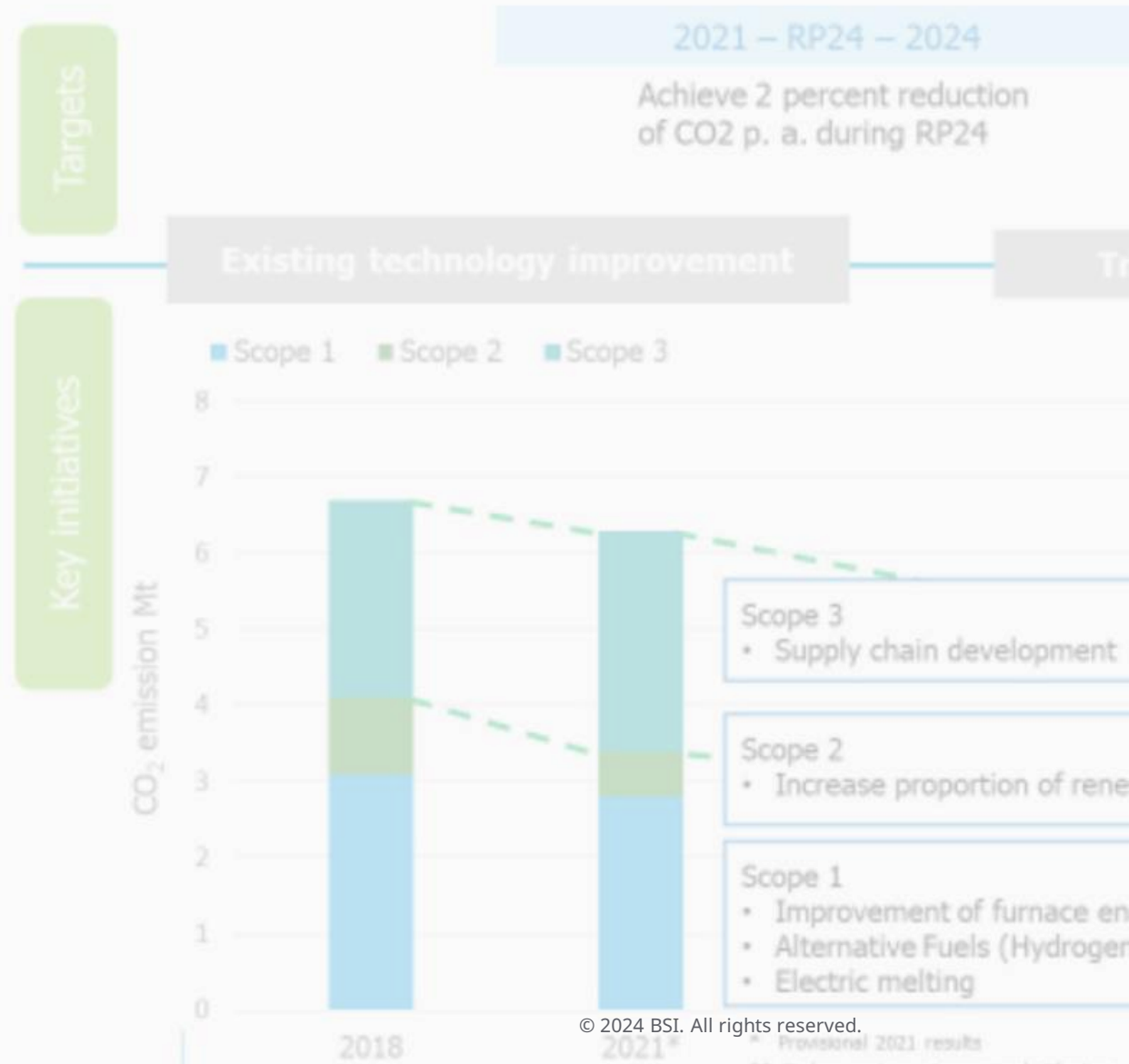
- เป้าหมายเบื้องต้นถูกกำหนดไว้เพื่อให้บรรลุการลดการปล่อยก๊าซเรือนกระจกอย่างมีนัยสำคัญในระยะสั้น
- โดยทั่วไปคือ 5 ปีถึง 10 ปี



เป้าหมายระยะยาวคือปี 2050 (โดยทั่วไป)

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# Roadmap to Carbon Neutrality

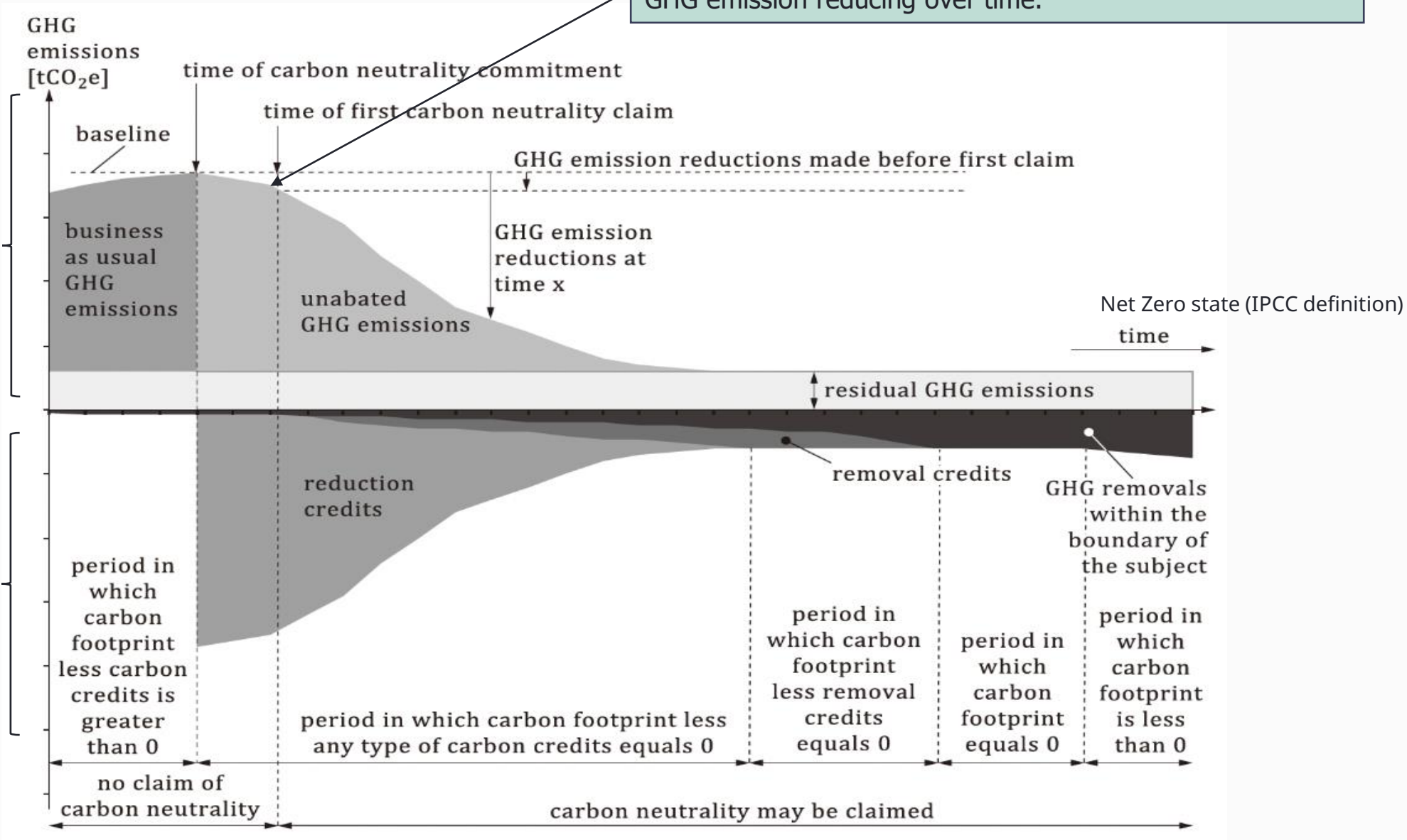


# ISO14068-1:2020

After the entity has made the commitment, the unabated GHG emission reducing over time.

Everything above the X axis is GHG emission.

Everything below is a counterbalance, either a removal within the boundary or a removal or reduction outside the boundary, e.g. a carbon credit.



# Key takeaways: Carbon Neutral Plan (CNP)

CNP describes the ambition of the entity regarding the trajectory, to minimize the CF of the subject

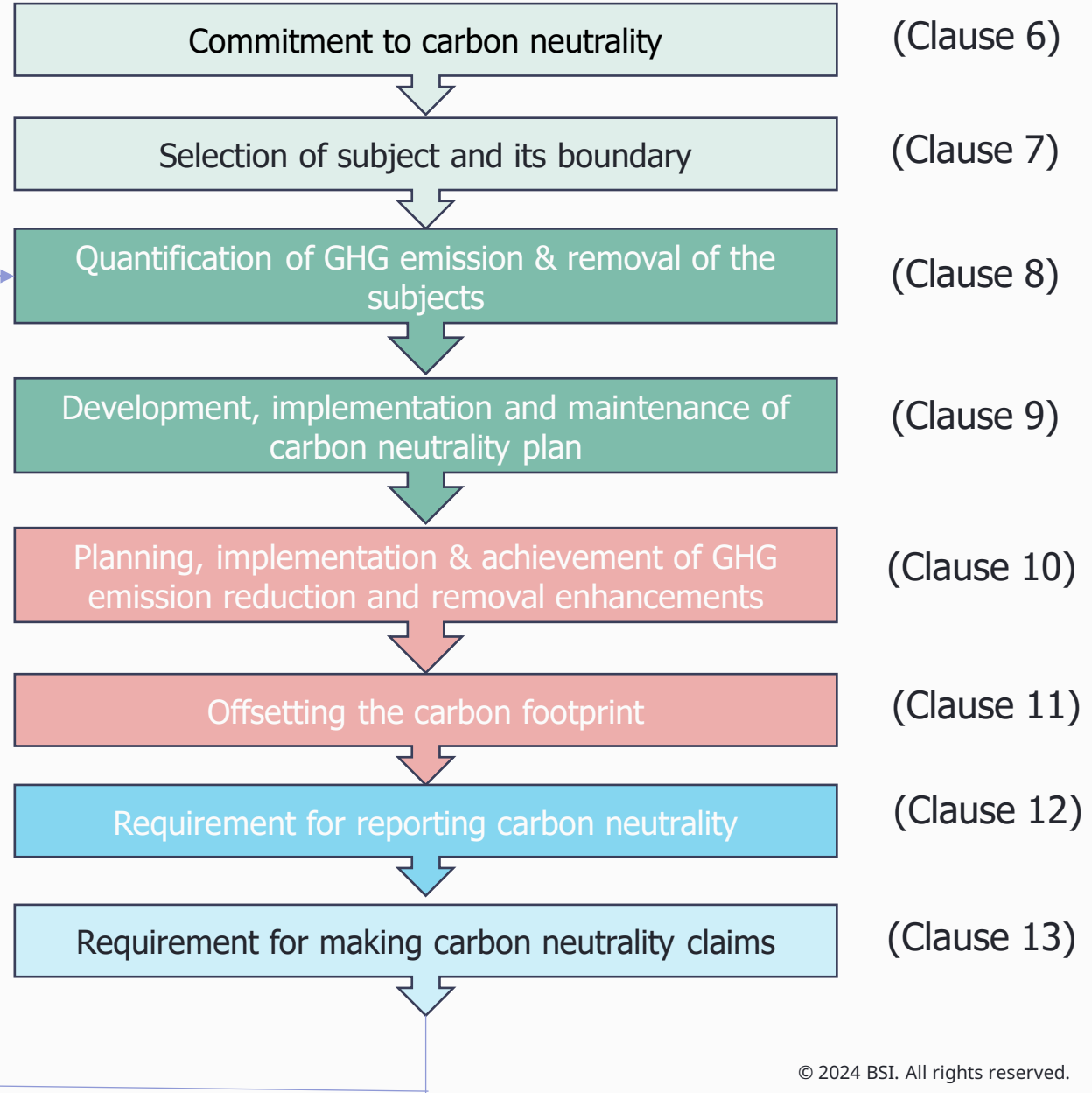
CNP includes target that are short term (5-10 years) and long term (20 years) with specified dates. As the target year by which will only residual GHG emissions will remain.

CNP shall be based on accepted science-based pathway, if applicable sectoral pathways should be determined.

The pathway should be corresponded with IPCC, IEA, the Assessing low-carbon transition (ACT), and SBTi.



# Framework for carbon neutrality



# Key differences in Carbon Management Plan

## ISO14068-1:2020

PAS2060	Issues	ISO14068-1
Carbon footprint Management Plan	Management Plan	Carbon Neutrality Management Plan
Does not require the statement and commitment comes from the top management	Commitment Statement	The statement and commitment comes from the top management of the entity
Require the inclusion of timescale	Time scale	Require the inclusion of timescale
Require activities / techniques to achieve and maintain GHG emission reductions	Activities / Techniques	Require activities / techniques to achieve and maintain GHG emission reductions
Require the offset strategy, the nature of the offsets and the number and type of credits	Offsets	Requires the inclusions of the intended quality
If the carbon neutrality is to be maintained, then the management plan is to be updated every 12 months.	Revision and Targets	Does not specify a timeframe.



\*ISO14068-1 requires that reductions have occurred before the entity can claim carbon neutrality for the subject.

# Commitment

Comes from top management – the requirement on top management are similar to those from the high-level structure used for management system.

- ▶ Include a statement of commitment from top management
- ▶ Provide framework for setting a carbon neutrality pathway
- ▶ Appropriate to the purpose and context of the entity
- ▶ Establish a carbon neutrality management plan, including the top management representative.
- ▶ Ensure that the strategic direction of the entity is compatible with the carbon neutrality management plan



## Subject definition

## Scope & Boundary

### ISO14068-1

The term subject is an organization or product

**Organization:** a person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives.



14064-1

### Product: goods or services

**Goods** include manufactured goods, computer software, processed and unprocessed material, buildings, and other types of construction works.  
**Services** include transport, events, financial investments, and services.



14067

# Quantification

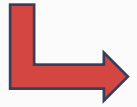


## Consistent standard

Annex C of ISO14068-1 specifies any quantification differences between the GHG protocol standards and ISO14064-1 and ISO14067

## Quantification: Organization

Most consistent with ISO14064-1



Scope II: The use of market or location approach

Either can be used but if market-based is used, must be following criteria



## Quantification: Products

There are some point differences between ISO14067 and GHG protocol but do not impact to overall carbon footprint.

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The **market-based** approach may be used only when the electricity supplier is able to guarantee through a contractual arrangement that the electricity product does the following:

- conveys the information associated with the unit of electricity delivered;
- is assured with a unique claim, to avoid double-counting of GHG emissions and GHG removals, within the boundary of the subject;
- is tracked and redeemed, retired or cancelled by, or on behalf of, the reporting entity;
- is produced as close as possible to the period to which the contractual instrument is applied, and comprises of a corresponding time span;
- is produced within the country, or within the market boundaries, where consumption occurs if the grid is interconnected.

# Carbon credit & offsetting

- Shall not claim carbon neutrality using carbon credit that have already been used by another party
- Shall avoid double counting
- Add clarification that the application of corresponding adjustments in accordance with Article 6 of the Paris Agreement: 2015.

Avoidance double counting between private entities and governments of a GHG project's host country



The vintage is no more than 5 years

Retirement period: Shall be retired no later than 12 months after the end of the reporting period

# Carbon credit & offsetting

'Ex-post carbon credits'

Type of carbon credit



Removal credits



Reduction credits



~~Avoidance credits~~

- Only carbon credits that represent GHG emission reduction or GHG removals that have already occurred.

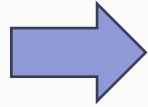
- The entity shall only source carbon credits generated from GHG emission reductions or GHG removal enhancements that are:
  - real GHG emission reductions or
  - real GHG removal enhancements

It is not allowed for ISO14068-1



# Carbon credit: Criteria Programme

Provide Safeguards



Ecosystem



Bio-diversity



Communities

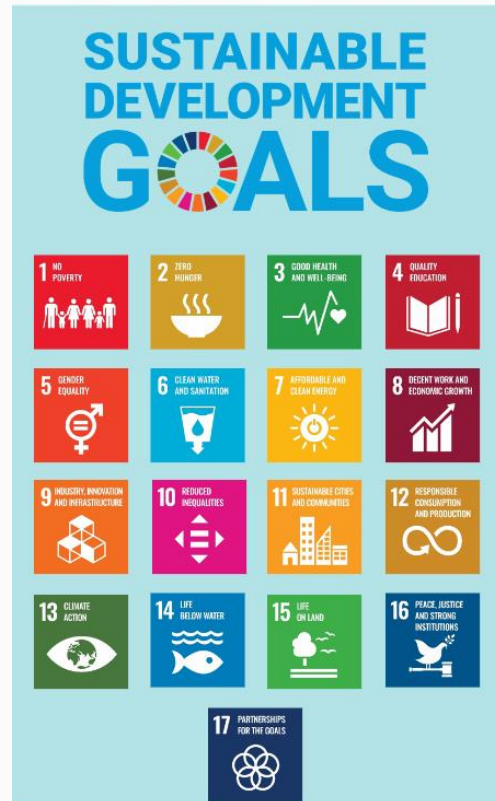
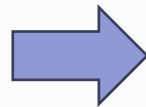


Human well-being



Human right & Local economies

Identify Sustainable Development Goals



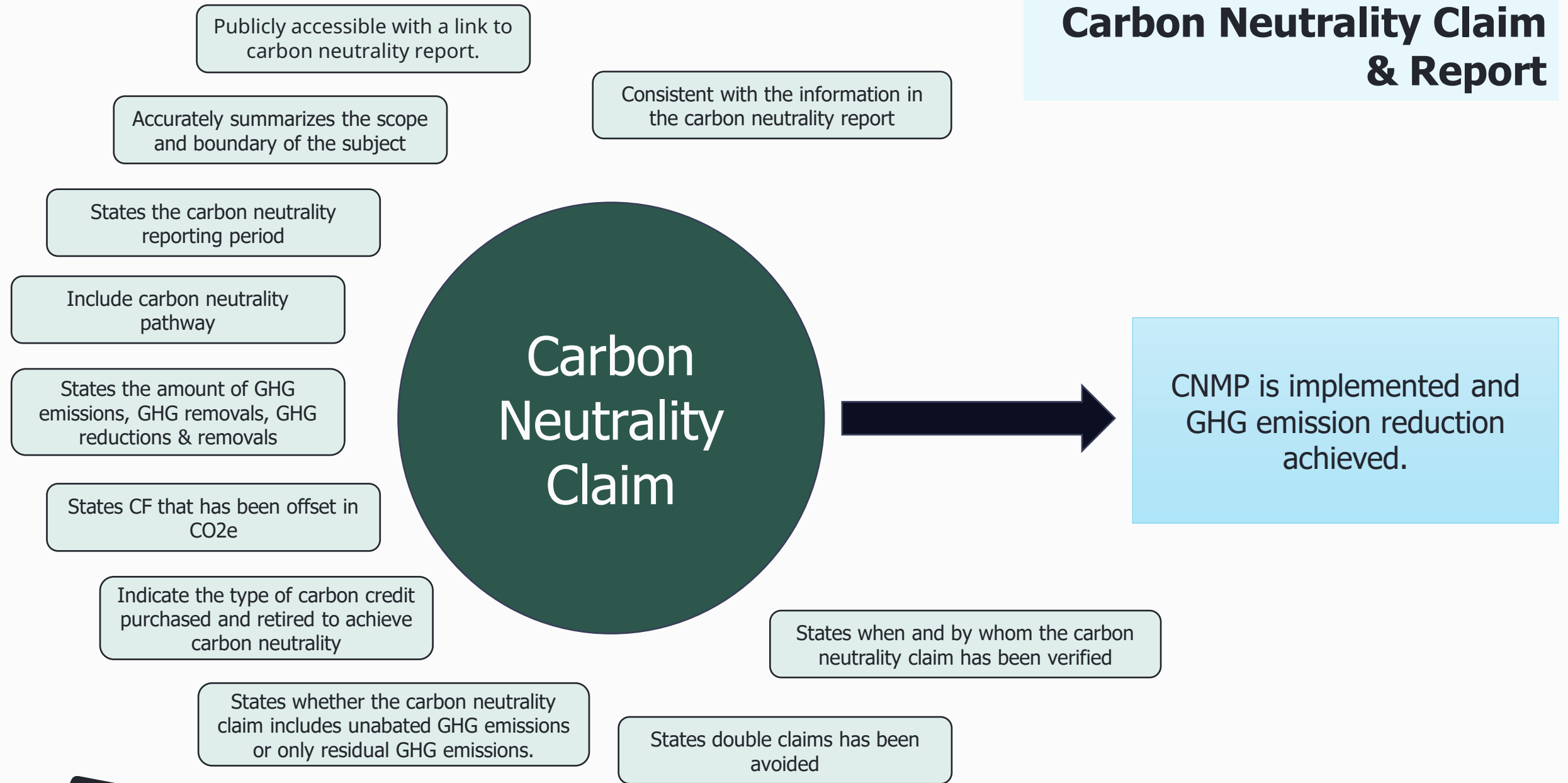
Minimize the risk of leakage

Independent verification



- Listed in public registry
- Issued with unique serial number
- Issued under procedure provide permanent retirement
- Traceable back to the relevant GHG project

# Carbon Neutrality Claim & Report



# More confident with ISO14068-1

Materiality



5% (In case of PAS2060, materiality level and level of assurance were agreed with the client)

Subject - Organization



Reasonable level for scope I & II  
Limited level for scope III

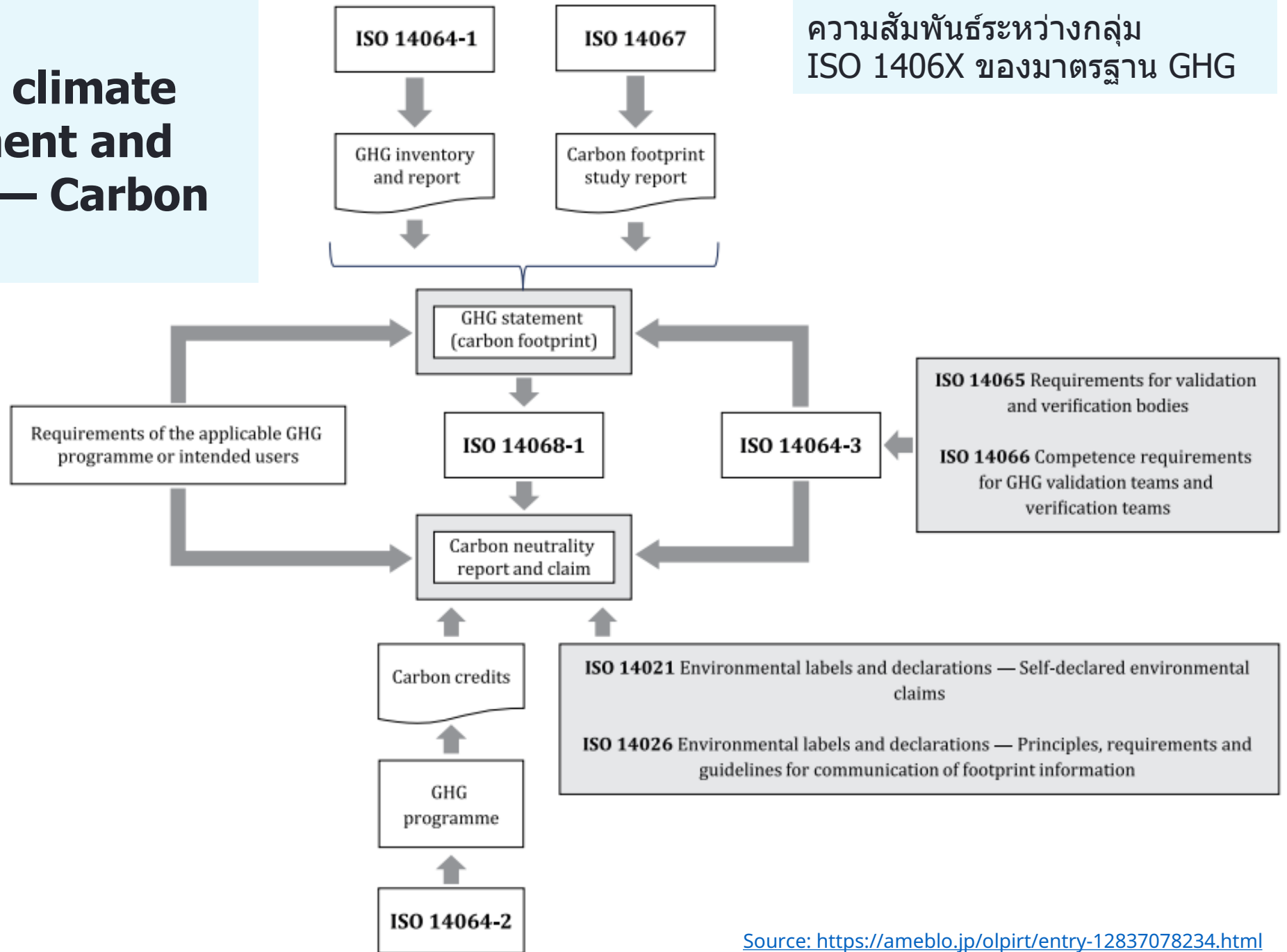
Subject – Product



Reasonable level for scope I & II based on life cycle stage  
Limited level for scope III based on life cycle stage

# Greenhouse gas management and climate change management and related activities — Carbon neutrality

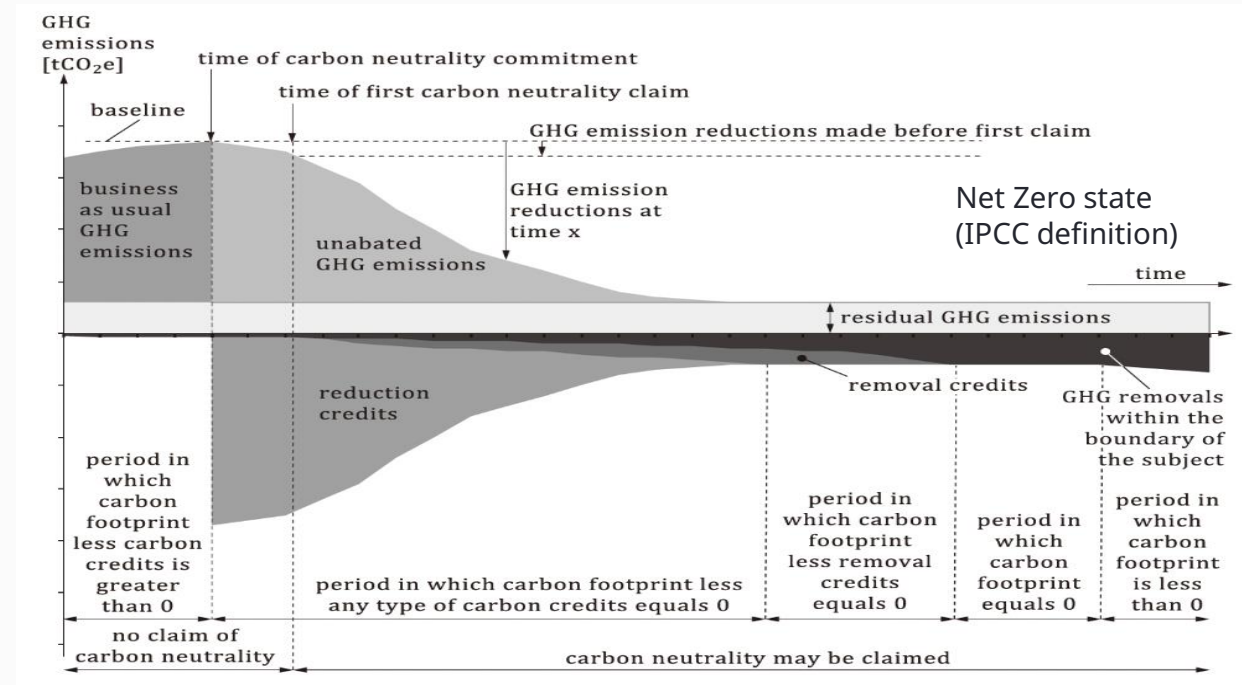
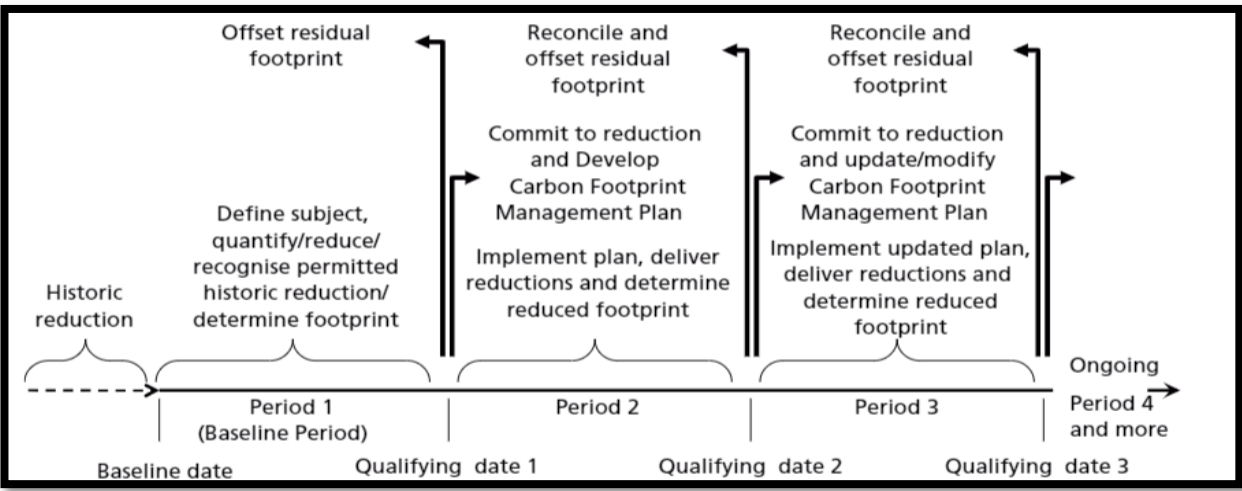
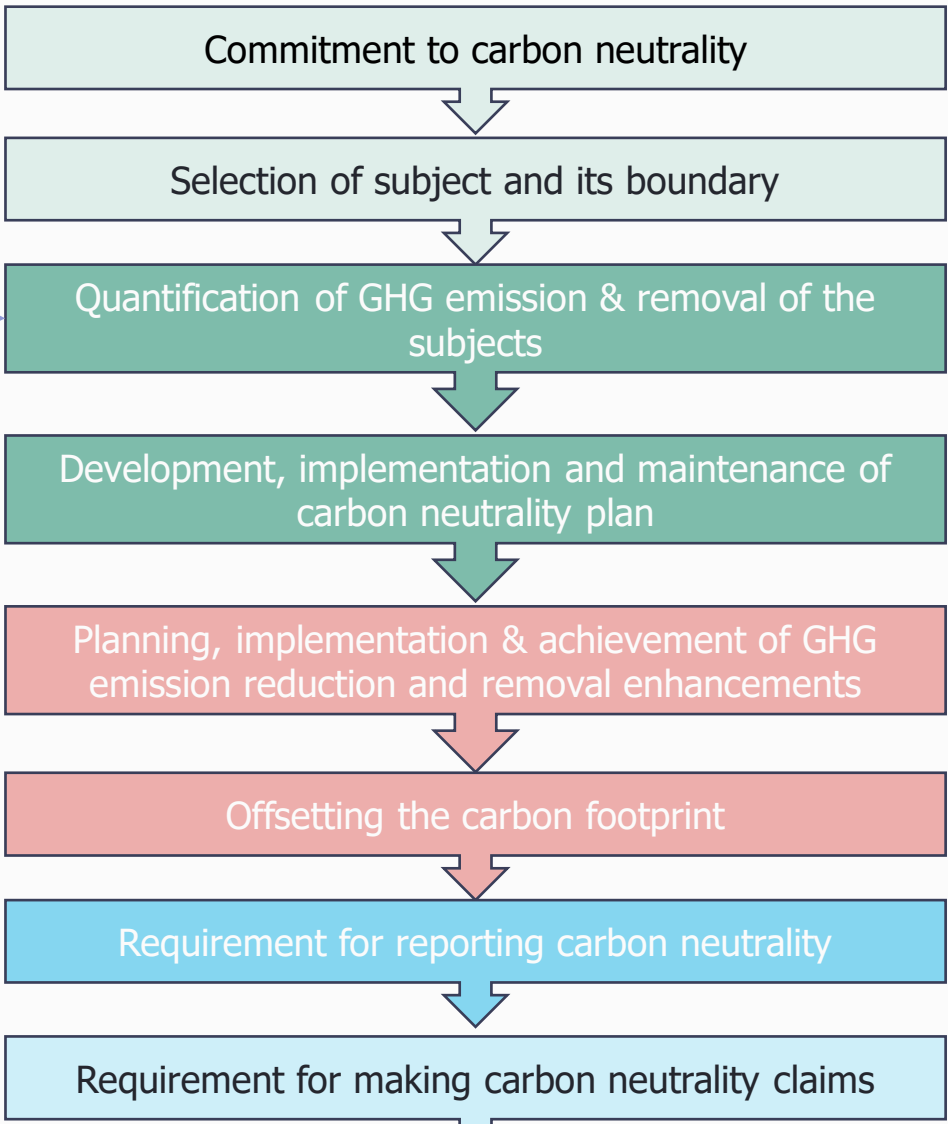
ความสัมพันธ์ระหว่างกลุ่ม ISO 1406X ของมาตรฐาน GHG



# Key Takeaway – ISO14068

- Because of its global reach, ISO 14068 keeps up with **emerging trends and best practices**, giving companies a sustainable competitive advantage.
- Compliance with ISO 14068 guarantees that short-term carbon neutrality initiatives **complement long-term sustainability plans**.
- **Measurement, reduction, and offsetting of carbon emissions can be done** in a complete manner with the strong structure of ISO 14068.
- **Leading businesses to a forward-thinking approach**, which ensures that businesses are not just meeting current standards but are also prepared for future shifts in the sustainability landscape.





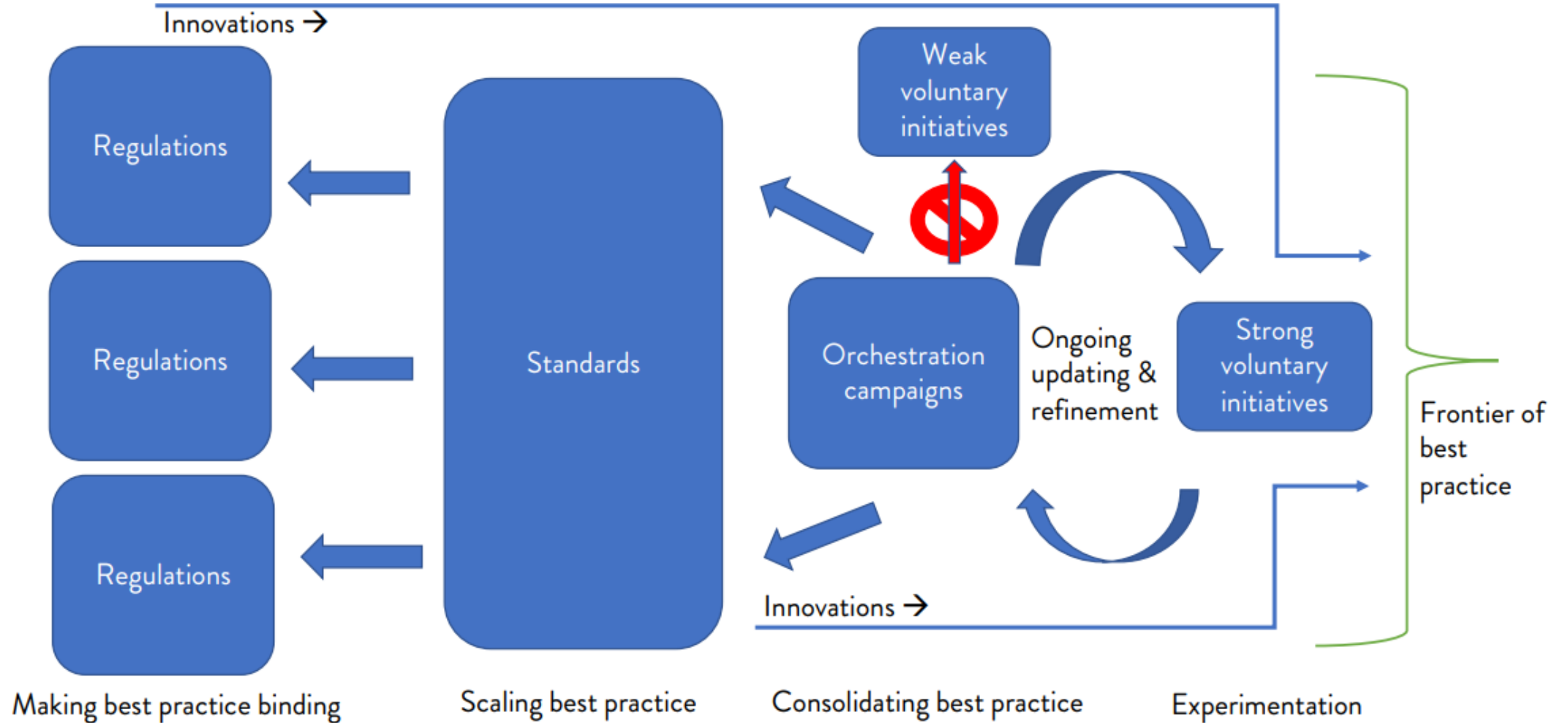
For each reporting period



# A "conveyor belt" governance system for net zero over the next decades

<----- More binding, harder to update, less influence for pro-climate voices----->

-----Less binding, easier to update, more influence for pro-climate voices----->





- มิติของมนุษย์เป็นหัวใจสำคัญของการเปลี่ยนผ่านไปสู่ยุค Net Zero ซึ่งเป็นความท้าทายทั้งทางเทคนิคและทางสังคม

Low-carbon behaviour

Acceptability of low-carbon technologies, policies, and system changes

Culture and regional differences

The human dimensions of net-zero energy systems (©Leah Rangi).



Source: Perlaviciute, G., Steg, L., & Sovacool, B. K. (2021). A perspective on the human dimensions of a transition to net-zero energy systems. Energy and Climate Change, 2, 100042.





Transition to Net Zero

We all save !!!

Create more jobs than will be lost

Somewhere only we know!!!

Low emission technology

Rich in Opportunities for a Net zero economy



# Contact us



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