



ISO 14064 Series, GHG Quantification & Reporting, GHG Validation & Verification, and related Accreditation Services

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Related ISO Standards and Technical Specification

- Greenhouse Gas (GHG) Quantification and Reporting (溫室氣體量化和報告)
 - ISO 14064-1, ISO 14064-2 and ISO/TS 14067
- GHG Validation and Verification (溫室氣體審定和核査)
 - ISO 14064-3, ISO 14065 and ISO 14066
- Accreditation (認可)
 - ISO/IEC 17011





GHG Quantification and Reporting

溫室氣體量化和報告





International Standards / Technical Specification

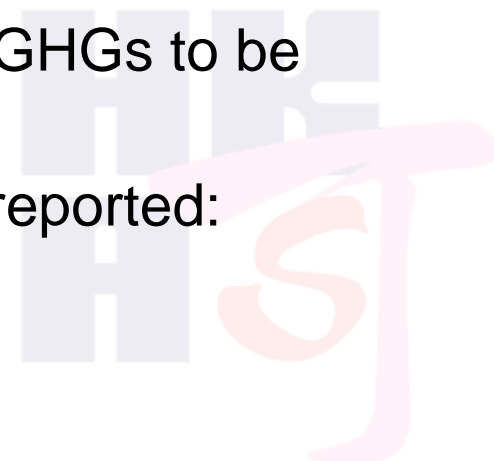
- ISO 14064-1: 2006
 - at the **organization level** for quantification and reporting of GHG emissions and removals
- ISO 14064-2: 2006
 - at the **project level** for quantification, monitoring and reporting of GHG emission reductions or removal enhancements
- ISO/TS 14067: 2013
 - for the quantification and communication of the **carbon footprint of a product (CFP)**



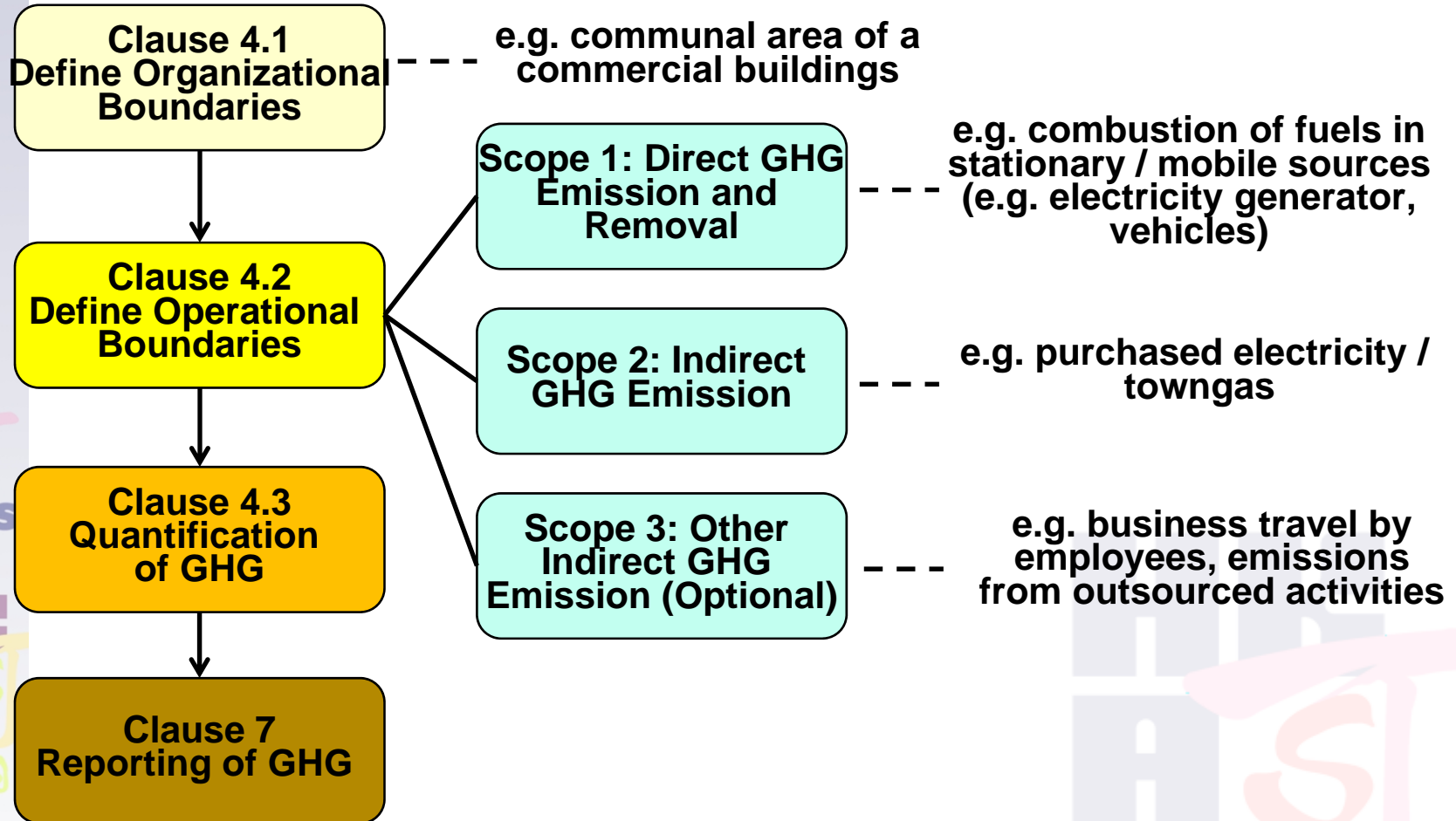


ISO 14064-1: 2006

- Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- Published in March 2006
- The organisation is allowed to select any GHGs to be quantified and reported.
 - Six common GHGs be quantified and reported: CO₂, CH₄, N₂O, HFCs, PFCs, SF₆



- Structure of ISO 14064-1: 2006
 - Clause 1: Scope
 - Clause 2: Terms and definitions
 - Clause 3: Principles
 - Clause 4: GHG inventory design and development
 - Clause 5: GHG inventory component
 - Clause 6: GHG information management
 - Clause 7: Reporting of GHG
 - Clause 8: Organisation's role in verification activities





Published by EMSD and EPD

**Applicable for buildings
(commercial, residential or
institutional purposes)**





Benefits

- Improve awareness
- Create a baseline
- Identify area of high GHG emissions
- Implement directed action(s) to reduce GHG emissions / enhance GHG removals





ISO 14064-2: 2006

- Greenhouse gases - Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements
- Published in March 2006
- Different from directed action(s) implemented by an organisation to reduce GHG emissions or increase GHG removals



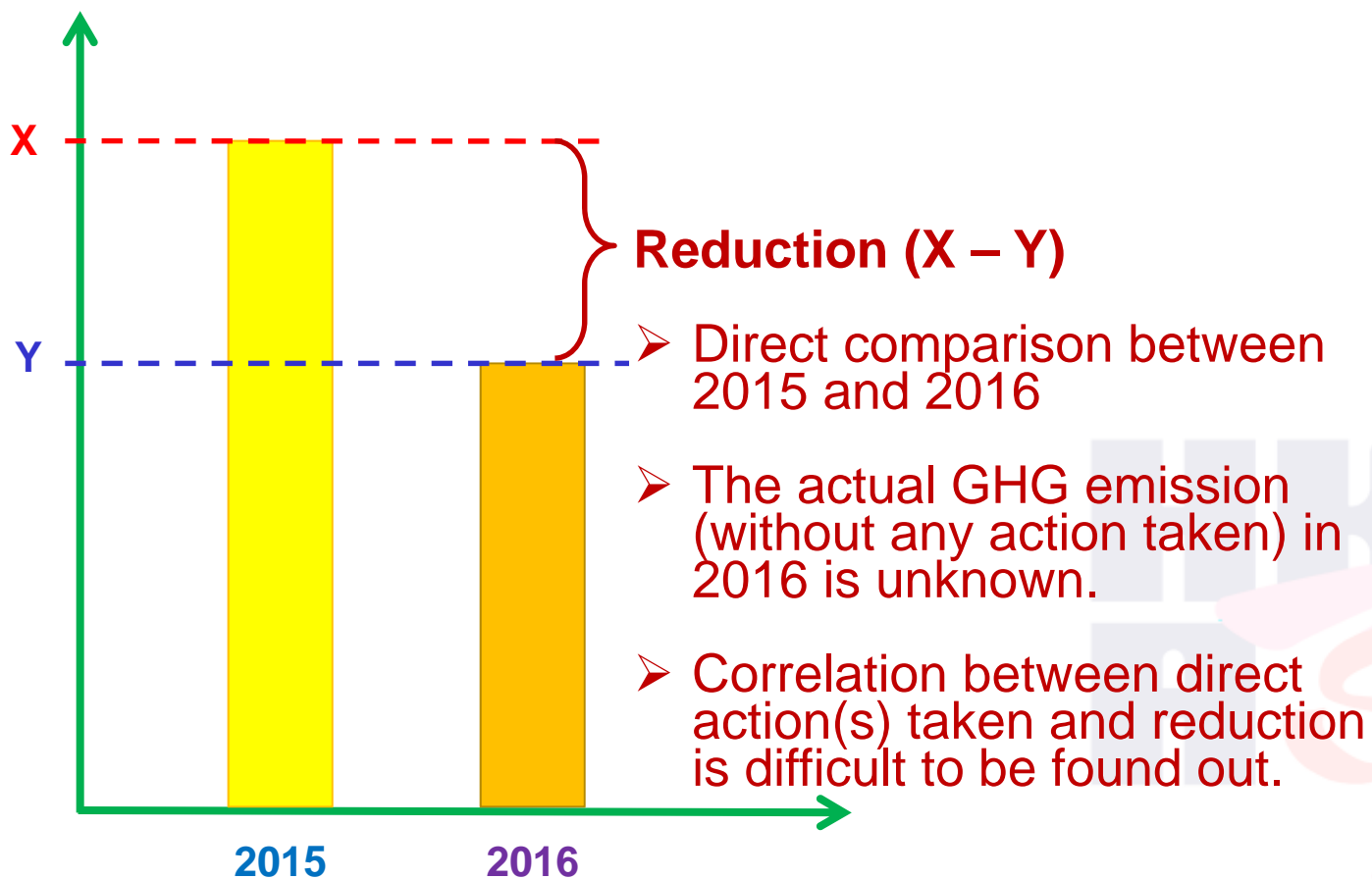
Directed Action VS GHG Project

- Measurement of emission reductions / removal enhancement
 - Directed action: a prior point in time
 - GHG project: same point in time
- Correlation to emission reductions / removal enhancement
 - Directed action: difficult
 - GHG project: clearly defined



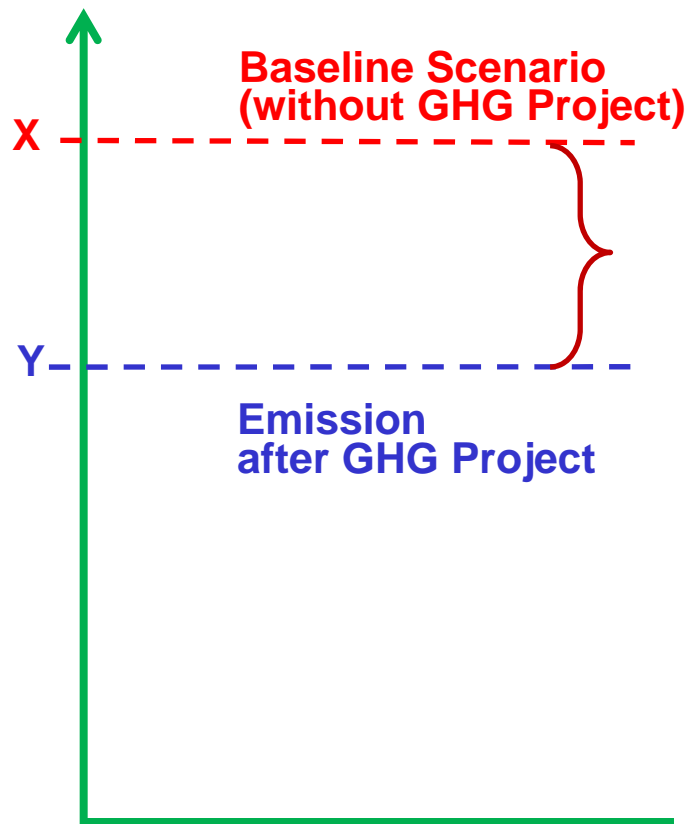
Directed Action

GHG Emission



GHG Project

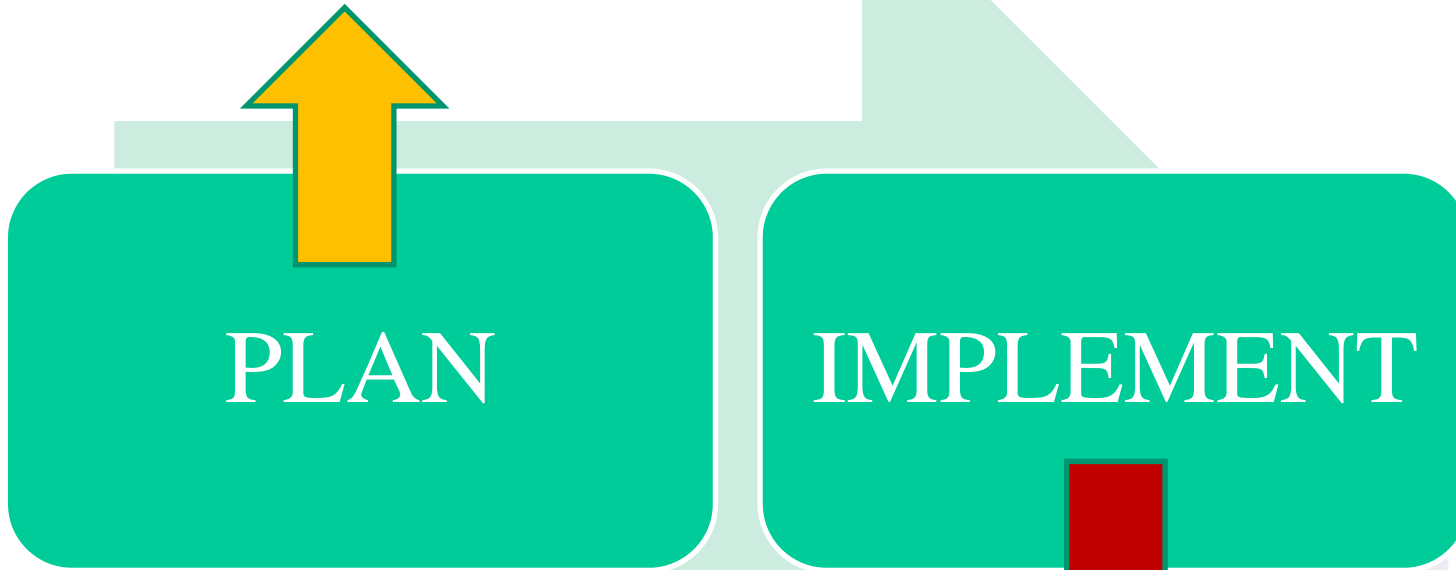
GHG Emission
In 2016



Reduction (X - Y)

- Comparison made in the same period of time
- The GHG emission (without GHG Project) is estimated as 'baseline Scenario'.
- Correlation between GHG project and reduction is clearly defined.

Project Plan



PLAN

IMPLEMENT

Project Report



Benefits

- Systematic
- GHG markets: crediting and trade of GHG emission reductions or removal enhancements



ISO/TS 14067: 2013

- Greenhouse gases - Carbon footprint of products -- Requirements and guidelines for quantification and communication
- Published in May 2013
- Quantification of the carbon footprint of a product (CFP) based on life cycle assessment

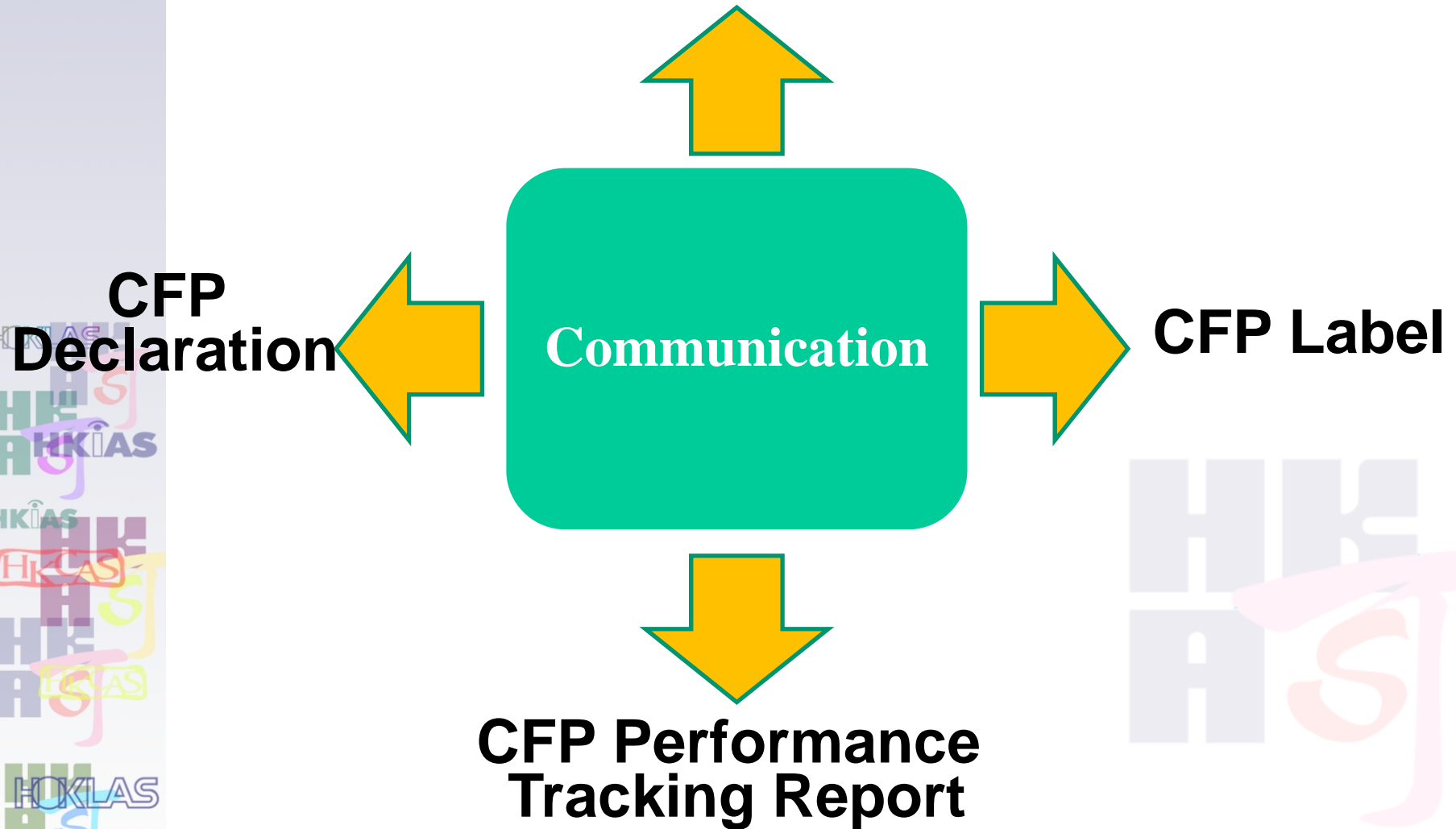


CFP
Quantification

CFP Study
Report

Communication

CFP External Communication Report





HOKLAS



HOKLAS



HOKLAS



HOKLAS



HOKLAS

http://www.cic.hk/eng/main/zcb/carbon_labelling_scheme/about_the_scheme/overview/index.html





Benefits

- Facilitate the evaluation of alternative product design, sourcing options, production process, raw material choices, recycling and other end-of-life processes
- Change consumer behavior





GHG Validation and Verification

溫室氣體審定和核査

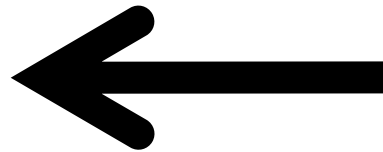




Organisation Level



Verification





GHG Project

Validation

Project Plan

GHG
Validation Body

PLAN

IMPLEMENT

GHG
Verification Body

Project Report

Verification

HOKLAS

HKAS
HKIAS

HKIAS

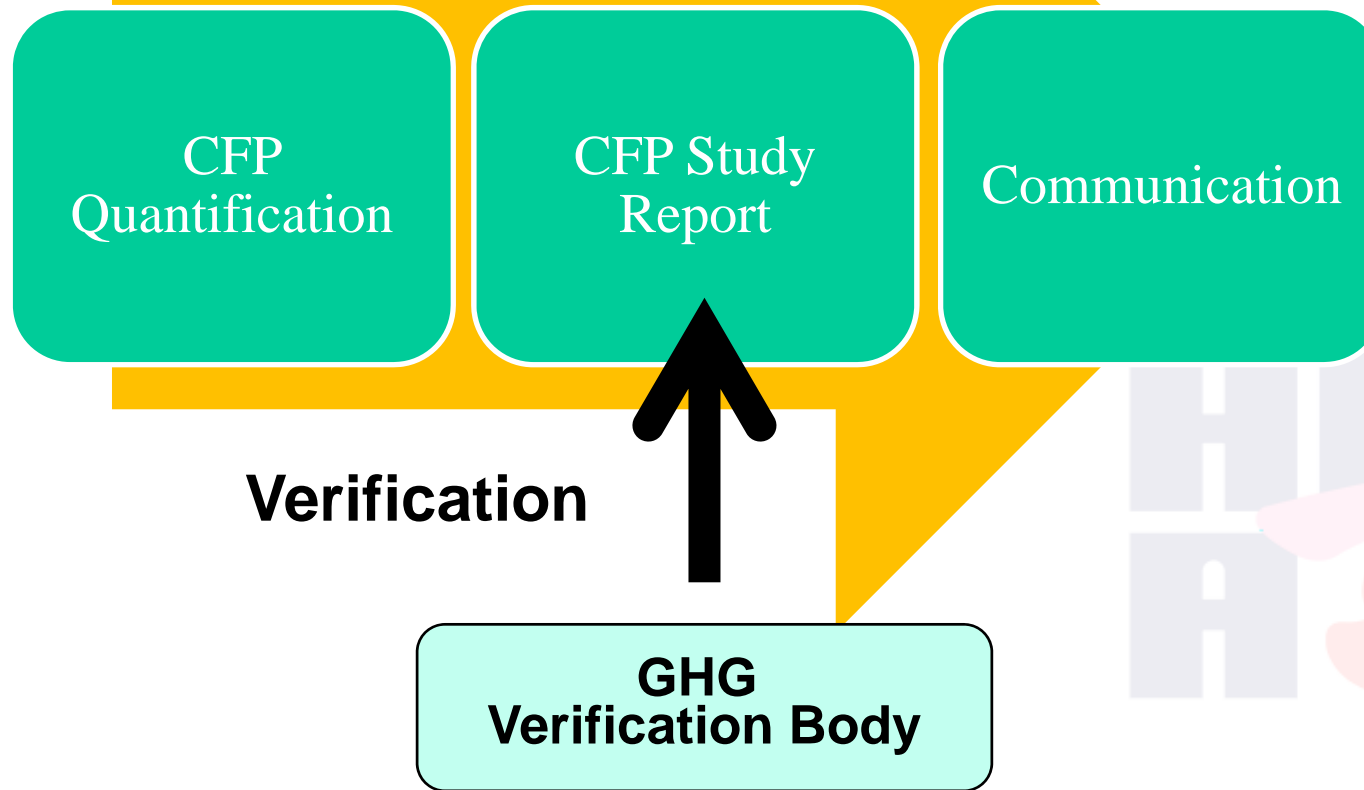
HKAS

HOKLAS

HOKLAS



Product Carbon Footprint





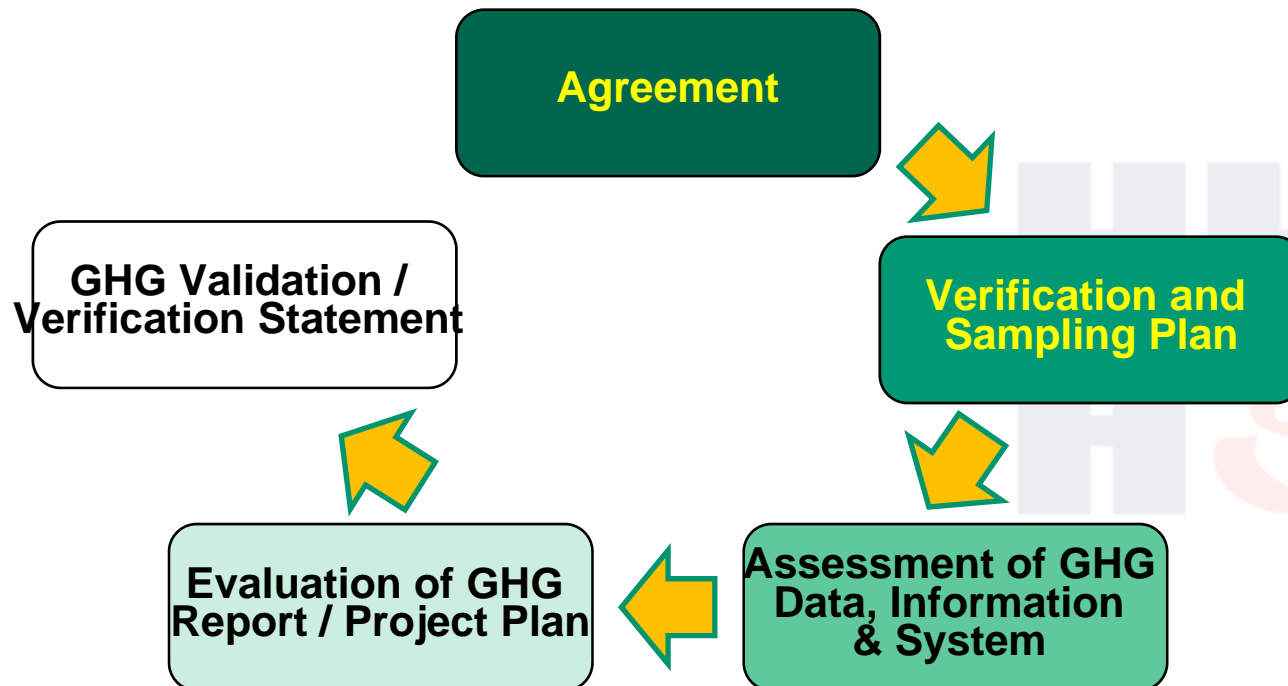
International Standards

- ISO 14064-3: 2006
 - conducting or managing the validation and/or verification of GHG assertions
- ISO 14065: 2013
 - specifies principles and requirements for bodies that undertake validation or verification of GHG assertions
- ISO 14066: 2011
 - specifies competence requirements for validation teams and verification teams



ISO 14064-3: 2006

- Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions
- Published in March 2006





ISO 14065: 2013

- Greenhouse gases - Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition
- Published in April 2013
- Requirements including
 - legal status, governance and management commitment, impartiality, competences, verification process, management system.....





ISO 14066: 2011

- Greenhouse gases - Competence requirements for greenhouse gas validation teams and verification teams
- Published in April 2011
- This International Standard complements the implementation of ISO 14065.





Benefits

- Increase credibility of the reported GHG information
- Provide assurance to intended users of the reported information





What is the competences of
GHG validation and verification
bodies?

Accreditation





Accreditation



Validation / Verification



Standards:
ISO 14064-3, ISO 14065, ISO 14066

Standards:
ISO 14064-1 / ISO 14064-2 /
ISO/TS 14067



Hong Kong Accreditation Service

香港認可處





Hong Kong Accreditation Service

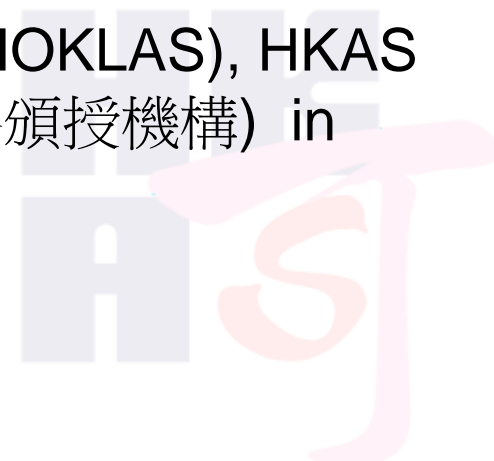
香港認可處

- Hong Kong Accreditation Service (HKAS) is part of Innovation and Technology Commission of the Hong Kong Special Administrative Region (HKSAR) Government.



香港特別行政區政府
創新科技署

- Established in 1985 (formerly named as HOKLAS), HKAS is the official accreditation body (認可資格頒授機構) in Hong Kong





- Support the Hong Kong testing and certification industry, provide accreditation services under 3 schemes:

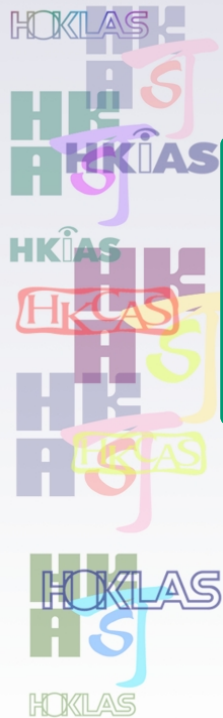
➤ HOKLAS (香港實驗所認可計劃)



➤ HKCAS (香港認證機構認可計劃)



➤ HKIAS (香港檢驗機構認可計劃)





Accreditation Programme for GHG Validation & Verification Bodies

- Under Hong Kong Certification Body Accreditation Scheme (HKCAS)
- For GHG validation/verification bodies (V/VBs) providing third-party GHG validation/verification services
 - at organisation and project levels (launched in Dec 2012)
 - for carbon footprint of a product (CFP) study report (launched in Jun 2014)
- One accredited GHG verification body (at organisation level)





- Some GHG programmes may require certification by GHG V/VB of the greenhouse gas performance achieved by responsible parties over a specified period of time. Such certification activities are not covered under this HKAS accreditation.
- HKAS accredited GHG V/VBs are allowed to issue accredited GHG verification/validation statements.





Features of HKAS Accreditation

- Voluntary
- Rigorous assessment and monitoring (through surveillance and reassessment) based on international standards
- Independent and impartial
- International recognition





International Recognition

- HKAS is a signatory to
 - Mutual Recognition Arrangement (MRA) of International Laboratory Accreditation Cooperation (ILAC) and Asia Pacific Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ALPAC)
 - Multilateral Recognition Arrangement (MLA) of International Accreditation Forum (IAF) and Pacific Accreditation Cooperation (PAC)
- 95 MRA/MLA partners in 94 economies
(as at February 2017)





- HKAS' PAC MLA extended to GHG Validation and Verification in June 2015.
- HKAS is the 5th PAC MLA signatory in GHG. The first batch signatories are TAF (Chinese Taipei), JAB (Japan), Ema (Mexico) and ANSI (USA). The 6th signatory is SLAB (Sri Lanka).





How to identify accredited GHG validation / verification statement?





For more information on HKAS ...

Please visit HKAS website at
<http://www.hkas.gov.hk>

The screenshot shows the homepage of the Hong Kong Accreditation Service (HKAS). At the top, it features the logo of the Innovation and Technology Commission, The Government of the Hong Kong Special Administrative Region, and the HONG KONG logo. Below this is a navigation bar with links for 'GovHK 香港政府一站通', 'TEXT ONLY', '繁體版', '简体版', a search box, 'SITE MAP', and an email icon. The main content area is titled 'Hong Kong Accreditation Service' and includes a navigation menu with 'Home', 'About Us', 'Estimate of Expenditure', 'Funding Schemes', 'Research & Development Centres', 'Technological Infrastructure', 'Advisory Committee on Innovation & Technology', 'Human Capital', 'Technology Areas', 'Hong Kong Accreditation Service (HKAS)', 'Product Standards & Information Bureau (PSIB)', and 'Standards & Calibration Laboratory (SCL)'. The main content area features a 'What's New' section with two bullet points: 'Testing of lead and other heavy metals in water' and 'Transition arrangements for ISO 9001: 2015, ISO 14001: 2015 and ISO/IEC 17021-1:2015 are available in the "Archive for What's New"'. Below this is an 'About Accreditation' section with a paragraph and two bullet points: 'Hong Kong Laboratory Accreditation Scheme (HOKLAS) - for laboratories, reference material producers and proficiency testing providers' and 'Hong Kong Certification Body Accreditation Scheme (HKCAS) - for certification bodies, and greenhouse gas validation and verification bodies'.



For more information on testing and certification industry ...

Please visit HKCTC website at <http://www.hkctc.gov.hk>

Hong Kong Council for Testing and Certification
The Government of the Hong Kong Special Administrative Region

GovHK 香港政府一站通 | TEXT ONLY 繁體版 简体版 | SEARCH Enter search keywords | SITE MAP |

Tested in Hong Kong
Certified in Hong Kong

Home

What is New

- The Innovation and Technology Commission and the Council have commissioned Hong Kong Baptist University to develop a teaching kit for use by senior secondary Chemistry teachers. ([Details](#))
- **Report of the Hong Kong Council for Testing and Certification 2015-16**
Report of the Hong Kong Council for Testing and Certification 2015-16 has been uploaded for information, please refer to [details](#).
- **Implementation details for "Nil Waiver Fee" for Testing Laboratories Operating in Industrial Buildings announced**
The government announced the implementation of the "nil waiver fee" measure to facilitate the operation of testing and calibration laboratories in industrial buildings.





Thank You

