



International Laboratory Accreditation Cooperation
&
International Accreditation Forum

GHG Measurement and Verification Current Practice and future Governance

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Japan Accreditation Board

BIPM Workshop Global to Urban Scale Carbon Managements
Standard for green house gas inventories, July 1 2015



ILAC & IAF

GHG emission with activity data, emission factors, heat values, oxidation factor

Calibrated
measurement
devices

With ISO/IEC
17025

Emission factor
delivered by
accredited
laboratory

With ISO/IEC
17025

Competent
persons of
laboratory testing
with quality
system

With ISO/IEC
17025

GHG
quantification and
reporting

With ISO14064-1

Verified GHG
report
By ISO14065
accredited
Validation and
verification bodies

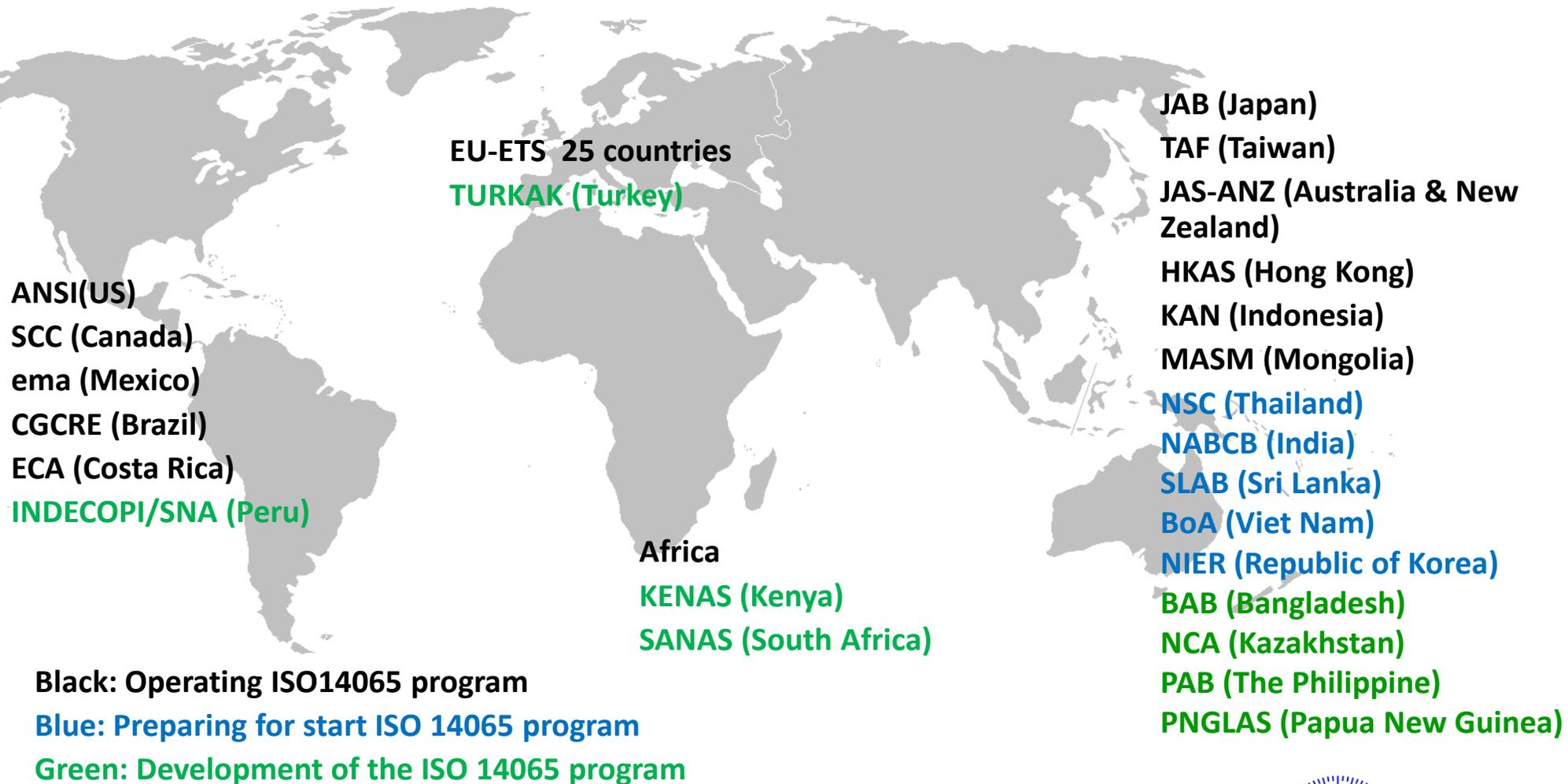
Lower heat value and emission factor, oxidation
factor are determined by laboratory analysis

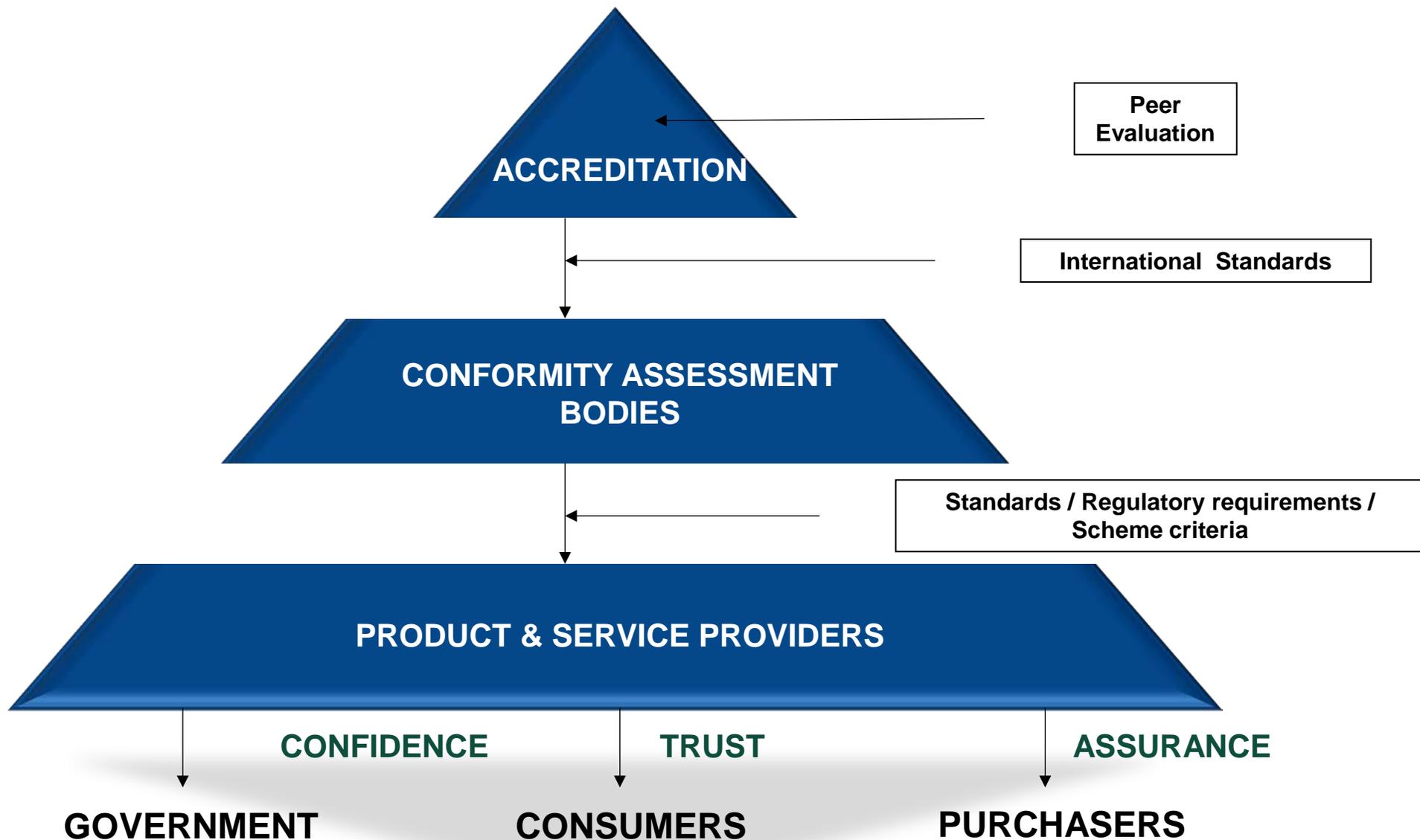
Total annual GHG emissions of the fuel in t CO₂e /year = Amount of fuel consumed in t/year X Lower heat value in GJ/t X Emission factor in t CO₂e /GJ X an oxidation factor of 1 means complete oxidation

Total annual GHG emissions of the material in t CO₂e /year = Amount of material consumed in t/year X Emission factor in t CO₂e /GJ X a conversion factor of 1 means complete conversion

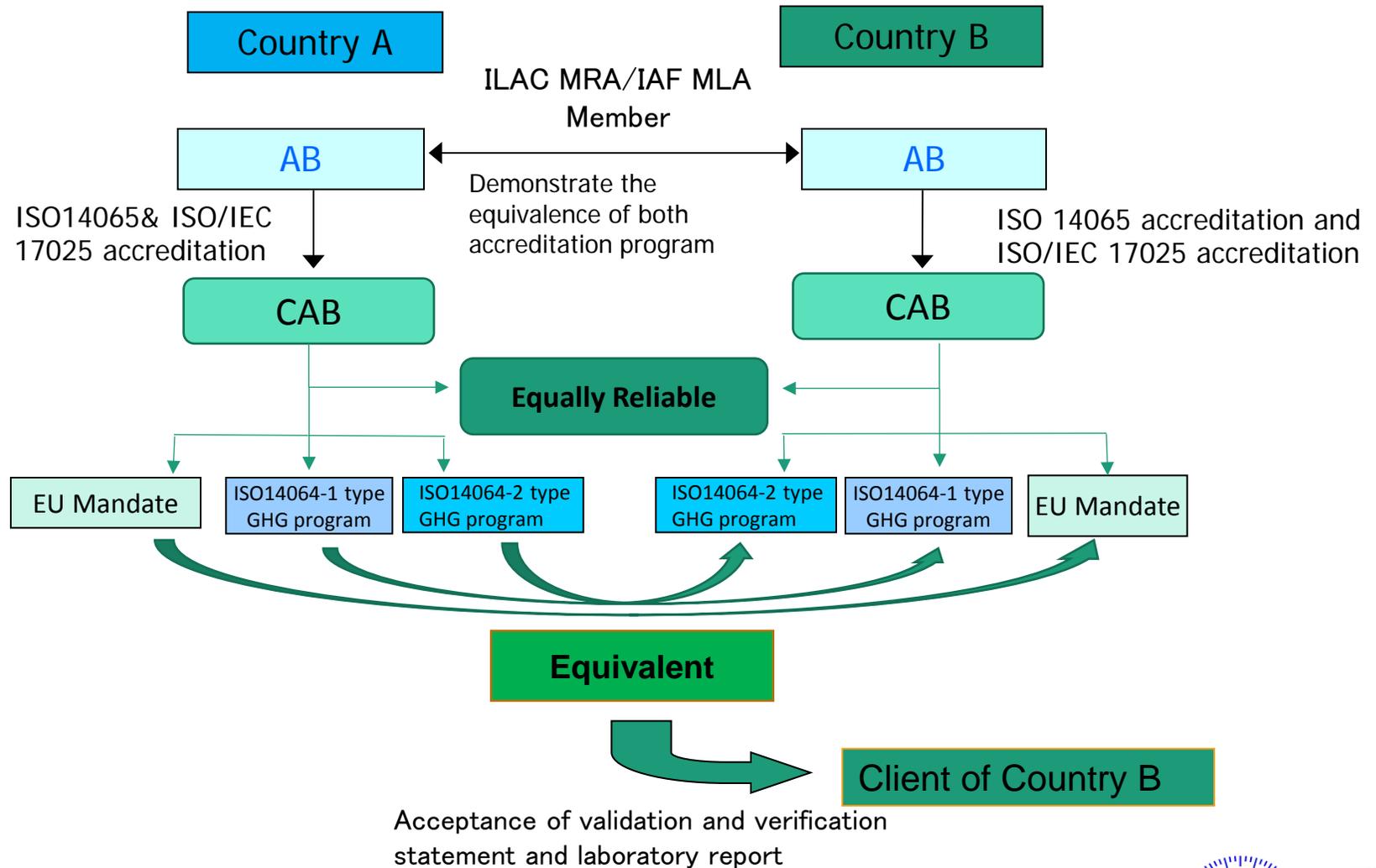


Current Status ISO14065 Accreditation Programs





Multilateral Recognition Arrangement



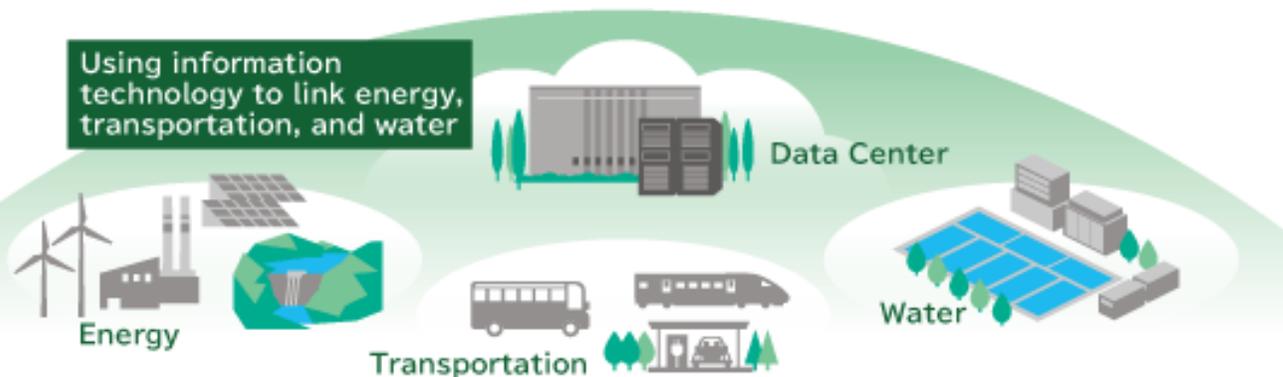
Future challenge to Climate Change mitigation and adaptation

Mitigation

- GHG (time frame, base year, coverage in terms of gases and sectors, GWPs, treatment of emission from land use sector, use of unit (if any) from market mechanism, baseline and assumption used)
- Non GHG (non-GHG goals or actions with short term impacts on GHG emissions)
- Low Carbon Society (long term transformation to low carbon economies and societies)

Adaptation

- Adaptation activities, monitoring and evaluation with climate data



Future mechanisms expect more measurement basis, and the scale of GHG measurement to expand to different areas and cities across supply chains. As to reliable measurement and GHG reporting, effective and efficient verification is highly expected.

Quality system with competent personnel, and sampling and its method with standard



As to scale out the boundary of the measurement, the expected monitoring points are increasing.

Quality system with competent personnel support, and the capacity building with standards are relevant.

The supplemental guidance of the sampling method is relevant.

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