

Update - ISO (International Organization for Standardization)

Technical Committee 285 - Clean Cooking Solutions

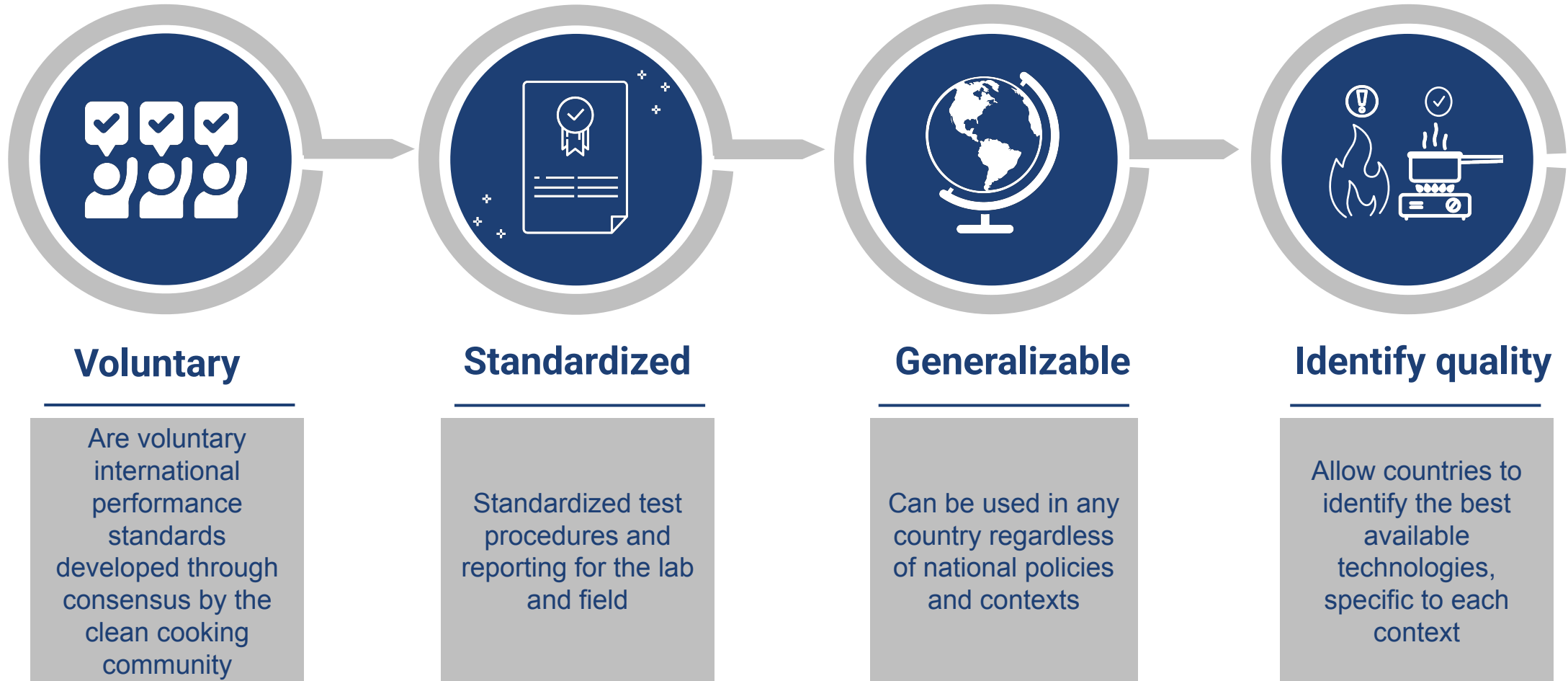
Jim Jetter, U.S. EPA, Office of Research & Development

27-January-2024

The views expressed in this presentation are those of the authors and do not necessarily reflect the views or policies of the U.S. Environmental Protection Agency.

International performance standards support global coordination and harmonization

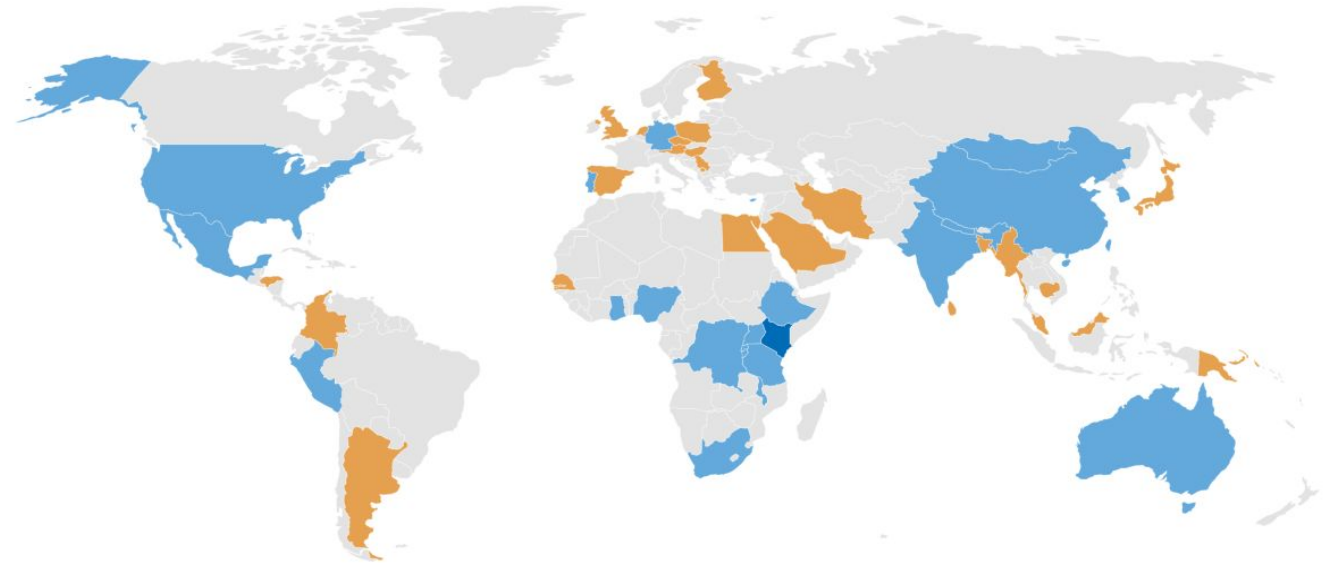
ISO standards...



ISO Technical Committee (TC) 285 background



- 2011 Lima Consensus – Partnership for Clean Indoor Air Forum
Tiers of Performance for multiple indicators
- 2012 ISO International Workshop Agreement 11 – The Hague, Netherlands
Guidelines for evaluating cookstove performance
- TC 285 Plenary Meetings
 - 2014 – Nairobi, Kenya
 - 2014 – Guatemala, Working Groups
 - 2015 – Accra, Ghana
 - 2017 – Kathmandu, Nepal
 - 2019 – Nairobi, Kenya
- TC 285 currently includes:
19 participating members and 27 observing members



1st Plenary Meeting, Nairobi, Kenya 2014



ISO TC 285 organization and published standards



- Committee Manager: [Zacharia Lukorito](#), Kenya Bureau of Standards
- Chairperson: [Richard Ebong](#), Uganda National Bureau of Standards
- Working Group #1 – Conceptual Framework
 - Vocabulary – 2018
 - Guidance for Evaluation – under development
- Working Group #2 – Laboratory Testing
 - Harmonized Laboratory Protocols –2018
 - Voluntary Performance Targets – 2018
 - Institutional Stove Testing Standard – 2023
- Working Group #3 – Field Testing
 - Field Testing methods for cookstoves – 2019
- Working Group #4 – Guidelines for social impact assessment
 - Guidelines for social impact assessment - 2023



Nairobi Plenary Meeting - 2019

Working Group 2 Update

New institutional cookstove testing standard published!

- Institutional stoves are used in schools, restaurants, hospitals, displaced-person camps, and other settings
- New standard was initiated by Uganda
- Project Leader was Dr. Juliet Kyayesimira, Uganda
- Working Group included 47 members from 8 countries and 2 liaison organizations
- Developed through the 4-year ISO process
- Built on the preexisting ISO lab and field testing standards
- Includes methods for testing in the laboratory and *in situ*



Photo courtesy of the Clean Cooking Alliance

ISO 5714:2023 Test Protocols for Institutional Cookstoves

Table 1 — Testing options

Testing options	Primary energy performance metrics (units)		Primary emissions met- rics (units) ^a
Water-heating test With test sequence defined by either field data in 5.2.6 or protocol, in 5.2.7 — Laboratory testing, Clause 5 — In situ testing, Clause 6	Thermal efficiency (%) Specific energy con- sumption, fuel energy / product mass (MJ/kg)	Cooking power (kW) Firepower (kW)	Emission factors, pollutant mass / delivered energy (mg/MJ) Pollutant mass/ fuel energy(mg/MJ) Emission rates (mg/min)
Controlled cooking test — Laboratory testing, Clause 5 — In situ testing, Clause 6	Specific energy con- sumption, fuel energy / product mass (MJ/kg)	Firepower (kW)	Emission factors pollutant mass/ fuel energy (mg/MJ) Emission rates (mg/min)
Uncontrolled cooking test — In situ testing, Clause 6	Usage (min/day)		
^a NOTE Emissions testing is optional, as described in the Introduction.			

Working Group 2 Update

Laboratory testing standard beginning systematic review

- All ISO standards are subject to systematic review
- Lab testing standard includes testing methods for air pollutant emissions, efficiency, safety, and durability
- Many labs now have experience using the ISO standard - can provide valuable input!
- Revisions needed, for example:
 - Charcoal stove testing protocol details
 - Clarifications throughout the standard



Laboratory Testing Team, Ghana CSIR

How can you participate in TC 285?

- Each ISO participating country has a “member body” and a TC 285 “mirror committee”
- For example, in the U.S.:
 - Member body is ANSI (American National Standards Institute)
 - Mirror committee is the U.S. TAG (Technical Advisory Group)
 - Led by John Mitchell, U.S. EPA
- Contact your country’s member body or mirror committee to participate!
<https://www.iso.org/members.html>

