Standards and Labels for clean Cooking Solutions

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Outline of the Presentation

• Introduction: Why standards and labels? Definitions

• Examples of standards and quality assurance approaches relevant for Western Africa

• Components of quality assurance
  – Stove type quality
  – Stove production quality
  – Fuel quality

• Relevant actors

• Questions / Discussions
Standards and Labels - Definitions

• Why standards, why labels? -> To enhance the quality of cooking equipment!

• **Standard**: definition of characteristics of a product; laid down in a document of reference, established by consensus and approved by a recognized body (example ISO)

• **Label**: A piece of paper, polymer, or other material affixed to a product, which indicates information about this product, for example the degree to which a set of inherent characteristics fulfills the requirements of a standard

• **Quality** of a product means in practice that the product meets end-user expectations in terms of performance, functionality, reliability and affordability
Validity and range of different types of Standards

- **Universal Minimum Standard**: Criteria laid down in laws or governmental decrees, to be applied to **ALL** products of a certain type, controlled by independent accredited organization.
  - Example: Cars in Europe. There is no car allowed that does not correspond to these criteria. A logo/label is not necessary. Objective: To avoid the existence of products of low (dangerous) quality.

- **Official Logo for a Standard of Extraordinary Quality**: Criteria laid down in laws or governmental decrees, controlled by independent accredited organization, to be applied only to a certain part of a product group.
  - Example: The EU logo and guidelines for organic farming. The main objective is to make organic products easier to be identified by the consumers. A logo is indispensable in this concept.

- **Brand, Trademark**: Criteria laid down in internal rules by a company, to be applied to **ALL** products of a certain type, controlled by the company itself.
  - Example Coca Cola. Objective: Marketing advantage for products of the one company.
Application of standards and labels in the stove market

• In the next future it will not be possible to forbid or ban traditional stoves. -> A universal minimum standard is not enforceable.

• Some stove producing companies have their own brands and might be able to establish those as well known stove brands in a market. -> A public intervention is not imperative.

• -> Standards and labels supported by public institutions defining “efficient stoves” in contrast to not efficient ones might be appropriate to enhance the share of high quality stoves in the market.
Which type of Standard?

Performance Standard or Technical Specification?

• A Standard can be defined as a specific performance of a stove type in terms of fuel consumption, the durability of stoves, emissions and safety, convenience of use. -> Performance standards

• A Standard can be defined by describing a stove type’s dimensions, properties of materials to be used, or some aspects of the producing technology to be applied. -> Technical specifications.
Example for a Performance Standard

- The Global Alliance for Clean Cookstoves (GACC) promotes the development of International Standards for cooking stoves.
- An International Workshop Agreement, that is base for the to development of ISO Standards for cookstoves, defines:
  - Tiers for performance standards on fuel consumption, CO and PM emissions, indoor air quality (IAQ) and safety parameters

Testing protocols to measure these performance parameters: WBT, Safety Test
International Workshop Agreement

- Stakeholders directly participate developing the IWA and do not have to go through a national delegation
- An IWA can be produced swiftly
- The IWA carries the ISO brand
- IWA’s can be precursors to International Standards

Source: Global Alliance for Clean Cookstoves
Some years ago CILSS/UEMOA developed a mechanism for cook-stoves labeling.

The proposed approach includes:

- Accreditation of qualified laboratories to perform WBT, CCT, KPT and safety tests
- Awarding of quality label to producers, providers or developers
- The « Cahier de charges d’utilisation du Label » contains a model contract for the use of this label stipulated by CILSS / UEMOA.

It does NOT define minimum performance standards or tiers

*Which obstacles slowed down the realization of this plan?*
Implementation and enforcement of standards and labels

• A standard has to be defined and imposed. By whom?
• A standard has to be controlled. By whom?
• To enforce the accomplishment of a standard, sanctions have to threaten and have to be imposed. Who has the power and the will to impose sanctions?
Implementation of standards: Who defines the standard?

- International Donors, Implementation Agencies often have defined their own standards. For example certain stove types or for example GIZ: savings of 40% against traditional stove.
- National Bureau of Standards: defines minimum quality stove types
- Private Entrepreneurs: develop high performance products
Implementation of standards: Who controls the parameters of the standard?

• Performance parameters of stove types are to be tested in a laboratory or in the field by a scientific organization. Example CERER in Senegal or IRSAT in Burkina Faso

• The production quality, if the produced stoves meet the specifications is to be controlled by an implementing agency, an independent body or a producer’s organization.
Components of performance standards
1) Parameters for stove type quality

- **Cooking power**
  - Time to boil water
  - Thermal efficiency

- **Fuel consumption**
  - Quantity of fuel consumed for a given task

- **Emissions**
  - Quantity of health endangering toxic emissions?
  - Quantity and type of climate relevant GHG emissions?

- **Durability**
  - Expected lifetime?
  - Up to which point of decay a stove can be considered as an improved stove?

- **Stove Security**
  - Sharp Edges and Points, Stability, Cookstove Tipping
  - Surface Temperature and Heat Transmission to Surroundings

- **Convenience**
  - Is the stove appropriate to the usual tasks in an average household?
Components of quality assurance

2) Testing the stove type quality in the Laboratory

• Laboratory:
  – WBT, CCT for fuel consumption
    Standard methods of several Institutes
  – WBT with emission testing
    CERER has set up a Laboratory Emission Measurements System (LEMS)
  – Security protocol
    Methodology available, however rarely used
  – Durability test
    Methodology is being developed
Components of quality assurance

3) Testing the stove type quality in the household

- Monitoring in the households
  - Fuel consumption: KPT
    Standard methodology
  
  - Indoor Air pollution
    First approaches with appropriate equipment
    (IAP meter)
  
  - Durability
    Methodology for systematic monitoring has to be developed
  
  - Convenience / acceptance
    Standard methodology: acceptance tests
Components of quality assurance
4) Stove production quality

• **Parameters**
  - Are all stoves conform with the approved stove type: measures, material, tolerances?
  - Are all the produced stoves of the same quality?

• **Methods to test and insure the stove production quality**
  - Adequate training of the producers, providing tools for quality management
  - Control of the produced stoves
  - Certification of products or producers
  - Labeling
Ensuring Quality of All Stoves

- CERER does quality control of stoves produced by artisans on behalf of GIZ. All the producers are visited regularly, get training, support in form of tools.
Other components of quality assurance

- -> Need for fuel quality standards?

Fuel type and source can have more impact on the emissions and the environmental impact than the stove type:

- Sustainable source?
- Minimum product quality in terms of heat value and low Emissions

- Is fuel standardization a realistic option?
Relevant Actors?

• **Improving the quality of stove types, Development of better stove types**
  - Research Organization: Stove testing, recommendations for stove improvement
  - Bureau of Standards: defines minimum quality stove types
  - International Donors: may define minimum quality for their projects
  - Private Entrepreneurs: develop high performance products

• **Monitoring and Management of stove production quality**
  - Project implementing organizations: training of producers, quality monitoring
  - Private Entrepreneurs: guarantee a high quality of their products as a marketing argument
Pertinent Questions / Suggestions for discussion

- Do we need common international standards or local, national ones?
- Does it make sense to fix absolute minimum standards (GACC)? Or is it more realistic to focus on improvement rates (40% GIZ)?
- Who is really able and willing to impose standards, including sanctions?
- Emission testing is interesting. However, it leads to testing procedures far from reality.
- Life time of improved stoves?
- Quality <-> Price and affordability
- Organization of a quality management system:
  - Which criteria?
  - Powerful actors?
Thank you for your attention

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