



Opportunities & Challenges for Appliance Standards and Labels in Central America

Ana Maria Carreño

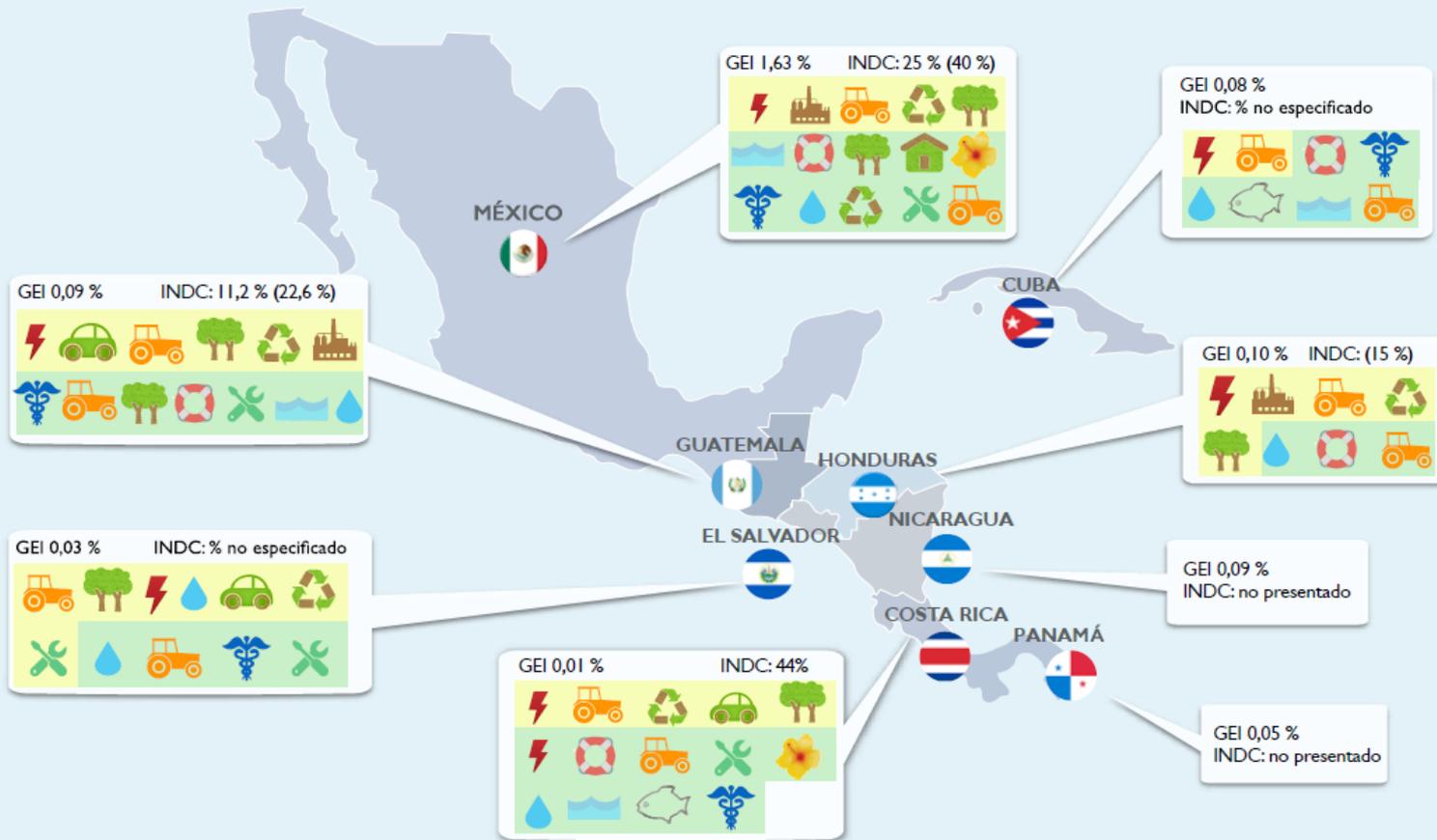
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San José, Costa Rica (via teleconference)



NDCs in Central America and Mexico all include energy sector

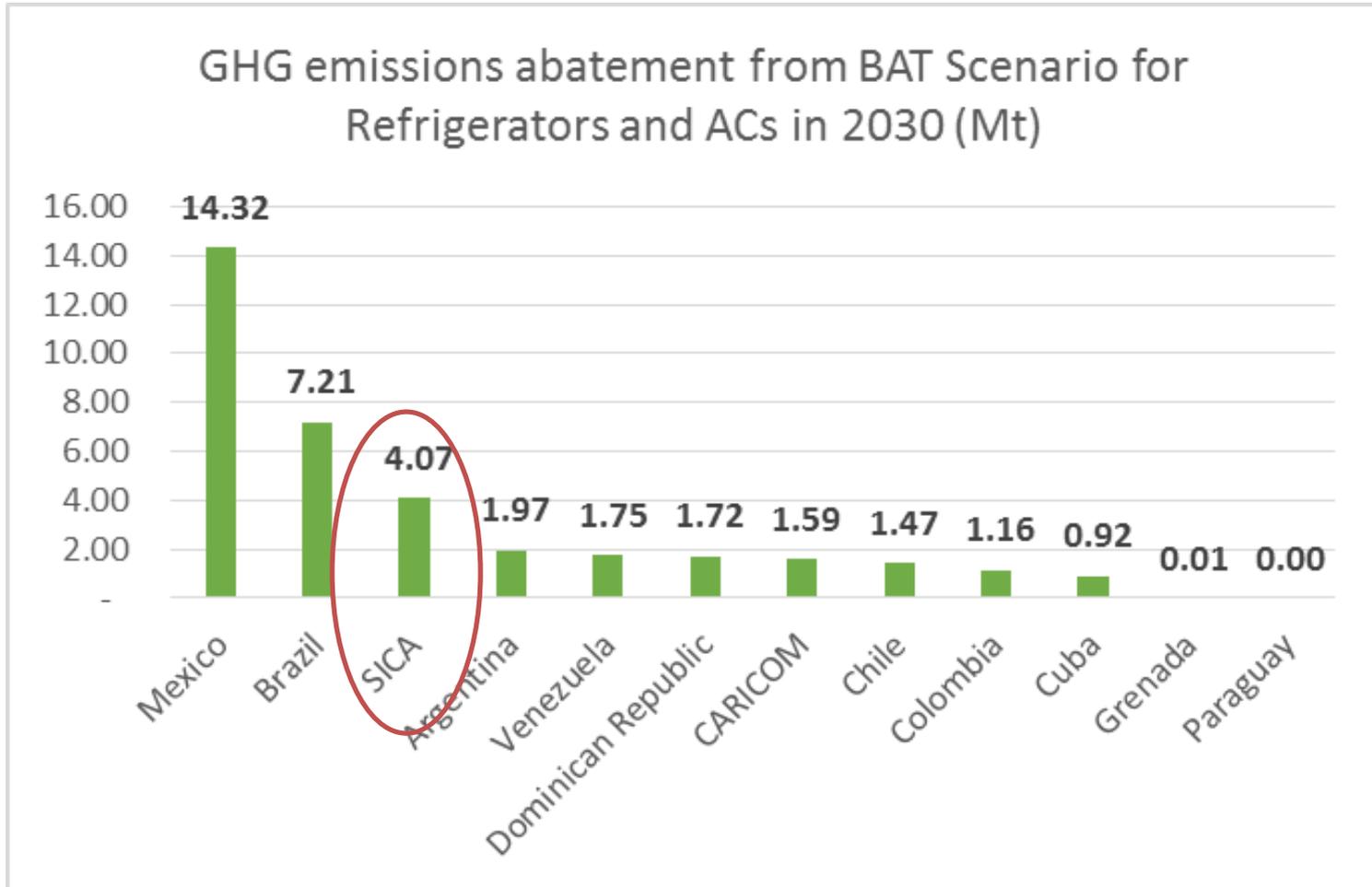
América Central y México



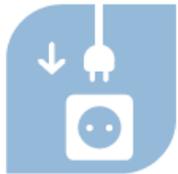
Energía

GHG emissions reductions from energy identified in all NDCs

SICA members ranked 3rd in GHG abatement potential in LAC



El potencial de ahorros anual en **Centro América** y **República Dominicana** en 2030



Reducción del consumo de electricidad

→ por encima de **6.8 TWh**

→ más del **14%** del consumo actual

...equivalente a
12 plantas de
energía de 100MW



Ahorro de **US\$ 1.2 billones**
en la factura de electricidad

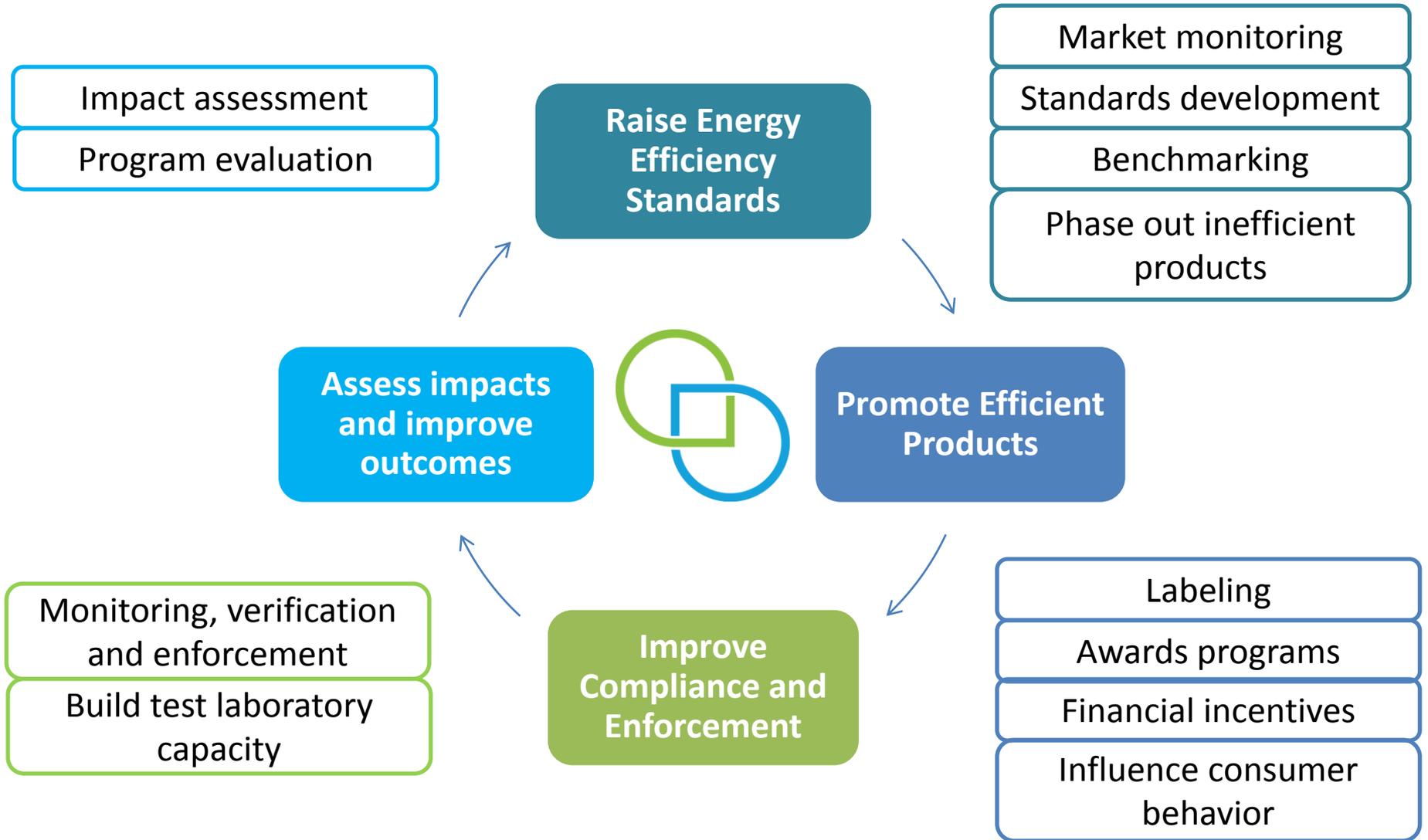


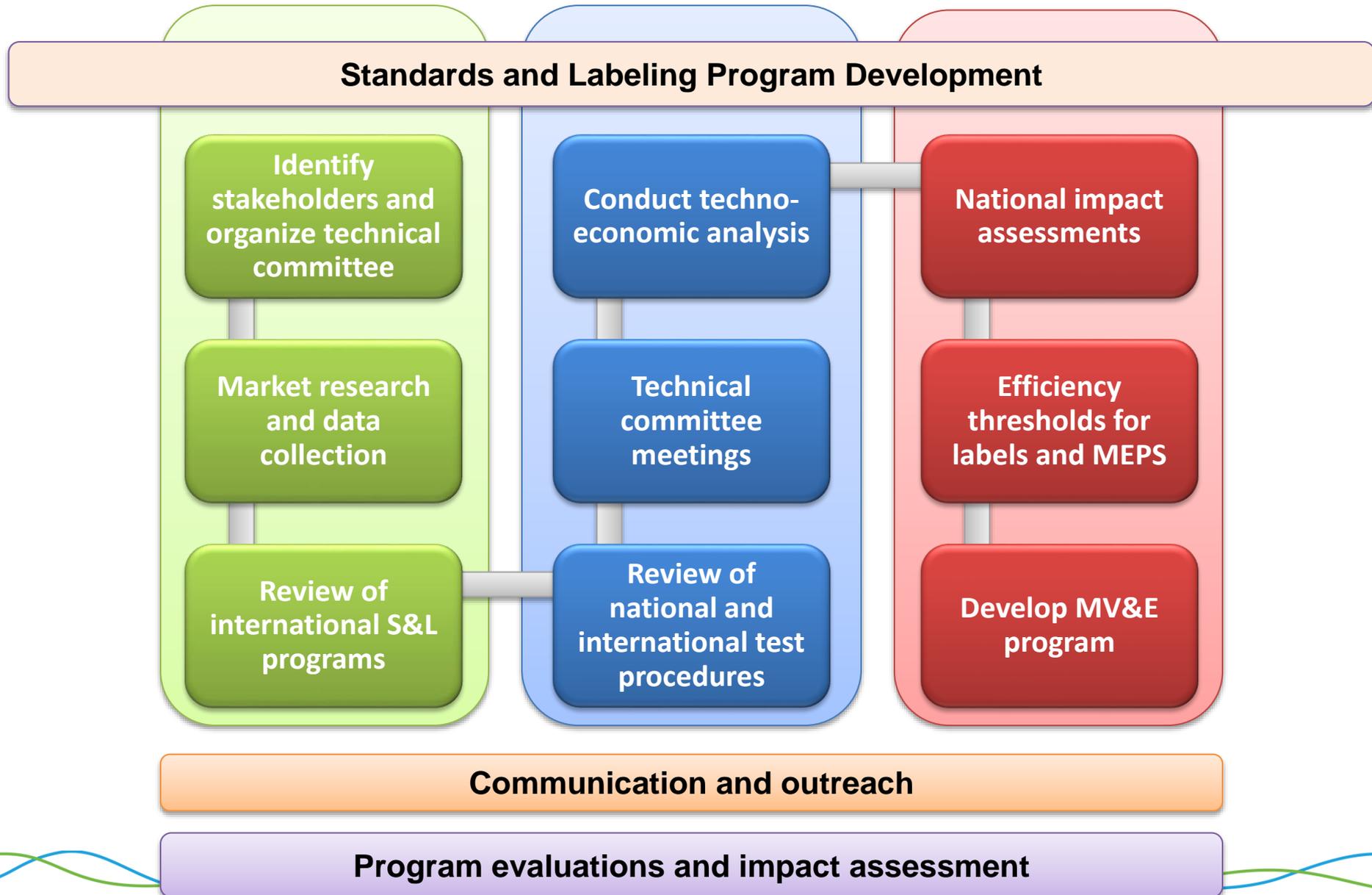
Reducción de emisiones de CO2
de **4.2 millones de toneladas**

...equivalente a
2.3 millones de
vehículos



The virtuous cycle of appliance energy efficiency programs





S&L Programs Require Resources

- Legal and Authoritative Resources
 - Clear mandates and lines of responsibility from framework legislation and/or implementing regulation
- Financial
 - A regular and consistent source of operational budgets; annual allocations? Fees from testing and/or labeling?
- Human Resources
 - Qualified staff to manage implementation as well as conduct market analysis; some outsourcing possible but base management requires dedicated staff
- Physical/Facilities
 - Central offices, field facilities for monitoring/enforcement and/or laboratories for testing?
- Institutional
 - All of the above should culminate in a managing institution with program responsibility

Consider Regional Harmonization

The major goal of harmonization is to reduce non-tariff trade barriers by:

- Simplifying and harmonizing customs procedures among countries.
- Harmonizing test procedures, labels, and standards.
- Implementing mutual recognition agreements.



Benefits of Harmonization:

- Can decrease program costs
- Removes trade barriers
- Avoid dumping of inefficient products on unregulated or under-regulated markets

Harmonizing Test Procedures

Most countries use (partly or wholly) standards from two international standards bodies: The International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC)

Countries in Central America are already seeking harmonization for some products under the SICA

Keep up the efforts!

Assess the Data Needs of the Program

Ideally, assessment of the technical potential of labels and standards will be based on data collected on the use of consumer products that describe:

- **Current levels and forecasted trends** for efficiency of products in the marketplace
- Specific **new technology** that has recently or will soon become available in the marketplace
- Existence and **characteristics** of domestically manufactured products
- Existence and characteristics of imported products
- Existence and levels of **standards in other countries**



Select Products and Set Priorities

- **Decide on a programmatic approach**
 - Standards vs. Labels
 - Mandatory vs. Voluntary
 - Comparative vs. Endorsement
- **What criteria should be considered when selecting products?**
 - Impact on total energy demand
 - Level of ownership and turnover
 - Potential for energy-efficiency improvement
 - Anticipated stakeholder impact
 - Coverage by test procedures
 - Existence of energy-efficiency regulations in other parts of the world
 - Existence of an energy-labeling scheme

Assessing Potential Costs and Impacts

Cost-benefit analysis for room air conditioners in Mexico in 2011

	Class 1				
	EER	Incremental cost	UEC	LCC	ΔLCC
	W/W	MX\$	kWh	MX\$	MX\$
Base case	2.89		1332	\$14,021	
Option 1	2.96	\$126	1301	\$13,759	\$(262)
Option 2	3.11	\$293	1211	\$13,259	\$(762)
Option 3	3.25	\$528	1077	\$12,836	\$(1,185)
Option 4	3.34	\$754	933	\$12,651	\$(1,370)
Option 5	3.42	\$ 1,541	789	\$12,701	\$(1,320)

ALL POSITIVE!!!

- Allows identifying options of proposed levels that result in net financial benefits for the consumer



Test Procedures

Test Procedures are the foundation of any standards and labeling program as they are used to determine the energy use of a product.

- ❑ Test procedures should:
 - Reflect typical usage
 - Yield repeatable and accurate results
 - Be relatively inexpensive to perform

- ❑ Test procedures can be developed either in country or adopted from an international body.

- ❑ Testing should be conducted in an accredited laboratory to ensure that tests are being conducted properly.



Chinese Air Conditioner Testing Facility



CHALLENGES TO S&L PROGRAM DESIGN AND IMPLEMENTATION



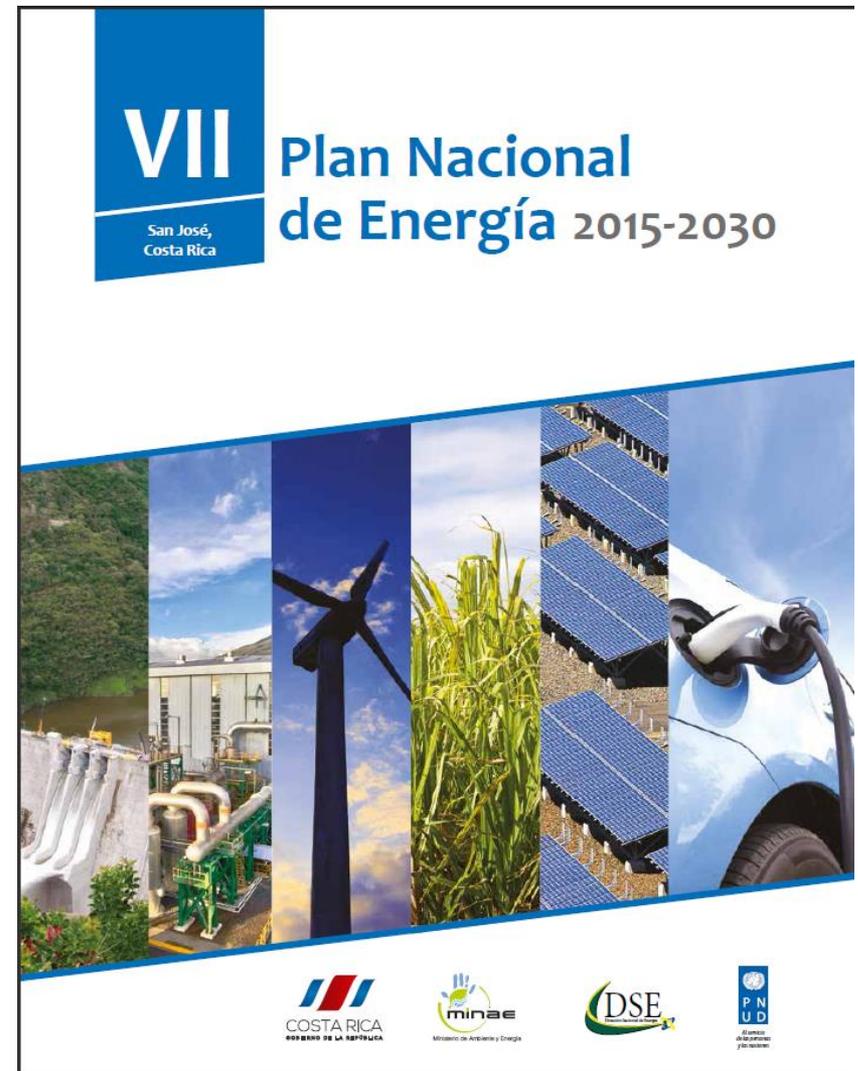
Develop and Raise Energy Efficiency Standards

- Energy efficiency not been prioritized in many countries until recently
- Lack of available data on the status of markets in individual countries hinders the implementation process
- Lack of adequate legal framework and institutional structures
- Lack of energy efficiency standards harmonization at the region or sub-regional levels

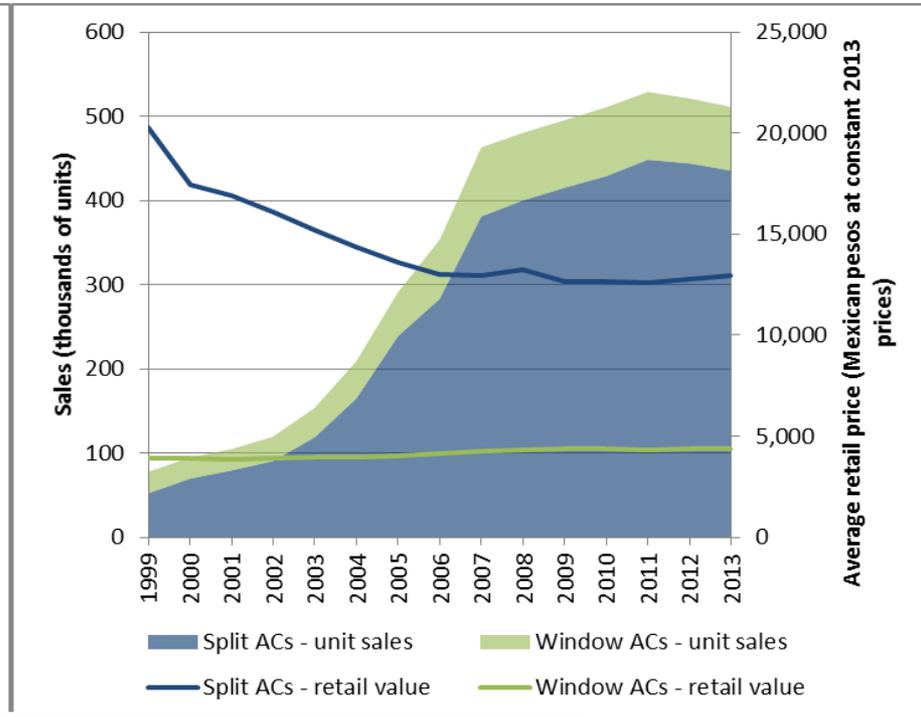
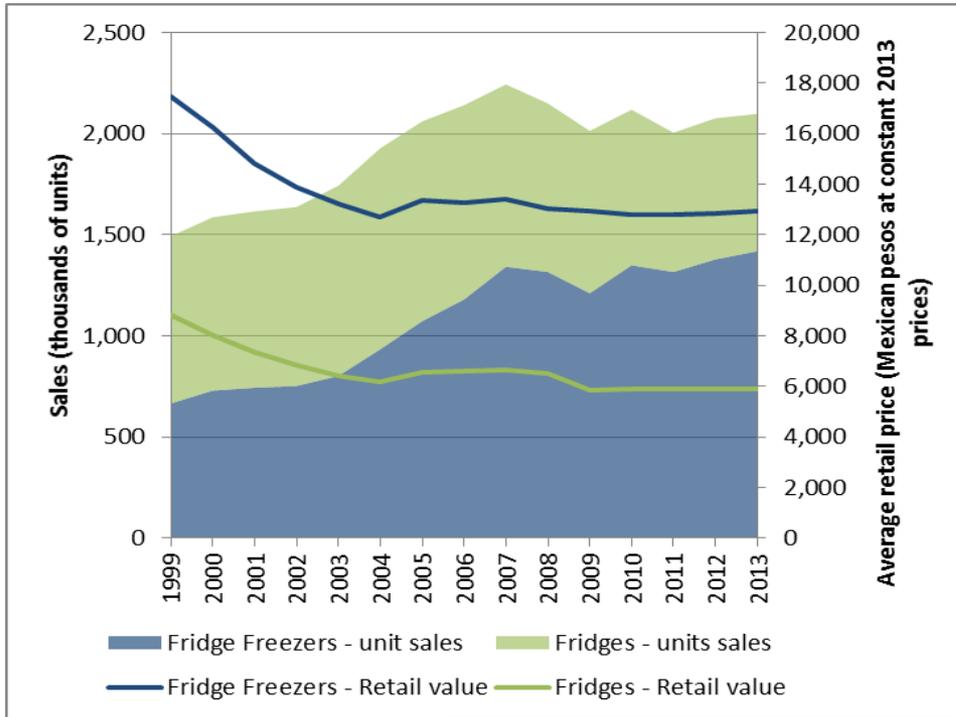
Promote Efficient Products

- Higher retail prices of energy efficient products when compared to inefficient products
- Gaps in information
- Low or subsidized energy tariffs
- Lack of incentives to importers to bring more EE products

Developing National Action Plans: Panama, Costa Rica



Proving no negative impacts to consumers: Mexico



Retail prices have remained constant or declined after standards were implemented in Mexico



Improve Compliance and Enforcement

- Lack of understating of the roles and coordination among various agencies involved
- Small markets → higher cost of compliance activities
- Lack of testing infrastructure at the national and regional level

Assess impacts and improve outcomes

- Lack of data to conduct a program evaluation
- Evaluations may not be conducted periodically
- Lack of awareness of the usefulness of a comprehensive program evaluation

Creating legal framework and institutional structures: EL Salvador

1. Registro y Certificación



2. Monitoreo del Mercado



3. Fiscalización



Comunicación



Monitoreo y Evaluación



Key Takeaways

- Appliance efficiency is a **fast, cost-effective response** to the global energy and climate crisis
- Countries in Central America should address efficiency to **avoid the lock-in** of inefficient products
- There are **abundant opportunities** to capture savings through S&L





Thank you!

Ana Maria Carreño
Manager, GBP & LA
CLASP

acarreno@clasp.ngo

+1 202-750-5113

www.clasp.ngo

