



**Asia-Pacific  
Economic Cooperation**

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**2011/SCSC/WKSP2/008**

Session 2

**Case Study 1 - Multi-Attribute LCA-Based  
Certification Programs in APEC Economies: Focus  
on Flooring and Plumbing Products**

Submitted by: DAI



**Green Buildings and Green Growth:  
Approaches to Encouraging a Positive  
Green Building Climate  
Singapore  
12-13 September 2011**

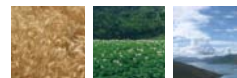
## Case Study #1 Multi-Attribute LCA-Based Certification Programs in APEC Economies: Focus on Flooring and Plumbing Products



Dana Kenney  
APEC SCSC Green Buildings  
Conference  
September 12, 2011

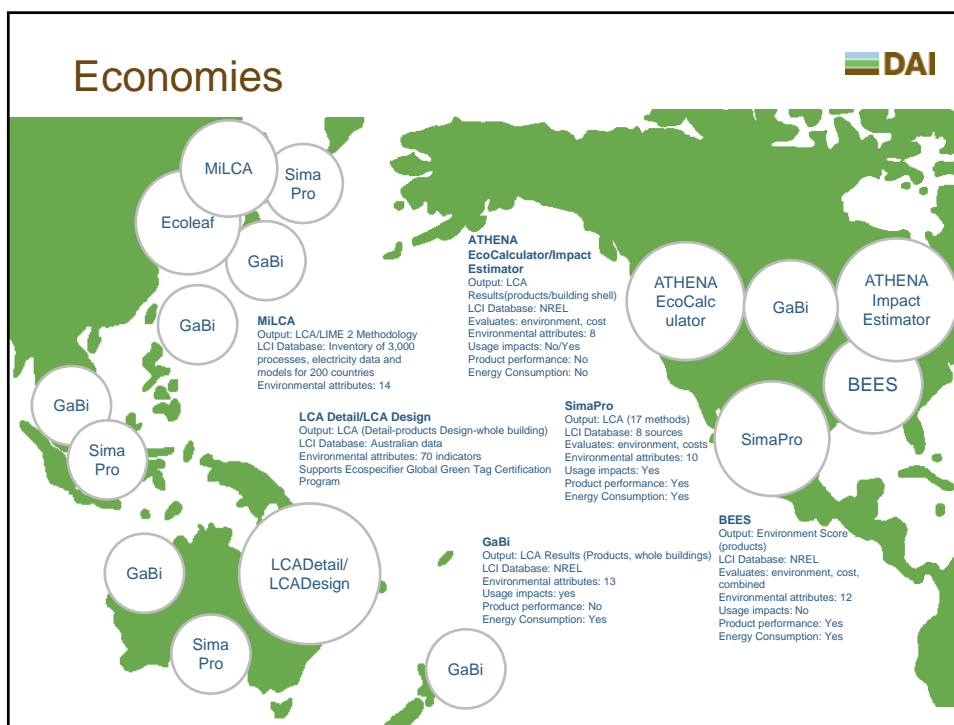
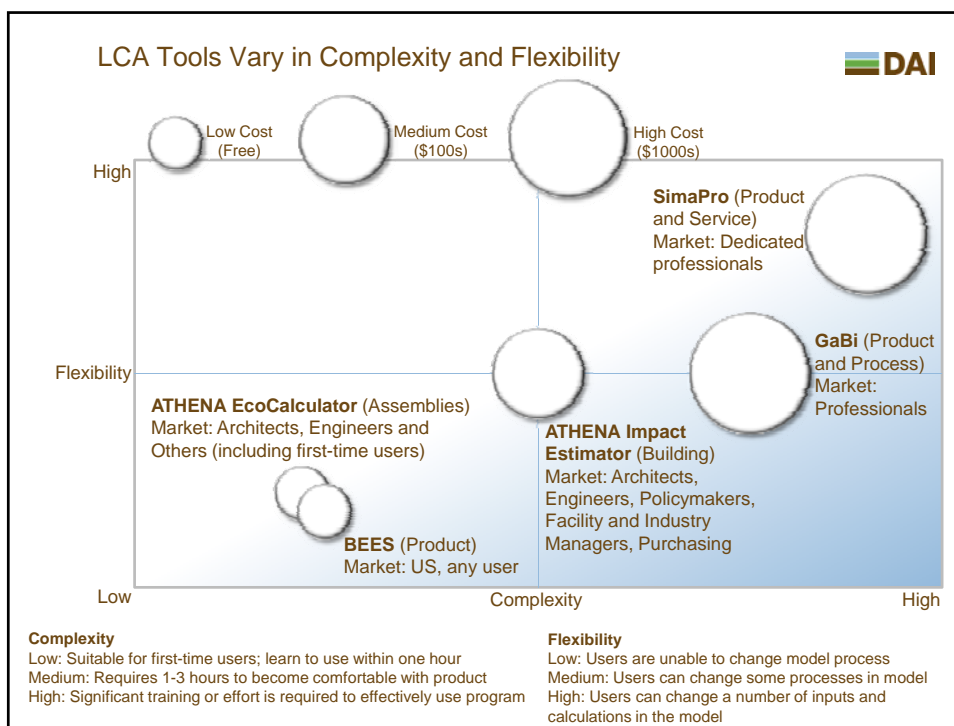


### Overview



- I. Tools for LCA Analysis
- II. Environmental Certification "Labeling" Programs
- III. Voluntary and Mandatory Requirements
- IV. Market Drivers
- V. Potential Impacts on Trade





## Types of Multi-Attribute Life-Cycle Analysis (LCA) Certification Programs



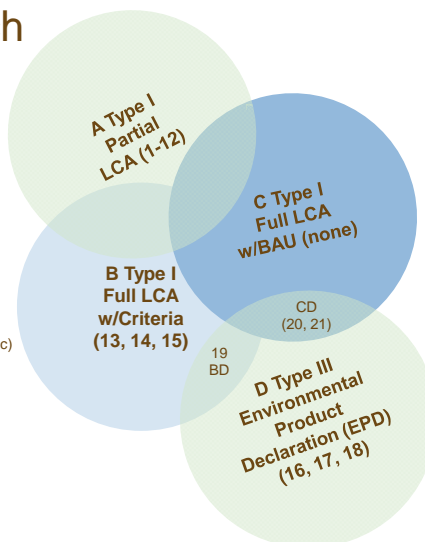
- Type I Labeling Programs - Voluntary, multi-criteria based third-party programs that award a license authorizing use of environmental labels on products indicating overall environmental preferability within a particular product category. Full LCA not required.
- Type III Labeling Programs – Voluntary programs to provide LCA-based, and additional, information on products’ environmental impacts to enable comparisons between products. Involves defining the scope and setting boundaries. Full LCA required.

## Environmental Labeling Programs Differ in Purpose and Approach



### Programs

- A)**
  - 1. USA SCC (
  - 2. AU GEC
  - 3. CN EcoLogo
  - 4. JP Ecomark
  - 5. SNG GL
  - 6. SNG GB
  - 7. USA UE
  - 8. R VI a)
  - 9. T GI
  - 10. NZ EC
  - 11. PRC Env Label
  - 12. HK GL
- B)**
  - 13. USA Cradle to Cradle c)
  - 14. K EcoLabel
  - 15. TH Green Mark
- C)** None
- D)**
  - 16. JP Ecoleaf d)
  - 17. T EPD program d)
  - 18. K EPD program d)
- BD**
- 19** USA SMART b) d)
- CD**
  - 20. AU GT/GR d)
  - 21. USA SUST Choice c) d)



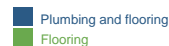
- a) Flooring product listed on website; no criteria available
- b) Have criteria for all building products as a category
- c) General criteria only, not product-specific; USA C2C has certified flooring; Sust. Choice only furniture
- d) There are no PCRs or EPDs for flooring or plumbing on any of these programs' websites.

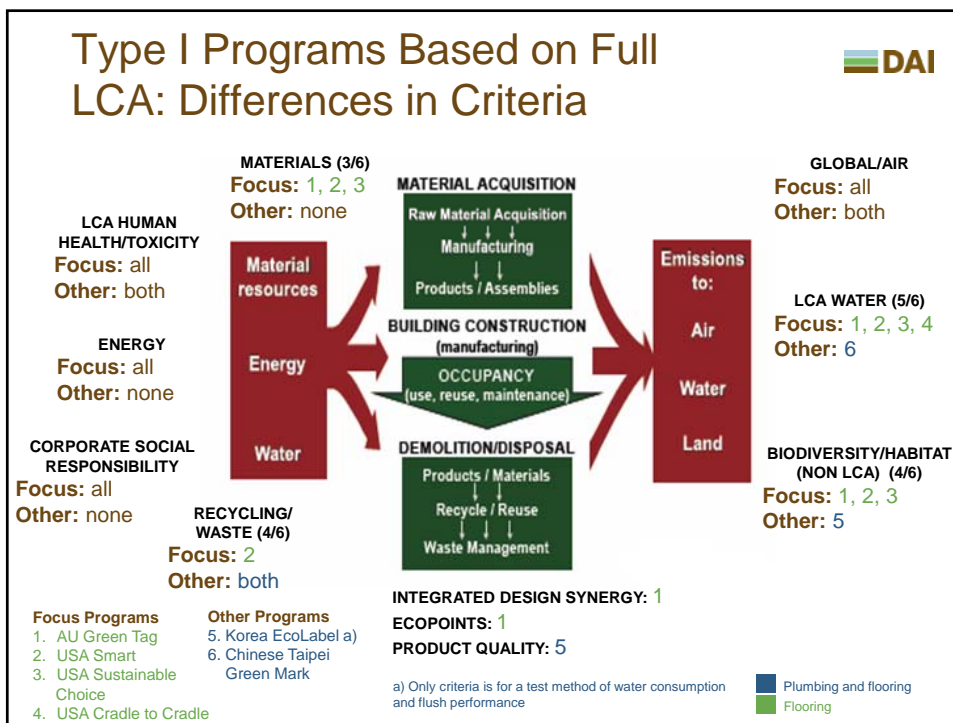
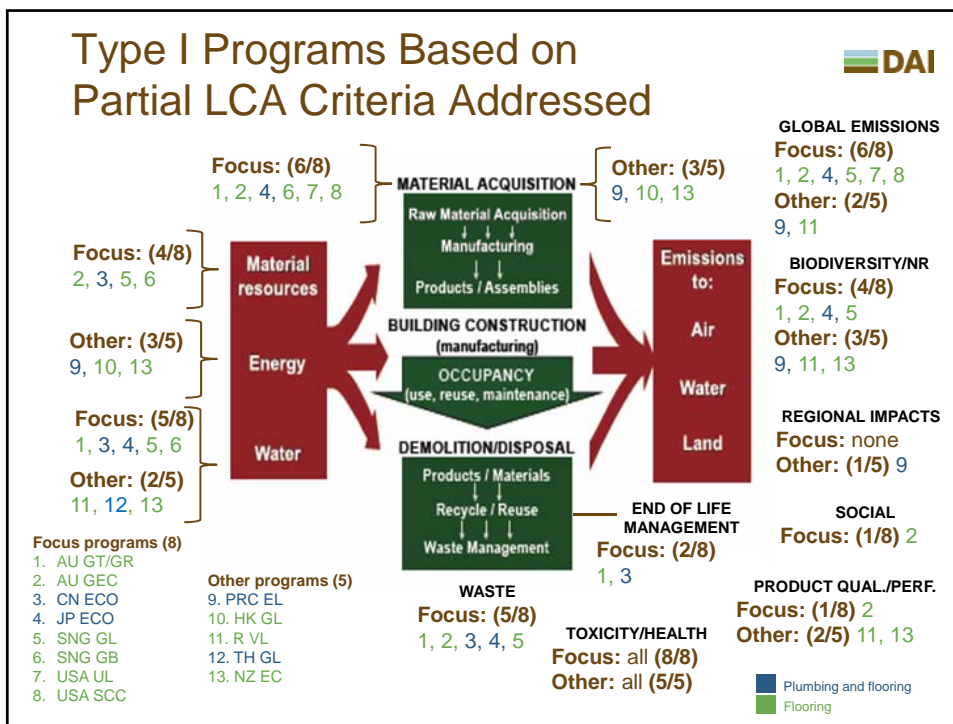
### Focus Programs

- AU - Australia
- CN - Canada
- JP - Japan
- SNG - Singapore
- USA - United States


### Other Programs

- K - Korea
- T - Chinese Taipei

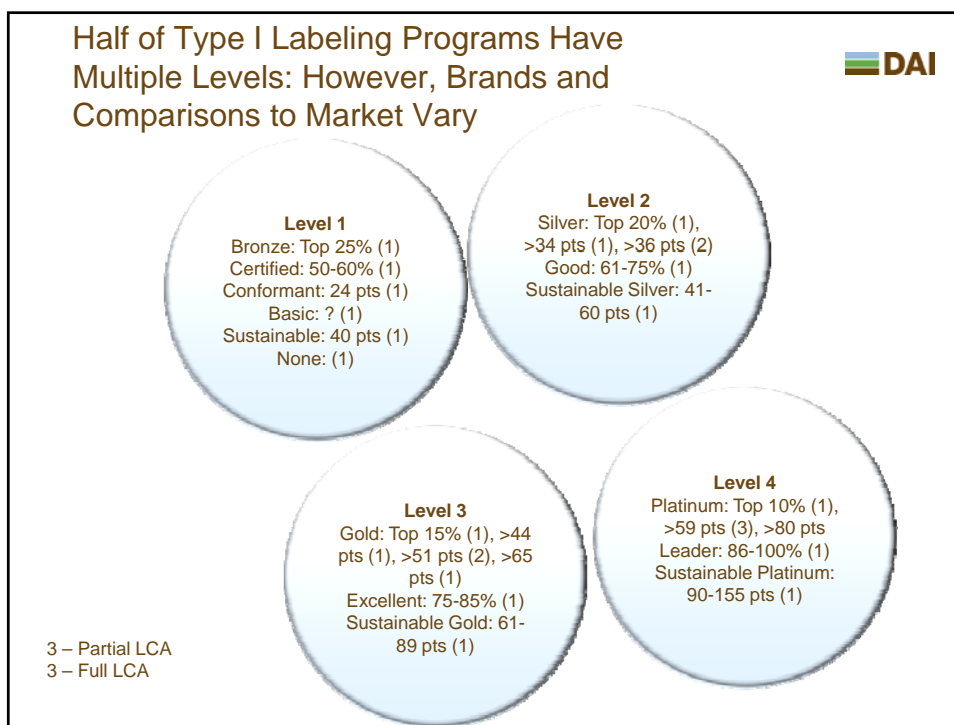


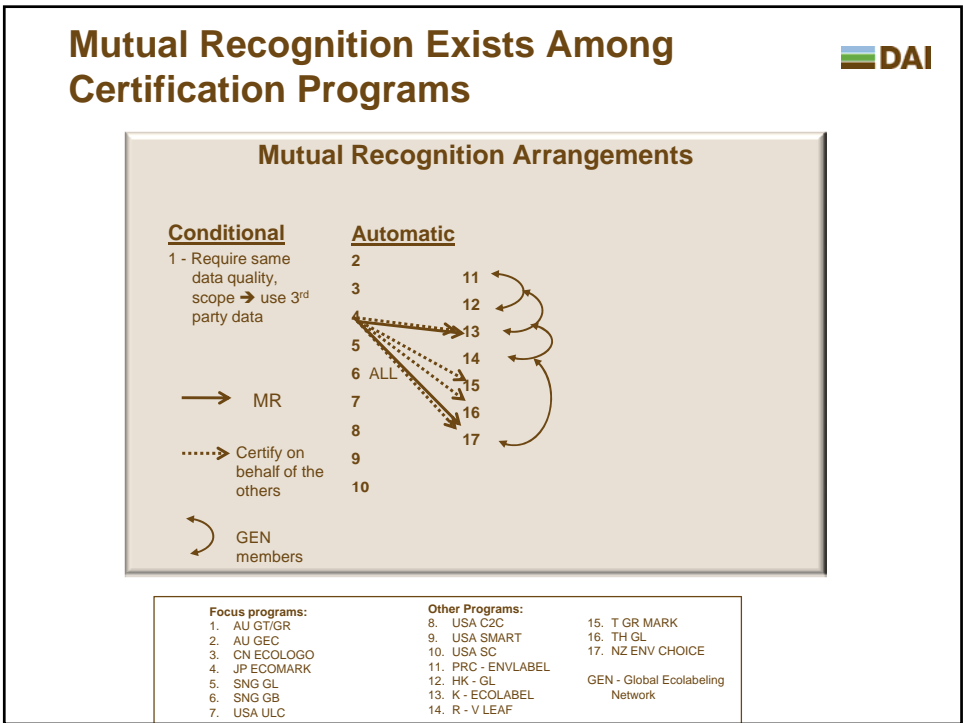
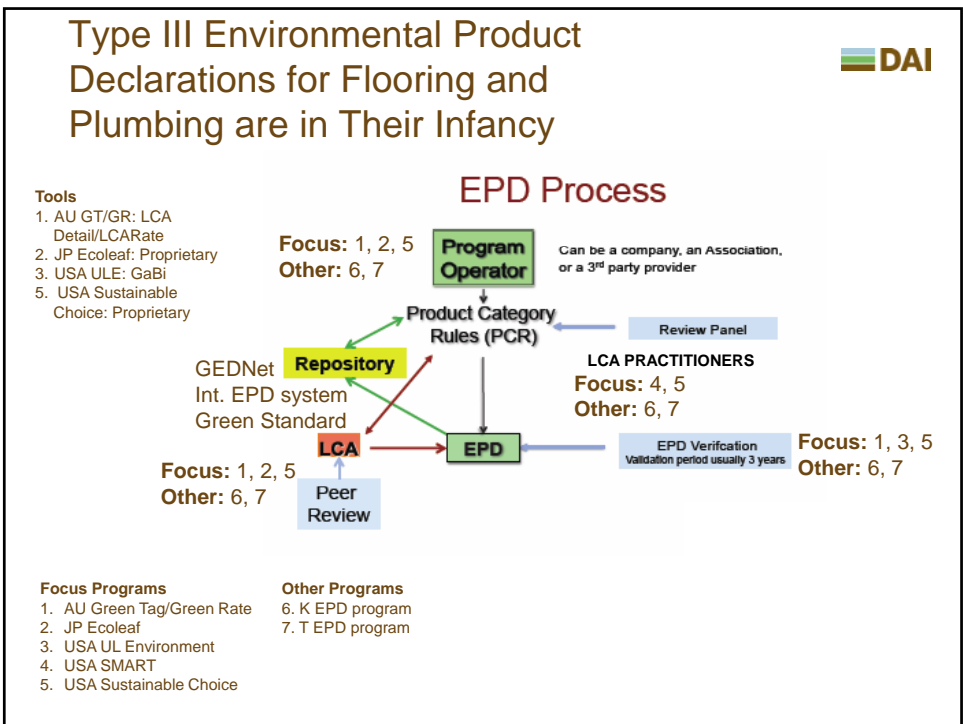


### Type I Labeling Programs: Conformity Assessment Practices Vary




Type I							Type III					
<b>Audits</b>												
	Certifiers	Contractor	Indep 3 <sup>rd</sup> party	When required	Yes	None	Certifiers	Contractor	Indep 3 <sup>rd</sup> party	When required	Yes	Unknown
Focus:	6, 7, 8	11	2, 4, 9	3	10	5	None	1	4a)	None		2, 3, 5, 8
Other:	11	None	13a), 17a)	12	14, 15a), 16							1, 2
a) Accreditation required												
<b>Testing</b>												
	Certifiers	Contractor	Indep 3 <sup>rd</sup> party	When required	Yes	None/Unknown	Yes	Unknown				
Focus:	None	None	6	4, 5	1, 2, 3, 7, 10	8, 9	2a)	1, 3, 5, 7	<b>Type I Focus Programs</b> 1. AU GT/GR 2. AU GEC 3. CN Ecologo 4. JP Ecomark 5. SNG GL 6. SNG GB 7. USA UL 8. USA Cradle to Cradle 9. USA Smart 10. USA SCC  <b>Type III Focus Programs</b> 1. AU GT/GR 2. JP Ecoleaf 3. US ULE 4. US SMART 5. US SC  <b>Type III Other Programs</b> 6. K EPD Program 7. T EPD Program			
Other:	None	None		11a), 12a)	13a), 14, 15a), 16	1, 7		1, 2				
a) Accreditation required												
<b>Post-License Surveillance</b>												
	Audits	Decertification	None				Unknown					
Focus:	2, 3, 7a), 9, 10a)	9					1-5	<b>Type I Other Programs</b> 11. PRC Env Label 12. HK Green Label 13. K EcoLabel 14. R Vitality Leaf 15. T Green Mark 16. TH Green Label 17. NZ EnvChoice				
Other:	11, 12, 13, 14, 17	11, 12, 13, 17	15, 16				1, 2					
a) Third party												





## Voluntary vs Mandatory Requirements for Certified Products



### Focus Program Economies

**Mandatory**

- None

**Voluntary**

- AU → Plan to introduce LCA materials credits for government buildings

### Other Program Economies


**Mandatory**

- K → Green purchasing for government agencies – 10% certified, extra points in bids
- R → Govt Green procurement - >80%
- T → A % of certified products required for government agencies, up to 10% price differential, categories defined by Govt


**Voluntary**

- No information available


## Demand Drivers for Certified Products Are Many



### Focus Program Economies

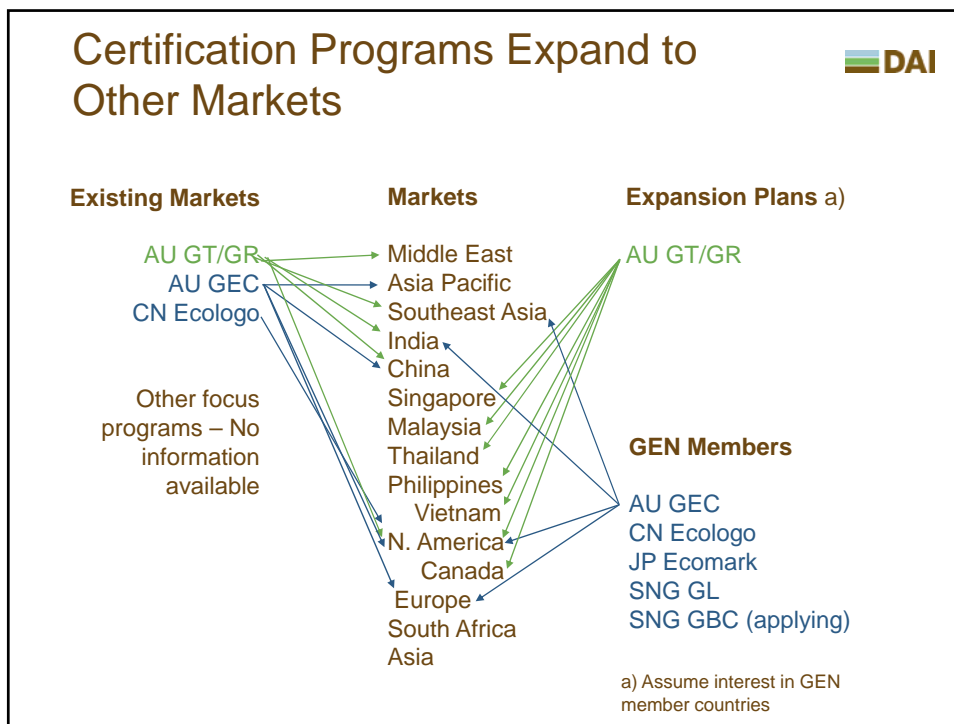


### Other Program Economies



KEY:	OTHER:
1. AU GT/GR	8. PRC ENV LABEL
2. USA SMART	9. HKGL
3. USA C2C	10. K ECOLABEL
4. AU GEC	11. R VITALITY LEAF
5. JP ECOMARK	12. T GREEN MARK
6. SNG GL	13. TN G LABEL
7. SNG GB	14. NZ ENV CHORE





## Many Program Features Have Potential Impacts on Trade

Feature	Potential Impact
<ul style="list-style-type: none"> <li>Varying criteria for programs in same climate, including levels</li> </ul>	<ul style="list-style-type: none"> <li>Difficult to identify relevant programs</li> </ul>
<ul style="list-style-type: none"> <li>Rating system credits not available to all certified products due to rating system requirements, or difficulty of applying</li> </ul>	<ul style="list-style-type: none"> <li>Products which do not earn credits are not chosen by project developers</li> </ul>
<ul style="list-style-type: none"> <li>LCAs may be conducted and EPDs produced without using publicly-vetted PCRs</li> </ul>	<ul style="list-style-type: none"> <li>EPDs are meant to aid comparability. Market users are unable to compare products</li> </ul>
<ul style="list-style-type: none"> <li>Requirements for audits and testing are not consistent</li> </ul>	<ul style="list-style-type: none"> <li>Hinders mutual recognition. Multiple certifications, required, increasing costs</li> </ul>

## Many Program Features Have Potential Impacts on Trade (continued)



### Feature

- Lack of transparency; criteria or conformity assessment procedures not available (or difficult to find)
- Lack of transparency; stakeholder engagement not apparent
- Government procurement regulations favoring certified products (category choice unclear, favoring in-country certification programs)
- Lack of reference to international systems of conformity assessment



### Potential Impact

- Manufacturers are unable to determine criteria required for certification, resulting in lost sales opportunities
- Program requirements may not reflect all relevant environmental impacts or not realistic/cost-effective
- Some manufacturers' products are not able to qualify for government procurements, leading to lost sales
- Manufacturers must certify their products under many programs, increasing costs



Thank you for your attention!

**DANA\_KENNEY@DAI.COM**