



A World Without Waste

Extended Producer Responsibility
in British Columbia, Canada

by David Lawes, BC Ministry of Environment
September 2011



Ministry of
Environment






British Columbia Facts

- Population: 4.5 M
- Half population lives in Metro Vancouver
- GDP \$197.9 Billion
- Top 3 exporting partners:
 - 1. U.S. (49.9%)
 - 2. Japan (13.6%)
 - 3. China (10.2%)



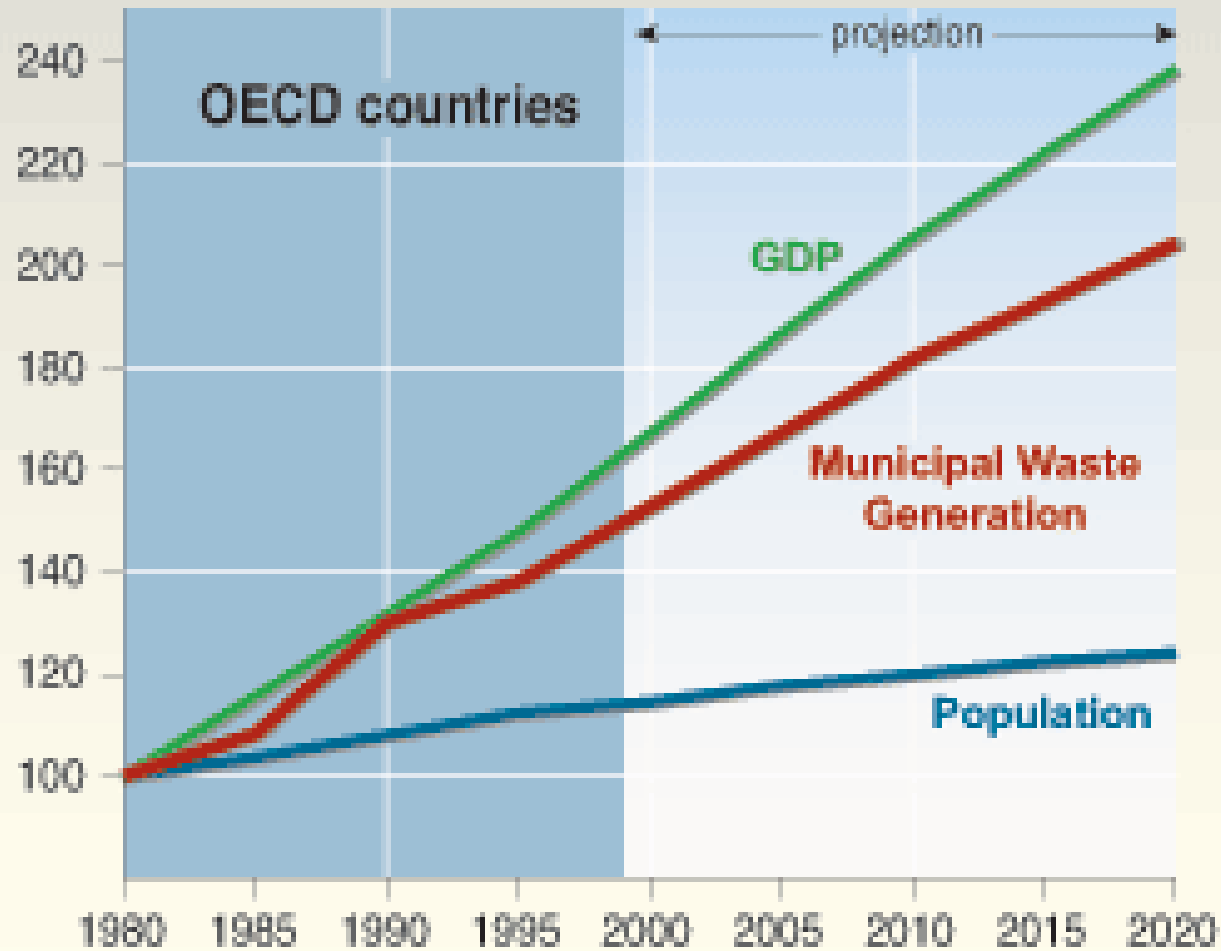


The problem with waste...

- We make too much of it....
 - Per capita waste generation increasing
 - Population increasing
- Expensive to manage for local governments with very little influence over generation
- Long-term liability
- Waste composition changing
 - 100 year shift from organic to inorganic (products)


The richer we get, the more we discard

Index 100 in 1980



Source: OECD, 1999.

**Change does not
happen by
consensus**

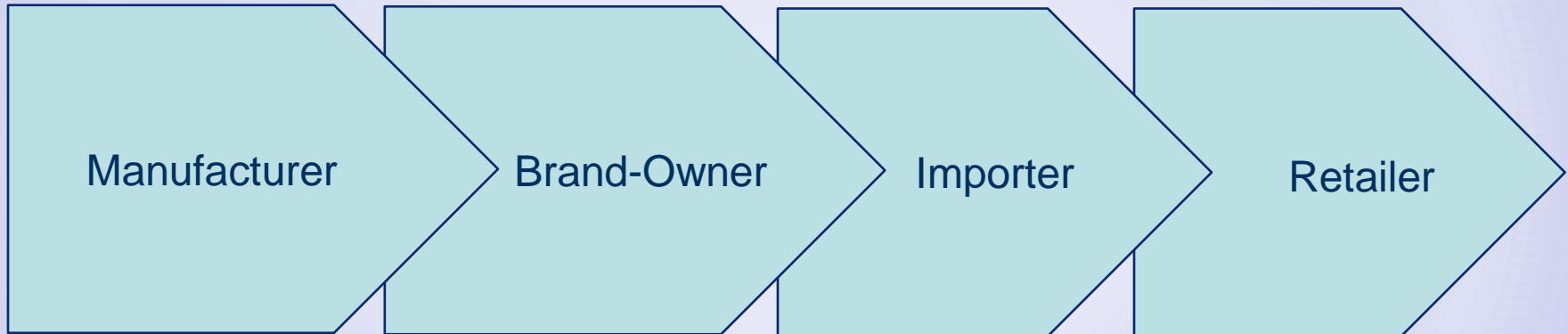


Extended Producer Responsibility in BC

- BC Recycling Regulation
- Requires producers to collect and recycle the products that they make and sell.
- Provides producers with a financial incentive to make and sell products that contain **less toxic material** and extend their life spans by making them more **durable, reusable** and **recyclable** so they **never become waste**.



Who is the Producer?



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Performance Measures

- Product Recovery Target(s)
- Collection System
- Consumer Awareness
- Collection system costs
- Stakeholder Consultation Expectations
- Dispute Resolution
- Product Life Cycle Management
- Pollution Prevention Hierarchy





Current Programs

1. Beverage Containers
2. Pharmaceuticals
3. Paint
4. Pesticides
5. Batteries
6. Cell phones
7. Gasoline
8. Tires
9. Electronics
10. Thermostats
11. Lubricating Oil
12. Solvents and flammable liquids
13. Fluorescent lamps
14. Car batteries
15. Smoke Detectors
16. Antifreeze (July 2011)
17. Small Appliances (Oct 2011)



Upcoming Programs

1. Electric/electronic tools (July 2012)
2. Automatic dispensers (July 2012)
3. Lighting Equipment (July 2012)
4. E-Toys (July 2012)
5. IT telecom. equipment (July 2012)
6. Monitoring/control (July 2012)
7. Packaging and Printed Material (2013)



Canada-wide Action Plan for EPR (2009)

Provides all provinces and territories with a harmonized set of principles and a common schedule of products

Phase 1 (by 2015)

- packaging and printed materials,
- electronics and electrical
- mercury-containing products (including lamps),
- household hazardous and special wastes, and
- automotive products

Phase 2 (by 2017)

- construction and demolition materials
- furniture, textiles and carpet
- appliances (including ODS)



Benefits – *as of 2008...*

Economic Impact of BC Recycling Regulation (2008) *by Gardner Pinfold Consulting Economists*

- 2100 jobs created
- Reduced landfill costs (short and long term)
- Reduced GHG`s
 - 5.3 million gigajoules of energy saved each year
 - equivalent to 72,950 passenger cars removed from the roadway each year

Ducks in a row...



- Government leadership – create the platform
- Industry needs consistent direction and level playing field
- From there industry will do what the do best - make business decisions

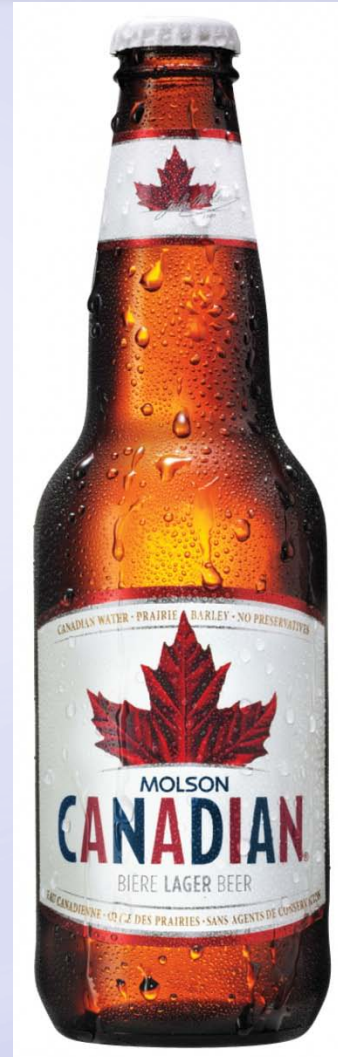


The Future.....

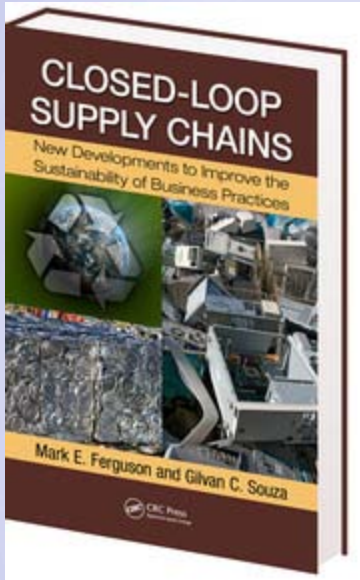
- Magnify the financial incentive to producers
 - Landfill bans from local governments
 - EPR program performance improvement
 - Expanded market size subject to EPR laws
- Closed Loop Supply Chains
 - Producers shift from sellers of products to service providers
 - Sell the benefit of the product versus the product itself

Beer

- 2010 Return Rate 94%
- Bottles reused 15 times on average
- Cost approx. 60% less to reuse bottles versus make from new material



Research on CLSCs



Closed Loop Supply Chains: New Developments To Improve The Sustainability Of Business Practices

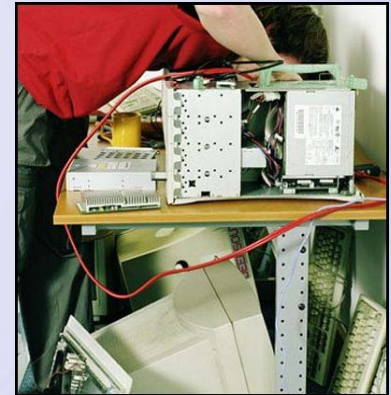
Published April 2010

by **Mark E. Ferguson**
Gilvan C. Souza

IBM Global Asset Recovery Solutions

Some Figures:

- Annual collection volume > 1M machines
- 85% reutilized, refurbished, resold
- Annual end-of-life + waste volume processed > 50,000t
- Annual recycling volume > 18,000t
- Billions \$ of revenues from equipment, parts, and material sales



Caterpillar: Remanufacturing Division

Remanufacturing Business Model:

- 200 dealers keep close tab on customers
- Customers get 50% discount for returning an old part
- Receives about 2M old parts per year
- Approximately \$2B in sales in 2007
- The remanufacturing division is Caterpillar's fastest growing division





Thank You

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British Columbia Ministry of Environment EPR Website

www.recycling.gov.bc.ca