CiP Project: The Toy Sector

- Status
- Sector characteristics pertinent to CiP information exchange
- Life cycle & use of chemicals
- CiP information systems
- Stakeholder uses & needs
- Enablers & obstacles
CiP Project: The Toy Sector

Status

- Sector characteristics pertinent to CiP information exchange
- Life cycle & use of chemicals
- CiP information systems
- Stakeholder uses & needs
- Enablers & obstacles

Toy Sector Case Study Methodology & Status

<table>
<thead>
<tr>
<th></th>
<th>Africa</th>
<th>Asia</th>
<th>Europe</th>
<th>Latin America</th>
<th>North America</th>
<th>Oceania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Materials</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Manufacturers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Brands/ OEMs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Traders</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Retailers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Consumers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>NGOs/ Advocacy</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Governments</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Other Experts</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Desk research complete; Interview consultations in progress; Online survey in progress
CiP Project: The Toy Sector

- Status

- Sector characteristics pertinent to CiP information exchange
  - Life cycle & use of chemicals
  - CiP information systems
  - Stakeholder uses & needs
  - Enablers & obstacles

The Toy Sector: Market Size 2007

The map shows the market size for the toy sector in 2007, with different countries representing their share of the global market. The United States has the largest share at 27%, followed by countries like China, Japan, and others, each with their respective market shares indicated by the size and position of the flags on the map.

Note: The map represents share of global toy market in 2007 (valued at 67 billion USD in 2006).
The Toy Sector

- Estimated total size: 67 billion USD
- Largest market: USA
- Largest exporter: China
  - supply 85% of toys on market in Europe
- 1000's of small & medium companies; few large firms
  - 2.700 in China in 2008
- Highly regulated
  - CiP information exchanged according to regulatory requirements of the world’s largest markets
  - CiP activity beyond compliance at largest firms
- Operators
  within the supply chain
  beyond the supply chain

The Toy Sector: relationships & influence

- small operators = small buying power = less control & influence
- collaborative relationships
- long-term relationships
- short-term relationships
### The Toy Sector: characteristics

<table>
<thead>
<tr>
<th>Market Dynamics</th>
<th>Market Players</th>
<th>Toy Characteristics</th>
<th>Market Structure</th>
<th>External Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Fast-moving</td>
<td>- Fragmented</td>
<td>- Inexpensive products</td>
<td>- Small market (low materials consumption =</td>
<td></td>
</tr>
<tr>
<td>and fashion-driven</td>
<td>- Competitive</td>
<td>- Heterogeneous product range</td>
<td>low buying power)</td>
<td>Significant regulation</td>
</tr>
<tr>
<td>- Seasonal</td>
<td></td>
<td>- Formal &amp; informal (illegal)</td>
<td>- Formal &amp; informal (illegal) markets</td>
<td>- Sensitivity to safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Awareness of chemicals issues in some regions</td>
<td></td>
</tr>
</tbody>
</table>

#### CiP Project: The Toy Sector

- **Status**
- **Sector characteristics pertinent to CiP information exchange**
- **Life cycle & use of chemicals**
  - CiP information systems
  - Stakeholder uses & needs
  - Enablers & obstacles
Life Cycle of a Toy & Use of Chemicals

### Relevant Inputs
- raw material producer
- manufacturer
- retailer
- consumer

### Relevant Stages
- input production
- compounding
- conversion
- assembly
- painting
- packaging

### Connected material
- use
- handling
- incineration

### Dust emissions (occupational health & safety risk, indoor air quality risk)
- spillage during storage or handling (hazards to environment and occupational health)
- VOC emissions (hazard for environment and occupational health)
- Release of additives during use phase due to ingestion, oral or skin contact (health hazard)

*Additives often are combined into a 'master batch', of which functionality is specified but not necessarily the chemical composition.

### Target Chemicals

<table>
<thead>
<tr>
<th>Substances</th>
<th>Plastic material (dyed)</th>
<th>Paper</th>
<th>Wood</th>
<th>Metal</th>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMR and/or SVHC under REACH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulated under the EU toys directive or other regulations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subject to societal concern</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Polystyrene
- Thermoplastic, elastomers (TPS)
- Polypropylene
- Polyethylene
- Polyvinyl chloride (PVC)
- Acrylonitrile-butadiene styrene (ABS)
- Natural rubber
- Paper
- Wooden material
- Natural wood
- Metal
- Colour, Lacquer, Air

#### Thermoplastic elastomer (TPE)
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)

#### Polystyrene
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)

#### Polyethylene
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)

#### Polypropylene
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)

#### Polyvinyl chloride (PVC)
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)

#### Acrylonitrile-butadiene styrene (ABS)
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)

#### Natural rubber
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)

#### Paper
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)

#### Wooden material
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)

#### Natural wood
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)

#### Metal
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)

#### Colour, Lacquer, Air
- Wood, Plastic material (dyed)
- Wood, Plastics material (dyed)
CiP Project: The Toy Sector

- Status
- Sector characteristics pertinent to CiP information exchange
- Life cycle & use of chemicals

CiP information systems

- Stakeholder uses & needs
- Enablers & obstacles

### CiP information systems

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Producer to Customer</th>
<th>Producer to Consumer</th>
<th>External Stakeholder to Consumer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy</td>
<td>Internal use or external use (e.g. for internal or external use)</td>
<td>Product guides (e.g. based on testing)</td>
<td>Consumer associations, NGOs</td>
</tr>
<tr>
<td>Lead</td>
<td>Initiated by an OEM or retailer</td>
<td>Individual companies in cooperation with 3rd parties (label issuer)</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>Bilateral systems</td>
<td>Labels (e.g. ISO14024)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Product guides (e.g. based on testing)</td>
<td>Consumer associations, NGOs</td>
</tr>
<tr>
<td>Toy Sector</td>
<td>Policy</td>
<td>Purpose</td>
<td>Producer to Customer</td>
</tr>
</tbody>
</table>
Dialogik and DEKRA Industrial // CiP Toys sector case study // Expert workshop December 10

CiP Project: The Toy Sector

- Status
- Sector characteristics pertinent to CiP information exchange
- Life cycle & use of chemicals
- CiP information systems

Stakeholder uses & needs

- Enablers & obstacles

Information uses & needs: producers and distributors

- Compliance
  - documentation purposes
  - confirmation that materials/toys comply
- Risk assessments and quality management
  - information on the composition of materials to assess design projects, to assess materials used
  - information on risk and on feasible alternatives to offer a internal company positive lists of preferable materials
- Selection of materials
  - information on regulation and risks, as well as
  - knowledge on chemical issues to formulate specifications of materials/products to be purchased/ordered and work with raw material suppliers to develop materials suited to their needs
- Interpretation of regulation
  - Understanding; develop internal policies for chemical compliance/management, also for future changes
Information uses & needs: consumers

- Certainty to buy and use a safe product
  - confirmation that product complies with safety standards

- “Right to know”
  - ingredients list, or information on non-presence of certain chemicals of concern

- Interpretation
  - certainty in the case of scandals

Information uses & needs: NGOs

- Supporting consumers for informed choice
  - General information on risks associated to materials
  - Link between materials and substances of concern

- Advocacy for better toys
  - Transparency (assurance that toy manufacturers know what is in the toy and prevent harm)
  - Information on risks and on substances contained in toy products to lobby for regulation
Information uses & needs: governments

- Ensure safe products
  - documented use of substances
  - information of market surveillance

- Improve regulation
  - Scientific evidence on certain risks associated with materials
  - information about substances contained in toys products at a general level

Existing CiP information flows

Overview

- raw materials producer → manufacturer
- manufacturer → OEM
- OEM → retailer
- retailer → consumer

- compliance with regulatory guidelines
- presence of specific substances
- ingredients list
- recipe including mass/volume

* upon request  ** via 3rd party to ensure confidentiality  *** with non-disclosure agreement
### Existing CiP information flows

#### Scenario 1.
Standard approach developing countries
- without regulation or with low market surveillance

- **raw materials producer** → **manufacturer** → **OEM** → **retailer** → **consumer**

- [Compliance with chemicals regulations](#)
- **presence of specific substances**

#### Scenario 2.
Standard approach EU

- **raw materials producer** → **manufacturer** → **OEM** → **retailer** → **consumer**

- [Compliance with chemicals regulations](#)
- **presence of specific substances**

* upon request
Existing CiP information flows

- **Scenario 3.**
  Leading approach US/EU

  3rd party

  Raw materials producer → manufacturer → OEM → retailer → consumer

  - Compliance with chemicals regulations
  - Presence of specific substances
  - Ingredients list
  - Recipe including mass/volume

  * upon request  ** via 3rd party to ensure confidentiality  *** with non-disclosure agreement

Existing CiP information flows

- **Scenario 4.**
  Leading approach US/EU

  Recipe or ingredients list

  Raw materials producer → manufacturer → OEM → retailer → consumer

  - Compliance with chemicals regulations
  - Presence of specific substances
  - Ingredients list
  - Recipe including mass/volume

  * upon request  ** via 3rd party to ensure confidentiality  *** with non-disclosure agreement
CiP Project: The Toy Sector

- Status
- Sector characteristics pertinent to CiP information exchange
- Life cycle & use of chemicals
- CiP information systems
- Stakeholder uses & needs

Enablers & obstacles

Gaps in information exchange

- Gaps in expertise on CiP information requests
- Gaps in demand for CiP information
- Patchy information systems
- Lack of information among enforcement authorities
<table>
<thead>
<tr>
<th>Obstacles</th>
<th>Low information exchange</th>
<th>Medium information exchange</th>
<th>High information exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness industry</td>
<td>low</td>
<td>Importance of topic is known and first steps towards chemicals management</td>
<td>High</td>
</tr>
<tr>
<td>Awareness society / NGO activities</td>
<td>low</td>
<td>Rising NGO activity, individual consumers interested</td>
<td>Rising number of press articles and public discussion</td>
</tr>
<tr>
<td>Market pressure</td>
<td>None</td>
<td>Regulation</td>
<td>Product differentiator Influencing consumer behaviour</td>
</tr>
<tr>
<td>Resources and knowledge</td>
<td>Non existent</td>
<td>Limited resources available for professional and proactive approach toward chemicals management No resources to process and assess CiP information</td>
<td>Internal risk assessments for products and materials Internal lab facilities Knowledge to specify chemicals requirements and information needs</td>
</tr>
<tr>
<td>Willingness/reluctance to share information</td>
<td></td>
<td></td>
<td>In some cases granted through stable and collaborative business relations</td>
</tr>
<tr>
<td>Market power</td>
<td>Limited</td>
<td>Limited</td>
<td></td>
</tr>
</tbody>
</table>

**Discussion: overcoming obstacles**

“Enablers” that help overcoming important gaps

- Overcoming limited awareness, limited market pressure
- Making communication more effective and efficient
- Pool resources, knowledge, and buying power
- Building trust

Major steps towards the future: Outlook

- Improving the information flow
- Managing complexity