Social Life Cycle Assessment - Standardization of mid-point impact categories

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Agenda

I. Context

II. Objectives

III. Methodology

IV. Results

V. Conclusions and future work
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I. Context

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V. Conclusions
The Social Life Cycle Assessment of products and services has two objectives:

1. Enable product, service and process comparison for decision-making

2. Attempt to identify improvements potentials within the system in order to slash social impacts
I. Context

HOWEVER

- **SLCA still lacks of standardisation** and clarity of what impact categories to measure and how to measure them (Benoît-Norris *et al*., 2011)

- One of the unsolved **problems** in the SLCA is related to the **allocation of impacts** in the sLCIA stage

- Muck work still needs to be done regarding the **interrelationships between mid- and end-point indicators and categories in SLCA** (Jørgensen *et al*., 2008)

- The **aggregation of quantitative and qualitative indicators still requires much effort**
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V. Conclusions and future work
II. Objectives

- Analyse and evaluate social responsibility indicators that have already been presented by the scientific community or by independent organizations

- Establish a social impact pathway as evaluation system for the sLCIA phase
  - Implement a cause-effect chain between the inventory indicators, the mid- and the end-point indicators

- Understand what are the relationships between these mid-points with the different supply chain echelons
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I. Motivation

II. Objectives

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III. Methodology

In response to the defined objectives, the following methodology was established:

1. Literature review: social KPI identification
   - A literature review was conducted gathering more than 250 documents.
   - In total a sample of 51 documents enabled to develop a social indicator database composed by 1,348 social indicators.

2. Social indicators classification
   - The 3.0 GRI Guidelines were utilised to screen, classify and aggregate the social indicators into main social subjects.
   - At this stage the 22 GRI social aspects were used as coding categories for screening the collected indicators.

3. Aggregation in social impact categories
   - The social indicators were aggregated into 54 “families” that monitor similar social issues.
   - In a second stage, these families then allocated into common areas of social assessment: 16 new mid-points.
   - The 16 mid-points were associated with 4 end-points that correspond to the GRI categories, thus defining a new taxonomy.

4. Validation
   - The framework was tested and validated through the performance of a computer-aided content analysis on 142 sustainability reports of worldwide companies recognised as sustainability leaders.
   - Seven in-depth face-to-face in-depth interviews held with EU corporate managers in charge of sustainability.
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IV. Results: social indicator database

Social impact framework

- Insert in an Excel spreadsheet all the collected indicators
- Classify the indicators according to the 22 GRI Social Aspects
- Aggregate the indicators into 54 families
- Allocate the families into 16 new mid-points
- Associate the 16 mid-points with 4 GRI end-points

Social performance indicators distribution according to the GRI

- LA: 47%
- S: 39%
- PR: 8%
- HR: 6%
IV. Results: SLCA framework

SLCA framework: distribution of categories

- **Labour Practices and Decent Work**
  - 7 mid-points were allocated to LA because they strive to monitor the internal organisation-wide labour aspects.
  - 5 mid-points were allocated to Society because they address the externalities that companies have on the local communities in which they operate.
  - 2 mid-points were allocated to HR because they assess the HR violations, HR training and awareness.
  - 2 mid-points were allocated to PR because their goal is to evaluate the social impacts and risks of products/services on the customers.

Main Evidences
IV. Results: SLCA framework

Content analysis

- It was used a computer-aided text analysis (CATA) for running a semantic analysis on the coded sustainability-related words
- The assessed companies must report its sustainability performances based on either the version G3.0 or G3.1 of the GRI Guidelines
- 142 sustainability leaders companies spread across the 12 industries
  - 47 upstream companies
  - 53 midstream companies
  - 42 downstream companies

Interviews

<table>
<thead>
<tr>
<th>Upstream</th>
<th>Midstream</th>
<th>Downstream</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility</td>
<td>Consumer Goods</td>
<td>Financial</td>
</tr>
<tr>
<td>Mining</td>
<td>Industrial</td>
<td>Retailing</td>
</tr>
<tr>
<td>Materials</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- A major European company of the energy sector
- A company that manages the transmission of energy infrastructures
- A worldwide provider of commercial explosives and blasting systems to mining and infrastructures
- A global company operating in the healthcare, agriculture and high-tech materials
- A large multinational pharmaceutical wholesaler, distributor and retailer group
- A multinational retailer group, consumer goods manufacturing and food distribution
- A large European financial group
### IV. Results: content analysis

#### Results from the content analysis performed on the 142 sustainability reports

<table>
<thead>
<tr>
<th>Category</th>
<th>Word Count</th>
<th>Total %</th>
<th>Word Count</th>
<th>Total %</th>
<th>Word Count</th>
<th>Total %</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>DOWNSTREAM</td>
<td>MIDSTREAM</td>
<td>UPSTREAM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment Scope; Benefits and Characteristics</td>
<td>3,899</td>
<td>6,32%</td>
<td>4,855</td>
<td>4,85%</td>
<td>3,920</td>
<td>5,71%</td>
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<tr>
<td>Employment Practices and Relations</td>
<td>404</td>
<td>0,65%</td>
<td>564</td>
<td>0,56%</td>
<td>322</td>
<td>0,47%</td>
</tr>
<tr>
<td>H&amp;S Practices and Incidents</td>
<td>5,769</td>
<td>9,35%</td>
<td>10,805</td>
<td>10,79%</td>
<td>9,561</td>
<td>13,93%</td>
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<tr>
<td>Training; Education and Personal Skills</td>
<td>6,506</td>
<td>10,54%</td>
<td>10,588</td>
<td>10,58%</td>
<td>6,174</td>
<td>8,99%</td>
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<tr>
<td>Employee Welfare</td>
<td>877</td>
<td>1,42%</td>
<td>996</td>
<td>1,00%</td>
<td>601</td>
<td>0,88%</td>
</tr>
<tr>
<td>Innovation and Competitiveness</td>
<td>5,454</td>
<td>8,84%</td>
<td>9,260</td>
<td>9,25%</td>
<td>6,941</td>
<td>10,11%</td>
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<tr>
<td>Diversity and Equal Opportunities</td>
<td>1,136</td>
<td>1,84%</td>
<td>1,072</td>
<td>1,07%</td>
<td>846</td>
<td>1,23%</td>
</tr>
<tr>
<td>Community Support and Funding</td>
<td>3,061</td>
<td>4,96%</td>
<td>3,657</td>
<td>3,65%</td>
<td>2,467</td>
<td>3,59%</td>
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<tr>
<td>Business Impacts; Community Involv. and Welfare</td>
<td>7,077</td>
<td>11,47%</td>
<td>11,396</td>
<td>11,38%</td>
<td>7,792</td>
<td>11,35%</td>
</tr>
<tr>
<td>Corruption in Business</td>
<td>6,302</td>
<td>10,21%</td>
<td>9,388</td>
<td>9,38%</td>
<td>6,753</td>
<td>9,84%</td>
</tr>
<tr>
<td>Fair Business Operations</td>
<td>4,723</td>
<td>7,65%</td>
<td>7,904</td>
<td>7,90%</td>
<td>5,952</td>
<td>8,67%</td>
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<tr>
<td>Stakeholder Participation</td>
<td>9,122</td>
<td>14,78%</td>
<td>11,817</td>
<td>11,81%</td>
<td>8,719</td>
<td>12,70%</td>
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<tr>
<td>Human Rights Implementation and Integration</td>
<td>1,962</td>
<td>3,18%</td>
<td>3,496</td>
<td>3,49%</td>
<td>2,776</td>
<td>4,04%</td>
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<tr>
<td>Basic Human Rights and Practices</td>
<td>346</td>
<td>0,56%</td>
<td>552</td>
<td>0,55%</td>
<td>424</td>
<td>0,62%</td>
</tr>
<tr>
<td>Consumer Health and Safety</td>
<td>1,037</td>
<td>1,68%</td>
<td>2,901</td>
<td>2,90%</td>
<td>1,068</td>
<td>1,56%</td>
</tr>
<tr>
<td>Product Management and Consumer Satisfaction</td>
<td>4,038</td>
<td>6,54%</td>
<td>10,842</td>
<td>10,83%</td>
<td>4,340</td>
<td>6,32%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>61,713</td>
<td>100%</td>
<td>100,097</td>
<td>100%</td>
<td>68,656</td>
<td>100%</td>
</tr>
</tbody>
</table>
IV. Results: content analysis

SLCA framework: analysis

Main Evidences

- **H&S**: operations considerably more dangerous due to their severe risk exposure and
- **Innovation**: upstream companies are trying to differentiate from the competition as much as possible
- **FBO**: upstream companies lobby and fund political parties in Third World countries, anti-trust litigations, operate in monopoly market conditions
- **HR**: holding a poor human rights respect record damages the company reputation
IV. Results: content analysis

Main Evidences

- Employment practices and employee welfare: reality is inherently linked to contentious relationships with the unions, the loss of employee welfare and the weak labour rights within the supply chain.

- Business impacts on community: many upstream industries operate in Third World countries.

- Community funding: this may indicate that downstream companies might better understand the community needs.
IV. Results: content analysis

- Each company and each industry have their own sustainability agendas and address social sustainability in a distinct way.

- The sustainable development strategies depend on the stakeholders’ expectations which may vary considerably from one supply chain echelon to another.

- Sustainable development within the supply chain is intrinsic to the organisational culture, the country precepts and the ability to influence the upstream and downstream tiers.

- There are distinct perspectives that cannot be overlooked when it comes to social sustainability.

- There may be a conceptual clash that cannot be disregarded in terms of sustainability vision.

- Supply chain operations are scattered worldwide, there is an accrued problem of acting in a coordinated way at the strategic level.
IV. Results: interviews

- The framework was successfully validated by all the interviewees.

- All of the respondents report everything and they cover all the mid-points from the framework.

- All the respondents stressed the materiality of these three newly established mid-points and the growing importance of these themes for the companies.

- The industries have slightly different priorities and different point of views depending on the SC echelon.

- The attempt to classify the mid-points into boxes fails to address all the interdependencies and secondary relations that exist.
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IV. Conclusions and future work

- A new framework identifying social impact mid-point categories for a cradle-to-cradle supply chain assessment was proposed and successfully validated.

- The supply chain echelons present slightly different sustainability priorities observed in the results of content analysis and in the interviews.

- This framework is a first step towards the standardization of social mid-point and demonstrated its reliability through the validation with the sustainability reports.

- Companies must improve the communication between the different echelons in the supply chain regarding social sustainability issues to ensure fully alignment.

- It is necessary to perform a multiple-criteria decision analysis in order to prioritise the mid-points in each SC echelon.

- It is necessary to create a performance score through the indicators’ aggregation.