Social Life cycle Metrics

for Chemical Products in their Applications

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What is the Social Metrics guidance?
A guidance prepared by the chemical sector to assess chemicals life cycle

- The Social Metrics guidance was prepared by key players of the chemical sector, members of the WBCSD: Aditya Birla, AkzoNobel, BASF, DSM, Eastman Chemical, Evonik Industries, Henkel, Mitsubishi Chemical Holdings, SABIC, and Solvay.
- This document provides guidelines for assessing and reporting on the social impact and value of chemical products in a life cycle perspective.
- It aims at providing solid foundations for the development of consistent and credible communication of the social metrics of chemical products throughout their whole life cycle.
- It is built on the foundations of preexisting methodologies and has been adapted to best meet the specificities of the chemical sector.
- This guidance completes the work already achieved on environmental metrics, thus providing tools for companies to fully asses their sustainability impact along their life cycle.
- The guidance has been officially released in June 2016.
The Social Metrics guidance is part of the current endeavor of WBCSD and chemical companies to promote more sustainable chemical products.

- **Metrics**
  - Avoided emissions
  - Life Cycle Analyses
  - **Product Social Metrics**
  - GHG value chain
  - Redefining Value (Social & Natural Capital)

- **Product Solutions & Value chains**
  - Portfolio steering
  - Buildings & Materials LCA
  - ICCA Automotive
  - Chemicals management across value chain

- **Manufacturing**
  - Breakthrough
  - Technologies
  - Other sector connections

**Underpinning / supportive activities:**
- Partnerships
- External stakeholders
1. Presentation of the WBCSD Social Metrics Guidance purpose and expected benefits

1.1 Purpose of the WBCSD Social Metrics guidance
1.2 Positioning of the guidance in the Social Metrics arena
1.3 The 6 key features of the WBCSD Social Metrics guidance
1.4 Company departments concerned by the assessment
1.5 Possible benefits provided to a company’s key audiences
1.6 A joined effort of Chemical sector companies
1.1 Purpose of the WBCSD Social Metrics guidance:
The WBCSD’s guidance aims at mapping, prioritizing and assessing the social positive and negative impacts of a product for three key stakeholder groups along its lifecycle regarding...

Social Life cycle of a product

Upstream Raw material extraction

Downstream Manufacturing, assembly

Use phase

End of life

Local communities

Workers

Chemical own operation

Consumers

Workers
1.1 Purpose of the WBCSD Social Metrics guidance: The guidance to help companies addressing five business challenges...

<table>
<thead>
<tr>
<th>Mitigate potential risks</th>
<th>Anticipate consumer expectations</th>
<th>Realization of improvement potentials</th>
<th>Find new products opportunities</th>
<th>Enhance dialogue with stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>The chemical sector is traditionally seen as a sector where health &amp; safety for employees and communities may be at risk</td>
<td>Consumers expect information about origins and ingredients of products, while chemical products are part of the life cycle of the majority of everyday goods.</td>
<td>An increasing number of companies define social missions alongside business objectives</td>
<td>Chemical companies are well positioned to deliver products that create a positive impact on the lives of people (end user), employees or the surrounding communities</td>
<td>Along their life cycle, products can have (positive or negative) impacts on several stakeholders (worker, local communities, consumers, etc.)</td>
</tr>
<tr>
<td>Chemical companies are provided with a complete overview to help them assess and compare potential risks</td>
<td>Transparent information is provided all along the product value chain (production, use, end of life)</td>
<td>By defining tangible indicators, an efficient tool is available for companies to track their social performance</td>
<td>By defining the performance scales as well as the aspirational levels for chemical products, new product opportunities can be identified</td>
<td>By analyzing the key social impacts of a product on its main stakeholders in the value chain, it provides concrete elements to facilitate the dialogue</td>
</tr>
</tbody>
</table>
1.1 Purpose of the WBCSD Social Metrics guidance: 
... and to contribute to the use of Social Metrics, with a focus on chemicals

<table>
<thead>
<tr>
<th>Chemical industry</th>
<th>Sustainability assessment practitioners</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increased awareness of the sector on its possible social impacts</td>
<td>• Refinement of existing methodologies</td>
</tr>
<tr>
<td>• Shared vision of the social topics particularly relevant for the chemical sector</td>
<td>• Use of social metrics by an increased number of companies</td>
</tr>
<tr>
<td>• Definition of standards for scales of social impacts for a specific social issue</td>
<td>• More examples and information available on product-related Social Metrics</td>
</tr>
<tr>
<td>• Fact-based communication and reporting, to improve the sector’s transparency and help customers achieve informed choices</td>
<td></td>
</tr>
<tr>
<td>• Progress towards product comparability concerning social topics</td>
<td></td>
</tr>
</tbody>
</table>
1.2 Positioning of the guidance in the Social Metrics arena:
The guidance builds on LCA principles as well as on existing social metrics approaches and offers a chemical-sector specific perspective.
1.2 Positioning of the guidance in the Social Metrics arena:
The guidance has mainly been built on the foundations of three pre-existing documents.

- Guidelines for Social Life Cycle Assessment of Products and Associated Works (UNEP/SETAC, 2009) and associated works, version 2.0
- Life Cycle Metrics for Chemical Products (WBCSD, 2014)
1.2 Positioning of the guidance in the Social Metrics arena:
The guidance builds upon LCA methodologies and may contribute to the development of a common framework for the steering of a company’s product portfolio by the WBCSD.

- Development by October 2016 of a common framework for the sustainability steering of a company’s product portfolio to enable companies to compete on sustainability performance, not on methodology.

- The framework will enable:
  - Credible & effective communication with stakeholders based on a common language.
  - Higher quality product steering methodologies at lower cost through cross-fertilization amongst companies.

**Life Cycle Assessment Standards & methodologies**

- ISO 14040:2006 (Environmental management – Life cycle assessment – Principles and framework)
- ISO/TS 14067
- PAS 2050
- GHG Protocol (Scope 1+2+3)
- ISO 14045
- European Commission Product Environmental Footprint (PEF)

**WBCSD standards**

- Accounting and reporting corporate GHG emissions in the chemical sector value chain
- Life Cycle Metrics for chemical products
- Addressing the avoided emissions challenge

**Sustainable Portfolio**

- Social metrics for chemical products in their applications
1.3 6 key features of the WBCSD product Social Metrics guidance:
The WBCSD Social Metrics guidance is characterized by 6 key features

**1. CREDIBLE**
- The guide has been created by key chemical sector players and reviewed by credible stakeholders
- Life Cycle principles are used as an underlying methodology
- Assessment scales have been built on credible references

**2. FLEXIBLE**
- A deep dive on social topics is possible as well as a general overview
- The guidance has been prepared to be as much as possible in accordance with existing reporting standards
- Only the key material issues for the product studied are integrated in the assessment
1.3 6 key features of the WBCSD product Social Metrics guidance:
The WBCSD Social Metrics guidance is characterized by 6 key features

3 BALANCED

- The guide addresses both positive and negative social impacts
- It covers the key impacts that might be generated by a chemical product during its life cycle:
  - Regarding three key stakeholders
  - Among five social areas

4 SECTOR-SPECIFIC

- The guidance covers material social issues for chemical products, within a selection of 25 social topics
- Whenever relevant, indicator scales are adapted to the specificities of the chemical sector

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### Scope of the 25 social topics covered by the guidance

<table>
<thead>
<tr>
<th>Number of social topics defined</th>
<th>Workers</th>
<th>Local communities</th>
<th>Consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic rights and needs</td>
<td>7</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Employment</td>
<td>1</td>
<td>1</td>
<td>N/A</td>
</tr>
<tr>
<td>Health and safety</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Skills &amp; knowledge</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Well-being</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>
1.3 6 key features of the WBCSD product Social Metrics guidance:
The WBCSD Social Metrics guidance is characterized by 6 key features

5 MEANINGFUL

- This guidance is the first sector-specific methodology to assess the impact of a product all along its value chain
- It provides chemical companies with insights on which social topics are relevant for their sector
- It defines scales of performance levels, in a chemical industry perspective

6 ONGOING

- WBCSD working group members will work on additional case studies, to provide more practical feedbacks on the use of the guidance and suggest potential improvements
- Further challenges that are not fully covered in this guide (e.g., database) may be addressed in future phases of the WBCSD chemical sector project in the years to come

The PVC pipe case study: assessment covering 15 material social topics

- Impact on consumers’ health & safety
- Fair wages
- Freedom of association
- No child labour
- No forced labour
- Workers’ occupational health risk
- Safety management system for workers
- Skills knowledge and employment
- Direct impact on basic needs
- Health and safety of local community’s living conditions
- Job creation
- Developing relationships with the local communities
- Access to basic needs for human rights
- Impact on consumers’ health & safety
- Direct impact on basic needs
- Health and safety of local community’s living conditions
- Job creation
- Developing relationships with the local communities
- Access to basic needs for human rights
1.4 Company departments concerned by the assessment

Several departments may be involved in the Social Metrics approach and/or use the results

- **Supply chain**
  - Collects and provides information from upstream and downstream supply chain partners

- **Product development**
  - Provides information on product characteristics

- **Marketing**
  - Provides information on market positioning and clients expectations

- **Sustainability / CSR department / Life cycle assessment practitioners**
  - Collects information (internally and externally)
  - Performs the analysis
  - Provides the results to targeted departments internally
  - Uses the results to assess its performance and adapt action plans accordingly

- **Human resources**
  - Provides relevant information on HR and security issues
  - Uses the results to assess its performance and progression on specific issues

- **Innovation**
  - Uses the results to understand potential risks and improvement opportunities of a new product in the initial development phase

- **Communication**
  - Uses the results to report on a product performance and dialogue with external stakeholders

Legend:
- Green: Provides information
- Blue: Uses the results
### 1.5 Possible benefits to a company’s key audiences

<table>
<thead>
<tr>
<th>Target</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal audience</strong></td>
<td>• Have a better and balanced overview of social impacts of products all along their life cycle  &lt;br&gt; • Assess a product performance to adapt the actions undertaken and plan product-level strategy  &lt;br&gt; • Understand potential risks and improvement opportunities of a new product in the initial development phase  &lt;br&gt; • Report on a overall product social performance and dialogue with external stakeholders  &lt;br&gt; • Use integrated approach to assess all aspects of sustainability</td>
</tr>
<tr>
<td><strong>External audience</strong></td>
<td>• Increase the transparency on social impacts of products all along their life cycle  &lt;br&gt; • Improve the product and/or company image to guarantee the license to operate and secure new clients  &lt;br&gt; • Help consumers achieve better informed purchases  &lt;br&gt; • Promote chemical solutions with positive social impacts  &lt;br&gt; • Contribute to the public debate on chemicals social impact</td>
</tr>
</tbody>
</table>

*Downstream customers (B2B), Final users (B2C), Local communities*
The WBCSD Social Metrics guidance is the result of the collective effort of 10 global chemical sector companies since March 2014, that reached consensus on several issues, such as:

- Key stakeholders to be considered
- Most material social issues for the chemical sector
- Indicator scaling system
- Scope of the assessment (value chain steps to be included)
- Etc.
2. **Key technical elements of the methodology**

2.1 This guidance is the result of a 2-year project by WBCSD member companies

2.2 The Social Metrics guidance is based on 6 principles

2.3 The assessment is focused on 3 stakeholder groups

2.4 Social consequences are grouped in 5 social areas

2.5 A total of 25 social topics have been selected as the most representative

2.6 Two types of indicators have been defined for each social topic

2.7 Indicators are assessed according to a five-level reference scale

2.8 The assessment is based on a 8-step methodology

2.9 The aggregation of results is suggested as optional

2.10 The guidance proposes a visual representation of the results

2.11 The guidance contains a gap analysis with existing approaches

2.12 Ideas for next steps
2.1 This guidance is the result of a 2-year project by WBCSD member companies

- The guide is the result of a collaborative process among 10 global chemical companies that are WBCSD members.
- It has been supported by the European Chemical Industry Council (CEFIC).
- The collaborative Working Group on Life Cycle Metrics met over 20 months to cooperatively share their best practices and jointly generate a commonly agreed guidance.

Companies who contributed to the preparation of the guidance:
2.2 The Social Metrics guidance respects 6 principles
Relevance, completeness, consistency, transparency, accuracy & feasibility

Feasibility
Ensure that the chosen approach can be executed within a reasonable timeframe and with a reasonable level of effort and cost.

Accuracy
Ensure that the assessment of social impacts within the scales is systematically neither over nor under actual information on processes, as far as can be judged. Ensure that uncertainties are reduced as far as practicable.
Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

Transparency
Address all relevant issues in a factual and coherent manner, based on a clear audit trail.
Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.

Relevance
Ensure the chemical product assessment appropriately reflects the actual social impacts of the life-cycle system as much as possible and serves the decision-making needs of users—both internal and external to the company.

Completeness
Account for and report on all social impacts for the given functional unit and within the chosen inventory boundary.
Disclose and justify any specific exclusion, define meaningful cut-off criteria.

Consistency
Use consistent methodologies to allow for meaningful comparisons of social impacts over time.
Transparently document any changes to the functional unit, applied datasets, system boundary, methods, or any other relevant factors in the time series.
2.3 The impacts assessed focus on 3 stakeholder groups
Workers, consumers and local communities

- As an impact (positive or negative) is always linked to a receiver (here a group of people, as we exclusively analyze the social impact), stakeholders had to be defined, in the same way that the Guidelines for Social Life Cycle Assessment of Products and Associated Works (UNEP/SETAC, 2009) links each impact subcategory to a group of stakeholders.

- Among the five groups listed by the UNEP/SETAC guidelines (see chart below), three stakeholders groups were selected for this work on social metrics: workers, consumers and local communities.

- These three stakeholders groups are the same as those selected in version 2.0 of the Handbook for Product Social Impact Assessment (PRé Sustainability, 2014).
2.4 Social topics are grouped in 5 social areas
Basic rights and needs, employment, health and safety, skills and knowledge, well-being

Basic rights and needs
- Minimum rights and entitlements within international conventions that apply to all workers
- Contribution to meeting worker’s basic needs through the implementation of fair wages, appropriate working hours, social security and benefits
- Respect community access to local material resources shelter and sanitation

Employment
- Role of an organization in directly affecting employment by creating jobs, generating income and supplying training opportunities for community members.

Health & safety
- Physical and mental elements affecting health, directly related to safety and hygiene at work.
- Consumer right to be protected against products that may be hazardous to health or life
- Impact of organizations on community safety and health (including the general safety conditions of operations and their public health impact)

Well-being
- Company contribution to worker, local community and consumer well-being through work-life balance satisfaction, job satisfaction, actions with local communities, etc.
- Respect and actions undertaken to protect, to provide or to improve community access to infrastructure

Skills & knowledge
- Investment in skills and education of employees
- Investment in skills and education at the community level
- Consumer education about goods and services (covering price, trade practice, environmental, social and economic impact, etc.)
2.5 A total of 25 social topics are selected as the most material... 
...and divided into 11 mandatory social topics and 14 optional topics

- Social topics are positive or negative social impacts that may occur at the various stages of the life cycle.
- Within the framework of social areas and stakeholders, 25 social topics were selected, among a total of 70, as the most representative for each combination of stakeholder and social area.
- A minimum set of 11 mandatory social topics should be assessed.
2.6 Two types of indicators have been defined for every social topic “Indicators” and “advanced indicators”

- **Indicator**: One indicator has been designed for each of the 25 social topics. It combines processes and impact.

- **Advanced indicator**: one (or more) advanced indicators have been designed for each of the 25 social topics. They are generally more quantitative and based on a specific aspect of the social topic. They are considered optional for the assessment.

### Example of indicator (social/employer security and benefits)

<table>
<thead>
<tr>
<th>Social/employer security and benefits</th>
<th>X</th>
<th>a) Policies in reporting company exist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>b) Company provides a minimum standard of social security in terms of healthcare and income security</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>c) Company provides access to remedy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) Company provides social security in terms of healthcare and income security (incl. old age) additional to national regulations (e.g. company pension scheme, protection, etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e) Suppliers are actively encouraged to achieve a,b,c,d</td>
</tr>
</tbody>
</table>

- 2 a,b,c,d,e achieved
- 1 a,b,c,d achieved
- 0 a,b,c achieved
- 1 a,b partially achieved
- 2 a,b,c,d,e not achieved

### Example of advanced indicator (access to basic needs for the human right to dignity)

<table>
<thead>
<tr>
<th>Access to basic needs for the human right to dignity</th>
<th>Local community’s access to adequate healthcare services and company’s contribution to healthcare services.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 Level 0 AND The company contributes to 0.2% of their revenue for healthcare services. Alternative: Government invests 2% of the tax income in healthcare services.</td>
</tr>
<tr>
<td></td>
<td>1 Level 0 AND The company contributes to 0.1% of their revenue for healthcare services. Alternative: Government invests 1% of the tax income in healthcare services</td>
</tr>
<tr>
<td></td>
<td>0 At least 95% of the community has access to adequate healthcare services.</td>
</tr>
<tr>
<td></td>
<td>-1 At least 75% of the community has access to adequate healthcare services.</td>
</tr>
<tr>
<td></td>
<td>-2 At least 50% of the community has access to adequate healthcare services.</td>
</tr>
</tbody>
</table>
2.7 Indicators are assessed according to a five-level reference scale

- The indicators will enable the **valuation of each social topic with the help of a scale** that assesses each process or input from -2 to +2.

- Setting up reference scales is critical to ensuring that a topic is handled the same way by the different users of the guide.

- The scales defined for each indicator were **built on a chemical industry perspective**, with zero or medium performance indicating the industry’s benchmark. Interpretation of scales across the value chain will touch upon sectors that are beyond the chemical sector.

- This reference scale approach is similar to the one used in version 2.0 of the Handbook for Product Social Impact Assessment (PRé Sustainability, 2014).

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**5 levels reference scale**

- **2**: Outstanding/exemplary performance
- **1**: Good performance
- **0**: Standard performance/compliance
- **-1**: Inadequate performance
- **-2**: Unacceptable performance
- **Unknown (default)**
2.8 The assessment is based on 8 steps

1. **Goal & scope**
   - A clear definition of the chemical product application assessment’s goal is critical for alignment between the results and expectations of the study. A clear definition of the scope will focus the analysis on the intended goal.

2. **Functional unit**
   - A clear definition of the functional unit represents a key element of the methodology, as it allows comparison of the social impact of two or more chemical products by providing a reference to which social topics can be related.

3. **Selection of social topics**
   - Selection of social topics that are particularly relevant for the assessment performed and consistent with the goal of the study, in addition of mandatory social topics.

4. **Choice of indicators**
   - For each social topic at least one, and up to several indicators and advanced indicators have been developed. At each relevant life cycle stage and for each selected social topic, the assessment shall include, at a minimum, the main indicators. One or several advanced indicators may be included as well.

5. **Reference scale for advanced indicators**
   - A reference scale has been developed for at least one indicator for each social topic. Due to a lack of data, reference scales have not been defined for all advanced indicators but first indications on what kind of reference scale could be useful are given.

6. **Boundary setting**
   - Prioritization and selection of the life cycle stages to be included in the social impact assessment because of the social risks they may have. Specific cut-off rules, which are clearly defined in an assessment, can be applied and the most significant life cycle steps will be assessed.

7. **Data collection and quality assessment**
   - The main difficulty when performing a social impact assessment will be the collection of data. Performing a social impact assessment requires to decide on the type of data sources (origin) and the gathering level (location) of data. Data quality is assessed according to a matrix elaborated by Pré Sustainability.

8. **Results interpretation**
   - The product performance is assessed for the indicators and advanced indicators selected and results can be interpreted with respect to some requirements concerning the limits, aggregation, etc.
2.9 Aggregation of results is suggested as optional
Along the value chain and across social topics

**Aggregation along the value chain** is the aggregation of results of all the key life cycle stages (see section 5.6) for one indicator.

**Aggregation across social topics** is the aggregation of all indicators (indicator and advanced indicators), either for a social topic or a social area or a stakeholder category or for all stakeholder categories, grouping all indicators studied.

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### Aggregation along the value chain

**Example of aggregation along the value chain**

<table>
<thead>
<tr>
<th>Lifecycle stage</th>
<th>Social assessment score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>0</td>
</tr>
<tr>
<td>Stage 2</td>
<td>2</td>
</tr>
<tr>
<td>Stage 3</td>
<td>-1</td>
</tr>
<tr>
<td>Stage 4</td>
<td>-1</td>
</tr>
<tr>
<td>Stage 5</td>
<td>1</td>
</tr>
</tbody>
</table>

*Simple average:* each activity on the value chain has the same importance/weight

Aggregated result for the indicator along the whole value chain

\[0 \times 20\% + 2 \times 20\% - 1 \times 20\% - 1 \times 20\% + 1 \times 20\% = 0.2\]

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### Overview of aggregation across social topics

**Indicators** (mandatory and additional material)

- Occupational health risks
- Safety management system
- 

**Social topics**

- Health & Safety
- Basic rights and needs
- Well-Being
- Training & Education
- Employment

**Social areas**

- Workers
- Local communities
- Consumers

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Aggregation can be seen as a way to facilitate the communication of the results of the assessment to external stakeholders and their understanding by non-experts. However, aggregating results can be time-consuming and presents a risk of misinterpretation and/or reduction in the transparency of the results.

- At this stage of development of the methodology, the WBCSD working group members recommend to address this step with particular caution.
2.10 The guidance proposes a visual representation of results

As an illustration, the following communication format could be used to present the key results of the assessment, assuming that one graph would be presented for each stakeholder category. The graph indicates the aggregated results of the assessment: the performance of the product and the quality of the data used to evaluate this performance.
2.11 The guidance presents a gap analysis with existing approaches

- A gap analysis with existing standards on Social Metrics, used as a basis to prepare the guidance, has been performed and is presented in appendix of the report.
- Two aspects have been studied:
  - Key steps of the methodology
  - Social topics covered
- As a result, it demonstrates that WBCSD guidance is in line with preexisting standards, but some aspects of the methodology and social topics covered have been adjusted to best meet the chemical sector’s specificities, as well as to refine and improve the assessment.

### Overview of the gap analysis detailed in appendix

<table>
<thead>
<tr>
<th>Key issues</th>
<th>WBCSD Social metrics for chemical products</th>
<th>Comparison with</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Stakeholders</td>
<td>3 stakeholder categories: workers, local communities and consumers</td>
<td>5 stakeholder categories: workers, local community, society, consumers and value chain actors</td>
</tr>
<tr>
<td>2 Social areas</td>
<td>5 social areas grouping the 23 most relevant impact categories for the chemical sector</td>
<td>6 impact categories (human rights, working conditions, health and safety, cultural heritage, governance, socio-economic repercussions) considered as logical groupings of S-LCA results, related to social issues of interest to stakeholders and decision-makers</td>
</tr>
<tr>
<td>3 Social topics</td>
<td>25 social topics corresponding to the most representative positive or negative social aspects for each stakeholder group</td>
<td>19 Social topics corresponding to social areas related to stakeholder groups that should be measured and assessed</td>
</tr>
<tr>
<td>4 Mandatory vs optional impact categories</td>
<td>11 mandatory impact categories identified as material for the chemical sector</td>
<td>Compact assessment (e.g. 5 material social topics) for internal communication vs broad assessment (19 social topics) for external communication</td>
</tr>
</tbody>
</table>
2.12 Ideas for next steps

Areas for the development of the WBCSD guidance

- Development of more accurate advanced indicators, as well as a reference scale for each advanced indicator;
- Guidance for data aggregation and single scoring of results;
- Development of a more detailed communication template;
- Definition of additional user-oriented features such as a checklist for quality assessment, a template for data collection, and/or an extended description of best practices;
- Completion and publication of pilot studies.

Further challenges to be addressed regarding Social Metrics

- Development of a common knowledge base (databases), gathering relevant information, e.g. literature, contacts, especially for the definition of industry averages;
- Development of rules and guidance to allow comparative studies;
- Implementation schemes for the decision-making processes of chemicals industries, in particular to move towards the combination of social and environmental LCA;
- Definition of additional indicators to address regional or cultural specificities.
- Reduce workload to make it easier to apply the framework
- Agreed scheme for data interpretation and integration of LCA information
3. Appendix

3.1 The product final scoring takes into account the quality of data
3.1 The product final scoring takes into account the quality of data

- Final scoring of a product on a social topic is based on two criteria:
  - The **product performance**, assessed through its ranking for the corresponding indicator and/or advanced indicator(s)
  - The **quality of the data** used to assess the performance of the products, assessed through the following matrix.

```markdown
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Score</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy, integrity, and</td>
<td>Own operations and direct suppliers</td>
<td>Independent 3rd party verified data provided with documentation</td>
<td>Non-verified internal data with documentation, or verified data partly based on assumptions</td>
<td>Non-verified data partly based on assumptions, or data based on grey scientific report</td>
<td>Qualified estimate (e.g. by an internal or external expert), or data based on non-scientific report</td>
<td>Non-qualified estimate, or unknown source</td>
</tr>
<tr>
<td>validity</td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Timelines</td>
<td>Data from current reporting period</td>
<td>Data from previous reporting period</td>
<td>Data from 2 years before reporting period</td>
<td>Data from 3 years before reporting period</td>
<td>Data from more than 3 years before reporting period, or unknown age of data</td>
<td>Average sector or country data from public or 3rd party database provider</td>
</tr>
<tr>
<td>Correlation</td>
<td>Data from specific site under study</td>
<td>Data from other sites of the company in the same region</td>
<td>Data from relevant sites of the company in other regions</td>
<td>Data from other companies in same region with similar production conditions</td>
<td>Data from other companies in same region with similar production conditions</td>
<td>Data from other companies in same region with similar production conditions</td>
</tr>
</tbody>
</table>
```
### 3.2 Complete gap analysis with existing literature

<table>
<thead>
<tr>
<th>Key issues</th>
<th>WBCSD Social metrics for chemical products</th>
<th>Comparison with</th>
<th>UNEP/SETAC Guidelines for Social Life Cycle Assessment of Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Stakeholders</td>
<td>3 stakeholder categories: workers, local communities and consumers</td>
<td>Stakeholder categories: workers, local community, society, consumers and value chain actors</td>
<td></td>
</tr>
<tr>
<td>2 Social areas</td>
<td>5 social areas grouping the 23 most relevant impact categories for the chemical sector</td>
<td>Impact categories (human rights, working conditions, health and safety, cultural heritage, governance, socio-economic repercussions) considered as logical groupings of S-LCA results, related to social issues of interest to stakeholders and decision-makers</td>
<td></td>
</tr>
<tr>
<td>3 Social topics</td>
<td>25 social topics corresponding to the most representative positive or negative social aspects for each stakeholder group</td>
<td>19 Social topics corresponding to social areas related to stakeholder groups that should be measured and assessed</td>
<td></td>
</tr>
<tr>
<td>4 Mandatory vs optional impact categories</td>
<td>11 Mandatory impact categories identified as material for the chemical sector</td>
<td>11 sub categories representing impacts within an impact category (working conditions of the stakeholder’s workers, for instance)</td>
<td></td>
</tr>
<tr>
<td>5 Indicators</td>
<td>At least one indicator for each impact category and one or more possible advanced indicators</td>
<td>Performance indicators</td>
<td>Inventory indicators (qualitative and quantitative)</td>
</tr>
<tr>
<td>6 Reference scale</td>
<td>Scale used for measuring process and outcome &amp; impact indicators that assess each process or input linked to the functional unit of the product application from -2 to +2</td>
<td>Scale-based approach or quantitative approach</td>
<td>Inventory indicators provide the most direct evidence of the condition or result they are measuring. They are specific definitions of the data sought. Inventory indicators have characteristics such as type (e.g. qualitative or quantitative) and unit of measurement.</td>
</tr>
<tr>
<td>7 Reference value</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>8 Impact assessment method</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>9 Functional unit</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>10 Life cycle stage selection</td>
<td>Assessment of all life cycle stages by a practitioner who must answer a list of specific questions and can use a risk filter analysis to select the most relevant topics to be integrated in the assessment</td>
<td>Hotspot assessment: a methodological framework that allows for the rapid assimilation and analysis of a range of information sources, including life cycle based studies, market and scientific research, expert opinion and stakeholder concerns.</td>
<td></td>
</tr>
<tr>
<td>11 Allocation</td>
<td>NO</td>
<td>YES for quantitative KPIs</td>
<td>YES (for co-products)</td>
</tr>
<tr>
<td>12 Aggregation</td>
<td>Aggregation along the value chain and across social topics, but no general aggregation (stakeholder results cannot be summed up)</td>
<td>Aggregation along the value chain, followed by aggregation of social topics scores into stakeholder group scores and total score. The subcategory indicator results are aggregated into impact category results</td>
<td></td>
</tr>
<tr>
<td>13 Weighting</td>
<td>No specific recommendation</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>
For more information contact:
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