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sustainability consulting + software

socialLCA+

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socialLCA+

1 Motivation and background

2 socialLCA+ additions: the ,+'
      a) influence
      b) risk and gap
      c) data quality

3 An example case

4 Discussion, use cases for socialLCA+

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1 socialLCA+ motivation and background

1 Motivation and background

> 100 deaths due to collapse of a textile producer building in Bangladesh

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1 Motivation and background

"Apple keeps exploiting", major German newspaper

http://blog.zeit.de/china/2013/07/29/apple-bleibt-einausbeuterkonzern/

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1 Motivation and background

- Assessing social impacts of products still gets more and more attention;

- Making sure that social impacts of products are acceptable is of high interest for companies, policy makers, and many consumers.

- The UNEP/SETAC guidelines for social LCA (UNEP 2009) have been a milestone for assessing the social impacts over the entire life cycle;

- And yet, there are few practical social LCA case studies.

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1 Motivation and background

- And yet, there are few practical social LCA case studies.

- One possible reason:

  The UNEP/SETAC approach lacks some aspects that are relevant for a practical application.

  → socialLCA+

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UNEP/SETAC social LCA approach:
Key elements

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UNEP/SETAC social LCA approach:
Key elements

(of course an incomplete list)

- Life Cycle approach (not: the experts assesses the life cycle based on one figure) → detects also issues "far down" in the supply chain

- ISO 14040 / 14044 structure: goal and scope, inventory, impact assessment, interpretation

- Stakeholders as addressees, for each stakeholder specific impacts

- Impact categories and subcategories, subcategories are assessed by indicators, rather case-by-case

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UNEP/SETAC social LCA approach: Additions since 2009

(of course also an incomplete list)

- Peer reviewed methodological sheets available that explain how to assess subcategories (Benoît et al. 2013)

- Impact assessment approach in assessment tables, and a concept for aggregation over the life cycle (Ciroth Franze 2011)

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UNEP/SETAC social LCA approach & practical application

- The approach is rather descriptive: how to perform one social LCA study for one single product.

- Questions like:

  - How to perform a product comparison?

  - What to do with the results and information gained from a study?

  - Where to focus?

  are not answered

- Second point: The approach is data-intense – nowadays, generic social LCA databases are available that address this point

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2 socialLCA+ additions

socialLCA+ additions

- SocialLCA+ is meant to add those parts to the UNEP/SETAC method that are required for a practical application:
    - Influence area of the decision maker
    - Difference of observed impacts to stated goals
    - Data quality.
- The method was developed in a workshop in Berlin in Summer 2013

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socialLCA+ additions

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socialLCA+ additions: Influence

- Influence, definition: the company can change the life cycle of the product, either by switching from one supplier / supplying process to another, or by changing the processes itself

  (viewpoint of a company decision maker)

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socialLCA+ additions: Influence

How to assess the influence:

- On a process basis
- Using the following scales

0: no influence (example: electricity grid mix, for a t-shirt production company in Bangladesh)

1: some influence (example: again for a t-shirt producer in Bangladesh: The cotton that is used – there is the option to use fair-traded textile but they will result in a slightly different product, probably at a higher price)

2: full influence (own production sites).

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socialLCA+ additions: Influence

- The scale is determined in goal and scope of a study; for larger studies / more complicated life cycles, further distinctions can be useful

Scale	Interpretation
1	Influence
3	Some influence
5	No influence

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socialLCA+ additions: Gaps & Risks
Difference of observed impacts to stated goals

- In goal and scope, "performance reference points" are defined (Ciroth Franze 2011): How does the study understand the analyzed subcategories, what is seen as good, what is bad

- The performance reference points are important since social assessment is partially subjective

- But of course, usually existing standards and references are considered.

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socialLCA+ additions: Gaps & Risks
Performance reference points (PRP)

- For example, weekly worker hours per person

Indicator	PRP	Scale A	
	≤40h	1	
	41 - 48h	2	
Average working hours per week	49 - 52h	3	
	53 - 56h	4	
	>57h	5	

Ciroth, Franze: Social Extension Task Force report, Task III and IV, Modeling, assessment, and aggregation of social indicators along the life cycle, Prosuite project, 2013

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socialLCA+ additions: Gaps & Risks

How to assess gaps and risks:

Scale	Interpretation
1	Perfect fit
2	Slight deviation
3	Gap
4	Considerable gab
5	Very large gap

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socialLCA+ additions: Data quality

Data quality is quite complicated for social assessment:

- Subjective information
- At times, qualitative information, from various sources
- Sometimes, biased information intentionally

  (will a company honestly report occurrence of forced labor in its factories?)

- Information is more "volatile" than information on environmental impacts; a new management can introduce a new policy that can change the situation in a factory, to the better or to the worse

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socialLCA+ additions: Data quality

How to assess data quality:

- on a process level

- Using a pedigree matrix approach (see environmental LCA, ecoinvent / Weidema)

- The specific composition of the matrix may differ from one study to another, and will be specified in goal and scope

- Results for different quality indicator per process are aggregated as follows:

  - As arithmetical mean; if one of the assessments is 5, the aggregated value cannot be better than 4

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socialLCA+ additions: Data quality

Score / Indicator	1	2	3	4	5
Reliability	Verified data from primary data collection	Verified data partly based on assumptions or non-verified data based on primary data collection	Non-verified data partly based on assumptions or data based on grey, but scientific documents	Qualified estimate (e.g. by expert) or data based on non-scientific documents	Non-qualified estimate or unknown origin
Completeness	Representative data for organisation and site under study	Data from more than 75% of all individuals within the estimated sample	Data from more than 50% of all individuals within the estimated sample	Data from more than 25% of all individuals within the estimated sample	Data from less than 25% of all individuals within the estimated sample
Temporal correlation	Less than 1 year of difference to the time period of the dataset	Less than 2 years of difference to the time period of the dataset	Less than 3 years of difference to the time period of the dataset	Less than 5 years of difference to the time period of the dataset	Age of data unknown or data with more than 5 years of difference to the time period of the dataset
Geographical correlation	Data from organization and site under study	Average data from several sites of the organization in the same region in which the site under study is included	Data from other sites within the same organisation and region with similar production conditions	Data from sites from other organizations in the same region with similar production conditions or regional average sector data	Data from unknown or distinctly different organisations, sites and regions

Ciroth, Franze: Social Extension Task Force report, Task III and IV, Modeling, assessment, and aggregation of social indicators along the life cycle, Prosuite project, 2013

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socialLCA+ additions: Data quality

How to assess data quality:

Scale	Interpretation
1	Perfect quality
2	Good quality
3	Medium quality
4	Considerable limitations
5	Bad quality

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3 Putting it together: An example case
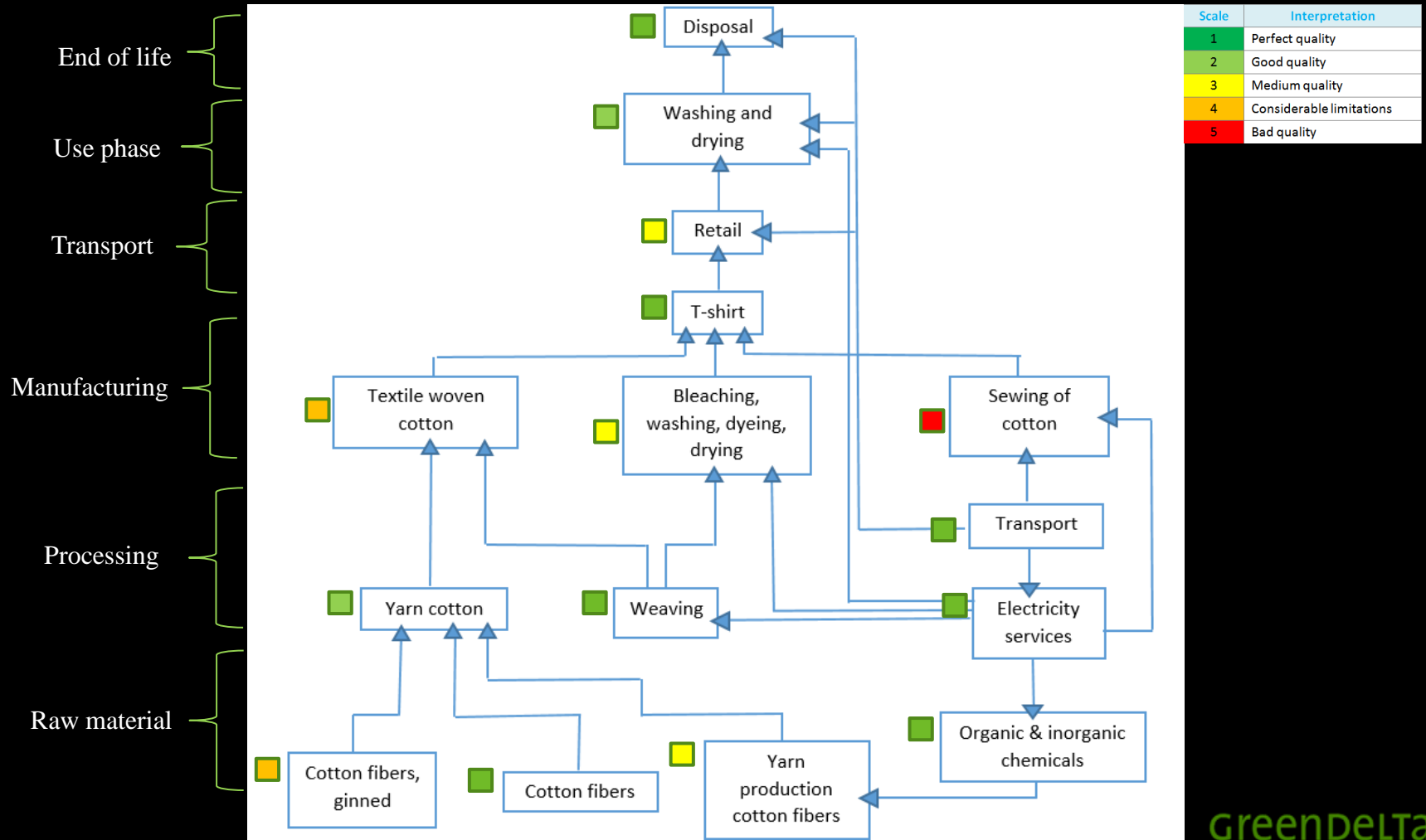
3 An example case: T-shirt from Bangladesh

- T-Shirt produced in Bangladesh
- Cotton from world market
- Sold in Germany
- Market price 5 €
- "used" for 2 years then disposed of
- Test case for developing the method

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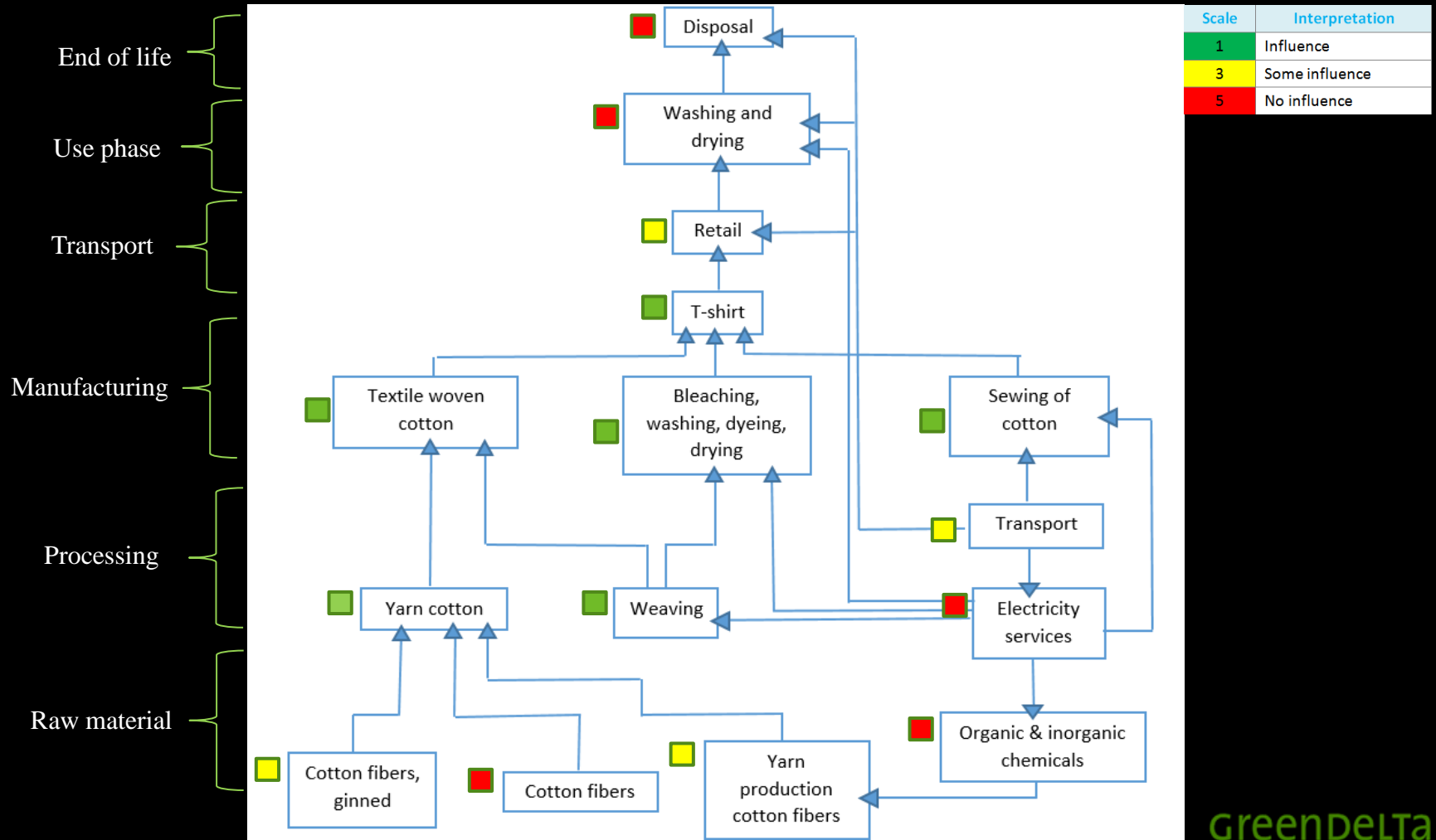
3 An example case: T-shirt from Bangladesh
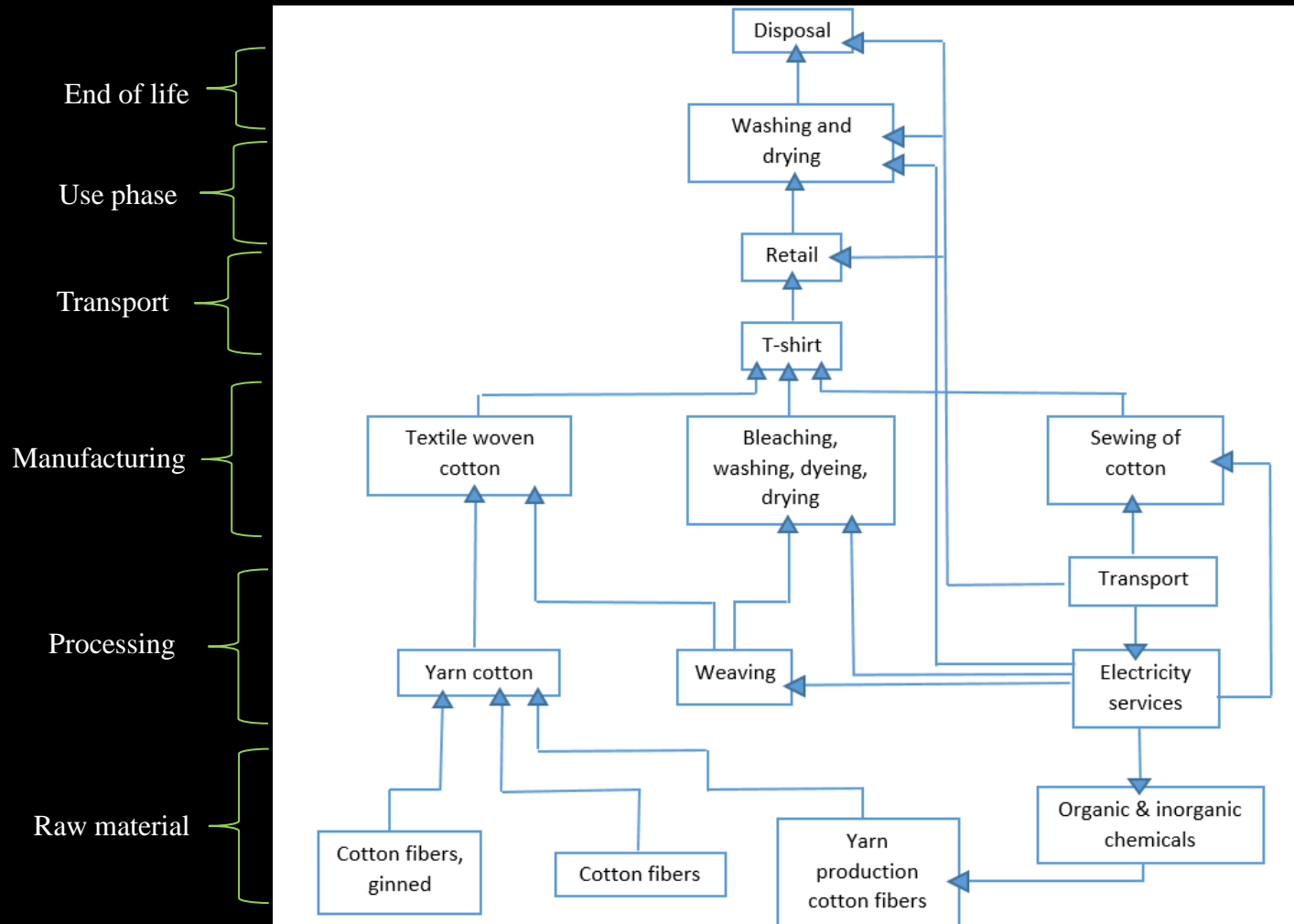
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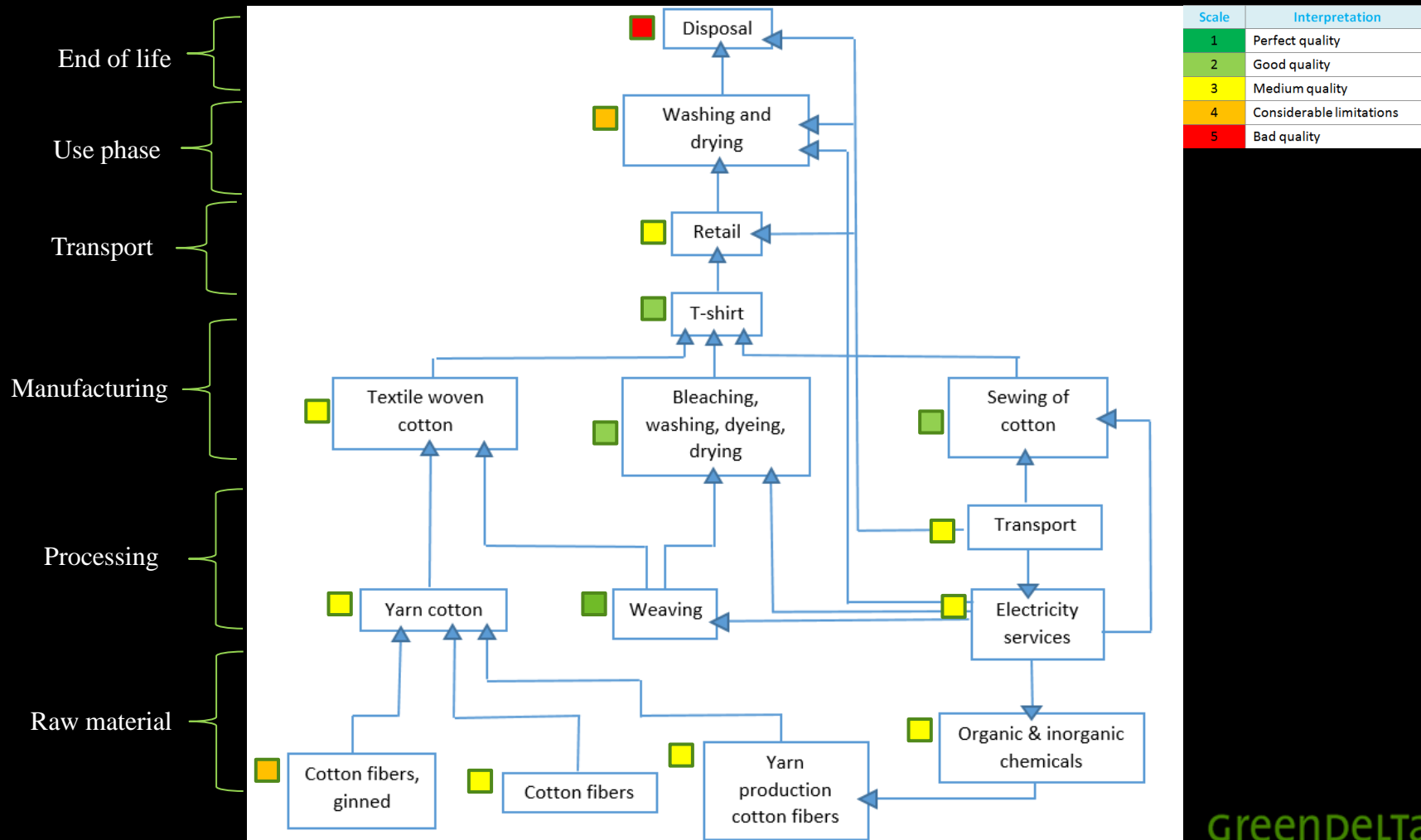
Gap Assessment

3 An example case: T-shirt from Bangladesh

Influence for shirt producing company

3 An example case: T-shirt from Bangladesh

Data quality assessment

3 Discussion, use cases for socialLCA+

Use cases for socialLCA+

- Based on the UNEP/SETAC approach, socialLCA+ provides three-dimensional results.
- These results suggest actions:

    for example:

    - high risk:
        - No influence → Seek influence
        - Influence → change life cycle
        - Influence, bad data quality: decide whether to change the life cycle or rather obtain better information
        - Asf.

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Use cases for socialLCA+

→ Specific actions are suggested in a study, based on case-specific rules

→ Adding the additional "dimensions" quality and influence helps to focus and prioritize;

- Quality: important for decision support

- Influence: New; "seek influence" is often the first action

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Use cases for socialLCA+

- A study can be oriented towards a specific action-type.
- Some possible directions:
  - Action-oriented: improve gaps
  - Strategy: increase influence
  - Descriptive: improve data quality.

  - … and more refined: 'social due diligence'

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Use cases for socialLCA+

- Comments and feedback are <u>very</u> welcome.

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Thank you!

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