Innovations for Sustainable Production in the Global Textile Supply Chains
Breaking the mould with scenario analysis

Silke Kleihauer, Julian Schenten, Martin Führ, Sina Wans
Research questions

1. How to foster transformation for sustainable production in the global textile supply chains?

2. How to foster a “culture” which enables and induces related transformation processes?
Analytical framework (of project)

Transdisciplinary Delta-Analysis

Field Actors
(incl. tacit knowledge)

1. Problem situation
2. Target state (normative aim)
3. Analyse the problem situation (status quo)
4. Identify Delta (−2−3)
5. Design regulatory options
6. Remaining Delta (−2−5)
7. Realisation by field actors

Iterative feedback process

a. Apply normative criteria
b. Identify relevant actors
c. Define expected behaviour to reach the target state:
   - Which actor should do
   - When
   - What?, respectively should with
   - Whom
   - How communicate/cooperate?

Behaviour of the relevant actors:
- Incentive and Impediments
- Analysis ([IA]
c.f. Führ/Bizer 2015, Compact Guidelines

Responsive Regulation (− „Response“ to [IA]):
- Enhance incentives
  - Sustain development
- Reduce Impediments
- Evaluation against the normative criteria
  - Sustainable Development
  - Remaining risks

Measures (incl. monitoring) towards:
- Sustainable Development
- Risk management

System knowledge
Normative Orientation
Transformation knowledge
Tacit knowledge of field actors

© Silke Kleihauer, Darmstadt 2016 (based on Staufacher/Scholz 2012 und Bizer/Führ 2015)
(1) Problem Situation

- UNEP: Textile and clothing the world’s 2\textsuperscript{nd} biggest economic activity for intensity of trade

- Exposure to hazardous substances

- Complex/volatile supply chains constrain risk management
(2) Target state (aim)

- Developments in international governance (SAICM, SDGs)

  12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

- Developments in Europe: REACH → Restrictions, SVHC

- Greenpeace „Detox“ → increased consumer awareness
(3) Status quo: EU Formulators‘ perspective

• Have SDG 12 relevant capacities

• No market opportunities due to lack of demand by brands

• Solution: Internationally agreed certification system
(3) Status quo: **Brands‘ perspective**

- Struggle to fulfil the regulatory minimum requirements
- Transparency needed, but doubt formulators‘ willingness
- Costs, but doubt consumers‘ willingness to pay
- (Interim) solution: Certification systems
Interim evaluation: **Deadlock**

- Individual and professional perceptions and thinking patterns
- No systemic view solutions for sustainable production
Scenario method activates systemic thinking

Analytical framework

Refined process with scenario method

Transformative thinking
Scenario method (*H. Geschka*), adapted

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<td><strong>Focal issue:</strong> Textile Industry 2030</td>
<td><strong>Main drivers plus effect relationships</strong></td>
<td><strong>Formulating descriptors and arranging projections</strong></td>
<td><strong>Projections plus effect relationships</strong></td>
<td><strong>Developing, interpreting external Scenarios</strong></td>
<td><strong>Introducing events breaking with trends</strong></td>
<td><strong>Elaborating the scenarios or derive consequences</strong></td>
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**Scenario development**

**Key 1:** Impact Matrix

**Key 2:** Consistency Analysis

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Status quo revisited: **Common perspective**

- Lack of horizontal and vertical cooperation
- No unified standard for textile sector chemicals management
- No sector solution supporting traceability and knowledge as to the chemicals used in the supply chains.

➢ In this respect, certification systems of no help
- Lack of IT-tools to facilitate exchange of information
- Normative impulses not strong enough
- Consumer of very limited significance
Answers and outlook

• Question 2: Scenario method as learning tool to foster transformation

• Question 1: Identification of sustainable production strategies for the global textile chains

• Dissemination and testing (EU LIFE AskREACH)