Sustainable and innovative textiles procurement

Insights in the working lab of the City of Zürich

Procura+ Seminar Marketplace, Brussels
Sonja Gehrig, October 13, 2022
Green house gas emissions of the City of Zürich
13 tons per person and year of direct and indirect emissions

Tons of GHG emissions per person and year

Ambitious climate target of -30% of GHG emissions for the indirect carbon emissions

Net Zero target for the direct emissions
## Net Zero: Procurement as a key

### Stadt Zürich

<table>
<thead>
<tr>
<th>Type</th>
<th>Goal</th>
<th>Verwaltung</th>
</tr>
</thead>
<tbody>
<tr>
<td>direkte CO₂-Emissionen</td>
<td>Netto-Null bis 2040</td>
<td>Netto-Null bis 2035</td>
</tr>
<tr>
<td></td>
<td>Zwischenziel: Minus 50% bis 2030</td>
<td></td>
</tr>
<tr>
<td>Indirekte CO₂-Emissionen</td>
<td>Minus 30% pro Einwohner/in bis 2040 (ggü. 1990)</td>
<td>Minus 30% bis 2035 (gegenüber 1990)</td>
</tr>
</tbody>
</table>

**Gemeindeordnung, Abstimmung 15.5.22**

**In Kraft seit STRB vom 21.4.21**
Why is it worth to procure socially and ecologically responsibly?

- Overall responsibility
- Image, reputation
- Role model
- Responsibility towards the taxpayer
- Competitiveness: Sustainability as opportunity for Swiss/EU industry
- Satisfied employees
- Innovation potential
- Policy coherence: commitment to sustainable procurement
Fields of action for sustainable procurement in the city

- **Resource preservation, sustainable raw material extraction**
- **Climate protection, net zero target**
- **Ecological standards, toxic substances**
- **Social standards**
- **Corporate due diligence, supply chain transparency**
- **Product safety, harmful substances in the product**
- **Applied circular economy**
Actions towards Innovative and Sustainable Procurement

Sustainable Textiles Switzerland 2030

Circular Cities Declaration

Circular Economy Strategy "Circular Zürich"

Circular Procurement
Bed sheets & towels from recycled cotton
Environmental effects of textile fibres
Environmental impact of different textile fibres

Total Environmental Impact (incl. scattering)

<table>
<thead>
<tr>
<th>Textiles fibres</th>
<th>Environmental Impact Points (UEP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton fibres (conventional)</td>
<td>34'100</td>
</tr>
<tr>
<td>Cotton fibres (organic)</td>
<td>32'900</td>
</tr>
<tr>
<td>Cotton fibres (recycled)</td>
<td>788</td>
</tr>
<tr>
<td>Hemp fibres</td>
<td>11'800</td>
</tr>
<tr>
<td>Linen fibres</td>
<td>16'700</td>
</tr>
<tr>
<td>Lyocell fibres</td>
<td>5'440</td>
</tr>
<tr>
<td>Viscose fibres</td>
<td>16'700</td>
</tr>
<tr>
<td>Polyester yarn (recycled)</td>
<td>3'570</td>
</tr>
<tr>
<td>Polyester yarn</td>
<td>5'580</td>
</tr>
</tbody>
</table>

Source: City of Zürich, Environmental and Health Protection Service (Quantis 2022)
Environmental impact categories of different textile fibres

Environmental Impact of different Textile Fibres

- Cotton fibres (conventional)
- Cotton fibres (organic)
- Cotton fibres (recycled)
- Hemp fibres
- Linen fibres
- Lyocell fibres
- Viscose fibres
- Polyester yarn
- Polyester yarn (recycled)

Source: City of Zürich, Environmental and Health Protection Service (Quantis 2022)
Sustainability criteria for procurement of textiles

1. Analysis of needs
2. Conditions of participation
3. Minimum requirements
4. Award criteria
Sustainability hotspots of textiles

- **Pesticide use** and **water consumption**, especially in cotton cultivation
- **Water pollution** from chemicals in textile production and processing (bleaching, dyeing, finishing)
- **Child labour, forced labour, exploitative working conditions:** excessive overtime, low wages (esp. textile production, confection and garment manufacturing)
- **Electricity and fuel consumption in manufacturing:** greenhouse gas and air pollutant emissions

Source: BAFU/Quantis 2019: Relevanzmatrix
# Textile procurement: criteria and requirements

<table>
<thead>
<tr>
<th>Conditions of participation</th>
<th>Ecological</th>
<th>Social</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Code of conduct:</td>
<td>Textile sustainability calculator questionnaire</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ILO core labour standards</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transparency of supply chain</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minimum requirements</th>
<th>Ecological</th>
<th>Social</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Third party audit</td>
<td>No sewn-on or printed logos</td>
</tr>
<tr>
<td></td>
<td></td>
<td>at confectioning for ILO core labour standards</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Award criteria (25-35% Gewichtung)</th>
<th>Ecological</th>
<th>Social</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Labour standards, working conditions</td>
<td>Part of the textile sustainability calculator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Living wages</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fair trade</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Implementation of ILO standards (i.e. occupational health &amp; safety)</td>
<td></td>
</tr>
</tbody>
</table>

- Chemicals in the product: Standard 100 by Oeko-Tex
- Organic cultivation for natural fibres
- Air pollution minimum requirements for delivery vehicles
- Third party audit at confectioning for ILO core labour standards
- No sewn-on or printed logos

- Recycling materials
- Avoidance of chemicals
- Organic fibres
- CO₂ emissions
- Recyclability
- EMS
- Supply logistics: type of vehicles and combustion
- Multi-criteria scoring system (25-35% Gewichtung)
Standards, Labels, Certificates, Initiatives

1. Define labels

2. Submission

3. Rate the product with labels

4. Check the certificates, labels, standards, other evidence

5. Ask for evidence if not provided, possibly exclusion

1. Criteria definition and operationalisation

2. Establish evidence for criteria

3. Submission: Ask for requirements and evidence for criteria
Challenges with labels and certificates
Textiles Sustainability Calculator of the City of Zürich (Textiles Calculator)

Publication (German): https://kofu-zup.ch/asp/db/pdf/ZUP97-20_Textilrechner.pdf
Textiles Calculator for climate prioritised procurement

Textiles Calculator: Sustainability of Textile Production

Information of the product

1. Produktbeschreibung und Lieferkette
2. Standards, Labels, Zertifizierungen, Initiativen
3a. Sozialfragebogen
3b. Umweltfragebogen

Life cycle assessment: data basis

4. Rohmaterial
5. Entsorgung/Recycling
6. Nutzung
7. Konfektion
8. Stoff weben/stricken
9. Farben/Veredelung

Evaluation and output

5. Evaluation
   - Umweltkriterien
   - Sozialkriterien

6. CO2-Indikator
   - vermiedene Treibhausgase
   - Referenzprodukt

Calculation

Open source
Carbon emissions: Results

Example: Poloshirt 55% organic cotton, 45% polyester
Origine: Europe, Oeko-Tex 100, GOTS, amfori BSCI-Audit for confection

### Result compared to non sustainable reference product

<table>
<thead>
<tr>
<th>Process</th>
<th>Greenhouse gas emissions per piece (kg CO₂-eq)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider 1</td>
<td>7.09</td>
</tr>
<tr>
<td>Reference product</td>
<td>14.83</td>
</tr>
</tbody>
</table>

- **Disposal**
- **Packaging**
- **Transport**
- **Confectioning**
- **Refinement**
- **Textile production**
- **Dying**
- **Fibre production**
- **Raw material extraction**
Resultat Textile Calculator: i.e. Sweatshirt

Places of Production: Türkei (İzmir), FWF

soziale Kriterien

<table>
<thead>
<tr>
<th>Anbieter</th>
<th>64%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anbieter 1</td>
<td>64%</td>
</tr>
<tr>
<td>Anbieter 2</td>
<td>0%</td>
</tr>
<tr>
<td>Anbieter 3</td>
<td>0%</td>
</tr>
<tr>
<td>Anbieter 4</td>
<td>0%</td>
</tr>
<tr>
<td>Anbieter 5</td>
<td>0%</td>
</tr>
</tbody>
</table>

Die Ergebnisse sind in Prozent erreichter Punkte im Verhältnis zur maximalen Punktzahl

ökologische Kriterien

<table>
<thead>
<tr>
<th>Produkt</th>
<th>Pullover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beschreibung</td>
<td>Sweatshirt (Pos. 60)</td>
</tr>
<tr>
<td>Gewicht</td>
<td>0,431 kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Anbieter</th>
<th>74%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anbieter 1</td>
<td>74%</td>
</tr>
<tr>
<td>Anbieter 2</td>
<td>0%</td>
</tr>
<tr>
<td>Anbieter 3</td>
<td>0%</td>
</tr>
<tr>
<td>Anbieter 4</td>
<td>0%</td>
</tr>
<tr>
<td>Anbieter 5</td>
<td>0%</td>
</tr>
</tbody>
</table>

Die Ergebnisse sind in Prozent erreichter Punkte im Verhältnis zur maximalen Punktzahl

Treibhausgasemissionen

Das Referenzprodukt wird mit konservativen Werten berechnet und beinhaltet einen Anteil Flugtransport.
Circular economy

is our most important lever for achieving the net zero targets

Why?
- We have influence
- We build on Zurich's economy and on innovation
Especially for textiles ...

Focus on the whole supply chain

Ecological and social criteria make the difference for others

Circular economy solutions are the future

Textile submissions are very complex
Thank you!

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