NAHGAST

Nachhaltiges Produzieren und Konsumieren in der Außer-Haus-Gastronomie

Sustainability assessment in socio-ecological research for sustainable production and consumption between ideal and practice

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Introduction

- Comparison and discussion of different assessment approaches of the three considered projects by asking:
- "What was assessed, why was a certain item or process assessed, and what factors determined the sustainability-assessment outcome?”

- First step for a template for the systematization of sustainability-assessment practices that can be elaborated and applied to the other SÖF projects in further steps

Methods

- First, we tried to draft a sophisticated analysis grid:
  - Who evaluates [who is the *evaluand*?]
  - Which criteria, methods, and indicators are considered? [how is sustainability operationalized as an *evaluating criterion*?]
    - How can the criteria, methods, and indicators be classified? (e.g. qualitative/quantitative, input/output oriented, …)
  - What kind of object (process (esp. production, sale), enterprise, product, service) is reflected? [what is the *object of evaluation*?]
    - System boundaries of the object (cradle to grave/ gate to gate, …)
- Which levels (micro, meso, macro) are behind the selected procedures?
- Intention of the evaluation (descriptive, normative, …)
- Methods of data collection, data sources

Methods

- We did not have enough capacities to elaborate and to implement it properly and we were worried that the analysis grid would not cover all specific particularities of each approach
- So we made the first step before the second and just asked three questions:

- „What was assessed?“
- „Why was a certain item or process assessed?“
- „What factors determined the sustainability-assessment outcome?”

Case study NAHGAST

Target values for the module NAHGAST Meal-Pro (based on Speck et al. 2016, own translation).

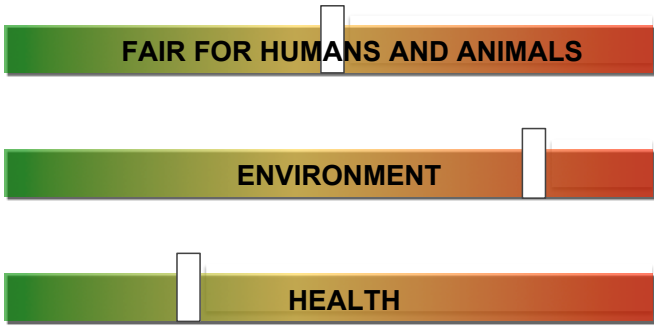
Dimension	**Indicator**	**Unit**	**Target value** **"Sustainable Level"**	**Source**
Ecology	Carbon Footprint	g CO_2eq per meal	< 800 (g CO2eq) per meal	Lukas et al. 2016
	Water demand	l per meal	< 640 l per meal	Lukas et al. 2016
	Material Footprint	g per meal	< 2670 g per meal	Lukas et al. 2016
	Land demand	m^2 per meal	< 1,25 m^2 per meal	Lukas et al. 2016
Health	Energy content (kcal)	Kcal per meal	< 670 kcal per meal	Lukas et al. 2016
	Fibre content	g per meal	> 8 g per meal	Lukas et al. 2016
	Salt content	g per meal	< 2 g per meal	Lukas et al. 2016
	Fat content	g per meal	< 24 g per meal	Lukas et al. 2016
	Total carbohydrates content	g per meal	< 90 g per meal	Lukas et al. 2016
	of which sugar	g per meal	< 17 g per meal	Lukas et al. 2016
Social	Share of fair-trade products	% possibly available fair-trade products	100% of possibly available fair-trade. Fair-trade *and* organic products should be preferred	Own estimation; Fair-trade Germany; Fair-trade Austria
	Share of animal products from appropriate animal husbandry	% animal products	100% animal products	Own estimation

Case study NAHGAST

Fictional result of a food assessment with NAHGAST Meal-Pro and label (own work)

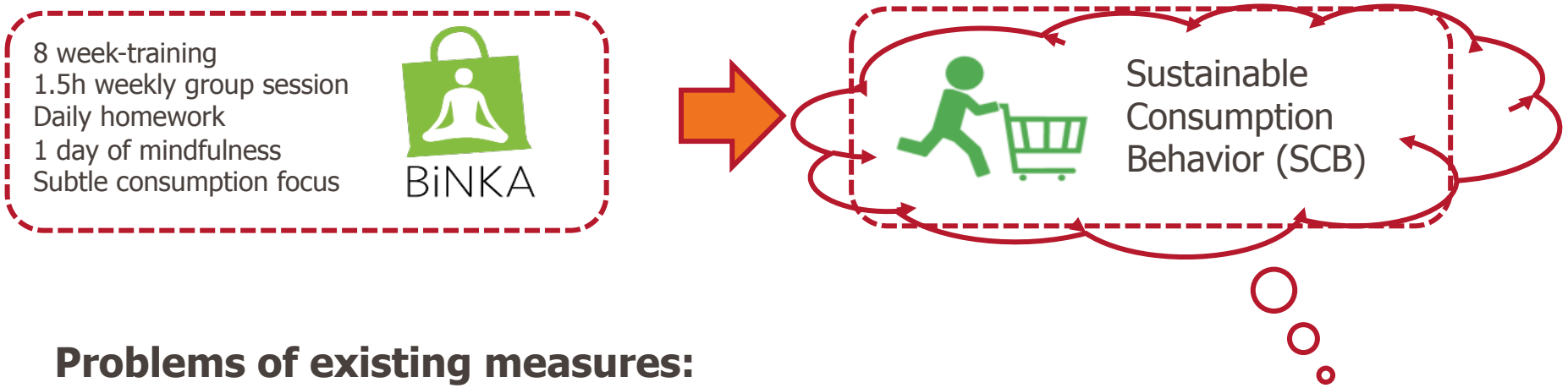
Indicators	Recommendations	Scores
Fairtrade products:	recommendable	3
Animal welfare	not recommendable	1
Energy amount:	recommendable	3
Fibre amount:	recommendable	3
Fat amount:	restrictively recommendable	2
Carbohydrates amount:	not recommendable	1
thereof sugar:	recommendable	3
Salt amount:	recommendable	3
Material Footprint:	restrictively recommendable	2
Carbon Footprint:	not recommendable	1
Water demand	not recommendable	1
Area required	not recommendable	1
Popularity	restrictively recommendable	2
Cost coverage	restrictively recommendable	2
	Recommendation	Score
Total result:	restrictively recommendable	2,3
Dimensions:	Recommendations	Scores
Social dimension	restrictively recommendable	2,0
Health	recommendable	2,5
Ecology	not recommendable	1,3
Economy	restrictively recommendable	2,0

below 1,5: not recommendable
1,5 to below 2,5: restrictively recommendable
above 2,5: recommendable



Rationale

How does participation in the BiNKA training effect individual SCB?

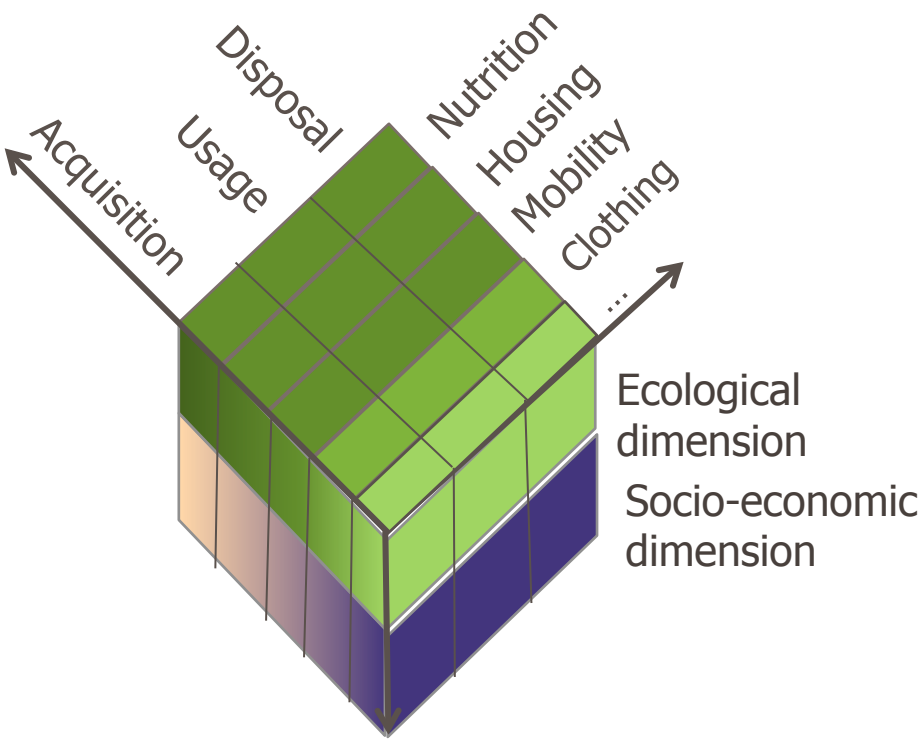


Problems of existing measures:

- Focus on single dimensions (e.g. environmental issues)
- Focus on single facets of consumption (e.g. purchase)
- Focus on single consumption areas (e.g. food)
- Selection of behaviors neglects sustainability impact (e.g. oven spray)

Sustainability Assessment: SCB-Cube

- Cube model of sustainable consumption behavior: “SCB-Cube”
- based on the Brundlandt declaration on sustainable development (WCED, 1987)



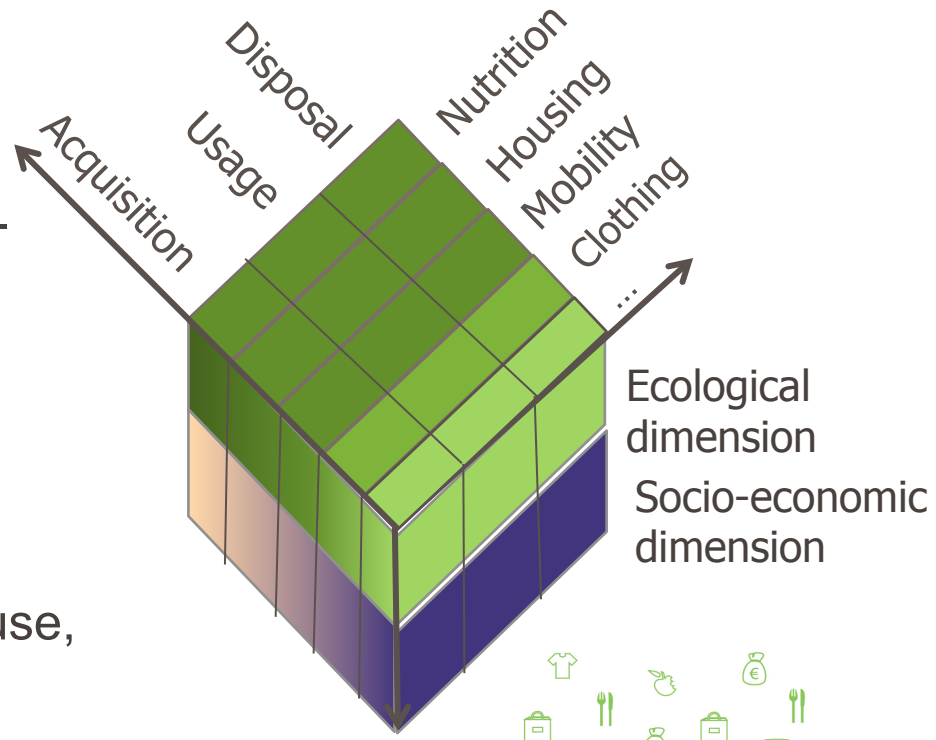
“Sustainable consumption behaviors (SCB) are individual acts of satisfying needs in **different areas of life** by **acquiring, using** and **disposing** goods and services that do not compromise the **ecological** and s**ocio-economic** conditions of all people (currently living or in the future) to satisfy their own needs.”

(Geiger, Fischer & Schrader, 2017)

Sustainability Assessment: SCB-Cube

- SCB-Cube applied to food and clothing
- Selection of behaviors based on their socio-economic and ecological impact
- Mix of indicators
  - *qualitative* (e.g. regionality, seasonality, working conditions, health issues)
  - *quantitative* (GHG emission, resource use, fair prices)
- Adapted to target audiences (adolescents) (Fischer, Böhme & Geiger, 2017)

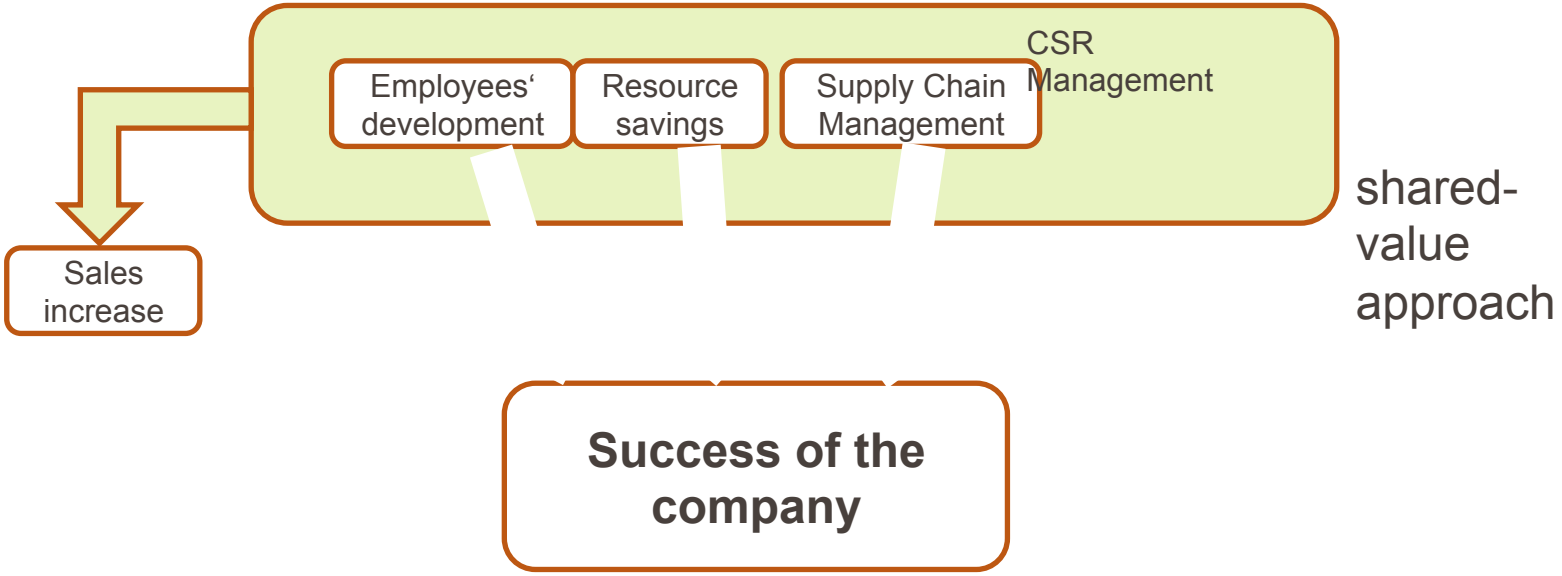
➔ Focus on relative impact (vs. absolute consumption limits)



Aim and Scope of the TransKoll-Projekt

Aim: to elaborate a systematic, economic process for small and medium sized enterprises

- **<u>Strategic</u> sustainability management**



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Aim: to elaborate a systematic, economic process for small and medium sized enterprises

- **Strategic sustainability management**

  Elaboration of sustainability in SMEs through a mixed method approach:
  Qualitative empirical assessments (focus group discussions, hot spot analyses and in-depth interviews with managers)
  Quantitative employee and **supplier surveys** used to understand organizational and behavioral barriers to implementing a sustainability management.

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e.g. dimension **environment**: efficient use of resources (energy use, water, and ingredients), reflection of the raw product's regional origin, enhanced waste recycling and reduced emission.

Employees' survey:
Attitudinal statements of the **company's action** towards the **environment**, towards **health**, in regard to **child care** facilities, company's economic stability was evaluated and its influences in regard to social norms.
Barriers and drivers for an enhanced production.
Company's culture and internal sustainability
Supplier survey:
Importance of sustainability in general ,
planned and **existent certifications** and regular audits,
responsibilities for sustainability activities,
barriers and **drivers** for an enhanced production ,
company's preparedness to **collaborate** in regard to enhanced production standards.

Comparison and Discussion
Similarities

- Normative approach: promoting a sustainable production and/or consumption
- Meeting the need of practice-oriented and accepted assessment methods

Comparison and Discussion
Differences (1/3)

NAHGAST:

- Enabling companies to assess the sustainability performance of their offerings
- Providing customers with clearly understandable information about single meals' sustainability

BiNKA:

- Exploring the influence of mindfulness training on consumption patterns

TransKoll:

- Helping to implement a sustainability management in food SMEs and their supply chains

Comparison and Discussion
Differences (2/3)

BiNKA:

- Contributes to the scholarly debate about valid and reliable instruments for assessing sustainable consumption behaviors of individuals and thus primarily targets the research community

TransKoll:

- Directed at enterprises that want to assess themselves as part of a sustainability management system

NAHGAST:

- Addresses both enterprises (for analyzing and improving their products and services) and consumers (for informing and nudging them)
- Main focus on enterprises (interactive work with the tool) instead of costumers one-directional information)

Comparison and Discussion
Differences (3/3)

TransKoll:

- Multistage approach where qualitative, hermeneutical procedures go together with standardized questionnaires and hot-spot analyzes:
- Deriving inductively measures, goals and indicators to transform the enterprises' current activities

NAHGAST:

- Qualitative and quantitative indicators connected with sustainability goals
- Quasi-qualitative but calculable results (1, 2, 3) for each indicator → calculating the results for each sustainability dimension or for the meal's total result

BiNKA:

- Choice of indicators was made with regard to their relative ecological and socio-economic sustainability impact in the specific consumption area and phase
- Selection reflects the most severe behaviors, but does not reflect absolute sustainability goals and limits

Comparison and Discussion
Limitations and Challenges

- Assessment of sustainable consumption or production should be fully comprehensive – but also feasible – necessity to prioritize and define cut-off points
- Incomplete data base esp. for reliable data on socio-economic sustainability impacts, but also for ecologic indicators (e.g. in the food production)
- Interrelatedness of sustainability impacts: Need of considering both production and consumption on different sustainability parameters (e.g. socio-economical, ecological) – an impact may be positive on one and negative to another parameter
- Decisions on how to deal with trade-offs and how to weight different impacts are made on normative grounds – making these grounds transparent is of critical importance

Comparison and Discussion
Conclusion

- Many topics have to be considered in a very specific project context
- This context dependence makes it hard for single projects to learn from each other so a comparison should rather focus on the approaches in the different SÖF projects, e.g.
  - selection of the fitting sustainability indicators
  - comparison of the approaches to identify the importance of aspects and indicators for sustainability
  - determination of the appropriate sustainable targets and levels, esp. if there are no widely accepted ones in the scientific community
  - exchanging knowledge about indicators that do not really fit together (e.g. qualitative/ quantitative, input/output/impact-oriented, indicators belonging to different sustainability dimensions), and about weighting of indicators against each other
  - justification of the normative approaches from a scientific point of view
  - dealing with incomplete data
- Such comparisons of approaches could allow an approximation on the question if a concept is appropriate for assessing sustainability or not

Comparison and Discussion
Outlook

- NAHGAST, BiNKA and TransKoll have done first steps for working out indications and recommendations for choosing adequate approaches to sustainability assessment
- A comparison of approaches can be elaborated based on this discussion with the participation of more SÖF projects in the next months
- The SustEcon conference can serve as a networking and discussion platform for going next steps on this way

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