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## **Sustainable Consumption in the Field of Nutrition in Germany – Four Examples**

### **Abstract**

Four main surveys in Germany focused on sustainable consumption in the field of nutrition. The results and the methods of these studies were analysed. The results show the complexity of nutrition behaviour and influencing factors. Organic products have become more familiar in recent years but the purchase frequency of organic products is low. Different quantitative and qualitative methods were used to gather data. Recommendations were given for the food supply chain as politics and consumer counselling in the conclusions of these projects. Advice for future research is offered at the end of the analyses. Inter- and transdisciplinary research and methods should increase. Not only nutrition, but also all household activities should be included in the analysis of sustainable consumption.

**Key words:** sustainable consumption, organic products, private households, inter- and transdisciplinary research

**JEL codes:** E2

### **Introduction**

#### *Background*

The message of the UN Earth Summit of Rio in 1992 was that nothing less than a transformation of our attitudes and behaviour would bring about necessary changes (UN, 1997). During the United Nations Conference on Sustainable Development (Rio+20), from 20th to 22nd of June 2012, Secretary General Ban Ki-moon must state that since the Earth Summit twenty years ago, progress has been too slow and much more needs to be done. “It is time for all of us to think globally and locally” (UN, 2012).

Looking at Germany, we can see that many local Agenda 21 groups and processes have been established since 1992 (BMU, 2002). Since 2002, a national strategy for German sustainability perspectives exists for each of the following main fields:

- intergeneration-fairness
- quality of life
- social cohesion
- international responsibility (BMU, 2010).

Reports were presented in 2004 and then every four years statistical indicator reports have been presented every two years since 2006 (BMU, 2010). The German Council for Sustainable Development (Rat für nachhaltige Entwicklung) was established in 2001. The sustainable basket from the German Council for Sustainable Development was published

first in 2002/2003, and was in many cases revised with the participation of consumers. The basket gives concrete hints for the daily shopping, especially for nutrition and shopping (Rat für nachhaltige Entwicklung, 2011).

In the last few years, sustainable consumption has become the subject of more and more research in Germany. Since 1999, the German Federal Ministry of Education and Research (BMBF) has been funding Socio-Ecological Research (SÖF). Through this programme, strategies for solving precise societal sustainability issues should evolve. Strategies would be developed in order to solve social sustainability issues connecting ecological transformation of the society with social justice and economic demands (German Aerospace Center, o.J./1).

“Despite considerable knowledge regarding the necessity of sustainable consumption patterns and a broad range of measures in the field of consumer information there cannot be recognized a general trend towards sustainable consumption within the society” (German Aerospace Center, o.J./2).

While in Germany in 2008 (Federal Statistical office at al. 2011) the largest expenses (32.6%) were for housing, heating, electricity, gas and other fuels, etc., many research fields and funds were oriented in the direction of energy-saving and sustainable buildings.

Other fields such as transport (14.6%), food, beverages, and tobacco products (14.3%) (Federal Statistical office at al. 2011) were not as important.

Since 2008, the German Federal Ministry of Education and Research has been funding ten research projects focusing on “From knowledge to action – new paths to sustainable consumption”. The themes were mostly directed to energy saving, e.g. reduction of electricity use, intelligent energy consumption, conserving energy in houses, and energy mix. Nutrition was only included in one project (German Aerospace Center, o.J./ 2). The accompanying research for the focal point elaborates syntheses, advances the exchange of experiences, furthers the transformation process in policy fields and societal actions (German Aerospace Center, o.J./3).

## *Methods*

The aim is to give an overview of main empirical research projects conducted on the subject of sustainable consumption in the field of nutrition in Germany over the last ten years. There is no requirement for completeness.

The main results and methods will be presented, and the bias of methods and the recommendations are checked.

## **Results**

### *Nutrition styles in Everyday Life*

The Institute of Socio-Ecological Research (ISOE) had analysed how nutrition was embedded in the everyday life of consumers. In this transdisciplinary project funded by Social-

Ecological Research (SÖF), ISOE developed a typology of nutritional styles. An empirical survey with a qualitative and quantitative methodology was used. The quantitative survey with a representative group of 2.039 adults was aligned towards nutrition, health and behaviour in 2004. Afterwards they clustered attitudes towards nutrition and health as well some of the socio-structural characteristics. Seven nutritional styles were identified (Stiess, Hayn, ISOE, 2004, p. 238f).

The nutritional style of “sophisticated nutrition conscious – Ernährungsbewusste Anspruchsvolle” (13%) supports sustainability. These consumers were very interested in nutrition issues. They were looking for quality, freshness and the origin of products, and considered organic food to be a benefit to body and soul. This style was not bound to a specific age or phase of life (Stiess, Hayn, ISOE, 2004, p. 239f).

The researchers stated that the results of the project could help “to identify potentials and starting points that could support a ‘food change’” (Stiess, Hayn, ISOE, 2004, p. 240).

### *German National Nutrition Survey II*

The Federal Research Institute of Nutrition and Food, which was newly renamed in 2008 as the Max Rubner–Institute, completed this research on nutrition in Germany. More than 20.000 persons between 18 and 80 years participated between 2005 and 2006 for a German population representative study. Lifestyle factors regarding health and nutrition behaviour as well as food intake were the foci. Different research instruments were used, e.g. diet-history-interviews by computer, questionnaires about activities and nutrition behaviour, telephone calls, and body measurements (MRI, o.J.).

Approximately 45% bought organic products, and from this group 5% regularly bought more product groups as organic, 26% occasionally had part of the product group as organic, and 14% seldom picked organic in some product groups. An above average percentage of women were purchasers of organic items (Hoffmann, Spiller, 2010, p. 131).

Adults between 18 and 24 years bought organic products least. Seniors did not do so often but when they did, it was intensive.

Major influencing factors were psychographic parameters, e.g. environmental consciousness and sustainability-related attitudes. These parameters had a greater influence than socio-demographics.

Central to consumer influence are altruistic motives like fair prices, anti-genetic engineering and animal protection. Organic buyers have a greater knowledge of nutrition (Hoffmann, Spiller, 2010, p. 132).

Buyers of organic food showed more favourable food choices than non-buyers. They had more normal weights, especially the women (Hoffmann, Spiller, 2010, p. 133).

In the end, recommendations were given to increase the intensity or loyalty of the buying consumers and to use various approaches to acquire new customers. They were addressed to policy makers (Hoffmann, Spiller, 2010, p. 134), consumer counsellors (Hoffmann, Spiller, 2010, p. 135ff), the food industry and retailers (Hoffmann, Spiller, 2010, p. 137ff). A marketing mix on the basis of the analysis of the target group was suggested (Hoffmann, Spiller, 2010, p. 139).

*Life events*

A research project at the Technical University of Berlin (funded by Socio-Ecological Research – SÖF) shows how personal changes in life, such as the birth of a child or moving to a new city, open opportunities for a change towards more sustainable behaviour in the areas of mobility, energy and nutrition. The researchers wanted to identify the potential for changes towards sustainable consumption. They made 40 qualitative interviews between 2008 and 2009 which were analysed using Grounded theory. The results showed that the birth of the first child is a fundamental life event. Everyday consumption must be organized around the needs of the child. Sustainable nutrition will be important. For relocation, sustainable patterns in the areas of mobility and energy saving were considered. In both cases the preparation phase before the event was very important. During this time, there is a very good opportunity for acquisition of knowledge, purchase of products, and rearrangement of the home to pre-structure later consumption patterns (Schäfer, Jaeger-Erben, 2011, p. 129).

Life events are opportunities for changes in direction for sustainable consumption. This should be respected in interventions and consumer campaigns (Schäfer, Jäger-Erben, 2011, p. 226).

*“So eats Germany”*

In their study “So eats Germany” from 2011, Nestle Deutschland looks for the status of the nutrition situation and the purchasing behaviour amongst consumers. They had enlarged their first study from 2010 through new themes (e.g. sustainability) and by contacting more respondents (by about more than 10.000). The methods were face-to-face and online surveys (Nestle Deutschland AG, 2011, p. 6f, p. 156-159).

The core results show a strong interdependence between social changes and the attitude towards nutrition. The abolition of every-day structure is a main problem. The time allotted to eating diminishes more and more and differs more between family members. Fundamental knowledge about nutrition is necessary for a well-balanced life style (Nestle Deutschland AG, 2011 p. 7). Only some consumers had reduced their expenses for nutrition during the economic crisis in recent years (Nestle Deutschland AG, 2011, p. 15).

The results reveal that only one third of the interviewed 16-84 year-old persons showed high interest in different aspects of sustainability, e.g. fair prices for ecological farmers and distributors. Only 15% were willing to pay a higher price (Nestle Deutschland AG, 2011, p. 12).

Of the respondents, 67% had heard of sustainability and social responsibility in the scope of nutrition but only 37% knew the correct definition. Of the respondents, 31% knew the general states of cropping systems, and 14% understood species-appropriate methods of keeping of animals. Therefore the associations were diffused and the activity panel was low for own input for a sustainable future (Nestle Deutschland AG, 2011, p. 12).

Clearly presented information is an important determinant of buying behaviour. About 95% of respondents knew the most important seals of quality and 31% paid attention to them when making buying decisions (Nestle Deutschland AG, 2011, p. 12).

The results are an ambitious worksheet of economy, trade, and politics that can be used to offer consumers solutions for nutrition. This helps them make sustainable improvements in their quality of life, as well as to help them for a more believable position (Nestle Deutschland AG, 2011, p. 15).

## Discussion

The results of four surveys in Germany were presented in the direction of sustainable nutrition. They showed the complexity of nutrition behaviour. The methods that were used were quantitative and qualitative, both food- and body-measuring. The disciplinary and transdisciplinary research was adopted.

The results illustrated that sustainable nutrition consumption is to be seen as important to a large per cent of consumers; however, the concrete actions of buying organic products are low. The influence factors are, on the one hand, socio-demographic factors, and, on the other hand, psychographics and socio-structural factors.

Almost all of the surveys conclude with recommendations for all participants, from producers, the food industry, retailers as well as consumers, politics and consumer counselling.

## Conclusions

Several research studies result in the politics and other participants giving good recommendations for sustainable nutrition for the whole population as well as for the target groups.

For future research the orientation towards inter- and transdisciplinary research must increase.

The relatively new science “Nutrition ecology - Ernährungsökologie” could be considered (Hoffmann, Schneider, Leitzmann, 2011). The results of the accompanying research from “Knowledge to Action” (Defila, Di Giulio, Kaufmann-Hayoz, 2011) and the advice for inter- and transdisciplinary research (Defila, Di Giulio, 2011) could be used.

It would be preferable to have a common focus on sustainability in all aspects of private households instead of dividing the focus into energy, electricity and nutrition, for example. A wider purview of the German Socio-Ecological Research (SÖF) for sustainable consumption could be a reasonable possibility.

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## **Konsumpcja zrównoważona w dziedzinie żywienia w Niemczech – cztery przykłady**

### **Streszczenie**

Cztery podstawowe badania ankietowe w Niemczech skoncentrowały się na zrównoważonej konsumpcji w dziedzinie żywienia. Dokonano analizy wyników i metod tych badań. Wyniki wskazują na złożoność zachowań żywieniowych i wpływających na nie czynników. Produkty ekologiczne stały się w ostatnich latach bardziej znane, ale częstotliwość kupowania produktów organicznych jest niska. Do zebrania danych użyto różnych metod ilościowych i jakościowych. We wnioskach tych projektów podano zalecenia dla łańcucha dostaw żywności w charakterze polityk i doradztwa konsumenckiego. Pod koniec analiz proponuje się doradztwo w sprawie przyszłych badań. Należy zwiększyć zakres badań i metod inter- i transdyscyplinarnych. Analiza zrównoważonej konsumpcji powinna objąć nie tylko żywienie, lecz także całą działalność gospodarstw domowych.

**Słowa kluczowe:** zrównoważona konsumpcja, produkty ekologiczne, indywidualne gospodarstwa domowe, badania inter- i transdyscyplinarne.

**Kody JEL:** E2

## **Устойчивое потребление в области питания в Германии – четыре примера**

### **Резюме**

Четыре основных опроса в Германии были сосредоточены на устойчивом потреблении в области питания. Провели анализ результатов и методов этих опросов. Результаты указывают сложность поведения в отношении питания и влияющих на него факторов. Экологические продукты стали в последние годы более известными, но частотность их покупки низка. Для сбора данных использовали разные количественные и качественные методы. В выводах из этих проектов указаны рекомендации для цепочки поставок продуктов питания в качестве политики и потребительских советов. В конце анализов предлагаются советы по вопросу о будущих исследованиях. Следует расширить круг интер- и трансдисциплинарных исследований и методов. Анализ устойчивого потребления должен охватить собой не только питание, но и всю деятельность домохозяйств.

**Ключевые слова:** устойчивое потребление, органические продукты, частные домохозяйства, интер- и трансдисциплинарные исследования.

**Коды JEL:** E2