

# **Strategies to promote sustainable consumer behaviour – The use of the lifestyle approach**

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**Abstract**

Environmental problems caused by human activity are a growing problem. Both production and consumption of goods and services cause a large amount of negative environmental impacts. Embracing the concept of sustainable development, governments aim to devise strategies to promote more sustainable consumer behaviour.

For such strategies to be effective, it must be understood how consumer behaviour works and how it can be influenced. Sustainable consumer behaviour is influenced by a multifaceted and dynamic system of interacting factors. These factors are attitudinal, socio-demographic as well as external contextual. The make up of the influencing factors differs according to the needs area (e.g. housing, food or mobility) and the consumption practices within a needs area.

Strategies to promote more sustainable consumer behaviour must address the influencing factors by using a range of instruments in combination. The instruments can be regulatory, economic or social. The consumption practices that are targeted for change need to be environmentally significant otherwise the aim of increasing environmental sustainability of consumer behaviour cannot be fulfilled. Strategies must also take a long-term perspective and need to be evaluated regularly after implementation.

A comprehensive approach to understand sustainable consumer behaviour better is the lifestyle approach. It takes into account the wide range of factors influencing consumer behaviour. By conducting surveys, a consumer typology can be drawn up for a specific needs area. This knowledge can be used to create comprehensive opportunity structures for different types of consumers to practice more sustainable consumer behaviour.

A review of four recent German studies that employ the lifestyle approach shows the usefulness of such an approach. It was found that although environmental orientations are important for sustainable consumer behaviour, non-environmental orientations are usually stronger. Socio-demographic and external factors further limit the extent to which consumer behaviour will be sustainable. Consumers are also sceptical about the credibility of actors asking them to change their behaviour as well as about environmental issues in general. All relevant societal actors need to therefore be involved to provide credibility to strategies for more sustainable consumer behaviour.

While the lifestyle approach offers detailed knowledge about how consumer behaviour works with different types of consumers, it is often case-specific. The results of lifestyle studies are difficult to compare and generalise. They should be considered more as a heuristic tool in consumer behaviour research. However, improvements on the comparability of studies can be made if a standardised process of research methodology could be agreed upon by researchers.

Future research is needed on the factors influencing sustainable consumer behaviour. Research should especially focus on the socio-demographic as well as external contextual factors. The environmental impacts of specific consumption practices must be measured. Generally, an interdisciplinary approach must be taken.

Finally, public debate to define sustainable development and sustainable consumer behaviour must continue. Here, it is important to look at questions of social inequality and poverty. Furthermore, the environmental responsibility that should be taken by the different actors in society must be discussed, also from a gender perspective.

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## 1 Introduction

The global environment is threatened by the level of impacts of human activities. Air pollution, water pollution, soil acidification, desertification and increasing urbanisation are only a few examples for the consequences of human activities that lead to environmental degradation. The largest environmental impacts today origin from the highly industrialised countries. Here, the two sources of impacts are the production and the consumption of goods and services.

Most governments in industrialised countries support the concept of a sustainable development. To achieve a long-term sustainable development, environmental impacts have to be reduced. Impacts can be reduced at the industry level but also at the level of individual household consumption. It is estimated that in Germany private consumer behaviour results in 30 to 40% of all negative impacts on the environment. It is therefore considered a target area for more sustainability (Umweltbundesamt in Wimmer 2001:78). Consumers can reduce their impacts by changing their detrimental behaviour. Examples are energy saving or the consumption of more environmentally friendly products.

It has been shown that the awareness about environmental problems is relatively high amongst people in industrialised countries. In Germany, 30% of the population can be considered environmentally conscious (Wimmer 2001:90). Many would like to change their behaviour to contribute to sustainable development. At the same time, there do exist many feasible options for people to do so: there are for example information materials on how to save energy or minimise waste in the household, and there are more sustainable options for a wide range of products, e.g. organic food, less polluting detergents. Furthermore, new, more efficient technology such as modern heating boilers and insulation materials is available to upgrade property.

Although people want to become more sustainable and there are options to do so, the environmental impacts from consumption are still continuously increasing. It is therefore necessary for researchers to shed more light on consumer behaviour. How does it work, why does it still result in an increasing amount of environmental impacts and how can consumers be encouraged to behave in more sustainable ways?

Researchers from several disciplines, for example psychology and sociology, have in the past looked at how consumer behaviour works and what is influencing it. They have tried to find out about consumers' intentions, needs, wishes as well as routines and habits in order to develop options for them to change their behaviour to become more sustainable.

One tool researchers have used is to develop consumer lifestyle typologies. Consumer behaviour comes in many different types and socio-demographic or class factors by themselves had soon been found insufficient to explain it. Comprehensive consumer lifestyle typologies take into account socio-demographic variables alongside attitudinal characteristics such as orientations and preferences as well as consumer behaviour patterns. The lifestyle approach provides more understanding about consumer behaviour and is the necessary basis for any initiatives or programmes to promote more sustainable consumer behaviour.

The first lifestyle type in Germany which practiced sustainable consumer behaviour was identified in the 1980s. The SINUS market research institute called this lifestyle type the 'alternative milieu'. Then, environmentally friendly practices were not very common and people who adopted them were seen as an 'alternative' niche group. Today however, sustainable consumer behaviour is practised by several lifestyle types, some of which are very different from each other. This is due to the diffusion of environmental values and practices broadly throughout society, which has occurred since the 1980s. To behave in a sustainable way to some extent has become a routine for many, and many rarely think about the environmental benefits that these routines bring with them. An example is the separation of rubbish for recycling purposes, which has become a daily routine procedure in most German households, however, cannot be credited only to environmental orientations anymore. Many people recycle their rubbish regularly without holding particular environmental values (Brand 2002:188).

The lifestyle approach must therefore be used to understand why some groups of consumers are motivated to behave sustainable and why other groups are not motivated to do so. Only strategies that address just this multitude of different motivations in their communication to very different groups of consumers will be able to result in more sustainable consumer behaviour.

## 1.1 Aim of the research

This thesis is an exploratory study on sustainable consumer behaviour, the lifestyle approach and its role in strategies for more sustainable consumer behaviour. One goal of exploratory research is to provide understanding of a process or problem (Hart 1998:47).

The thesis draws together the discussion around sustainable consumer behaviour, strategies to promote such behaviour as well as the lifestyle approach. The aim of this thesis is twofold: Firstly, it is to learn more about how sustainable consumer behaviour works and secondly, it is to find out how this knowledge can be used to improve strategies to promote more sustainable consumer behaviour. The role of the lifestyle approach in such strategies is examined. Additionally, recommendations for future research are given.

In this paper, I will explore the following main questions:

- When is consumer behaviour sustainable?
- What factors influence sustainable consumer behaviour?
- How can these factors be influenced to make consumer behaviour more sustainable?
- What strategies are there to promote more sustainable consumer behaviour?
- What role does the lifestyle approach play in strategies for more sustainable consumer behaviour?

## 1.2 Methodology

### 1.2.1 Scientific tradition

This thesis is influenced by an interpretative sociological perspective. Weber defined sociology as ‘a science which attempts the interpretive understanding of social action in order thereby to arrive at a causal explanation of its course and effects.’ (Weber in Blaikie 1993:37). Weber’s social action is made up of behaviour as well as the motives for it (Blaikie 1993:37). In this thesis I use the term ‘behaviour’ in the sense of Weber’s social action, in that it includes motives.

This thesis can be considered as taking an interpretivist as opposed to a positivist scientific approach. Halfpenny (in Silverman 1985:95-96) describes this distinction as follows: ‘In contrast with the sharp distinction drawn between concepts and explanatory hypotheses within the positivist approach, in the interpretivist approach ‘understanding’ the actions and interactions of respondents, by virtue of grasping and comprehending the culturally appropriate concepts through which they conduct their social life is the way in which explanation is achieved.’

Taking this approach further, in this thesis I also look at the individual in relation to their physical and social environment. Therefore I also endorse some of the suggestions of realism. The first stage in the process of realist science is to critically describe patterns of events by exploration. This is followed by theoretical studies to rationally explain the patterns found. The causal or generative mechanisms which produce the patterns are identified (Harré in Blaikie 1993:60). This process is used in this thesis to explain the mechanisms underlying the observable consumer behaviour. According to Blaikie (1993:99) ‘the aim of realist science is to explain observable phenomena with reference to underlying structures and mechanisms’.

The approach taken for this thesis is also normative in that I set out to define what an effective strategy to promote more sustainable consumer behaviour is. I also define sustainable consumer behaviour and assume that such behaviour will actually reduce environmental problems.

### 1.2.2 Methods

This thesis is based on two parts of research. Firstly, a literature review with focus on sustainable consumer behaviour, the lifestyle approach and strategies to promote more sustainable consumer behaviour was conducted. Secondly, four studies that use the lifestyle approach were compared and reviewed in detail. For both parts secondary research was used throughout, in this case the review of literature such as books, reports and articles. To identify relevant literature to be reviewed I read the most recent literature on the topic of sustainable consumer behaviour and the lifestyle approach. I continued the search by looking at literature which had been referred to in the publications that I had read before. In addition to this process, I did a keyword search in library catalogues, journal databases as well as the social sciences citation index.

To explore and compare secondary empirical research was found to be an appropriate strategy. The strategy served the aim of this thesis, that is, to better understand how sustainable consumer behaviour works and what role the lifestyle approach plays in attempts to promote more sustainable consumer behaviour. As there had already been research conducted in these areas it could readily be analysed by way of a literature review as well as the review of four empirical studies using the lifestyle approach. One advantage of using secondary research over primary research is that the studies used in the secondary analysis are most often of high quality. They were usually conducted by experienced researchers who often had a high level of resources available for their conduction. The studies used for secondary analysis have usually been published, i.e. their quality had been acknowledged earlier (Bryman 2001:197).

To be sure, primary research is one set of strategies that could have been used to contribute to the research in this area. Nevertheless, I want to argue that analysing existing research and producing a comprehensive overview of research may sometimes be at least as useful. Instead of adding another empirical study employing the lifestyle approach, I chose to review the relevant literature and analyse four recent studies using the lifestyle approach in a comprehensive manner.

These two parts of the research are linked. The literature review provides an overview of research on sustainable consumer behaviour, the lifestyle approach as well as on strategies to promote more sustainable consumer behaviour. Following, the findings of the four studies which employed the lifestyle approach were drawn together and significant issues identified. These results were then related back to the results of the literature review. With this knowledge, the role of the lifestyle approach in strategies for more sustainable consumer behaviour was evaluated.

This secondary analysis and the important issues resulting from it can be the basis for further, more focussed research in this area. One aim of secondary analysis is to distinguish what has been done in research from what needs to be done (Hart 1998:27). The evaluation of what has been found so far in a scientific area is an essential part of the process of knowledge accumulation in this research field. It serves to point out limitations and weaknesses in the accumulated knowledge and gives direction for future research (Hoyle, Harris, Judd 2002:483).

Furthermore, secondary analysis is useful in this case, because the research that I reviewed originates from several different research disciplines. These are psychology, socio-psychology, sociology and social ecology. Secondary analysis here was a means to draw together research results from different disciplines and to synthesise this knowledge to guide future research as well as application to programmes and policies. This synthesis of studies from different disciplines might have been more difficult to operationalise when conducting primary research where it is more likely that the research will be done with the background of one specific discipline only.

### ***Review of four studies***

For the review of the four studies, a narrative review approach was taken. Meta-analysis is an approach that I could have used for the review of the four studies. However, for this approach, the hypotheses of all four studies needed to be the same, which is not the case with the studies chosen (Hoyle, Harris, Judd 2002:493). The four studies are not directly comparable, however, relevant issues could still be identified.

Here, a further advantage of secondary research can be pointed out. The four studies might not be directly comparable as they each have slightly different aims. Secondary analysis however can re-analyse studies in the light of some other aim, which has not been dealt with by the studies themselves. The results of several different studies, drawn together in a review, can provide new perspectives (Bryman 2001:199-200). In the case of this thesis, I reviewed the four studies also to find out what role the lifestyle approach can play in wider strategies to promote more sustainable consumer behaviour. This question has not been specifically dealt with in any of the studies. However, by drawing the studies together, the question of the role of the lifestyle approach in strategies could be considered.

A disadvantage of secondary analysis is that the researcher is analysing studies which he or she has not conducted him or herself. The researcher is initially not familiar with the data and method of the studies to be analysed (Bryman 2001:200). I also encountered this problem when reviewing the four chosen studies on the lifestyle approach. The study reports often referred to other, unpublished preliminary studies or intermediate reports for a detailed description of their methodology. I was in certain cases not able to obtain these documents, and therefore was limited in my knowledge of these studies.

Another disadvantage can be that although secondary research analyses published studies conducted by skilled researchers, the quality of the data and results cannot entirely be ensured. This is better possible with primary research, where the researcher knows exactly where the results are coming from and how reliable they are (Bryman 2001:200-201).

### **1.2.3 Scope of the study**

I focussed on consumer behaviour in Germany. Germany is one of the countries with the highest consumption-induced environmental impacts and it has a large population. Both characteristics make Germany an interesting country to study with regards to strategies to promote more sustainable consumer behaviour. The four studies employing the lifestyle approach that I analysed are four German studies. They were the most comprehensive studies using the lifestyle approach for sustainable consumer behaviour that I could find. I could not find studies from other countries that use the lifestyle approach specifically focussing on sustainable consumer behaviour.

For the general discussion around consumer behaviour, the lifestyle approach and strategies for more sustainable consumer behaviour I drew from studies done by German as well as international researchers. The focus of these studies is also either on conditions in Germany or other industrialised high-consumption countries. The results of this thesis apply to Germany. They could potentially be applied in other industrialised high-consumption countries. Still, it has to be kept in mind that the conditions for sustainable consumer behaviour in other countries might vary significantly in some cases.

I also limited my research on the research results that have emerged most recently, i.e. approximately between 1980 and today. The lifestyle approach has been used more widely since the 1980s and also research on consumer behaviour is rather young. I found that the most interesting studies regarding sustainable consumer behaviour in particular are also the most recent ones.

Furthermore, some of my assumptions for this research narrowed down the literature which I chose to review. Firstly, as will be mentioned again later on, I assumed that environmental awareness is not a reliable predictor for sustainable consumer behaviour. Therefore, while searching for relevant literature, I did not consider studies which solely focus on environmental awareness. Secondly, when looking for empirical studies on sustainable consumer behaviour, I ignored studies which did not research the actual consumption patterns of consumers. As I was most interested in the actual sustainable consumer behaviour, I assumed that any meaningful way to research this area is to also observe actual behaviour as part of a study.

### **1.2.4 The influence of research from different disciplines**

It was stated in the methodology chapter that the literature review is based on research which originates from different research disciplines. As the study draws together a wide range of factors influencing sustainable consumer behaviour it is interesting to identify what results come from what disciplines. Different disciplines have different perspectives and this is evident in the range of relevant factors for sustainable consumer behaviour. Most of the research originates from the areas of sociology, as well as from psychology and socio-psychology. The latter two disciplines focus more on the individual. Therefore, studies in this discipline will emphasise more the attitudinal factors when looking at sustainable consumer behaviour. Sociology on the other hand sees the individual as part of a social environment. It might therefore be better capable to research sustainable consumer behaviour, which is strongly influenced by external factors.

### **1.3 Limitations of the study**

The aim of this thesis was to get a better understanding of sustainable consumer behaviour and the lifestyle approach by drawing from a wide range of results of existing research and creating a comprehensive overview. This results in the thesis to be broad rather than in-depth. The results of the thesis can be taken as a starting point for further research to validate them.

The four studies employing the lifestyle approach which I analysed are few in number. The results one can draw from such a small number of studies might be limited. Still, these four studies represent the state of research in the field of lifestyle studies with regards to sustainable consumer behaviour. A review of these four studies can identify the most significant issues and can be used to understand how the lifestyle approach can be used in strategies for more sustainable consumer behaviour.

## 1.4 Structure of the thesis

After introducing the concepts of sustainable development, environmentally significant behaviour and sustainable consumer behaviour (Chapters 2, 3 and 4), I explore to some detail the internal and external factors that influence sustainable consumer behaviour (Chapter 5). Chapter 6 examines the strategies to promote more sustainable consumer behaviour, followed by a discussion of the instruments that can be used in such strategies (Chapter 7). Chapter 8 introduces the reader to the theoretical background and history of lifestyle research. The benefits and limits of the lifestyle approach are discussed in Chapter 9 and Chapter 10 looks at how lifestyle research can be used in strategies to promote more sustainable consumer behaviour. Following this literature review, I present the review of four studies that employed a lifestyle approach (Chapter 11). The results are discussed in the light of the literature review (Chapter 12). Chapter 13 then sums up the role of the lifestyle approach in the conception and implementation of strategies to promote more sustainable consumer behaviour. This chapter also gives an example of how such a strategy can be constructed. In Chapter 14 recommendations for future research are given. Finally, the conclusions of this study are presented in Chapter 15.

## 2 Sustainable development

In 1987, the World Commission on Environment and Development (WCED) published the report 'Our Common Future'. The definition of sustainable development that was brought forward by this report is still the most commonly used definition. "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (WCED 1987:43). Environment, society and economy must all aspire to become sustainable, as sustainable development cannot be achieved without sustainability in all three areas. This definition is open for many different interpretations. For example, sustainability can be weaker or stronger according to how one defines it. Also, it is open to debate what the needs of the current and future world citizens are. However, the flexibility of this concept is also an advantage, as anyone can work towards giving this concept a meaning, which, by means of academic and public debate can be refined. Complete sustainability might not be possible to reach. We can rather speak of achieving a 'more' sustainable development and of an ongoing, long-term process.

## 3 Environmentally significant behaviour

Stern (2000) introduces two definitions of environmentally significant behaviour. The first one considers environmentally significant behaviour to have positive or negative impacts on the natural environment. The second definition takes an actor perspective. Environmentally significant behaviour is here related to the intent of the actor to act in an environmentally significant way, most often with the aim of having a positive impact.

Stern points out the fact that there can be a gap between what behaviour people think is environmentally significant and what behaviour actually is environmentally significant, i.e. actually has an impact on the environment. For example, many people in the U.S. limit their use of spray cans as they want to minimise their contribution to the impact on the ozone layer. Their behaviour is not environmentally significant because the substances that affect the ozone layer have already been banned in the U.S. long ago. Employing these two definitions of environmentally significant behaviour thus enables one to find out about what actual environmental impact behaviour has, as well as people's conception of environmentally significant behaviour (Stern 2000:408).

As mentioned above, the actual environmental impact of a behaviour and what people think it is often differ significantly. This can be due to people's insufficient knowledge about general environmental impacts of consumption and about their own consumption in particular. Another form of misconception about environmentally significant behaviour is that some people focus their perception on a few areas in which they behave more sustainable, ignoring other areas in which their behaviour is less sustainable. For example, a person who is regularly separating the rubbish for recycling, as well as using more sustainable detergents

and also taking public transport to work, might feel quite sustainable in their behaviour. However, he or she might ignore the impacts caused by frequently using air travel as transport and by living in a large, old standard flat that needs a high amount of energy to be heated (Schäfer 2002: 67). It is therefore necessary that people get a better understanding about what impacts different behaviours have on the environment to be aware of how environmentally significant their own behaviour is and where changes are needed to become more sustainable.

There is a wide range of environmentally significant behaviour. It includes environmental activism, political or financial support of environmental organisations or parties, as well as the contribution to public debate with one's opinion. Organisational behaviour, i.e. the decisions one makes as part of one's profession, can also be environmentally significant. For example, an engineer can design a new appliance with the aim of it being energy efficient. Then there is environmentally significant behaviour that takes place in the private sphere. This is consumer behaviour. It comprises the 'purchase, use and disposal of personal and household products that have environmental impact' (Stern 2000: 409). Political, organisational and private environmentally significant behaviours are likely to be influenced by different determinants respectively (Stern 2000:410).

This thesis will be limited to consumer behaviour as one area of high relevance for sustainable development, due to the fact that nearly any person acts as a consumer sometimes and therefore the cumulated environmental impacts make up a large part of all environmental impacts caused by human activities.

#### **4 Sustainable consumer behaviour**

I define consumer behaviour along the lines of Stern (2000) above, i.e. as behaviour relating to the purchase, use and disposal of personal and household products. Consumer behaviour will be more sustainable, the less negative environmental impact it causes. This means that I do not define sustainable consumer behaviour in the sense of general sustainable development, which aims for a balance of environmental, social and economic sustainability. Instead I only look at the environmental sustainability of consumer behaviour. This is in line with the majority of the current research on sustainable consumer behaviour which also mainly focuses on the environmental dimension of sustainability. Due to the complexity of the three dimensions of sustainable development and their interconnections, it is quite difficult to decide what consumer behaviour actually would be more sustainable than other (Rosenberger 2001:442).

Aiming 'only' for environmentally sustainable consumer behaviour means to aim for a decrease in environmental impacts, which is easier to determine and quantify. It can be assumed that environmentally sustainable consumer behaviour might also be sustainable generally. Looking only at environmental sustainability of consumer behaviour is not ideal, but it is a practical solution for this thesis which has not got a big enough scope to be able to discuss what consumer behaviour would be sustainable when aiming for environmental as well as economic and social sustainability. Still, a consensus must be found on what sustainable behaviour really means. Then it also will be easier to define when consumer behaviour is truly sustainable, in a social, economic and environmental way (Schrader & Hansen 2001:23-25).

There are several ways for consumer behaviour to be more sustainable. Individuals and households can either become more energy-efficient, use less energy or replace environmentally damaging products with more environmentally friendly products. Here, it is important to acknowledge that maximum environmental sustainability might actually prevent social sustainability. It is not viable to ask households to minimise their consumption when this would mean a lower quality of life or even poverty. It is therefore necessary to address the socio-political issue of sustainability in relation to social inequality and poverty when devising strategies for more sustainable consumer behaviour (Kraemer 2002:61). This is one of the more obvious questions that needs to be dealt with when trying to find a consensus about the integration of the environmental, social and economic dimensions of sustainability, as mentioned above.

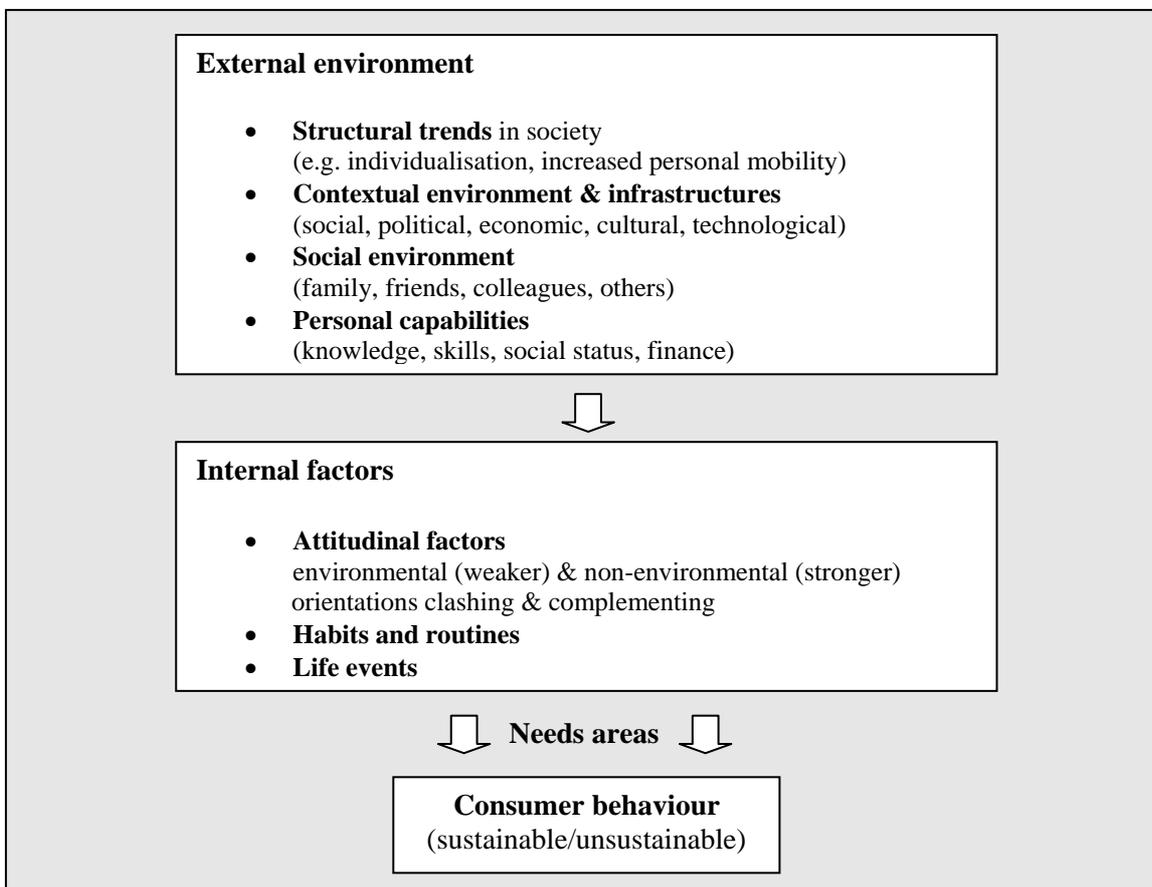
## 5 Factors influencing sustainable consumer behaviour

Environmental awareness and the resulting intent to minimise one's negative impacts on the environment are one factor influencing actual sustainable consumer behaviour. However, environmental awareness might not always be the most influential one; there are several other factors more. According to Stern (2000) there are four major types of causal variables affecting environmentally significant behaviour.

Firstly, there are attitudinal factors, which include norms, values and beliefs. These can be environment-related (e.g. respect for nature) or not (e.g. family or health values). Secondly, external or contextual forces influence environmentally significant behaviour. These include social norms and expectations, government regulation, available technologies and infrastructure factors. Thirdly, sustainable consumer behaviour can be influenced by personal capabilities, for example financial resources, literacy, skills and knowledge, as well as social status. Finally, behaviour often occurs as a habit or routine, which will be more or less difficult to change (Stern 2000). The strength of the factors influencing sustainable consumer behaviour may differ depending on the actor, the type of behaviour and the context (Stern 2000:415).

External factors and personal capabilities often have a stronger weight than attitudinal factors. Environmental awareness will therefore be more likely to lead to sustainable consumer behaviour the more favourable to this action the external factors and personal capabilities are. It is important to develop a theory or model that sets the different causal variables in relation with each other and with the actors and type of behaviour in question. It is also important to note that the make up and significance of the different causal variables is likely to change over time. Such a model or theory is needed to make advances in explaining environmentally significant behaviour. Most single-factor studies have not been successful in doing so (Stern 2000). For an overview of factors influencing sustainable consumer behaviour, see Figure 1. The internal and external factors listed there will be discussed in the following sections.

**Figure 1**  
**Factors influencing sustainable consumer behaviour**



## 5.1 Factors internal to the individual

### 5.1.1 Attitudinal factors

Sustainable consumer behaviour is multifaceted and researchers have not yet been able to provide a general theory that could be employed to explain how it works. Not many studies on sustainable consumer behaviour have used theoretical approaches; the ones that have are mainly the ones that focus on attitudinal factors of behaviour. Attitudinal factors include values, attitudes and other orientations.

One of the theories used to explain general sustainable behaviour is the norm-activation model by Schwartz (1977, in Stern 1996:141). It focuses strongly on attitudinal factors. It is assumed that sustainable behaviour is led by the social norm which is activated by two conditions. Firstly, people must be aware of the harmful consequences that their behaviour has on others. Secondly, people must feel responsible, i.e. they know that they have the power to avert the negative consequences of their behaviour by changing this behaviour. If these two conditions apply, the social norm which is activated will then result in the pro-social behaviour of people (Schwartz in Stern 1996:141).

Stern, too, partly explained sustainable consumer behaviour with social norms and developed the norm-activation model further. His value-belief-norm (VBN) theory has had some success in explaining sustainable behaviour. It assumes that personal norms are the main basis for individuals' predisposition to act in favour of the environment (Stern 2000: 413).

### 5.1.2 Conflicting and complementary orientations

From the above it is evident that an individual's attitudes and values influence his or her consumer behaviour. Most research has actually focussed on environmental values and environmental awareness as a predictor for sustainable consumer behaviour and has found it to be significant in many cases. Other, non-environmental orientations that an individual holds, however, can conflict with the environmental orientations. Non-environmental orientations are also often stronger than environmental ones. They are for example career, status or security orientations. Yet other orientations can be complementary to the environmental values, for example health or quality orientations (Gaus & Zanger 2002: 212).

Therefore, environmental values often only lead to actual sustainable consumer behaviour when this behaviour satisfies motive alliances (Niedergesäß 2001:73). As an example, a motive alliance can be environmental motives coupled with health and enjoyment motives. Organic food will serve the motives of environmental benefits, health as well as enjoyment (many consumers think that organic food often tastes better than conventionally grown food). If organic food would have only environmental benefits, the consumer would probably not buy it. As it serves the motive alliance of environmental benefits, health as well as enjoyment, however, the consumer has more reason to buy organic food.

### 5.1.3 Needs areas and the symbolic dimensions of consumption

Environmental awareness can lead to more sustainable consumer behaviour in one needs area (e.g. food) while highly unsustainable consumer behaviour still prevails in other needs areas (e.g. mobility). The factors which influence consumer behaviour in different needs areas differ. Needs areas must therefore be considered individually.

Hunecke (2001:158) suggests to look at the different needs areas of consumer behaviour and to identify the relevant symbolic dimensions of each to understand sustainable consumer behaviour better. As an example he gives the four symbolic dimensions of personal mobility. These are autonomy, status, enjoyment and privacy. They are the factors that were found relevant in the choice of a travel mode for personal mobility. When these symbolic dimensions are identified, their relevance to specific areas within the needs area can be examined. So Hunecke (2001:162) found for example that autonomy was the most significant factor when choosing the car as a travel mode and enjoyment was most significant in the choice of public transport.

### 5.1.4 Life events

Values and beliefs of an individual will not constantly change but are mostly quite stable. So is the behaviour. There are, however, periods in life when people go through big changes and re-evaluate their attitudes and values. Such an event can be moving house, child birth, starting or graduating from university,

the loss of a near person, divorce or health problems. At these points in life, people's attitudes and values might change and with them their behaviour and routines. For example, a mother might start buying organic food after the birth of her first child because she wants the child's diet to be healthy (Schäfer 2002:65).

### **5.1.5 Personal capabilities**

Personal capabilities such as knowledge or ability can influence sustainable consumer behaviour (Stern 2000). For example, a consumer has to know where recycling facilities are located and how they work before he or she will be able to use them. Another factor, which determines the ability for sustainable consumer behaviour is the available income of the consumer. Many sustainable consumption practices are rather costly, for example buying products such as organic food or investing in new heating appliances. Personal capabilities are often stronger than attitudinal factors because they can clearly limit the possibility to practice sustainable consumer behaviour independent from what the attitudes and values of a person are.

## **5.2 Factors external to the individual**

### **5.2.1 Social environment**

Sustainable consumer behaviour is influenced by the social environment of the consumer. Firstly, there is the close social environment, such as family, friends or work colleagues. They influence the consumer with their attitudes and behaviour. On the one hand, they themselves can show a certain behaviour, which the consumer notes and possibly takes on. On the other hand, the consumer will seek confirmation from the social environment of his or her own actions (Schäfer 2002:65). This is a way of conforming with injunctive social norms. These norms are what one's social environment expects to be the right behaviour (Stern 1996:88).

Secondly, there is the wider social environment. Consumption can be seen as socially and culturally constructed. Consumption patterns evolve embedded in the ideological, economic, technical, historical and social context of production and consumption in a particular culture (Bocock in Reisch 2002:41).

### **5.2.2 The contextual environment and infrastructures**

The contextual environment and existing infrastructures are strongly influencing sustainable consumer behaviour. Along with the personal capabilities these factors set the framework for behaviour options. In its broadest sense, the contextual environment includes the social (e.g. social norms), political (e.g. regulations and market instruments which apply to consumption), cultural (e.g. cultural significance of a consumption pattern), economic (e.g. state of the economic situation, prices of goods) and technological (e.g. available technology) context of people's behaviour in society.

The social context includes for example the larger structural trends in society which influence consumption patterns. In the case of Germany, these were found to be five mega trends of socio-structural development. Firstly, population growth in Germany is mostly due to migration. Migrants can have other consumption patterns than people who have lived all their life in Germany, and they have a demand for foreign products. These consumption patterns have to be researched in further detail as they increasingly make up an important part of overall consumption in Germany.

The second trend is towards smaller households. This is due to a development towards single households, one parent families and an increase in the number of elderly people. It is coupled with an increase in overall energy consumption, as the living space per capita is increasing.

The third trend is, as mentioned, the increasing ageing of the German population. The consumption patterns of the elderly will become more significant. These include for example higher spending on health as well as on special services for seniors.

The increasing work activity by women is another important trend. As more and more women go to work, the family organisation will change and the demand for convenience products and services might increase.

Finally, there are strong polarisation trends in the German society. The income gap between rich and poor, women and men as well as East and West Germans is increasing. This development has for example resulted in the strong popularity of low price discount supermarkets (StBA, GfK, in Empacher et al. 2002:88-89).

The above are examples for how the social context influences sustainable consumer behaviour and examples can also be found for the political, economic, cultural and technological contexts of sustainable consumer behaviour.

The existing infrastructures within which a person consumes are facilitating the consumption patterns. Examples for such infrastructures are the availability of more sustainable products or the availability of recycling facilities. Without such existing infrastructures, sustainable consumer behaviour is a difficult undertaking which involves a high level of transaction costs.

### **5.2.3 Transaction costs**

Transaction costs usually originate from the personal capabilities and the external environment which influence consumer behaviour in a certain needs area. Consumers will be more likely to take on more sustainable consumer behaviour, when the costs involved are low. Costs can be financial (e.g. the more sustainable product is more expensive), they can come in the form of higher time consumption or they can be structural (e.g. taking on the more sustainable behaviour involves inconveniences). Diekmann and Preissendörfer (1992, 1998 in Gaus & Zanger 2001:248) presented empirical evidence for their 'low-cost-hypothesis'. It was shown that as soon as costs of a specific sustainable consumer behaviour were higher than a certain minimum, this option was unlikely to be chosen.

### **5.3 Subjective evaluation of factors by the consumer**

As shown above, there are different factors influencing sustainable consumer behaviour. These factors will influence sustainable consumer behaviour only as they are evaluated by the consumer. After subjectively evaluating the influencing factors, the consumer will make a decision on whether to behave in a sustainable way or not. The consumer is likely to make this decision based on a simplified picture of these factors as the complexity of reality is too high to be completely considered by a person. This simplified version of reality can be considered by the concept of 'bounded reality' (Simon in Gaus & Zanger 2001:247). It is therefore important for researchers not only to look at factors objectively but also how they are perceived by the consumer. It must be noted here, however, that consumers not always make a conscious decision on what behaviour to practise. Very often, consumer behaviour occurs as a habit or routine which the consumer is not consciously evaluating every time he or she practises it (Canzler & Franke in Gaus & Zanger 2001:249).

## **6 Strategies for more sustainable consumer behaviour**

It is clear that strategies to promote more sustainable consumer behaviour must address the way consumer behaviour works in specific needs areas if it should be effective. Stern (2000:420) presents several important steps when developing an intervention strategy. Firstly, one must identify behaviours that actually are environmentally significant. Within these behaviours, the relevant actors and actions must be identified. Finally, the range of causal variables that influence the target behaviour must be considered from the actor's point of view. These are the internal and external factors that were discussed in the previous chapter. The three steps to develop a strategy for more sustainable consumer behaviour will be discussed in the following paragraphs.

### **6.1 Environmental impacts of consumer behaviour in Germany**

To achieve environmental and probably also overall (environmental, social and economic) sustainability, the negative environmental impacts of consumer behaviour must be minimised. To see if any progress has been made, one must be able to quantify current and future environmental impacts of consumer behaviour.

In Germany, private consumer behaviour results in 30 to 40 % of the total environmental impacts which include resource use and pollutant emissions (Umweltbundesamt in Wimmer 2001:78). This figure will be even higher if one adds the indirect environmental impacts that occur during the production of the goods and services that are consumed.

Lorek and Spangenberg (2001) identified the needs areas with the most environmental impacts. These are construction and housing, food and nutrition, as well as transport (Lorek & Spangenberg 2001:10). To conduct a meaningful assessment of the environmental impacts of consumption, a life-cycle wide approach

must be taken. This means that, in the case of the consumption of a product, its whole life-cycle including resource detraction, production, use, and disposal must be considered. Indicators must measure the impacts in terms of the amount of material extraction, energy consumption as well as land use that are needed during the life-cycle of consumed goods or while a certain behaviour is practiced (Lorek & Spangenberg 2001:20). The following figures illustrate the significance of the needs areas of housing/construction, transport as well as food.

Property heating makes up 49% of the total energy consumption of households in Germany (GRE in Lorek & Spangenberg 2001:32). The amount of heating needed depends on the amount of space one lives in. The average per capita amount of square metres living space has been increasing continuously in Germany (Statistisches Bundesamt in Stieß & Götz 2002:248). Property heating will therefore be likely to take an even higher share in household energy consumption in the future.

The savings potential of heating energy use has been estimated with 30% with improved building insulation, 30% with better heating technologies as well as 10% with consumer behaviour changes. The latter, however, can vary significantly. It was found that the heating energy use in identical flats with the same equipment can differ up to 50% just due to the behaviour of its residents (Institut für Wohnen und Umwelt, in Agenda-Agentur Berlin & Sustainable Europe Research Institute 2004:4).

The material consumption of construction and for the maintenance of housing makes up 29% of the total material extraction in Germany (Former Federal Republic of Germany in Lorek & Spangenberg 2001:33). New housing made up 85% of all approved building schemes in Germany in 1994. Of all new housing construction occurring between 2000 and 2010 in Germany, single family houses will take up 84% of all land used for this construction (Deutscher Bundestag in Lorek & Spangenberg 2001:33).

Passenger transport takes up 36% of the total energy consumption in Germany (GRE in Lorek & Spangenberg 2001:32).

The food chain in Germany makes up 20% of the total energy and material consumption (SÖL in Lorek & Spangenberg 2001:37).

These figures are evidence for the significance of the needs areas of housing and construction, food and nutrition as well as transport concerning energy, material consumption and land use. Still there are little data available related to consumer behaviour in general and consumption practices in specific. Although some data exist, they are often not easily comparable (Agenda-Agentur Berlin & Sustainable Europe Research Institute 2004:2).

### **6.1.1 Environmental significance of specific consumption practices**

#### ***Decreasing environmental impacts***

When designing a strategy for more sustainable consumer behaviour, the first step is to set the aims. As was established above, sustainable consumer behaviour is behaviour which has minimal negative impacts on the environment. The aim of a strategy should therefore be to decrease the negative environmental impacts of consumer behaviour. It must be identified which consumer behaviours are the most damaging on the environment, which behaviours are practiced most frequently and by the most people, as well as which behaviours have a great chance to be influenced. The aim is to decrease the environmental impact as much as possible, also in the long term. As stated above, the aims must be realistic, in that they acknowledge that aiming for a minimum consumption will actually endorse lifestyles of social deprivation and poverty which are obviously not desirable and just.

When the effects of unsustainable consumer behaviour have been evaluated, the options for more sustainable consumer behaviour have to undergo the same inspection. It needs to be evaluated what sustainable consumer behaviour practices will decrease the environmental impacts significantly and how likely such practices will be adopted by a large amount of consumers. The effectiveness of such practices can be due to the smaller environmental impact or due to the large number of people adopting these more sustainable consumer behaviours. For example, it could be that the energy savings that occur by switching to energy saving light bulbs are actually rather marginal compared to that of other behaviours and should therefore not be focussed on. Social science consumer research should take on such technical evaluations as a basis for studies to be relevant in the context of sustainable development (Wimmer 2001:82).

### ***Likelihood of adoption***

As said above, measures should be considered not only for their effect of decreasing the environmental impacts, but also for their likelihood to be implemented by a large number of consumers. For example, consumers can be recommended to re-evaluate the amount of living area they occupy, because a smaller living area will need less heating energy which will result in less greenhouse gas emissions. This is a practice which is highly effective in terms of its potential to reduce environmental impacts. However, not many consumers are likely to actually opt for less living space. In this case it can be more advisable to promote a minor action such as energy saving airing of the flat, which does not decrease the environmental impacts to a high degree but is more likely to be adopted by a large number of people. The overall decrease of environmental impacts could therefore be higher with this measure than with the promotion of a lesser living space. It is therefore possible that behaviour changes, which in themselves do not reduce the environmental impacts, to a great extent can become significant when a large number of people adopt them.

### ***The need for reliable data on impacts***

It was shown above that it is necessary to evaluate the level of environmental impacts of different consumer behaviour practices. This has not yet been done comprehensively in the field of consumer behaviour research. Heiskanen and Pantzar (1997:410) put it like that: "From the point of view of sustainable consumption, the issues that consumer research has dealt with are rather trivial; (...) consumer research has not (yet) focussed on the really important issue." They point out that consumer research has neglected in its studies the relevant environmental impacts which can inform about the environmental significance of consumer behaviour. Reusswig (1994:131) also criticises the lack of solid criteria for environmentally sustainable consumer behaviour. He points out that many authors base their criteria on scientifically shallow eco behaviour guidebooks and do not aim to use proper life-cycle based eco-balances for products and behaviours.

After evaluating the consumer behaviour patterns where the highest environmental impacts occur (considering environmental impact as well as the number of people practising this behaviour and its frequency) several different options of sustainable consumer behaviour must be evaluated for their level of decrease in environmental impacts and for their likelihood of being adopted by a large number of consumers (Wimmer 2001:85). To get reliable information on these issues an indicator system for sustainable consumer behaviour, listed by needs area, must be established (Weber 2001:69). This prioritisation process is important to ensure that measures to promote more sustainable consumer behaviour have a chance of being effective, i.e. decreasing the environmental impacts of consumer behaviour to a significant degree.

As a starting point could serve the priority fields of action that Lorek and Spangenberg identified. These are construction and housing, food and nutrition as well as transport (Lorek & Spangenberg 2001: 10; see above). They are rather large fields and specific behaviours within each of these needs areas must be evaluated. This is useful because the majority of people are only open to take on a limited number of new consumption patterns at a time. The options promoted to the consumer should be the ones with a high chance of effectiveness (Gardner & Stern 1996:275).

Considering the environmental impacts of different consumption patterns is the basis for strategies to promote more sustainable consumer behaviour. Without such consideration, the effectiveness of the strategy in terms of its impact on the environment cannot be ensured. Furthermore, a strategy to promote more sustainable consumer behaviour which aims to decrease environmental impacts is more credible to consumers. Any requests to change their behaviour will be more strongly embraced by consumers who are assured that changing their behaviour will actually have a positive impact on the environment.

## **6.2 Actors**

The different actors that are involved in sustainable consumption include government, industry, university and research institutes, non-governmental organisations such as consumer councils or environmental groups and the consumers. These actors must be co-ordinated to realise a strategy for more sustainable consumer behaviour. Here, the actors' involvement might differ from case to case and from needs area to needs area. Agenda-Agentur and the Sustainable Europe Research Institute (2004:7-24) developed actors matrices for specific consumer behaviour practices. They give an overview of the actors to be involved and the actions they can contribute. For example, the actors involved to reduce heating energy consumption are

international organisations, central government and public institutions, local authorities, property owners, tradesmen, architects, engineers and developers, energy suppliers and non-governmental organisations. Consumers are approached through one or several of these actors. The actions that actors can contribute fall into the categories regulatory measures, financial incentives, forerunner function, education, specific information, consulting and general campaigns. This matrix provides an overview of a wide range of measures involving the relevant actors. Measures to reduce heating energy consumption can be for example the co-ordination of several energy consumption advice offices by one central body, the opening of a fund for energy saving measures around the house or specialised education for tradesmen, architects and engineers on increasing heating efficiency by means of construction techniques (Agenda-Agentur & Sustainable Europe Research Institute 2004).

The government is a key actor in this process. It has to supply strong signals to the consumer as to what impacts his or her consumer behaviour has and what more sustainable behaviour options there are. To determine these environmental impacts of specific consumer behaviours, the impacts must be evaluated for the entire life-cycle of a product. Strong and consistent signals are essential to the acceptance of strategies for more sustainable consumer behaviour by consumers (OECD 2002).

### **6.2.1 Responsibility in society**

The consideration of the actors involved in a strategy for more sustainable consumer behaviour points to another factor which influences the consumer. This is how the consumer sees his or her own responsibility for environmental impacts and the responsibility taken by the other actors such as the industry, government and other consumers. Lange (2002:218-223) speaks of a societal negotiation process about the distribution of responsibility. A consumer will only change his or her consumer behaviour to be more sustainable if he or she feels that these changes represent a fair deal compared with what is required to be done by other actors. The aspects that a consumer will consider are what relevance more sustainable consumer behaviour has for him or her, what effort such behaviour involves and how it will benefit him or her. Regarding the other actors they will consider these actors' credibility, the amount of responsibility they take on as well as the resources they have available to act responsibly. For consumers to act, the distribution of responsibility must seem fair. To achieve a consensus about this, there is a need for a discourse in society about the questions of what sustainable development and specifically sustainable consumer behaviour means, what goals want to be achieved with it and who should take what responsibility in the process. Although the state is not the only actor involved, it can be considered a key actor in this negotiation.

It must be noted that any consensus about these questions is temporary and that the discourse is an ongoing process. One reason for this instability are the ever-changing needs of society. Sustainable development itself is such a negotiation between its economic, social and environmental needs.

### **6.3 System of factors**

After having identified the environmentally significant consumer behaviour practices and the relevant actors, the factors which influence sustainable consumer behaviour must be assessed. As was shown above, sustainable consumer behaviour is influenced by a wide range of factors internal and external to the consumer. Some of these factors are barriers to sustainable consumer behaviour while others are conducive to it. The external contextual factors and the infrastructure determine the sustainable consumer behaviour options and so do the personal capabilities of a consumer. Secondly, the consumer's attitudinal factors will influence his or her consumer behaviour. Here, environmental orientations are most often weaker than other orientations.

Any strategy to increase sustainable consumer behaviour must remove the barriers to such behaviour and work with the factors that support it. After having established what behaviour practices should be targeted due to their environmental impacts it is useful to go through all the influencing factors of a specific behaviour and see what measures can be taken to remove any barriers to change or to enhance any helping factors. It is important to focus the analysis on specific behaviours in specific needs areas, as the composition of influencing factors differs from behaviour to behaviour (McKenzie-Mohr et al. in McKenzie-Mohr 2000:548).

After having decided what environmentally significant behaviours should be changed, what alternative behaviours should be promoted as well as who the relevant actors are, a strategy for more sustainable consumer behaviour can be drawn up.

As said above, most research so far has focussed on attitudes and beliefs, for example environmental awareness as the major predictor for sustainable consumer behaviour. It is necessary to take better into account external factors such as the political, economic and technological framework conditions for consumption (Agenda-Agentur Berlin & Sustainable Europe Research Institute 2004:7). Furthermore, more research is needed to find out about the causal relationships between attitudinal factors and the other factors such as external conditions or the socio-demographic characteristics of the consumer (Wimmer 2001:84). All the influencing factors must be seen as an interacting system.

Hirschl, Konrad and Scholl (2002: 206) researched new concepts of usage, for example the rental of skiing equipment as a service that can replace the repeated purchase of new skiing equipment. To change this usage regime, they found that a restructuring of actors' relations, technical factors, supply and demand conditions as well as of organisational structures was needed. Only when all of these factors are considered, a change of usage patterns has a chance to take place. The improvement or renewal of single factors is not likely to be successful.

The target group specific communication of more sustainable consumer behaviour must be accompanied by the supply of more sustainable products and structures, to make it easier for the consumer to adopt more sustainable behaviour. Schubert (in Brand 2002:199-200) speaks of the necessity to create comprehensive opportunity structures as a prerequisite for more sustainable consumer behaviour.

A strategy to promote more sustainable consumer behaviour is unlikely to achieve behaviour changes by consumers quickly. Especially the behaviours which have the largest barriers to change will take time to be changed. This is because often several of the factors influencing the sustainable consumer behaviour must be changed, sometimes even the physical infrastructure or governmental regulations. Therefore achieving more sustainable consumer behaviour can be a long process. Reisch (2002:51) speaks of a cultural change that might take several generations.

## **7 Instruments for promoting more sustainable consumer behaviour**

An actor who is to devise a policy to increase sustainable consumer behaviour has to address all the influencing factors. Thus, the instruments employed should be of a wide range and working in combination to remove as many barriers as possible for the desired consumption pattern. In the following, I will present a range of instruments which can be used in a strategy to promote more sustainable consumer behaviour.

### **7.1 Economic, regulatory and social policy instruments**

The Organisation for Economic Co-operation and Development (OECD) issued a publication on sustainable household consumption in its member countries. To promote more sustainable household consumption it suggests to employ a combination of economic, regulatory and social policy instruments (OECD 2002). These 'policy packages' can be aimed at directly changing the consumer behaviour or they can target the wider external environment, with policies for more sustainable products for example (Geyer-Allély & Zacarias-Farah 2003:923). The different instruments that the OECD suggests to use in combination are instruments have also been suggested by most of the other researchers who wrote about this topic.

Economic instruments can be financial or tax incentives for more sustainable consumption or production. Examples from the consumption area are waste collection fees, deposit-refund schemes for drinks containers or subsidies for renewable energy use.

Regulatory instruments are for example minimum product standards such as energy efficiency standards, building insulation regulations as well as eco-labelling requirements. Regulations more often target the industry than the consumer directly.

Thirdly, social instruments are mainly information-based, such as information campaigns and labelling schemes. The authors however also point out that participatory decision-making and voluntary citizen initiatives could potentially contribute to the promotion of sustainable consumer behaviour. Participatory

decision-making in the public sector has the potential to lead to better informed decisions as well as can result in increased acceptance of and support for policies. Voluntary citizen initiatives can be co-ordinated by NGOs or other civic groups. These organisations can provide information or financial support to consumers. They can reach consumers for example by events, workshops or the Internet (OECD 2002).

Other instruments suggested are environmental assessment and the setting of goals, infrastructure provision as well as zoning planning (Geyer-Allély & Zacarias-Farah 2003:925; OECD 2002).

Regulatory, economic as well as social instruments should be employed in combination to be effective.

## **7.2 Social instruments review**

In this paragraph I will take a closer look at some social instruments as these instruments directly affect consumers and in some cases involve them strongly.

Gardner and Stern (1996) reviewed research on interventions to change individuals' environmentally significant behaviour. The intervention types they looked at can be considered social instruments. The four intervention types studied were moral and religious appeals to change values and beliefs, education and information, material and other incentives as well as community management to strengthen shared rules and expectations. They found that any type of intervention on its own is likely to be insufficient to predict behaviour change and that combinations of different types of interventions have the best outcome.

Moral and religious appeals were not found to be very promising unless perhaps in selected cases. There is not either enough evidence to support the assumption that a shared eco-centric world view or values are spreading though society (Gardner & Stern 1996:33-70). The other three instruments are outlined in the following paragraphs.

### **7.2.1 Education and information**

Education and information appeal to people's knowledge and attitudes. More information will rarely lead to changed behaviour directly. As was shown above, even if attitudes are favourable to environmental issues, they often will not lead to actual sustainable consumer behaviour because stronger factors such as the external environment can act as a barrier. However, in combination with other instruments, information and education are important and have as an additional benefit that increased environmental awareness can result in support for political measures which in turn change some of the external barriers to sustainable consumer behaviour (Gardner & Stern 1996:74).

Gardner and Stern (1996:83) point out the importance of information catching the consumer's attention and being credible. There are several ways of transmitting information which are more effective than for a example a simple printed message. Feedback on sustainable consumer behaviour can be given to the consumer. This could be a regular feedback on the consumer's energy use, for example. Feedback is relevant to the consumer as it applies directly to his or her behaviour. Modelling is another way of transmitting information to catch the attention of the consumer. Modelling could be for example a video which shows a 'typical' family or person, which the viewer easily identifies with, sampling the desired sustainable consumer behaviour. Another style measure for information is to frame the message in a way that is more relevant to the consumer. For example, information on how much money a consumer will lose by not heating efficiently will be more alarming than pointing out how much money the consumer could save by heating efficiently. Furthermore, reminders and prompts are a form of information which is considered very effective, as long as they are given close in space and time of the consumer behaviour.

Trust in the person or organisation who provides the information is essential for consumers to perceive the information as credible (Gardner & Stern 1996:83-86).

### **7.2.2 Changing personal incentives**

There is a multitude of potential barriers to more sustainable consumer behaviour which need to be addressed by a strategy. Personal barriers for a consumer to act sustainable can be lack of know-how (how to consume in a more sustainable manner; what are the anticipated benefits), available income, rejection of change, a low priority given to environmental issues, distrust of local contractors or other actors or the limitations applying to change appliances and insulation in a rented property (Gardner & Stern 1996:76). These personal barriers originate from the personal capabilities and attitudinal factors as stated above.

External barriers that hinder more sustainable consumer behaviour are a person's socio-economic background, available technology, social and political institutions, economic forces as well as inconvenience (Gardner & Stern 1996:78-79).

The barriers can be removed in some cases through information supply but also by changing the incentives for the consumer. Incentives have already been mentioned above as part of economic instruments. Here I mention them again, as social instruments because they directly relate to the consumer and because they also include non-economic incentives.

Incentives can for example be greater convenience or a financial gain. Incentives can either be related directly to the desired sustainable consumer behaviour or related indirectly to it. For example, better public transport infrastructure is a direct incentive to use it. Decreasing subsidies for suburban home ownership might be an incentive for more inner city living which in turn is usually less transport intensive than living in a suburb (Gardner & Stern 1996:101-102). The stronger the structures are within which the incentives should be changed, the more difficult such a change will be. This is due to the interests that are behind the creation of such structures in the first place. For example, it will be rather difficult to increase fuel tax, as this will be strongly opposed by the car user lobby (Gardner & Stern 1996:103).

### **7.2.3 Community management**

Community management is the fourth intervention type Gardner and Stern evaluated. Ideally, the community in question should be rather small, with close social interaction and a limited area of the natural resource to govern. Increasingly, large-scale social and economic changes prevent these strong communities to emerge (Gardner & Stern 1996:131-148).

Although the main use of community management is for the administration of a natural resource, involving the community can also be a tool when promoting sustainable consumer behaviour. Here, the stimulation of social interaction between consumers is the goal. For example, a neighbourhood workshop on recycling might result in the interaction of neighbours which can then strengthen the sustainable consumer behaviour. Firstly, injunctive social norms will be strengthened. These norms are what a consumer perceives that others in his or her social environment expect from him or her. Further, norms can become internalised by the consumer, i.e. the consumer will practice a certain behaviour because he or she thinks that it is the right thing to do, notwithstanding what others in the community think (Gardner & Stern 1996:87-89).

Similarly, asking a consumer to commit to a sustainable behaviour might make him or her more likely to change the behaviour. Commitment is a quasi-public action and therefore involves the consumer more strongly. Also, the consumer will have the feeling that he or she has chosen to change his or her behaviour, instead of such change being imposed from outside. Furthermore, changes achieved through community management are more internalised, i.e. they are likely to last longer (Gardner & Stern 1996:149).

If a behaviour is seen as a norm in a society, its credibility increases. Someone who sees a neighbour practising a certain behaviour is perhaps more likely to adopt it, too, than if he or she is asked to change his or her behaviour by an organisation or the government. Word of mouth is very effective (Gardner & Stern 1996:151).

### **7.3 Social marketing of products and behaviours**

McKenzie-Mohr also found that involving the community is an effective approach. He suggests that the best strategy is to work with community-based social marketing. This approach aims to remove any barriers to more sustainable behaviour as well as to get individuals from the community involved in this process (McKenzie-Mohr 2000).

Kotler and Zaltman (1971, in MacFadyen, Stead, Hastings 1999) define social marketing as 'the design, implementation and control of programs calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communication, distribution and marketing research.' Social marketing is based on a strong consumer orientation as well as on exchange. Exchange means that social marketing should offer something that the consumer is interested in, and in exchange the consumer should then change his or her behaviour. For example, an initiative using social marketing could ask the consumer to buy more organic food. The benefit for the consumer in exchange could be the health benefits of organic food. At the same time, the change in consumer behaviour will also benefit the environment, but

this is not necessarily the focus of the communication. Furthermore, social marketing is based on long-term planning. Campaigns should be strategic and use research to define the problem and barriers to behaviour change, then set goals and develop a strategy. Before running an initiative, it needs to be piloted and reviewed. After the implementation, the outcomes should be evaluated regularly (MacFadyen et al. 1999).

Social marketing is a promising tool in strategies to promote more sustainable consumer behaviour. It has been mostly used for health education and disease prevention programmes. However, it has yet to be applied to environmentally significant consumer behaviour. I will therefore not discuss social marketing in further depth.

#### **7.4 Ideals**

Ideals have often been suggested as a means to change consumer behaviour to be more sustainable. The ideal of more sustainable consumer behaviour can be a guiding principle for individuals and society. It can stimulate people to change their behaviour in order to work towards this ideal and the consequences of it, an improved environment (Reisch 2002:49). Ideals are a 'soft' measure, i.e. change can be stimulated without the use of controls or orders. They communicate a desirable state and give people the flexibility to move towards it in the ways most appropriate for them. However, one has to consider the limitations for people to be guided by ideals.

Firstly, their lifestyle options are determined by their economic and cultural resources available, as well as external factors such as existing infrastructure and technological possibilities. Many decisions are influenced by their close social environment, too. These factors delimit the scope for change of lifestyle.

Secondly, many behaviours are routines. When one attempts to change routines does it involve a temporary loss of control and a resulting feeling of fear (Hoff, Walter, Meynen, Ewers in Lange 2002:214). Such change of routines might also involve a certain amount of additional transaction costs that act as a further deterrent.

Thirdly, even if people would orient themselves at such a sustainability or environmental justice ideal, they could be confronted with possible conflicts with other values of theirs, e.g. regarding security, convenience or hygiene. Again, these conflicts can deter people from acting in accordance with their ideal.

Finally, it can be considered a contradiction in itself to aim for a general change in society towards an ideal. The general diffusion of 'the' sustainable lifestyle throughout society is close to impossible, as lifestyles are per se a statement of individual personality.

To summarise, the effect of having an ideal for society is questionable and ideals will certainly not be a measure that will work by itself. Still, the promotion of an ideal could increase the awareness and consensus about environmental issues in society. It is a measure that could support more concrete strategies to promote more sustainable consumer behaviour.

#### **7.5 Combining the intervention types**

In summary, Gardner and Stern suggest a combination of the above interventions to promote more sustainable consumer behaviour. The combination is important as there is usually a wide range of barriers to sustainable consumer behaviour, which can only be addressed by using as wide a range of interventions. Research is needed to identify the barriers in the first place. The community approach again can help with this, for example by involving people in the design of motivational strategies (Gardner & Stern 1996:91).

Any strategy of interventions must be tried out and improved. Trial and error is necessary to find the most effective combination of interventions. Part of an intervention programme must also be the regular reassessment of its effects. Although this can be a long-term learning process however it will lead to increased effectiveness of any strategy to promote more sustainable consumer behaviour (Gardner & Stern 1996:153-174).

In the remainder of this section I will illustrate the range of instruments and what factors they can influence as well as distinguish between short-term and long-term measures. This will be done by means of two tables. Table 1 is an overview of the different instruments discussed above. It is shown what factors influencing sustainable consumer behaviour these instruments affect. It can be argued that any instrument could have the potential to affect all factors to some extent. This table shows only the most obvious influences.

**Table 1**  
**Instruments to influence factors of sustainable consumer behaviour**

	Attitudinal factors	Personal capabilities	External, contextual environment
<b>Regulatory instruments</b>	✓ (indirect)	✓ (indirect)	✓
<b>Economic instruments</b>			✓
<b>Education &amp; information</b>	✓	✓	
<b>Changing incentives</b>	✓ (indirect)	✓	✓ (indirect)
<b>Community management</b>	✓	✓ (indirect)	

From Table 1 it can easily be seen that the external contextual environment can only be influenced by hard measures such as regulatory and economic instruments. These instruments are so important because they can affect external contextual environment which often represent considerable barriers to sustainable consumer behaviour.

To address the barriers, the actors at different levels in society can be approached for short-term and long-term changes. Levy and Zaltman (in MacFadyen et al. 1999) present the different levels in Table 2 below. The examples they listed were related to an anti-smoking campaign. I adapted this table to include examples for environmental significant behaviour.

**Table 2**  
**Types of social change by time and level of society**

	Micro level (individual consumer)	Group level (group or organisation)	Macro level (society)
<b>Short term change</b>	<i>Behaviour change</i>	<i>Change in norms</i> <i>Administrative change</i>	<i>Policy change</i>
EXAMPLE:	Buying organic food	Word-of-mouth advertising for organic food amongst family and friends.	Introduction of an organic food labelling scheme.
<b>Long term change</b>	<i>Lifestyle change</i>	<i>Organisational change</i>	<i>'Socio-cultural evolution'</i>
EXAMPLE:	Buying organic food exclusively; reduction of meat consumption.	Promote the increase of organic farming methods	Consumption of organic food exclusively; decrease of the impact of food consumption on the environment

(Adapted from: Levy & Zaltman, in MacFadyen et al. 1999)

The table includes both short-term and long-term changes at the micro-level (the individual), the group level (group or organisation) and the macro-level (society). The actors addressed are the individual consumer and his or her social environment, industry as well as government. Furthermore, all the instruments mentioned above can be used to effect the social change as outlined in the table. A clear example here is the introduction of an organic food labelling scheme. This is, depending how strict the requirements for the food label are, either a regulatory or an information instrument. Although a difference is made between short-term and long-term changes, it has not been researched sufficiently yet exactly how short-term and long-term changes can be affected and what role the choice of instruments plays in this process.

## 7.6 Strategies to promote sustainable consumer behaviour in practice

Stern (2000:420; as mentioned above) recommends looking at environmentally significant behaviour, identifying actors and actions within it and then researching the causal variables that influence this behaviour

when developing motivational strategies. Despite this recommendation are strategies to encourage more sustainable consumer behaviour in practice not conceived using this comprehensive process. Most often, any initiatives by the government or organisations focus on single factor approaches. This could be for example the distribution of a leaflet which contains advice on how to save energy in the household. Most of the initiatives are heavily based on the provision of information. Such strategies are not comprehensive in dealing with the barriers to sustainable consumer behaviour and are therefore seldom effective (McKenzie-Mohr 2000:544; Barr 2003:227).

Furthermore, apart from rather simple initiatives (e.g. ones that are based on information supply only), most initiatives to promote more sustainable consumer behaviour have not been evaluated after their implementation. It is therefore difficult to see what approaches are effective and it is then not possible to learn from experience. Often it does not seem necessary to evaluate specifically, as some behaviour changes are obvious. Still, without any evaluation, it is not possible to see if behaviour changes are short-term or lasting longer (OECD 2002:143).

There can be several reasons for the incomprehensive approach to strategies promoting more sustainable consumer behaviour. Often, the actual barriers to more sustainable consumer behaviour are presumed by the responsible actors who devise a strategy (McKenzie-Mohr 2000:551). However, as was shown above, barriers differ in the worst case from person to person and according to place and time.

The goals set for a strategy to promote more sustainable consumer behaviour will also influence the outcome. For example, many strategies still do not target consumer behaviour changes with consideration to the environmental impacts of consumer behaviour. What behaviour will be the most sustainable is often presumed by policy makers and researchers. Strategies also often aim to increase environmental awareness amongst consumers. While environmental awareness is an important element of a strategy to promote more sustainable consumer behaviour, it will not be likely to result in actual behaviour change if it is the only goal of a strategy. Another reason for incomprehensive programmes is the lack of resources in terms of finance and time (McKenzie-Mohr 2000:551).

As was established above, it is important to take a comprehensive approach when designing strategies to promote more sustainable consumer behaviour. The most relevant behaviour-influencing factors must be considered in such a strategy. Here, the lifestyle approach can be one such comprehensive approach. It will be discussed in the following chapters.

## **8 Lifestyle research – theoretical background**

Lifestyles are group specific forms of everyday life and the interpretation of it by individuals. Lifestyles are embedded in their economic, social, political and cultural context. The focus of this definition lies on the qualitative differences that make up the different lifestyles (Rink 2002:36-37).

Lifestyles comprise information about the social situation, mentality and performance dimensions of groups. The social situation includes variables such as education level, income, occupation, age and gender. Mentality variables are values, attitudes, life goals and world views. The performance dimension describes typical behaviour and consumption patterns, every day practices as well as the number of appliances used in the household (Lüdtke in Reusswig 2002:158-159).

### **8.1 Lifestyle research in sociology**

The lifestyle concept became popular in sociology in the 1980s and has been widely used since. Lifestyles were considered to be a useful addition to socio-demographic or class factors when trying to understand and categorise consumer behaviour. Very often, lifestyle research produces empirical typologies of lifestyles, i.e. identifies groups that differ as much as possible from each other in the lifestyle factors that influence their behaviour.

Different sociological lifestyle approaches exist. Objectively oriented approaches develop lifestyle groups according to objective factors, e.g. what household income is spent on (see Sobel 1981; Zapf et al 1987; Weiss 1988). Subjectively oriented approaches focus on subjective factors like needs, wishes and attitudes of people (see Mitchell 1983; Schulze 1992). Further, there are integrative approaches that integrate subjective and objective factors in typologies (see Bourdieu 1983, 1987; Lüdtke 1989, 1990).

Bourdieu's lifestyle approach has inspired the majority of lifestyle approaches that were developed later on. It is made up of elements from the social field and from the field of lifestyles. Elements comprise capital volume, capital structure, social career, ways of thinking, perceiving, evaluating and acting, as well as lifestyle factors such as distinction, pretension or necessity (Müller 1992a in Reusswig 1994: 66).

## **8.2 Lifestyle research in market and consumption research**

Independent from the development of the lifestyle concept in sociology, lifestyles were also acknowledged in market and consumption research. While in the U.S. the lifestyle approach has been used since the 1960s, mainly for consumption goods like cars, beer or furniture, the lifestyle approach started to be employed in Germany at the end of the 1970s by publishing houses and advertising agencies for their marketing (see for example INFRATEST/Gruner+Jahr in Reusswig 1994).

The lifestyle approach that is currently most widely known in Germany is the lifestyle approach developed by the SINUS market research institute. It is a general (not focussed on a specific needs area) approach which is built of the elements attitudes, social situation as well as behaviour in the areas work, leisure, consumption, finance, living, media consumption, as well as everyday life aesthetics (Sinus Sociovision 2004). It is a classification of so-called 'social milieus', of which there are ten and which are updated annually to account for the dynamics of society. This approach was developed for use in consumption and politics research.

## **8.3 Interdisciplinary approach**

As was stated in the methodology chapter, strategies for sustainable consumer behaviour have been mainly researched by sociologists and psychologists. There has not been much of a co-operation with professionals from the marketing sector. This is regrettable as the knowledge, skills and techniques that are used in marketing could well be of use in this context, for example by using social marketing techniques, which were mentioned above (Wimmer 2001:80-81; Stieß & Götz 2002:255). On the other hand, the lifestyle typologies that have been developed in market research have only rarely explored sustainable consumer behaviour. Moreover, market research uses typologies mainly for the purpose of looking at potential target groups for specific products, i.e. they are very much product centred. Nevertheless, using approaches from different disciplines including marketing could lead to a better understanding of the field of sustainable consumer behaviour (McKenzie-Mohr 2000:552).

Other disciplines that should be involved in the research on sustainable consumer behaviour are for example the natural sciences (in the area of environmental impacts) or engineering (for the conception and design of more sustainable products and technologies). Taking a truly interdisciplinary approach to strategies for more sustainable consumer behaviour is a project that should be considered in research soon. Here the work of independent socio-ecological institutes is an example for more interdisciplinarity. Many universities are still catching up with this development (Schrader & Hansen 2002:39).

None of the first lifestyle approaches used in sociology and market research has focussed on sustainable consumer behaviour specifically. This new focus was developed when lifestyle typologies were started to be used in socio-ecological research. Several studies have been produced so far that employ the lifestyle approach and develop a typology of lifestyles. Before reviewing four socio-ecological lifestyle approaches in detail, however, the benefits and limits of lifestyle approaches as well as the use of lifestyle approaches for strategies to promote more sustainable consumer behaviour will be discussed.

# **9 Benefits and limits of the lifestyle approach**

## **9.1 Lifestyles give a more detailed picture**

Some people practise sustainable consumer behaviour without being aware of the environmental benefits of it. For example, some people might save energy at home in order to save money on the utility bills without being concerned about environmental issues. Others might buy organic food purely for health reasons (Schneider 2002:133). Using a lifestyle approach can identify these different motivations.

Another benefit of the lifestyle approach is that with it, important sub-groups can be identified, which would not be visible from a general approach that is not taking into account typologies of lifestyles (Hunecke 2002:84). However, a balance must be found between the detail of a typology and its viability in terms of resources available. The more indicators the types are based on the better a strategy can be tailored to a type. The cost of developing such a detailed typology can however easily exceed the resources available for such a lifestyle study (Lange 2002:208).

## **9.2 The lifestyle approach links the objective and subjective perspectives**

Lifestyle typologies are made up of objective as well as subjective elements. The objective elements are the socio-demographic characteristics of a lifestyle type as well as the actual behaviours that a type practises. Through the survey of consumers, a subjective perspective can be incorporated. Consumers state their orientations, wishes and needs. The symbolic dimensions of consumer behaviour are recorded in the typology. Stieß and Götz (2001:251) state as an example that in some urban milieus, the ownership of a specific type of car (e.g. BMW or Mercedes-Benz) is a prerequisite for membership and internal competition in a group. This can be found out through a survey on people's orientations and consumer practices. It is important to understand these symbolic dimensions and avoid the mistake of trying to appeal against car ownership completely with this group. It is therefore recommendable to identify and strengthen already existing elements of lifestyles which are conducive to more sustainable consumer behaviour. A strategy will be more effective if it focuses on the existing lifestyles, offering options for sustainable consumer behaviour that fit with the general requirements and structures of these lifestyles (Lange 2002: 212-217). The lifestyle approach is a means of identifying subjective lifestyle characteristics and of aggregating them at a group level so that they can then be described and analysed in a social scientific manner (Götz et al. 2002:58).

## **9.3 Lifestyle typologies are conceived for a specific case**

Lifestyle studies are very detailed and describe types of consumers well. One reason for this is that the majority of studies are conceived for a specific case. While such studies provide a detailed picture of lifestyle groups for this specific case, it is difficult to draw generalised conclusions from them. The studies can hardly be compared with each other. Their typologies are also specific at least to a needs area and a point in time (De Haan, Lantermann, Linneweber, Reusswig 2001:11). Furthermore, the studies which have employed the lifestyle approach have often used different methodologies to develop their typologies. This is another reason why it is difficult to compare the different studies.

## **9.4 Lifestyles can be ambivalent and short-lived**

Lifestyles can last unchanged for a long time, but they do not have to. Lifestyles are made up of socio-demographic variables, attitudes and values as well as behaviour patterns. All of these can change at any point in time. This must be understood when trying to devise strategies for more sustainable consumer behaviour.

Lifestyles are also often ambivalent. Sustainable consumer behaviour might be practiced in one needs area, whereas in other areas, the consumer behaviour can be far from sustainable. For example, someone who is separating rubbish regularly might still frequently go on air travel (Lange 2002:216; Lange 2001:39). Reusswig (1994:113-120) speaks here of patchwork lifestyles. This means that different lifestyles are practised in different needs areas, i.e. different factors influencing sustainable consumer behaviour will be active depending on the needs area.

## **9.5 Socio-demographic variables are still most important**

Taking a lifestyle approach and incorporating a wide range of variables when developing typologies is a development from considering only socio-demographic factors. However, the latter still determine the majority of possibilities for sustainable consumer behaviour. Socio-demographic variables such as age, income, family size and life cycle stage were found to limit any attitude or lifestyle variables. For example, although young mothers are often quite environmentally conscious consumers, this consciousness might not go as far as replacing their car with public transport, since the car might be very important in the daily family organisation. Here, the fact that there is a small child in the household will have a greater effect of the likeliness of sustainable consumer behaviour than the environmental orientations of the mother (Gaus &

Zanger 2001:245; Hunecke 2001:165-166). Still, lifestyle orientations provide additional relevant knowledge about consumer types which cannot be described by socio-demographic factors alone.

## 10 Strategies based on lifestyles

It was shown above that the lifestyle approach is a comprehensive means to find out how sustainable consumer behaviour works with different types of consumers. The lifestyle approach is also a tool to tailor sustainable behaviour diffusion strategies better towards the lifestyles of different groups.

Lifestyle typologies are especially useful for the communication and marketing of sustainable products and services. Trying to change peoples' behaviour, for example towards energy saving, local tourism or the repair and maintenance of things instead of new purchases, will be more difficult. Here, lifestyle typologies are still of use but other instruments than communication, for example community management or the creation of social networks, should be used in addition to it (Brand 2002:197).

Lifestyle typologies can also be used in the process of devising a strategy for more sustainable consumer behaviour. Here, they are useful for example in community management as participative processes can be tailored more towards the different types of consumers.

## 11 Review of four lifestyle studies

To see what role lifestyle approaches can play in the understanding of sustainable consumer behaviour, I reviewed four recent German studies that employed a lifestyle approach. They were chosen because of their comprehensive use of the lifestyle approach.

### 11.1 Aims of the studies

The first study by Prose and Wortmann was also the first study that employed the lifestyle approach in a comprehensive manner. It is a consumer analysis done for the municipal energy supplier in the German city of Kiel. This company commissioned the study as a basis for their development of a marketing campaign to increase energy saving aimed at the inhabitants of Kiel (Prose & Wortmann 1991:3).

The second study reviewed analysed consumer behaviour in a general household context in Germany. It was done by the Institute for socio-ecological Research (ISOE) (Empacher, Götz, Schultz 2002) in Frankfurt and was published by the German environment agency.

The third study looked at leisure mobility styles of consumers. The aim was to identify target groups in Germany and their respective potentials for a more sustainable leisure mobility behaviour. It was a co-operation between the above named Institute for socio-ecological Research (ISOE) and the Öko-Institut (Götz, Loose, Schmied, Schubert 2002).

The fourth study was also done by the Institute for socio-ecological Research (ISOE). It examined yet another needs area, which is the consumption of organic food. The aim was to identify target groups in Germany that can be used for the marketing of organic food. It was commissioned for the German governmental initiative 'Ecological Agriculture', which supports the increase of organic agriculture (Birzle-Harder, Empacher, Schubert, Schultz, Stieß 2003).

Apart from the Prose and Wortmann study, which was conducted in 1991, the studies are very recent, done in either the year 2002 or 2003. All four studies produced typologies. Also, apart from the study by Prose and Wortmann, which focussed on households in Kiel, all the studies developed a typology that is based on a representative sample for the whole of Germany. In three of the studies, the Institute for socio-ecological Research (ISOE) was involved. The lifestyle approaches are therefore in some ways very similar, however, as they focus on different needs areas, there are many different results and issues worth discussing.

For an overview of the aspects of consumer behaviour examined by the four studies, see Table 3.

**Table 3**  
**Aspects of consumer behaviour studied**

<p><b>Prose &amp; Wortmann 1991: Energy saving</b></p> <p><u>Energy saving behaviour:</u>  Washing/Drying: no pre wash, lower temperature, always full machine, no dryer use  Dish washing: full dish washer, use of saving programme  Refrigerator/freezer: Own appliance with automatic defrosting, defrost regularly  Cooking: use a pressure cooking pot, use minimum amount of water to cook  Lighting/standby/heating: use light only when needed, switch off standby from TV, don't use additional electricity heaters  <u>Heating energy saving:</u>  Insulate house/flat; build in new boiler; lower indoor temperature; insulate windows and doors  <u>Alternative energy sources:</u> e.g. photovoltaic  <u>Saving water:</u> Use of water saving button on toilet, use of mix tap  <b>&gt; actual energy consumption has not been noted, nor the size of the flat/house</b></p>
<p><b>Empacher et al. 2002: General household consumption</b></p> <p><u>Energy use:</u> size of flat and ownership/lease, appliances (whirl pool, solarium, sauna, other sport/leisure/hobby appliances, clothes dryer, fridge/freezer), use of energy saving bulbs, annual consumption of electricity (looking at bills!)  <u>Transport:</u> frequency and distance on holidays, car(s), horsepower and km travelled annually, subscription for public transport or railways and frequency of use, bike use  <u>Food:</u> purchase of ready meals and frequency, purchase of organic veggies and frequency, purchase of fair trade products  <b>&gt; good: energy consumption is actually noted down from the annual bills</b></p>
<p><b>Götz et al. 2002: Leisure mobility</b></p> <p>Frequency, lengths, purposes of travel  Use of transport type  Car/mc ownership, horsepower  <b>&gt; longer holidays and air travel are not included in the survey</b></p>
<p><b>Birzle-Harder et al. 2003: Organic food</b></p> <p>Frequency of purchase of organic food, kinds of organic food, place of purchase, intention of how frequently to purchase organic food in the next few years  <b>&gt; It was not asked about the opposite behaviour, e.g. purchase of ready meals, amount of meat bought; nor any specific products, e.g. fair-trade</b></p>

## 11.2 Theories employed

None of the studies employs a solid theory or model of consumer behaviour or lifestyles. In the Prose and Wortmann study, the choice of questions was led by some proven models such as Ajzen's theory of planned behaviour (1991) and Rogers' diffusion of innovations (1983) (Prose & Wortmann 1991). However, there is no detailed explanation in the report of how these models influenced the research work.

The study on leisure mobility styles by Götz et al. (2002) uses some theory in defining the concepts of leisure and mobility, however, there is no theoretical approach used to explain their use of the lifestyle concept. It is merely stated that behaviour is determined by intentions, which in turn are influenced by subjective motives. These are based on social norms, judgements by society as well as group specific preferences. Behaviour can therefore be considered a result of social facts that are seen subjectively by the individual (Götz et al. 2002:57).

The two other studies, both by the Institute for socio-ecological Research (ISOE), employ the socio-ecological lifestyle approach, which was developed by the institute. The approach has three dimensions. First, there is the social background, which describes the life stage and life situation. Then there are lifestyle specific orientations which are made up by general and needs area specific values and motives. Finally, the approach includes variables on consumption specific behaviour, such as if and how frequently a specific consumer behaviour is practised (Birzle-Harder et al. 2003:7).

### 11.3 Assumptions held

The study on household consumption by Empacher et al. has as a starting point already existing practice in the household. It does take environmentally relevant consumption areas into consideration, however these are as broadly defined as construction and housing, mobility and food in general (Empacher et al. 2002:174).

The leisure mobility study by Götz et al. assumes that consumer behaviour is not fully determined by external circumstances but that there is a certain freedom of action. Therefore, motivations have to be taken into account when trying to understand or change consumer behaviour. Also, some larger societal trends, e.g. the trend towards experience and fun events will not reverse, so strategies to change behaviour must consider them. And it is assumed that even lifestyle characteristics that are not directly related to leisure mobility can nevertheless influence the behaviour of mobility (Götz et al. 2002:57-58).

The study on organic food consumption limits itself to the 54% of the German population who already consume organic food, because it is assumed that it will be very difficult to convince the other 46% to consume organic food (Birzle-Harder et al. 2003:11).

All studies take already existing consumer behaviour as a starting point. The content of the questions they employ is therefore led by these existing behaviours. The questions were not mainly conceived by looking at what behaviours would be desirable to minimise environmental impacts but by looking at what behaviours are already practised. Also, it is considered doubtful whether lifestyle can be changed. All four studies assume that behaviour changes can only occur if they fit with the existing lifestyle of consumers.

### 11.4 Methods used

Prose and Wortmann employed marketing segmentation techniques from the commercial marketing field. They made a survey with 781 people, using a questionnaire of 100 questions. They then conducted a factor analysis to find significant dimensions within the asked questions. In a next step, the individuals were categorised in groups according to their answer behaviour regarding the different dimensions. This was done by using a cluster analysis, which then resulted in seven types (Prose & Wortmann 1991).

The study on household behaviour used qualitative research. Open exploration interviews were conducted with a representative sample of the German population. Here, representative was not defined in a statistical sense but more as the ability to capture typical cases (Lamnek in Empacher et al. 2002:92). The number of interviewees was 100 and a process similar to the content reduction method was used for analysis (Lamnek in Empacher et al. 2002:95). The research resulted in ten different consumption styles.

In the leisure mobility study, methods of lifestyle research (factor analysis and cluster analysis) and methods of transport research (travel diary) were combined. The survey employed face to face and telephone interviews with 1000 people representative for the German population. The study did not take into account longer holidays or air travel (Götz et al. 2002:59-65). Five lifestyle segments resulted from the analysis of the surveys (Götz et al. 2002:79).

The study on organic food consumption was based on a qualitative-empirical as well as a quantitative-empirical phase. The first phase entailed creative group discussions and explorations with individuals and the second phase uses a questionnaire survey. Then a target group model was developed by using factor and cluster analysis. The sample was made up of 1575 organic food consumers, which are representative for the German population (Birzle-Harder et al. 2003:8-12). This analysis resulted in five target groups for organic food consumption (Birzle-Harder et al. 2003:41).

The methods used in the four studies are very similar with the exception of the study on general household consumer behaviour which only used qualitative methods. The other three all used a standard procedure of factor and cluster analysis. Although three of them used a similar standard procedure for the analysis of the data, the studies are still difficult to compare as they examined different needs areas and were conceived to answer different questions.

### 11.5 Lifestyle approach

In the Prose and Wortmann study on household energy consumption, lifestyle was explored by looking at socio-demographic and socio-psychographic variables. These are values, lifestyles and consumption

behaviour. It must be noted though that the consumption behaviour data stem from self-reporting by the interviewees and not from actual observation. It is therefore biased.

The consumption styles in the household study by Empacher et al. are made up of orientations, social situation as well as behaviour. Again, the behaviour data is based on what interviewees reported themselves, however, the level of consumption was recorded by checking bills of the annual water and electricity use of each interviewee.

For Götz et al. in their leisure mobility study, lifestyle is made up of lifestyle specific orientations, life stage and life situational factors, socio-demographics and actual behaviour (Götz et al. 2002:58-59). The mobility behaviour was again based on self-reporting by the respondents.

The study on organic food consumption used the socio-ecological lifestyle approach that was developed by the Institute for socio-ecological Research, as mentioned above. It entails three dimensions. Firstly, there is the social background, which is made up by life stage and life situation, then there are lifestyle specific orientations which are general and needs area specific values and motives, and thirdly there is the needs area specific consumer behaviour (Birzle-Harder et al. 2003:7).

All studies took into account socio-demographic and attitudinal variables as well as the consumer behaviour in the needs area researched. It must be noted, however, that the consumer behaviour was not independently checked but relied on the self-reporting by consumers, which is biased (McKenzie-Mohr 2000:549).

## 11.6 Typologies and impacts

For a detailed overview and description of all the lifestyle types of the four studies, see Table 4 at the end of this section.

All studies come up with between five and ten lifestyle types. For example, the leisure mobility study identifies five types, which are called the 'fun-oriented', the 'modern exclusive', the 'stressed family-oriented', the 'disadvantaged' and the 'traditional domestic'.

All studies, apart from the qualitative study on general household consumer behaviour, quantify the size of the different lifestyle types as a percentage of the overall population of Germany, or, as in the Prose and Wortmann study, the population of the city of Kiel.

Only the study on leisure mobility behaviour can also quantify the environmental impacts of each lifestyle group (related to their behaviour in the specific needs area researched). The primary energy use (in litres of petrol-equivalent per person per day), the CO<sub>2</sub>-equivalents (in kilograms per person per day), the SO<sub>2</sub>-equivalents (in grams per person per day) as well as the ozone forerunner-equivalents (in grams per person per day) were calculated (Götz et al. 2002:141-145). The household consumption study by Empacher et al. is the only other study that collected some environmental impact information. By means of checking the annual water and electricity bill of the respondents, the average energy consumption (for water and electricity only) per person in the different consumption styles could be calculated. Also, as mentioned above, a pre-study identified the consumer behaviour areas which have the most impacts on the environment. These are the areas of construction and housing, mobility as well as food (Empacher et al. 2002:174). However, the single actions within these fields and their impacts were not considered.

In conclusion, only the leisure mobility study could quantify the total environmental impacts of the leisure mobility behaviour of all the mobility styles that they identified.

Some types in several or all of the studies show certain similarities, however, non of them are the same. This can be seen from Table 5 at the end of this section which lists the different types of the four studies in a comparative overview. It gives however an indication of what factors can be found in all four studies. These can be either socio-demographic (age, income, family stage) or attitudinal factors (fun/hedonism, status/exclusivity, traditional values).

**Table 4**  
**Overview of typologies of four reviewed studies**

<p><b>1) Energy saving</b>          (Prose, F, Wortmann, K (1991) <i>Energiesparen: Verbraucheranalyse und Marktsegmentierung der Kieler Haushalte (Endbericht)</i>)</p> <p><b>Seven types</b> can be summarised in <b>four umbrella groups</b>:</p> <ul style="list-style-type: none"> <li>○ <b>Traditional</b> 29.2% (1 (Economically modest 10.2%) + 4 (Conservative environmentally conscious 19.0%))</li> <li>○ <b>Materialists</b> 25.6% (3 (Hedonists 14.2%) + 6 (Disinterested Materialists 11.4%))</li> <li>○ <b>Open-minded value pluralists</b> 23.4% (2)</li> <li>○ <b>Alternative</b> 21.8% (5 (Alternative environmentally conscious 14.7%) + 7 (Potentially sustainable 7.1%))</li> </ul> <p><b>Factors looked at:</b> Values, lifestyles, consumption behaviour (socio-demographic and socio-psychographic variables)</p> <ol style="list-style-type: none"> <li>1) <b>Economically modest:</b> Mainly women, not much income, not many values, mainly family, safety, health, only slight interest in environment &gt; strategy: economic savings</li> <li>2) <b>*** target group*** Open-minded value pluralists:</b> High in all values, but mainly materialist, have good income to spend, act quite sustainable. <u>Strategy:</u> Emphasis on efficiency and latest technologies, not savings; might be won as multipliers! Can be influenced by sports idols or with mailings that target their occupational group</li> <li>3) <b>Hedonists:</b> Men, young, fun, not important are health, environment and social issues, consume a lot, but not sustainable, maybe energy saving can be a peer trend. <u>Strategy:</u> Hard to reach; energy saving must first get more exciting image, also use events and attract them with spectacular technology. Then easy steps for own energy savings. If convinced they could be multipliers.</li> <li>4) <b>*** target group*** Conservative environment conscious:</b> Family, social, material, not post-material values. <u>Strategy:</u> They trust energy suppliers and save energy already. They can be updated with a newsletter on new ways of saving even more. Newsletter can address other environmental topics, too. Maybe persuade to exchange old white wares with new ones. Multipliers!</li> <li>5) <b>*** target group*** Alternative environment conscious:</b> Self realisation, social conscience, environmental, not material values; see themselves not as environmentally conscious as the above group but act more sustainable, could save more energy if they knew more about technical issues, mainly women. <u>Strategy:</u> Improve image of energy suppliers, as group is sceptical. Information, must be comprehensive, from easy to advanced. Mail tips via the social networks they are active in.</li> <li>6) <b>*** target group*** Disinterested materialists:</b> Mainly men, not many values, material, not much social or eco values, saving money, do not care about energy saving appliances, but want to be technically up to date. <u>Strategy:</u> Show them financial benefits. Reach through multipliers which are motivated employees of the energy supplier.</li> <li>7) <b>Potentially sustainable:</b> No income, young, self realisation, also fun, a bit sustainable, not material, relatively healthy, simple life, but spend still on spontaneous fancies, still seem to develop their style, not yet technical interest, see also characteristics of the Alternative environment conscious; can be used as multipliers. <u>Strategy:</u> Improve image of energy supplier. Maybe events to improve energy consumption at the university or other frequented places.</li> </ol>
<p><b>2) General household consumption</b>          (Empacher, C, Götz, K, Schultz, I (2002) <i>Haushaltsexploration der Bedingungen, Möglichkeiten und Grenzen nachhaltigen Konsumverhaltens. Die Zielgruppenanalyse des Instituts für sozial-ökologische Forschung</i>)</p> <p><b>Ten consumption styles:</b> Made up of orientation, behaviour, social situation.</p> <ol style="list-style-type: none"> <li>1) <b>Organised eco-families:</b> Important multiplier! Open for environment, ethics, regional produce. Convenience. Consumer advice is partly used, eco-labels too but not understood. <u>Strategy:</u> Tips to stabilise their behaviour, with convenience and time saving offers.</li> <li>2) <b>Childless career-oriented:</b> Important trendsetter! Very high energy consumption. Like quality, maybe long life products, modern heating system. Convenience and eco services. Conscience: health and ethics. Not really much consumer advice or labels, must be trustworthy, like advice from social network. <u>Strategy:</u> Focus on health or technology, long life quality products; reach via Internet.</li> <li>3) <b>Young disinterested:</b> Important multiplier amongst young! Important target group! Not interested in environment, more in bargains and special offers, instructions how to make household life easier and quicker, fair-trade ok but must be cheap, organic meat ok due to empathy with animals, car reduction only by tax incentive for clean fuel. Consumer advice and labels unknown. <u>Strategy:</u> Difficult to convince but maybe they form their preferences later; focus on fun, action.</li> <li>4) <b>Every day creative:</b> Relatively eco, still potential to reduce car use, more eco products, but must be cheap and handy. Good use of consumer advice. <u>Strategy:</u> No additional action necessary.</li> <li>5) <b>Disinterested in consumption:</b> Huge energy consumption. Likes savings, but only if they are convenient, maybe eco services. Sceptical. Don't ever trust consumer advice. Can maybe be reached through colleague groups and easy telephone offers of consumer advice. <u>Strategy:</u> Hard to convince/reach: will maybe only act under regulative pressure.</li> <li>6) <b>Rural traditional:</b> Important target group! Likes regional products, quality can be expensive, maybe long life products, energy saving measures on the house. Consumer advice partly used, information must be more transparent. Eco labels hardly used. <u>Strategy:</u> No ideology, maybe interesting subsistence economy with responsible agriculture; reached by</li> </ol>

<p>multipliers/clubs.</p> <p>7) <b>Disadvantaged stressed:</b> Like to save money. Feel frustrated and don't want to be pressurised to do extra efforts. Maybe children health. East Germany: regional products. Consumer advice ok but must offer specific advice for low income families, without having the air of a poverty advice. <u>Strategy:</u> Maybe debt advice, where this type might go to anyway.</p> <p>8) <b>Inconspicuous families:</b> Maybe children health. Like to save. Likes to own, maybe long life products. Is sceptical, trusts family, friends, clubs. Can trust eco labels. <u>Strategy:</u> Use multipliers, don't approach directly</p> <p>9) <b>Active seniors:</b> Multipliers! fourth biggest energy per capita consumption. Quality important, maybe ethics or bio products. Also potential to use consumer advice. <u>Strategy:</u> No ideology; maybe offers for environmental travel.</p> <p>10) <b>Status-oriented privileged:</b> Very high energy consumption. Maybe energy saving measures around house. Like to own and quality, maybe long life aspect and repairs. Ethics/social issues amongst women. Maybe eco tourism. Consumer advice is seen as not needed, it is for the poorer ones. Hard to reach, maybe only as a donor.</p>
<p><b>3) Leisure mobility</b> (Götz, K, Loose, W, Schmied, M, Schubert, S (2002) <i>Mobilitätsstile in der Freizeit. Abschlussbericht des Projekts "Minderung der Umweltbelastungen des Freizeit- und Tourismusverkehrs"</i>)</p>
<p><b>5 types:</b> orientations, social situation <b>Environmental impacts:</b> Most: Fun-oriented (5.4kg/day greenhouse gas emissions). Least: traditional (2kg/day)</p> <p>1) <b>Fun-oriented:</b> 22%, individualistic, fun/event/risk, modern technology cool, peer strong (trendsetters), but not neighbourly; young, low income, high education, many singles; are very leisure active mostly at night; transport: car is fun but are open to other fun transport, to walk is boring, public transport indifferent (23% use it though); (short) holidays: 2<sup>nd</sup> biggest group for short hols (47%).</p> <p>2) <b>Modern exclusive:</b> 17%, modern mainstream, job imp, exclusivity, trends, bit family, open for soc/environmental, strongest technological affinity, traditional partnership roles; 60% men, good education, high income, 2/3 as couple/family, 40% have kids; most active group, also furthest travelling; transport: car is prestige and fun (have most of it), BUT also eco concern, support public transport but do not use it, bike and walk not really; most short hols, mainly by car.</p> <p>3) <b>Stressed family-oriented:</b> 24%: family very imp, homely, happy to pay slightly more for eco, neighbourly, stressed; 2/3 women, highest number in part-timers, average income, 70% couple or family, 50% with kids; not so active, mainly to visit family or shopping; transport: car imp and safe (second highest ownership), do not like public transport, rarely walk or bike</p> <p>4) <b>Disadvantaged:</b> 11%, instrumental job attitude, no strong lifestyle orientations (just drinking with friends); 58% men, low education, low income, above average unemployed, 34% workers, biggest group with unemployed/social benefits; not very active; transport: rational choice, open to any kind of transport, do not walk as it is no fun.</p> <p>5) <b>Traditional domestic:</b> 26%, safety/security/non risk, long-life/naturalness, traditional values, suspicious about modern technology; 56% women, many elderly, 58% pensioners, low education, low income; not very active; transport: safety first, like walking, only 2/3 have a car, few have public transport subscription.</p>
<p><b>4) Organic food</b> (Birzle-Harder, B, Empacher, C, Schubert, S, Schultz, I, Stieß, I (2003) <i>Zielgruppen für den Bio-Lebensmittelmarkt.</i>)</p>
<p><b>Five target groups:</b></p> <p>1) <b>Thoroughly convinced:</b> 24%, 8.7m of adults in Germany: Qualified women in after family phase, looking for (new) sense in their life, non material, social, ethical, sensual, fresh food cooking regularly, trust labels, talk in social group about organic food. 44% want to further increase their consumption. <u>Strategy:</u> want more information, magazine, world news. Modern eco-image instead of eco corner. Can be multipliers.</p> <p>2) <b>Successful sophisticated:</b> 13%, 4.7m, well-off mums in family phase, health, children, wellness, no consequent food regimes, are also prone to convenience purchases, but open for new products, information seeking, trust labels. For some it is too expensive, also the eco image is not popular. 40% want to increase consumption in future. <u>Strategy:</u> Want to see more of the personal benefits, e.g. health, taste, wellness, quality, naturalness and experience. Like also attractive corporate ID. Comprehensive supermarkets in the right part of town, nice, informative, lifestyle.</p> <p>3) <b>50+ health-oriented:</b> 17%, 6.1m: Elderly women, traditional, increasingly environmentally responsible, might have to eat more healthy, often want to due to life change (kids moved out), daily fresh cooking, price sensitive, but intensive buyers, need for convenience in access. Interested but many don't know labels. 33% want to increase their consumption further. <u>Strategy:</u> Supply them with more specific health related information to guide to make better choices. Need for either basic choice of products in local shop or also order services.</p> <p>4) <b>Distanced sceptical:</b> 24%, 8.7m: Men: singles and dinks. Only reachable over trends/technologies or sport/fitness. Convenience, rarely fresh cooking. Quality is attractive also persuaded by social group. Price not barrier but conviction about benefits. Don't know labels, all eco products have bad image and are suspicious. <u>Strategy:</u> Must be trendy new unconventional brand of ready made or deli foods.</p> <p>5) <b>Young indecisive:</b> 22%, 7.9m: Mixed sex under 30, simple, low income, hedonistic but also seeking for sense, reached via new media, no health, cheap, convenience, unsure about food issues, want to do their bit but unsure what it should entail. Organic food only sparsely. <u>Strategy:</u> need to learn about food issues and to easily/affordably integrate them into their life. Must be unconventional, maybe shown in soap operas or women's magazines.</p>

**Table 5**  
**Schematic overview of typologies of the four studies**

Energy saving	General household	Leisure mobility	Organic food
Economically modest	Disadvantaged stressed	Disadvantaged	Distanced sceptical
Disinterested materialists	Disinterested in consumption		Young indecisive
	Young disinterested		
Hedonists	Childless career-oriented	Fun-oriented	
Open minded value pluralists	Status-oriented privileged	Modern exclusive	Successful sophisticated
Alternative environment conscious	Organised eco-families	Stressed family-oriented	Thoroughly convinced
	Every day creative		
Conservative environment conscious	Active seniors	Traditional domestic	50+ health oriented
	Rural traditional		
Potentially sustainable	Inconspicuous family households		

### 11.7 Factors influencing sustainable consumer behaviour

The following factors were identified in at least one of the studies as influential to sustainable consumer behaviour typologies. It must be remembered that none of the studies, apart from the leisure mobility study, can quantify the environmental impacts of each type of their typology. What is considered sustainable consumer behaviour in the studies is not backed up by quantitative evidence. It is therefore difficult to determine what types are truly sustainable in their consumer behaviour. However, it can be seen what types are practising what behaviour already and if they are open to more sustainable behaviour practices. The factors identified in the studies are socio-demographic and attitudinal factors. These will be discussed in the following sections.

#### 11.7.1 Socio-demographic factors

##### *Income*

A low income is a socio-demographic factor which limits the extent to which consumer behaviour can be sustainable. Although some behaviour practices of low income groups might not be sustainable, the environmental impacts of these groups are often amongst the lowest in the typologies. This is due to the low level of consumption which is in turn due to their low incomes. Another reason for unsustainable consumer behaviour is that more sustainable consumer behaviour often involves higher financial cost and cannot be afforded by low income groups. The question is here, if it matters that low income types do not practise sustainable consumer behaviour, as the level of their consumption and therefore their environmental impacts are so low.

An orientation towards saving money can be found in some types in the typologies of all four studies. The energy saving study came up with one type called the 'economically modest'. Although this type is mainly made up of women and shows a family orientation, the economic situation is the most important concern. If this group has a low energy consumption it is due to their economic situation (e.g. they occupy less than average of housing space) or due to the financial savings they expect by saving energy (Prose & Wortmann 1991). In the general household consumption study, the type most interested in saving money is the type of the 'disadvantaged stressed'. Again, their main concern is their difficult financial situation and sustainable consumer behaviour is not something they consider and the suggestion of which feels like an overwhelming demand on them (Empacher et al. 2002:109-110). In the leisure mobility study, the group of the 'disadvantaged' is also in a financially difficult situation. There is no interest in sustainable leisure mobility behaviour; most are quite indifferent to the choice of transport (Götz et al. 2002:90-91). In the organic food study, the type of the 'young indecisive' has a below average income. As organic food is most often somewhat more expensive than regular food, this group rarely consumes organic food (Birzle-Harder 2003:99-101).

### **Gender**

Another socio-demographic variable that was found significant is gender. In all but the leisure mobility study there were lifestyle types that are made up of mainly women or men. The qualitative study on household consumption found differences in values and orientations between men and women within each of the ten consumption styles. Especially when it comes to actual behaviour, women are more environment-oriented. This might be partly due to the motive alliance made up by environmental values and health orientations (Empacher et al. 2002:177-178). This is particularly visible in the study on organic food consumption. This study focussed on the 54% of the German population who are already organic food consumers. Around 60% of those are women, which shows that women are more sustainable consumers, at least when it comes to buying organic food (Birzle-Harder et al. 2003:17). What the study unfortunately did not show is the unsustainable behaviour: how many of those buying organic food are still buying non-organic food as the main part of their food purchases?

Another example is the 'alternative environment-oriented' group in the energy consumption study by Prose and Wortmann (1991). This group is made up mainly by women. It is also one of the groups that are saving most energy already. Most individuals in this group do not even consider themselves as particularly environmentally friendly, although they actually behave environmentally friendly. Many in this group would be able to save even more energy, if they would receive more information about the technical details of energy saving behaviour (Prose & Wortmann 1991). Women are the consumers who practice more sustainable consumer behaviour, even if they often do not have as much environmental knowledge than men have (Diekmann & Preissendörfer in Reusswig 1994:109). It is necessary to not only develop motivational strategies for more sustainable consumer behaviour for the different lifestyle types, but also to consider women within these lifestyle groups more (Reusswig 1994:130). A starting point would be the lifestyle groups which are made up by a majority of women.

I will discuss gender issues in further depth in section 11.8.2 which summarises the strategies to promote sustainable consumer behaviour suggested by the four studies.

### **Children**

Another socio-demographic factor which was considered significant is the impact of children in the household. The study by Empacher et al. on household consumption especially points out families with children aged below six. These often have a greater health orientation when buying food as well as a greater concern for questions regarding construction and housing. They also seem to be generally more open for social and ethical questions such as for example fair trade (Empacher et al. 2002: 177).

The organic food study also has one type of which two thirds are living with children in the household. It is the type of the 'successful sophisticated'. Their organic food consumption is rather high. One reason for this is that they want a healthy diet for their children and another reason is that the birth of their first child often triggers an orientation towards organic food not only for their child but also for themselves (Birzle-Harder 2003:60-65).

Children seem to be a predictor for more sustainable consumer behaviour, however, only in some needs areas. Neither the study on energy saving nor the one on leisure mobility could show a strong influence by children in the household. As mentioned above, people seem to practice different lifestyles in different needs areas, a phenomenon which Reusswig called patchwork lifestyles (Reusswig 1994:113-120).

Low income, gender and children are three relatively strong socio-demographic variables. This confirms the assumption by Gaus and Zanger, as well as by Hunecke (as mentioned above) that socio-demographic factors limit any influences of lifestyle orientations (Gaus & Zanger 2001:245; Hunecke 2001:165-166). In the following, I will give an overview of attitudinal orientations that also have a strong influence on consumer behaviour.

### **11.7.2 Attitudinal orientations**

#### ***Environmental orientation***

The obvious attitudinal orientation which can lead to sustainable consumer behaviour is environmental consciousness. This orientation was found significant especially in two of the four studies. Firstly, in the energy consumption study by Prose and Wortmann, there is a type called the 'conservative environment conscious' which shows high environmental awareness as well as practises energy saving behaviour. Secondly, in the general household consumption study, the 'organised eco-families' are also very environmentally conscious. These types are environmentally conscious, and while we do not know about the energy consumption level of the 'conservative environment conscious' in the Prose and Wortmann study, the 'organised eco-families' do not practise a consequent sustainable consumer behaviour. As the family life requires good organisation of especially of time, many families, although they want to act environmentally friendly, would not do without a car, for example. Furthermore, many families often buy ready made meals in order to minimise stress related to family organisation. Environmental consciousness can be a predictor for sustainable consumer behaviour, but it does not have to. This is due to its weakness compared to other lifestyle orientations such as convenience.

#### ***Family orientation***

A general family orientation practised by certain types can be found in the typologies of all four studies. In the Prose and Wortmann study, the type of the 'conservative environmentally-conscious' shows a very high family orientation. This type is already very good at saving energy (Prose & Wortmann 1991). In the household consumption study the type of the 'organised eco-families' is also showing a strong environment conscious consumer behaviour (Empacher et al. 2002:99-101). In the leisure mobility study, the group of the 'stressed family-oriented' have a rather low environmental impact of their leisure mobility (Götz et al. 2002:141-145). However, this might also be due to their low disposable income and not so much due to environmental orientations. Family orientation in some cases seems to be a predictor for more sustainable consumer behaviour. Also, as already mentioned above, the type of the 'successful sophisticated' in the organic food study is often buying organic food to provide a healthy diet for the children and for themselves, too (Birzle-Harder 2003:60-65).

#### ***Fun orientation***

Another important lifestyle orientation that turned up in three of four studies was the orientation towards fun and exciting experiences, variety in experiences and action. This orientation can be linked with a low performance in sustainable consumer behaviour. In the energy consumption study, this type is called the 'hedonists', who is not saving much energy and is considered hard to convince to do so (Prose & Wortmann 1991). In the general household consumption study the type which is most oriented towards fun and action is the one of the 'young disinterested'. This group is not interested in environmental issues or sustainable consumption and is considered hard to convince (Empacher et al. 2002:103-104). The case is also quite clear in the leisure mobility study and its type the 'fun-oriented'. This group has the highest environmental impact from their leisure mobility behaviour (Götz et al. 2003:141-145).

**Additional important factors**

There are other attitudinal factors that were found in the studies. These that can influence behaviour to be either sustainable or unsustainable, however, depending on other motives of the consumer. They can build motive alliances with other orientations. No matter if these factors actually result in sustainable or unsustainable consumer behaviour, they are factors which are useful to know when designing strategies to promote more sustainable consumer behaviour. The attitudinal factors which can have an effect in combination with other orientations are a social orientation, a health orientation, being alternative and rejecting materialism, professionally ambitious, a trend orientation, a technology orientation, traditional values, a status and exclusivity orientation as well as materialism.

Materialism is an example of an orientation which can lead to either sustainable or unsustainable consumer behaviour. Materialism can mean that an individual generally consumes many things and therefore increases his or her environmental impact. On the other hand, materialists who like to own things, might rather let something be repaired instead of buying a new one of it. Materialism can also mean that a product with high quality and long life expectancy will be preferred over low quality products that have to be replaced soon.

As was shown, socio-demographic factors such as gender, the existence of children in the household and low income, as well as lifestyle orientations such as environmental consciousness, a family orientation or a fun and action orientation have a significant influence on the sustainable consumer behaviour of some of the groups in the typologies of the four studies. Socio-demographic factors often have a stronger influence than attitudinal factors. For an overview of all the factors identified by the four studies see Table 6.

**Table 6**  
**Identified factors of typologies**

	Energy-saving (Prose & Wortmann 1991)	Gen. Household (Empacher et al. 2002)	Personal mobility (Götz et al. 2002)	Organic food (Birzle-Harder et al. 2003)
<b>Socio-demographic factors</b>				
Gender	x	x	x	x
Low income	x	x	x	x
Young children		x		x
<b>Attitudinal factors</b>				
Family	x	x	x	x
Trend	x	x	x	x
Status/exclusivity	x	x	x	x
Materialism	x	x	x	x
Convenience		x	x	x
Fun	x	x	x	
Environmental	x	x		
Health	x	x		x
Technology	x		x	x
Traditional	x	x	x	
Social	x	x		x
Alternative	x	x		
Professional	x	x		
Physical (city or country living)			x	

## 11.8 Suggested strategies for more sustainable consumer behaviour

In this chapter, I give an overview of the lifestyle types suggested by the authors of the four studies to specifically target with strategies to promote more sustainable consumer behaviour. Furthermore, the strategies suggested are discussed in some detail. These strategies are in all cases developed to fit the characteristics of the target types in question. For example, young, fun oriented people might respond to information on energy saving if it is communicated through a comic story or through exciting cinema advertising (Prose & Wortmann 1991).

### 11.8.1 The study on household energy consumption

In the study on household energy consumption by Prose and Wortmann, the four types suggested to target are the 'open-minded value pluralists', the 'conservative environment conscious', the 'alternative environment conscious' as well as the 'disinterested materialists'. They were chosen as target groups from the typology of seven, because these segments are large, have a large saving potential, i.e. they are easy to be reached and can easily incorporate new patterns of behaviour in their life. In addition, some of them are strong multipliers, i.e. they are influential on a large number of people (Prose & Wortmann 1991).

A marketing strategy for energy saving behaviour must take into account the characteristics of each target group, as identified in the study. The 'alternative environment conscious' for example, are characterised by social and environmental consciousness, are strongly influenced by their social network, are not materialists, do not have an extensive technical understanding of energy saving issues, are sceptical regarding the trustworthiness of the local energy supplier company and are mainly women. The energy supplier (who commissioned the study) is recommended to develop a marketing strategy which takes into account these characteristics.

Prose and Wortmann suggest that the image of the energy supplier must be improved so that marketing measures for energy saving behaviour will be taken seriously by consumers such as the 'alternative environment conscious'. One means to achieve this can be the co-operation with other (environmental) organisations to market energy saving behaviour. The type of the 'alternative environment conscious' also needs information including an introduction into some of the technical issues of energy saving, to increase knowledge and understanding among this group of how energy savings work. Also, the cost aspects of changing behaviour should be explained and options for the financing of new measures such as exchanging old appliances with new, more energy efficient ones should be given. As this type is strongly influenced by his or her social network, information could be given through this network, e.g. through clubs, associations or the work place.

To reach the four target groups with marketing for energy saving behaviour, Prose and Wortmann propose the use of a range of measures and mediums. The main measure is information supply in printed format, as well as through exhibitions or advertising. Advice can also be given via discussions and consultations. Hands-on action is suggested, possibly also as part of exhibitions. Furthermore, special offers for more sustainable appliances or maintenance services could be arranged in co-operation with local shops. A general co-operation with other organisations such as environmental organisations can be effective. Consumers can also be reached through interest groups such as professional associations.

It is important with some types to address the financial implications of energy saving, underlining possible financial savings as well as giving options on how to deal with additional initial costs involved in a behaviour and equipment change. Another important point is to not communicate in overly technical terms, or at least in simplified technical terms, unless the target group is found to be 'technophile'. Finally, one important part of a marketing strategy is an image improvement of the energy supplying company itself. A trustworthy and competent image is needed before many consumers will consider taking on any advice by their local energy supplier (Prose & Wortmann 1991).

Prose and Wortmann also suggest that any successful strategy for energy saving must necessarily be planned to run over a longer period, for example over a period of five years. Furthermore, it is important that different actors are involved in it, such as technicians, business administrators as well as social scientists.

### 11.8.2 The study on general household consumption

In the general household consumption study by Empacher et al., the aim was to develop motivational strategies for the specific use by a regional consumer advice centre. This implies that the strategy suggested will heavily rely on information supply.

The study suggests motivational strategies for each of the ten different types. The ten types can be grouped into four target groups which each can be addressed with one common strategy. These four umbrella groups are the 'environment oriented', the 'stressed', the 'traditional' and the 'privileged' (For the types that are included in each umbrella group, see Table 4 'Overview of typologies of four reviewed studies' on page 30). From these four umbrella groups, priority target groups can be identified. The reason for prioritisation can be a high consumption level, how likely a group will incorporate behaviour changes, as well as if they are multipliers.

#### *Umbrella group 'the privileged'*

An example is the umbrella group of the 'privileged'. Firstly, the 'childless career oriented' should be targeted because it is a type with high consumption levels. Furthermore, this type is often seen as a 'winner type' and example for his or her social environment, due to his or her performance orientation and professional success. This type could therefore be an example for other people if he or she adopted more sustainable consumer behaviour. In a motivational strategy for this type, the emphasis must be on sustainable consumer behaviour options which fit into a life with a strong career orientation. The 'childless career oriented' must be convinced that strong responsibility and ambition in the career could be translated into other areas, such as environmental and social responsibility, too. Themes through which this could be communicated are health as well as modern technology. As this type is individualistic, it cannot be reached through multipliers. This type could potentially be addressed through the Internet (Empacher et al. 2002:126).

The 'status oriented privileged' are a strategically important target group because they are, like the 'childless career oriented' seen as a 'winner type' and an example for other groups in society. More sustainable consumer behaviour taken on by this group could serve as a good example for many other people. Another reason why they are an important group is their high consumption level. They emphasise their individuality and distinction from other groups in society and are therefore difficult to reach. One possibility could be to approach them through social networks they are members in such as the Rotary or Lions Clubs. This type is generally more difficult to convince to change their consumer behaviour. However, another role that they might be able to play is as supporters and sponsors for projects regarding motivational strategies for more sustainable consumer behaviour in the society in general. Through this involvement as supporters, this group might eventually also change some of their consumer behaviours (Empacher et al. 2002: 128-129).

The study suggests a number of themes through which the umbrella group of the 'privileged' can be targeted for more sustainable consumer behaviour. Firstly, this group is interested in quality and might therefore be interested in products with a long life span. Also, the use of repair services for things in the household can be a means to prolong a product's life span and also avoids the environmental impacts connected to the frequent repurchase of things. Eco-efficient services is another area which might be welcomed at least by the ones in the group who live in a family with children. Interesting services could be organic food delivery services or cleaning services. It is important though, that the environmental credentials of such a service are in the background of communication and that emphasis is put on other qualities such as quality and reliability. Finally, this group is the one who can best afford to invest in the upgrading of their property for more energy efficiency (Empacher et al. 2002:144-146, 166-174).

#### *Umbrella group 'the traditional'*

Another umbrella group that is suggested to be targeted is the group of the 'traditional'. Although the study cannot quantify the size of the different types, the three traditional types are at least not niche types. These traditional types could easily incorporate more sustainable consumer behaviour in their lifestyles, due to their typical orientations such as owning and taking care of things, traditional values, regional orientation (in the case of the 'rural traditional' as well as the 'active seniors'), or economising and the rejection of

wastefulness (in the case of the 'inconspicuous families'). The emphasis in the communication should however not mainly be on the environmental credentials of changed behaviour.

The behaviour patterns that could be brought close to this group by a consumer advice centre can therefore be the consumption of regional produce, fair trade, the rental of appliances and tools as well as car sharing. All these behaviour patterns have a potential for adoption by this group, however more information on them is needed before this group will change its behaviour. Many consumers, for example, do not know enough about the concept of fair trade or the specifics of car sharing. Car sharing is a behaviour which is generally not seen as an option for the men of this group. However, women of the 'traditional' showed a great interest in this concept, as many of them would consider it instead of the costly investment into a second car in the household. This was the result of a group discussion with representatives of the group of the 'traditional' (Empacher et al. 2002:143-144, 156-166).

### *A gender perspective*

Another group which the study suggests to address specifically is not a type from their typology of consumption styles. It is women in general who should be addressed better. As stated earlier, women are often already sustainable consumers, but need to be addressed more directly.

Empacher, Hayn, Schubert and Schultz (2002) looked at the results of the study on household consumption styles from a gender perspective in a separate project. Women indeed are generally more environmentally aware and also show more sustainable consumer behaviour more often than men. This is partly due to structural disadvantages that women face and result in them having less (financial) resources available and therefore often automatically consume less. On the other hand, they are often (by choice or not) the persons in the household who are expected to take care of environment and health issues, too. Although they are expected to take this responsibility, still, they often cannot make all decisions alone but are strongly influenced by the man's opinion and on his resources. The aim of any environmental strategy must also be to work against the feminisation of the environmental responsibility and spread it over both sexes. For strategies for more sustainable consumer behaviour, this means that the factors influencing sustainable consumer behaviour must be examined separately for men and for women, to identify differences.

Empacher et al. (2002) found gender specific differences in motivations of both umbrella target groups the 'traditional' and the 'privileged'. The traditional women differ from the men in that they show additional orientations. These are an environment orientation, as well as a social and ethical orientation. Also their health orientation is stronger. The orientation specific to the traditional men is their car orientation. This means that traditional women are for example more receptive to car sharing. The communication of sustainable behaviour options must consider these gender specific differences in orientations.

The same differences were found amongst the 'privileged'. Women here show a stronger health as well as ethical orientation while men show a strong technical and car as well as convenience orientation (Empacher et al. 2002:187-188).

As mentioned above, the communication to achieve more sustainable consumer behaviour must not reinforce the picture that women should be the ones responsible for environmental issues in the household. Instead of targeting women specifically, the fact that different orientations exist among women and men of the same lifestyle type should rather lead to an improved communication towards men while communication to women is continued. For example, the privileged men differ strongly from the privileged women in some of their orientations. In order to communicate the benefits of organic food better to the privileged men, their convenience orientation should be appealed to, while women are more susceptible to the health aspect of organic food.

Although gender specific differences in orientations for more sustainable consumer behaviour exist, these are different according to lifestyle types. As shown, the differences are significant for the 'traditional' and the 'privileged'. They are not very strong however, amongst the 'every day creative' or amongst the 'disinterested in consumption'. Still, this discussion shows that socio-demographic factors can influence sustainable consumer behaviour.

At the same time, these gender specific differences are another reminder of the above mentioned need for an ongoing negotiation process in society about which actors are to take what environmental responsibility. It also shows how closely environmental and social sustainability are linked.

The issue concerning gender and sustainable consumer behaviour is important to be researched in further depth. Given the scope of this paper, I could not discuss it in any further detail.

### ***Means and measures to be used by consumer advice centres***

There are several strategies that are proposed for a consumer advice centre to be used. Firstly, the centres should maintain an independent and competent image. Apart from information supply in form of advice talks and printed material and a renewed website, the study suggests hands-on events. For more effective communication, multiplier persons should be identified and targeted. Multipliers can be more effective in communicating with sceptical groups.

Strategies must be seen in the wider context of society. Empacher et al. point out that state and industry actors must work together to create a favourable environment for consumers to adapt more sustainable consumer behaviour. An example is waste recycling. The government has the responsibility of ensuring a functioning and reliable recycling infrastructure. After there had been reports in Germany about much of the collected paper ending up being burned instead of recycled, many consumers became rather sceptical about the use of recycling. Even worse, many became sceptical about the use of environmental measures in general. Here, the government must make an effort to provide functioning systems as well as to regain the trust of the citizens.

### **11.8.3 The study on leisure mobility**

The leisure mobility study proposes strategies to increase the use of more sustainable leisure mobility options for each of the five types. A guideline for any prioritisation of target types should be to minimise the environmental impact of leisure mobility. The study points to the per capita potential of a reduction of CO<sub>2</sub> and SO<sub>2</sub> emissions in the case of the suggested strategies being implemented.

The strategies focus on the main needs of each type and develop options according to it. It must be noted, however, that the study also found that most of leisure mobility is for the purpose of maintaining social relations. It is therefore difficult to reduce the level of mobility. The focus should be on replacing environmentally damaging modes of transport such as car travel with alternative modes of transport (Götz et al. 2002).

The study is rather comprehensive as it actually presents strategies not only for each consumer type but also for each kind of mobility measure which should be encouraged. This means they present a different strategy to encourage for example the use of bicycles for each type respectively.

The type the 'fun oriented' mostly seek fun and excitement. In the following a selection of the measures proposed for this type are given. Modern technology such as electronic displays for information or entertainment should be installed in public transport. Variable seating in compartments will cater for the socialising needs of the 'fun oriented' and free papers will help to distract the passengers. Student semester tickets could have the option to take a friend with them; there could be group tickets offered for the travel to special events or annual cards could give discounts for car sharing. The public transport company must improve its image in the public so that also the 'fun oriented' take them more seriously. Furthermore alternative transport modes must be supported. For example, inline skating, hybrid cars or bicycle cabs are some of the transport modes that are getting attention from the novelty-seeking 'fun oriented'. They can be even more attractive if they are easily available and if the necessary infrastructure is favourable (e.g. specific inline skating or cycling routes) (Götz et al. 2002:146-190).

The following main needs of the five mobility types were identified in the study. As stated above, the 'fun oriented' seek fun and excitement, the 'modern exclusives', on the other hand, seek distinction and luxury. The 'stressed family oriented' seek stress relieve and for the 'disadvantaged' it is important to achieve more social integration and the prospect of upwards upgrading in society. Finally, the 'traditional home oriented' hold strong traditional values such as safety and security.

The measures that the study suggests as part of a strategy for more sustainable leisure mobility behaviour include everything from the equipment and presentation of the public transport vehicles, public transport fare offers, the support for alternative transport modes and the support for the necessary infrastructure for alternative transport modes, as well as more safety in public transport, a personalised service and an improved image of the public transport companies. Alternative transport modes could be cycling, walking, inline skating, car sharing, taxis, hybrid cars, low emission motor cycles, electric bicycles,

bicycle cabs or generally public transport (Götz et al. 2002:146-190). The study points out that these measures would be more effective if accompanied by restrictive measures for car use or by pricing policies which incorporate environmental costs. These measures were, however, not considered in the study due to the lack of resources (Götz et al. 2002:195-196).

#### **11.8.4 The study on organic food consumption**

The organic food study suggests a marketing approach for each of the five consumer types to increase the consumption of organic food. The study does not give any recommendations for a prioritisation of any types but it points out that the types that have the biggest market share so far are also the ones who want to expand their future consumption of organic food the most. These are therefore types which are easy to target. The type of the 'thoroughly convinced' is also important due to their role as multipliers in society. Furthermore, although the type of the '50+ health oriented' only have the third biggest market share, they will become more important in the future due to the ageing of the population in Germany. The 'distanced sceptical' are second to last in terms of their market share, however, they are a group who is rather price insensitive once they are convinced and attracted by organic food products.

Each approach addresses a specific need of one or sometimes several types. The first approach emphasises that organic food is healthy and can be economical. This approach will appeal to the type of the 'young indecisive'. Other organic food products could be marketed as unconventional and convenient, to appeal to the 'distanced sceptical'. The more environmentally conscious such as the 'thoroughly convinced' or the '50+ health oriented' will seek for the already known and trusted organic food products. Nevertheless they like to see these products not to be old fashioned but with a contemporary touch. The type of the 'successful sophisticated' mostly respond to premium organic food products which seem to be fine and posh. A natural and authentic food brand is something which can be attractive to the 'thoroughly convinced', the 'successful sophisticated' as well as to the '50+ health oriented' (Birzle-Harder et al. 2003:122-134).

A target group typology is a tool for the marketing of organic food products. It can be used during product design and for decisions about shopping locations, product variety in shops and service. It is also useful for developing target group specific actions, events, presentations and themes (Birzle-Harder et al. 2003:120). Media used for marketing activities can be specialised consumer magazines, women and lifestyle magazines and television and radio advertising and features. Special services such as telephone order, home delivery as well as ordering specific products could appeal especially to the type of the '50+ health oriented'. Sample events in conventional supermarkets can introduce organic food products to those that are relatively new to them and still sceptical, such as the type of the 'young indecisive'. In addition to this, the study generally suggests improving the image of organic food. It should no longer be associated with the 'alternative eco corner' but should develop a modern image, which underlines other than environmental benefits of organic food, e.g. health, taste and quality (Birzle-Harder et al. 2003:122-134).

However, that the study by Birzle-Harder et al. focuses strongly on the marketing of one specific product. It is not considering general food consumption patterns which include the consumption of non-organic food products.

## **12 Discussion**

In this chapter I will discuss the results of the review of the four studies which use the lifestyle approach. I will compare the results to the literature review which preceded the review of the four studies. I will also see how the results are relevant to the hypothesis of the thesis and the specific research question it had set out to answer.

### **12.1 Target groups and environmental significance**

The four reviewed studies had been chosen because they were the most comprehensive in their use of the lifestyle approach. This could be seen in the detailed review above. They have some common features.

All of them give recommendations for a prioritisation of target groups. As was mentioned above, according to Stern, motivational strategies should look at the environmental significance of behaviour. First of all, the actions that are the subject of the four studies are all environmentally significant. It is less clear

however to what extent they are, because none of the studies, apart from the leisure mobility study actually relates the studied behaviours to their environmental impacts. Therefore only the leisure mobility study can prioritise target groups according to the potential they have of decreasing the environmental impacts of leisure mobility in general.

The other three studies prioritise groups according to the likeliness of behaviour change, for example the study on energy consumption suggests to target groups according to their size and how likely they are to adopt energy saving. This means that a successful strategy will result in a maximum number of people taking on energy saving behaviour. This does however not tell us about the level of decrease in impacts that will result.

It is important to link the lifestyle approach with the impacts of consumer behaviour on the environment to see which consumption practices are the most environmentally significant. Being able to state the environmental significance of consumer behaviour will also be important to make a strategy to promote certain consumption practices more credible to the consumer.

The quantification of environmental impacts of specific consumption practices is a challenge in lifestyle research that has not yet been sufficiently addressed yet. One reason for this is that it is rather difficult to attach specific energy consumption figures or other indicators for environmental impacts to the different lifestyle types. Practical methods and theories for such a process are yet to be developed. And, again, a consensus must be found on how much impact is acceptable to be sustainable. It obviously cannot be the goal to minimise impacts to the point where socially deprived people are seen to perform the most sustainable consumer behaviour, due to their minimal consumption (Rink 2002: 18).

## 12.2 Consideration of influencing factors

All four studies have identified the attitudinal orientations which influence sustainable consumer behaviour. Environmental orientations are significant in all four studies, however, it is not a reliable predictor for more sustainable consumer behaviour. Other orientations were found to be much stronger. Such non-environmental orientations can either deter a person from practising more sustainable consumer behaviour but some of them can also result in more sustainable consumer behaviour. The latter is the case when a behaviour is practiced by a consumer in order to satisfy non-environmental orientations such as for example health or quality orientations. Such behaviour might be sustainable, i.e. can actually lead to a decrease in negative impacts on the environment. All of the studies therefore suggest to address motive alliances, i.e. addressing both environmental orientations as well as others with a change of behaviour. Such orientations addressed are for example fun seeking, career orientation, interest in modern technology, health or traditional values.

Apart from the attitudinal factors influencing sustainable consumer behaviour, all studies also found socio-demographic variables to be significant influences. The most important socio-demographic variables were found to be a low income, gender, as well as young children in the household. Also, socio-demographic factors are often more influential on sustainable consumer behaviour than attitudinal factors.

Furthermore, all four studies consider the external environment of sustainable consumer behaviour in some way. One commonly identified factor is the influence of the social networks of people on their consumer behaviour. Another factor is the influence of multipliers on consumer behaviour.

The study on general household consumer behaviour mentions that it is necessary that different actors in society such as government and industry work together to develop strategies to promote sustainable consumer behaviour. The political context is seen as an important factor here, because one means to promote more sustainable consumer behaviour is regulations or economic incentives which discourage unsustainable behaviour by consumers or the production of unsustainable products by the industry (Empacher et al. 2002:178-179).

Wider structural trends in society have been considered by Empacher et al. as well as by Birzle-Harder et al. Empacher et al. list five mega trends of socio-structural development and Birzle-Harder et al. point out that the trend of population ageing in Germany will mean that the target group of the '50+ health-oriented' will become increasingly important. The leisure mobility study by Götz et al. stands out in their consideration of a wide range of external factors. Theirs is by far the most comprehensive view of the factors involved in sustainable consumer behaviour. None of the studies, however, considers the external environment and its influence on sustainable consumer behaviour in a systematic manner.

The system around sustainable consumer behaviour is not only multifaceted but also dynamic. Norms and values in society are changing constantly, the economic situation does and so do technological systems. This will also change the possibilities for sustainable consumer behaviour. None of the lifestyle approaches have taken a perspective that takes into account these dynamics. They mostly give a snapshot of such systems at a specific point in time only. More research is needed that incorporates such a dynamic perspective (Rink 2002: 40).

### **12.3 Image barriers to sustainable consumer behaviour**

One barrier to the acceptance of motivational strategies by the consumer that has been identified by all four studies is the image problem of the actors who want to promote more sustainable consumer behaviour. The energy supplier in Kiel, the consumer advice centres in the study by Empacher et al., as well as the general image of public transport providers as identified in the study on leisure mobility need to be improved. Any actors employing motivational strategies must be seen as trustworthy and competent by the consumer. In the study by Birzle-Harder et al. it is suggested that organic food products must develop a better image, i.e. the consumer must understand the benefits of organic food and must be able to identify what food products are organic.

Taking this issue further, although many consumers do have an interest in environmental issues, they are often still sceptical about the implications of environmental problems in general and are therefore reluctant to change their behaviour. This image issue can be seen as part of the earlier mentioned societal negotiation on who should take responsibility to act on environmental problems and why.

### **12.4 Suggested strategies to promote more sustainable consumer behaviour**

All four studies come up with a number of specific measures to be used in a strategy. The studies consider the use of a wide range of media in combination to communicate this approach. All four studies also mention the importance of targeting multipliers with a strategy to promote more sustainable consumer behaviour. Multipliers have a strong influence on and act as an example for others in their social environment and who could therefore play an important role in diffusing more sustainable consumption practices in society. Furthermore, all studies state the potential of co-operation amongst several actors such as governmental and non-governmental organisations and the industry.

Götz et al. offer a particularly structured list of specific measures to promote more sustainable leisure mobility. In their strategy, they take each behaviour that they want to promote (e.g. use of bicycles, use of public transport, reduction of car use) and present measures for it for every type of their leisure mobility typology. Götz et al.'s study of leisure mobility is one good example on how the wide range of influencing factors on sustainable consumer behaviour can be addressed, however, the other studies are far less comprehensive. All other studies focus mainly on the consumer and consumer lifestyle types, without addressing the wider external environment that these lifestyles are embedded in. This is also evident in the suggested strategies to promote more sustainable consumer behaviour.

It must be remembered however, that these studies were in the first place conceived to focus on the consumer lifestyles. For example the study by Empacher et al. on general household consumer behaviour designed a strategy to be used by consumer advice centres specifically. It is hardly in the scope of a consumer advice centre to change the harder environmental conditions such as market incentives or regulation.

### **12.5 Long-term perspective**

The only study that explicitly mentions the long-term character of strategies to promote more sustainable consumer behaviour is the study on energy saving by Prose and Wortmann. As mentioned above, they point out that such a strategy should be planned to be implemented over a longer time period, for example five years. The other studies do not consider this issue. It can be argued though, that the consideration that for example Götz et al. give to the necessary infrastructure changes for more sustainable leisure mobility implies a long-term view. Similarly, the Empacher et al. study might ensure a long-term view as they develop a strategy to be employed by consumer advice centres. These centres have existed for a long time and are established actors who also have had a history in promoting sustainable consumer behaviour and who probably will continue to play a significant role in the future (Empacher et al. 2002:116).

## 12.6 Implementation and evaluation of strategies

As far as I could find out, apart from the study by Prose and Wortmann (1991) on the marketing strategy for energy saving behaviour, none of the four reviewed studies has yet been implemented. The marketing strategy for energy saving behaviour of consumers in Kiel had been implemented shortly after the study had been finalised. Within a year after the implementation, the household energy consumption in Kiel had been reduced by 3% (Reusswig 1994:219). There is no information however, if this reduction was of a short-term or long-term nature.

Generally, strategies for more sustainable consumer behaviour which were developed from lifestyle research have rarely been implemented. Therefore, their success could not be evaluated yet. The only area where lifestyle approaches in general have been evaluated is in the marketing field. However, here the lifestyle approach had been focussed on the sales of general, not necessarily sustainable products. There is therefore a need to research the effectiveness of lifestyle based strategies in the sustainable consumption field, which includes the marketing of both products and behaviour patterns (Götz et al. 2002:202).

## 12.7 The need for transparent methods for the lifestyle approach

Most lifestyle studies are not based on theory. Furthermore, most studies have not been able to explain how socio-demographic and attitudinal factors are related when influencing sustainable consumer behaviour. This has been criticised by researchers (e.g. Götz et al. 2001:133). Stieß and Götz (2002:255-256) acknowledge this criticism but point out that there still lies strength in these studies as they, rather than offering generally valid models, invite academics and non-academics to use these qualitative descriptions of types to take them as a starting point for further understanding and development of strategies. The lifestyle approach can be understood as a heuristic tool to facilitate further understanding of the field of sustainable consumer behaviour.

Such typologies are also difficult to compare. This can be due to the fact, as mentioned above, that they are often not based on a proper theory. Another reason can be that these studies are conceived for a certain case, e.g. for recycling behaviour of people in one specific housing area in a middle-sized German city. Also, each study focuses on different needs areas and different approaches have been employed. Hunecke (2002:84) has also stated this problem of comparison when looking at other lifestyle approaches.

Stieß and Götz (2002:260) point to the only possible solution: the theoretical assumptions must be documented and the connection between the assumption and the implementation of the question must be clear. The implementation process must be retraceable for other researchers. Götz (2001) mentions the need for representative samples, commonly agreed dimensions to be researched as well as commonly agreed methods of analysis. Such a comparable methodology, however, must not be too rigid, otherwise it will lose its openness and flexibility to incorporate social dynamics and changes (Götz 2001:134-135).

Developing a useful typology requires the consideration of a sufficient number of indicators. However, the more indicators are used the less the typology is able to be operationalised. A balanced number of indicators must be found in order to avoid too much detail on the one hand and a too high simplicity on the other (Zwick 2002:101).

## 13 The role of the lifestyle approach in strategies for more sustainable consumer behaviour

The lifestyle approach is an approach that helps mapping out how sustainable consumer behaviour works in a more comprehensive manner. One can get insights into what motivations consumers have and what external factors facilitate or limit more sustainable consumer behaviour. This knowledge can be used as a basis for a strategy to promote more sustainable consumer behaviour.

It is especially effective in promoting smaller behaviour changes and in marketing sustainable products. It also gives comprehensive insights into how consumer behaviour is influenced in the case of larger behaviour changes and bigger investments. Here, however, strong external barriers are far more difficult to overcome. Still, the lifestyle approach gives important knowledge to policy makers about what these external barriers to more sustainable consumer behaviour are and what policies are likely to get support from the citizens.

The lifestyle approach takes a systematic view on consumer behaviour. This is essential as consumer behaviour is influenced by a multitude of different factors. Any attempt to effectively appeal to consumers to become more sustainable in their behaviour must be based on a sound knowledge of this system. Once one makes the effort to understand it properly, the outcomes will be far more effective and the efforts will be efficient. Of course, any programmes and initiatives must be piloted and continuously reviewed, as any such activities are undergoing a trial and error and learning process.

### **13.1 Strategy example**

This chapter will illustrate the results of the research of this paper at an example. I will draw up a strategy to promote more sustainable consumer behaviour. The whole process ranging from conception to the final evaluation will be presented. This is to summarise the different elements of such a strategy and how it can be implemented. This overview is just indicative and does not necessarily represent a successful strategy in outcome as it is not based on a real case. However, it shows the process of conception and implementation of a strategy and can serve as a starting point when devising a strategy for a concrete case.

#### **1) Environmental impacts and target needs areas**

As was stated earlier, most of the environmental impacts occur from consumer behaviour in the three needs areas construction/housing, food/nutrition as well as transport. Firstly, one has to pick one of these areas to target. I will take transport as an example, as in the review of the four studies the leisure mobility study by Götz et al. proved to be the most comprehensive one. I will incorporate findings of this study into this example.

The actions with the biggest environmental impacts are travelling frequently by car or by air plane. Air travel still causes less environmental impacts than car travel, however this relationship will be reversed latest by 2010 when air travel will have become the travel mode with the greatest environmental impacts (OECD/BMLFUW in Agenda-Agentur & Sustainable Europe Research Institute 2004:5). Still, I will here target car travel for a strategy, as I assume that there are more alternatives for car travel than for air travel and therefore the likeliness and level of decreasing the environmental impacts of car travel is still higher. This is just an assumption and would need to be validated.

Thus, the aim of the strategy will be to minimise the environmental impacts of car travel. This can be done in two ways: Either, consumers will minimise their car use or cars will become more efficient in fuel use or will use other, less polluting fuels. To be able to integrate some of the results of the leisure mobility study by Götz et al. I will focus in this example on sustainable consumer behaviour with regards to leisure mobility.

#### **2) What behaviour should be promoted**

Behaviours to be promoted can be to replace car travel with alternative modes of travel such as public transport, cycling and walking. Car sharing is a means to reduce car ownership and to minimise less important car journeys. Consumers can also be encouraged to organise communal car travel with neighbours or others. Other modes of transport can be inline skating, or the use of (bicycle) taxis or vehicles powered by renewable energy. Amongst the alternatives to car use, cycling, walking and inline skating are the ones with the least negative environmental impacts.

Although it is likely that any reduction in car travel will be substituted by several alternatives, according to the situation, it would be interesting to see what the different levels of environmental impacts of alternatives are and how likely it is that these alternatives will be adopted by consumers.

#### **3) Typology of consumers and type specific factors**

Next, the different types of consumers with regards to leisure mobility behaviour must be identified. In the leisure mobility study by Götz et al. these were the 'fun-oriented', the 'modern-exclusives', the 'stressed family-oriented', the 'disadvantaged' and the 'traditional domestic'.

For each type, a list of orientations with regards to mobility can be drawn up. For example, the 'fun-oriented' seek fun and eventfulness when travelling. They prefer travelling on their own control. They like car travel but cycling can be as exciting for them. Public transport as well as walking is

perceived as rather boring. They are open to modern technology and are strongly influenced by their social environment (Götz et al. 2002:77; 89).

#### **4) Target groups for a strategy**

The 'fun-oriented' as described above are an important target group for a strategy to promote more sustainable consumer behaviour in the area of mobility. They are the third biggest segment of the typology and make up 22% of the German population. This group also causes the largest amount of negative environmental impacts (Götz et al. 2002:80, 141). Additional target groups could be picked, again, according to their size as well as their amount of environmental impacts caused. For the purpose of this example, I will focus on the 'fun-oriented' as a target group.

#### **5) Barriers to the behaviour to be promoted**

Public transport is seen as boring and old fashioned. This image is a barrier for the 'fun-oriented' to use it. Car travel is still the most self-controlled and fun option for the 'fun-oriented'. Alternative travel modes such as cycling or inline skating are generally attractive to this group, however, they are rarely practised because they are not perceived as practical. Often the facilities to practise such alternative travel behaviour are lacking or the costs seem too high. In the following I will focus the strategy on the promotion of cycling as one type of alternative transport mode.

#### **6) Actors to be involved**

The actors involved in the promotion of cycling are the target group 'the fun-oriented', social environment of the 'fun-oriented', local authorities and central government, bicycle traders, environmental as well as sports organisations and the media. They should all be brought together to support measures to promote more sustainable leisure mobility options.

#### **7) Measures to address the barriers and enhance facilitators**

Measures to promote cycling to the 'fun-oriented' can be social cycle events as well as the provision of safe and interesting cycle routes in and around the city centre. Safe bicycle parking close to popular leisure destinations would be practical, too. Rental schemes for bicycles in city centres could encourage people who do not own a bicycle to try out this mode of transport. It could also be used by tourists. Finally, the ownership of bicycles can be promoted by offering economic incentives for it. Overall, any measures should have as an aim to make cycling more exciting for the 'fun-oriented'. Communication should be tailored to appeal to this group and the latest styles of bicycles (e.g. beach bikes or mountain bikes) could be advertised. Cycling routes should lead past destinations that are of interest for the 'fun-oriented'.

#### **8) Combination of instruments**

A strategy to promote more sustainable consumer behaviour concerning leisure mobility can use a combination of economic, regulatory as well as social instruments.

To encourage cycling with the group of the 'fun-oriented', several instruments can be used. The infrastructure for cycling can be improved by building more cycle lanes. For this to happen, the state must provide funding options for cities to use for such new infrastructure. Cycle routes could also be built and promoted as a national or regional route network. Again, the state could support this project, maybe funding could even come from health authorities.

Bicycle parking is another infrastructure that needs to be provided for by the government or public-private partnerships. Economic incentives for bicycle ownership could be given by employers to employees. This could be an interest free loan for the purchase of a bike. Social measures could be an information campaign on cycling or community projects that encourage cycling. Information on cycling as well as other non-motorised travel modes and public transport options could be supplied to people who move house. This is a time when people have to re-orient their travel behaviour and will seek information on transport in their new neighbourhood. It is of course also possible to promote cycling by discouraging car use. This can be done by encouraging people to live in city centres instead of in suburbs. Subsidies for private house ownership in suburbs could be decreased.

Communication to the group of the 'fun-oriented' would be most efficient if multipliers in this group would be convinced to try out cycling. They can in turn be influential on the people in their environment by setting an example.

This is but an indicative overview of the range of instruments that can be employed to promote cycling. When choosing the different measures and instruments it is most important to take into account any potential barriers for sustainable consumer behaviour, from attitudes and personal capabilities to the external contextual barriers.

### **9) Implementation & evaluation**

When the strategy to promote alternative transport modes to the group of the 'fun-oriented' has been conceived, it needs to be tested to see if it is effective and where changes will be necessary. This can be done by means of a pilot study. It can then be improved before it is implemented on a larger scale. The final implementation must be followed up by regular evaluations on the effects of the strategy.

This example gives an indication of how a strategy to promote more sustainable consumer behaviour could be designed and implemented. The aim was to point out the most important steps that need to be taken. Consumption practices that should change must be environmentally significant. The factors influencing sustainable consumer behaviour must be identified for each specific consumption practice as well as for the different types of consumers. A strategy must use a range of different instruments to address the relevant factors. A strategy should be conceived for a longer term and needs to be evaluated regularly.

## **14 Recommendations for future research**

The field of sustainable consumer behaviour is very multifaceted. More research is needed to understand it from further viewpoints. Firstly, the different factors influencing sustainable consumer behaviour and the causal relationship between them must be researched in greater detail. Efforts should focus more on the influence of the external contextual environment of sustainable consumer behaviour. The influence of the social environment can be considered more extensively. We also need to learn more about the relevance of socio-demographic variables. Especially the influence of gender on sustainable consumer behaviour promises to be interesting. Attitudinal factors have been researched quite well, however, it might be interesting to look more at the most important attitudinal factors. These are the symbolic dimensions of a consumption practice. Finally, the system of factors surrounding sustainable consumer behaviour as a whole should be researched. Here, the dynamics of this system is to be investigated. Furthermore, more research is needed to find out about when changes in consumer behaviour are long-term rather than short-term.

To be able to assess the effectiveness of strategies for more sustainable consumer behaviour in terms of environmental sustainability, the environmental impacts of specific consumption practices must be measured. The impacts must be quantified by taking a life-cycle perspective, i.e. looking at the impacts that occur starting from resource extraction and ending with the disposal or recycling of a given product or good.

As mentioned earlier, research in the area of sustainable consumer behaviour could gain from taking an interdisciplinary approach. Experts from the fields of sociology, psychology, engineering, natural sciences and especially marketing should work together in order to develop effective strategies to promote more sustainable consumer behaviour.

In the area of lifestyle approaches, the main efforts of research should focus on establishing a more standardised process of research methodology to be able to compare the results of different studies better. Here, the sample to be studied should be representative and the dimensions of sustainable consumer behaviour as well as methods of analysis should be agreed upon. Although one characteristic of lifestyle approaches is that they are specific for one needs area and case, with a more standardised methodology, it would be possible to at least tentatively generalise the results of studies.

Furthermore, strategies derived from lifestyle research should be applied more often and their effectiveness evaluated in the short and long term. The results in turn can then give new impulses for future research on sustainable consumer behaviour.

## 15 Conclusion

With regards to the aims of this thesis and the research questions it sought to answer, the following conclusions can be drawn. The recommendations for future research have been given in the previous chapter and will not be referred to again in this conclusion.

- It was established in this thesis that consumer behaviour is sustainable when its environmental impacts are minimal. It would have exceeded the scope of this thesis to also look at the economic and the social dimension of sustainability of consumer behaviour in relation to the environmental one. However, the integration of these three dimensions must be taken up in public debate in order to better define sustainable development and sustainable consumer behaviour. A related topic for debate is the environmental responsibility that should be taken by different actors in society. It is a prerequisite for more sustainable behaviour by consumers that they feel that their share of responsibility is fair compared to what is taken by other actors such as the government or the private sector.
- In order to claim that one behaviour practice is more environmentally sustainable than another, the environmental impacts need to be quantified. The impacts need to be evaluated for the entire life-cycle. The scientific verification of environmental impacts will also enhance the credibility of strategies to promote more sustainable consumer behaviour to the consumer. A large number of consumers are sceptical when it comes to the severity of environmental problems as well as the behaviour changes that consumers are asked to perform to decrease it. Many consumers are not practising more sustainable consumption practices because they are sceptical about what their options are and about the credibility of actors who promote more sustainable consumer behaviour. The image of these actors needs to be improved if a strategy to promote more sustainable consumer behaviour should be effective.
- Sustainable consumer behaviour was found to be multifaceted. Attitudinal factors, personal capabilities and external contextual factors influence sustainable consumer behaviour. Environmental awareness is not a reliable predictor for more sustainable consumer behaviour because non-environmental orientations, as well as the personal capabilities and the external contextual factors usually have a stronger influence. Most research so far however has focused on attitudinal factors. More research into the personal capabilities as well as external contextual factors is needed. Of particular interest to research would be socio-demographic factors such as gender or the existence of children in a household. From the external factors, the social environment was found to be rather strong and would merit further research.
- Strategies to promote more sustainable consumer behaviour must be comprehensive in that they must address the different types of factors that influence sustainable consumer behaviour. This can be done by using a wide range of instruments in combination, including regulatory and economic, as well as social instruments. So far, strategies have been mostly based on information supply to consumers. However, participatory instruments such as community management are especially useful in this process and should be used more often. A social marketing approach could be taken. Effective strategies should be planned to run over a longer term and must include regular evaluation. The main aim should be to create extensive opportunity structures for different types of consumers to practice more sustainable consumption.
- The lifestyle approach is a comprehensive approach to find out how consumer behaviour works and what factors influence it, according to specific consumption practices in different needs areas as well as different types of consumers. Lifestyle typologies give a detailed picture of the different types of consumers and serve as a basis for targeted communication and marketing. A weakness of the lifestyle approach is that it is case-specific and results can hardly be generalised. However, it still has a large heuristic potential. Also, typologies can become better comparable when a more standardised methodology is agreed upon by the different researchers using the lifestyle approach.

## References

- Agenda-Agentur Berlin & Sustainable Europe Research Institute (2004) *Integration zukunftsfähiger Lebensstile in die Nachhaltigkeitsstrategie – Umsetzungs- und Kooperationsstrategien anhand beispielhafter Akteursmatrizen* [Electronic version]. Berlin: Bund für Umwelt und Naturschutz Deutschland e.V.
- Barr, S (2003) Strategies for sustainability: Citizens and responsible environmental behaviour. *Area*, 35, 3, 227-240.
- Birzle-Harder, B, Empacher, C, Schubert, S, Schultz, I, Stieß, I (2003) *Zielgruppen für den Bio-Lebensmittelmarkt – eine Studie des ISOE*. Frankfurt am Main: Institut für sozial-ökologische Forschung (ISOE).
- Blaikie, N (1993) *Approaches to social enquiry*. Cambridge: Polity Press
- Brand, K (2002) Nachhaltig leben! Zur Problematik der Veränderung von Lebensstilen. In D Rink (Ed.), *Lebensstile und Nachhaltigkeit: Konzepte, Befunde und Potentiale* (pp. 183-204). Opladen: Leske & Budrich.
- Bryman, A (2001) *Social research methods*. Oxford: University Press.
- De Haan, G, Lantermann, E, Linneweber, V, Reusswig, F (Eds.) (2001) *Typenbildung in der sozialwissenschaftlichen Umweltforschung*. Opladen: Leske & Budrich.
- Empacher, C, Götz, K, Schultz, I (2002) Haushaltsexploration der Bedingungen, Möglichkeiten und Grenzen nachhaltigen Konsumverhaltens. Die Zielgruppenanalyse des Instituts für sozial-ökologische Forschung. In Umweltbundesamt (Ed.), *Nachhaltige Konsummuster: Ein neues umweltpolitisches Handlungsfeld als Herausforderung für die Umweltkommunikation* (pp. 87-181). Berlin: Erich Schmidt.
- Empacher, C, Hayn, D, Schubert, S, Schultz, I (2002) Haushaltsexploration der Bedingungen, Möglichkeiten und Grenzen nachhaltigen Konsumverhaltens. Die Bedeutung des Geschlechtsrollenwandels. In Umweltbundesamt (Ed.), *Nachhaltige Konsummuster: Ein neues umweltpolitisches Handlungsfeld als Herausforderung für die Umweltkommunikation* (pp. 182-214). Berlin: Erich Schmidt.
- Gardner, G, Stern, P (1996) *Environmental problems and human behaviour*. Needham Heights: Allyn & Bacon.
- Gaus, H, Zanger, C (2001) Ansatzpunkte eines integrativen Erklärungsmodells des Umwelthandelns am Beispiel Mobilität, In U Schrader, U Hansen (Eds.) *Nachhaltiger Konsum: Forschung und Praxis im Dialog* (pp. 241-256). Frankfurt: Campus Verlag.
- Gaus, H, Zanger, C (2002) Nachhaltige Mobilität fängt in den Köpfen an. Empirische Studie zur kognitiven Verankerung des Car-Sharing. In G Scherhorn, C Weber (Eds.), *Nachhaltiger Konsum: Auf dem Weg zur gesellschaftlichen Verankerung* (pp. 209-218). München: Ökom Verlag.
- Geyer-Allély, E, Zacarias-Farah, A (2003) Policies and instruments for promoting sustainable household consumption. *Journal of Cleaner Production*, 11, 923-926.
- Götz, K (2001) Sozial-ökologische Typologisierung zwischen Zielgruppensegmentation und Sozialstrukturanalyse, In G De Haan, E Lantermann, V Linneweber, F Reusswig (Eds.) *Typenbildung in der sozialwissenschaftlichen Umweltforschung* (pp. 127-138). Opladen: Leske & Budrich.
- Götz, K, Loose, W, Schmied, M, Schubert, S (2002) *Mobilitätsstile in der Freizeit. Abschlussbericht des Projekts "Minderung der Umweltbelastungen des Freizeit- und Tourismusverkehrs"*. Frankfurt am Main: Institut für sozial-ökologische Forschung (ISOE) & Öko-Institut.
- Hart, C (1998) *Doing a literature review: Releasing the social science research imagination*. London: Sage.

Heiskanen, E, Pantzar, M (1997) Toward sustainable consumption: Two new perspectives. *Journal of Consumer Policy*, 20, 409-442.

Hirschl, B, Konrad, W, Scholl, G (2002) Nachhaltige Produktnutzung – Verbraucherakzeptanz und Entwicklungsdynamik dienstleistungsorientierter Formen des Konsums. In G Scherhorn, C Weber (Eds.), *Nachhaltiger Konsum: Auf dem Weg zur gesellschaftlichen Verankerung* (pp. 197-207). München: Ökom Verlag.

Hoyle, R, Harris, M, Judd, C (2002) *Research methods in social relations*. 7<sup>th</sup> Edition. London: Wadsworth

Hunecke, M (2001) Lebensstiltypen und Umwelt – Zwischen allgemeiner Geltung und spezifischen Handlungskonzepten, In G De Haan, E Lantermann, V Linneweber, F Reusswig (Eds.) *Typenbildung in der sozialwissenschaftlichen Umweltforschung* (pp. 153-168). Opladen: Leske & Budrich.

Hunecke, M (2002) Lebensstile und sozialpsychologische Handlungstheorien: Perspektiven einer theoretischen Integration im Bereich des umweltbezogenen Handelns. In D Rink (Ed.), *Lebensstile und Nachhaltigkeit: Konzepte, Befunde und Potentiale* (pp. 75-92). Opladen: Leske & Budrich.

Kraemer, K (2002) Konsum als Teilhabe an der materiellen Kultur. In G Scherhorn, C Weber (Eds.), *Nachhaltiger Konsum: Auf dem Weg zur gesellschaftlichen Verankerung* (pp. 55-62). München: Ökom Verlag.

Lange, H (2001) Zur Herausforderung, verschiedene Typen unter einen Hut zu bringen – Sozialwissenschaftliche Typenbildung als umweltpolitisches Problem, In G De Haan, E Lantermann, V Linneweber, F Reusswig (Eds.) *Typenbildung in der sozialwissenschaftlichen Umweltforschung* (pp. 39-55). Opladen: Leske & Budrich.

Lange, H (2002) Veränderungen von Lebensstilen als gesellschaftliche Aushandlungsprozesse. In D Rink (Ed.), *Lebensstile und Nachhaltigkeit: Konzepte, Befunde und Potentiale* (pp. 205-228). Opladen: Leske & Budrich.

Lorek, S, Spangenberg, J (2001) Environmentally sustainable household consumption – From aggregate environmental pressures to priority fields of action. *Wuppertal papers, 117* [Electronic version]. Wuppertal: Wuppertal Institute for Climate, Environment and Energy.

MacFadyen, L, Stead, M, Hastings, G (1999) *Social Marketing – A synopsis by the Centre of Social Marketing*. Retrieved October 3, 2004, from <http://www.marketing.strath.ac.uk/csm/about/synopsis.htm>

McKenzie-Mohr, D (2000) Promoting sustainable behaviour: An introduction to community-based social marketing. *Journal of Social Issues*, 55, 3, 543-554.

Niedergesäß, U (2001) Denkanstöße zum nachhaltigen Konsum im Bedarfsfeld Bauen und Wohnen, In U Schrader, U Hansen (Eds.) *Nachhaltiger Konsum: Forschung und Praxis im Dialog* (pp. 169-174). Frankfurt: Campus Verlag.

Organisation for Economic Co-operation and Development (OECD) (2002) *Towards sustainable household consumption? Trends and policies in OECD countries*. Paris: OECD.

Prose, F, Wortmann, K (1991) *Energiesparen: Verbraucheranalyse und Marktsegmentierung der Kieler Haushalte (Endbericht)* [Electronic version]. Kiel: Stadtwerke.

Reisch, L (2002) Kultivierung der Nachhaltigkeit. In G Scherhorn, C Weber (Eds.), *Nachhaltiger Konsum: Auf dem Weg zur gesellschaftlichen Verankerung* (pp. 41-54). München: Ökom Verlag.

Reusswig, F (1994) *Lebensstile und Ökologie: Gesellschaftliche Pluralisierung und alltagsökologische Entwicklung unter besonderer Berücksichtigung des Energiebereichs*. Frankfurt am Main: Institut für sozial-ökologische Forschung.

Reusswig, F (2002) Lebensstile und Naturorientierungen. Gesellschaftliche Naturbilder und Einstellungen zum Naturschutz, In D Rink (Ed.), *Lebensstile und Nachhaltigkeit: Konzepte, Befunde und Potentiale* (pp. 156-180). Opladen: Leske & Budrich.

Rink, D (Ed.) (2002) *Lebensstile und Nachhaltigkeit: Konzepte, Befunde und Potentiale*. Opladen: Leske & Budrich.

Rosenberger, G (2001) Denkanstöße zu den Zukunftsperspektiven des nachhaltigen Konsums, In U Schrader, U Hansen (Eds.) *Nachhaltiger Konsum: Forschung und Praxis im Dialog* (pp. 437-444). Frankfurt: Campus Verlag.

Schäfer, M (2002) Die täglichen Mühen der Ebene – von Ansprüchen und Widersprüchen nachhaltigen Konsumverhaltens. In G Scherhorn, C Weber (Eds.), *Nachhaltiger Konsum: Auf dem Weg zur gesellschaftlichen Verankerung* (pp. 63-71). München: Ökom Verlag.

Schneider, J (2002) Das kommt gar nicht in die Tüte! Nachhaltigkeitsmuster beim Kauf von Gütern des alltäglichen Bedarfs. In G Scherhorn, C Weber (Eds.), *Nachhaltiger Konsum: Auf dem Weg zur gesellschaftlichen Verankerung* (pp. 131-145). München: Ökom Verlag.

Schrader, U, Hansen, U (Eds.) (2001) *Nachhaltiger Konsum: Forschung und Praxis im Dialog*. Frankfurt: Campus Verlag

Silverman, D (1985) *Qualitative methodology and sociology: Describing the social world*. Aldershot: Gower.

Sinus Sociovision (2004) Produkte. Bausteine der Lebenswelt. *Internet*. Accessed on 28/09/04.  
<http://www.sinus-milieus.de/>

Stern, P (2000) Toward a coherent theory of environmentally significant behaviour. *Journal of Social Issues*, 56 (3), 407-424.

Stieß, I, Götz, K (2002) Nachhaltigere Lebensstile durch zielgruppenspezifisches Marketing?, In D Rink (Ed.), *Lebensstile und Nachhaltigkeit: Konzepte, Befunde und Potentiale* (pp. 247-263). Opladen: Leske & Budrich.

World Commission on Environment and Development (WCED) (1987) *Our Common Future*. New York: United Nations.

Weber, C (2001) Nachhaltiger Konsum – Versuch einer Einordnung und Operationalisierung, In U Schrader, U Hansen (Eds.) *Nachhaltiger Konsum: Forschung und Praxis im Dialog* (pp. 63-76). Frankfurt: Campus Verlag

Wimmer, F (2001) Forschungsüberlegungen und empirische Ergebnisse zum nachhaltigen Konsum, In U Schrader, U Hansen (Eds.) *Nachhaltiger Konsum: Forschung und Praxis im Dialog* (pp. 77-102). Frankfurt: Campus Verlag

Zwick, M (2002) Umweltgefährdung, Umweltwahrnehmung, Umweltverhalten – Was erklären Wertorientierungen?, In D Rink (Ed.), *Lebensstile und Nachhaltigkeit: Konzepte, Befunde und Potentiale* (pp. 75-92). Opladen: Leske & Budrich.