

# Nordic stakeholders and sustainable catering



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## ABSTRACT

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Sustainability deficits in modern food systems are widely reported and changes in food habits towards more sustainable eating patterns, including eating seasonal and locally produced food, have been suggested to minimise the environmental impact of food consumption and production. By means of national programmes and recommendations, the Nordic countries have taken the initiative for public catering to use local, organic and seasonal food in an attempt to create a healthier and more sustainable catering sector. But the problem is obvious, that sustainability action is not prioritised or sufficiently implemented everywhere and although the 'eating out phenomenon' is increasing every year, very little research has focused on sustainability action in the catering sector. The overall aim of this thesis is to analyse and discuss crucial factors for progress in sustainable catering as well as to establish a systems approach in research on food systems. Based on system thinking analysis of a Swedish survey and telephone interviews with stakeholders in the Nordic countries, crucial factors for sustainable catering can be linked to insufficient communication, ideological dilemmas due to conflicting messages but also to language deficiencies between stakeholders and other actors in the food system. System thinking would make it easier to make visible different stakeholders' views concerning sustainable catering but also to better understand the whole picture. Stakeholders such as professional food purchasers and procurers are important in the process but do not have the tools to handle the conflicting message between economical and environmental directives. Knowledge of how the concept of sustainable development is constructed will facilitate work on achieving sustainable catering.

## SAMMANFATTNING

Dagens måltidsproduktion bidrar till en ökad miljöbelastning. Våra matvanor måste därför förändras för att minska påfrestningen. Både när det gäller produktionen och konsumtionen av livsmedel måste mer lokala, ekologiska och säsongsbetonade livsmedel prioriteras. De nordiska länderna har genom nationella program och rekommendationer uppmuntrat storhushållen, särskilt inom den offentliga sektorn, att använda mer ekologiska livsmedel i ett försök att skapa en hållbar och hälsosam måltidssektor. Men dessvärre uppstår problem när arbete mot hållbar utveckling inte främjas. Trots att uteätandet är en ökande företeelse genomförs väldigt lite forskning om måltidssektorns betydelse för hållbar utveckling. Syftet med denna avhandling är att analysera avgörande faktorer för en hållbar måltidssektor men också att etablera systemtänkandet inom forskning på matsystemet. En survey (intervjuer och enkät) har genomförts i Sverige där inköpare, upphandlare och chefer inom restaurang och storhushåll deltagit, samt telefonintervjuer med olika aktörer inom matsystemet i fyra nordiska länder (Danmark, Finland, Norge och Sverige). Avgörande faktorer för en hållbar måltidssektor kan kopplas samman med bristfällig kommunikation, ideologiska dilemman till följd av konfliktfyllda myndighetsdirektiv men också med språkförbistringar mellan olika aktörer inom matsystemet. Att använda ett systemtänkande möjliggör att olika aktörers synpunkter synliggörs så att hela den komplexa bilden kommer fram. Professionella upphandlare och inköpare är viktiga i processen för en hållbar måltidssektor men de har inte riktigt medlen och förutsättningarna som krävs att hantera konfliktfyllda situationer mellan ekonomiska och miljömässiga direktiv. Resultatet av denna avhandling bidrar till större kunskap om hur begreppet hållbar utveckling används och formuleras. Detta kan i sin tur bidra till att arbetet för en hållbar och hälsosamt måltidssektor kan stärkas.

# CONTENTS

|                                                                   |    |
|-------------------------------------------------------------------|----|
| CONTENTS.....                                                     | 7  |
| ACKNOWLEDGEMENTS.....                                             | 9  |
| LIST OF PUBLICATIONS.....                                         | 11 |
| INTRODUCTION.....                                                 | 13 |
| BACKGROUND.....                                                   | 17 |
| The catering sector in Sweden and the Nordic countries.....       | 17 |
| Food system and system thinking.....                              | 22 |
| Sustainable development and other concepts.....                   | 24 |
| Sustainable catering.....                                         | 26 |
| AIMS.....                                                         | 31 |
| Specific aims and overall aim.....                                | 31 |
| Limitations.....                                                  | 32 |
| RESEARCH DESIGN.....                                              | 33 |
| Design of two empirical studies.....                              | 33 |
| Description of the participating stakeholders.....                | 36 |
| METHODS AND THEORIES.....                                         | 41 |
| In-depth interviews and survey (first empirical study).....       | 41 |
| Descriptive statistics (first empirical study).....               | 43 |
| Telephone interviews (second empirical study).....                | 44 |
| Reasons for selecting this data.....                              | 45 |
| Interpretative repertoires and ideological dilemmas.....          | 45 |
| Quality of the data and limitations of discursive psychology..... | 48 |
| RESULTS.....                                                      | 51 |
| Paper I.....                                                      | 51 |
| Paper II.....                                                     | 53 |
| Paper III.....                                                    | 55 |
| Paper IV.....                                                     | 57 |
| DISCUSSION.....                                                   | 61 |
| Important factors.....                                            | 61 |
| Barriers.....                                                     | 63 |
| The role of the professional purchaser.....                       | 65 |
| CONCLUSION.....                                                   | 67 |
| REFERENCES.....                                                   | 68 |

Appendix I: Questionnaire (study I)

Appendix II: Interview guide (study I)

Appendix III: Interview guide (study II)





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## *LIST OF PUBLICATIONS*

This thesis consists of a summary and four papers, which are referred to in the text by Roman numerals:

- I Post, A., Shanahan, H. & Jonsson, L. (2008). Food processing: barriers to, or opportunities for, organic foods in the catering sector? *British Food Journal*, vol. 110, no. 2, pp. 160-173.
- II Post, A., Bergström, K. & Mikkola, M. (2008). Sustainable Development in Nordic Catering. Conference of the Sustainable consumption Research Exchange (SCORE!), 10-11 March 2008, Brussels.
- III Post, A. & Mikkola, M. Nordic Stakeholders in catering for sustainability: chasm between ideology and practice? (Submitted to *British Food Journal*)
- IV Post, A. Food purchasers' experience of conflicting communication. (Manuscript).

Articles were printed with permission from the journals.



## *INTRODUCTION*

This thesis is written within “Sustainable Catering”; a research and knowledge field focusing on how food and meals can be produced and distributed supported by sustainable practices. The use of a sustainability viewpoint, from the perspective of the stakeholders in the catering sector, indicates the importance of analysing interaction between stakeholders in different positions in food systems. Analysing interaction supports the idea of system thinking, focusing on the different experiences to be able to understand a problem or situation. Only the contribution of different views creates the necessary broader understanding of a problem.

This thesis contributes to the discussion on sustainability in the catering sector by identifying implications of the concept of sustainable development and the practical experiences of sustainability work. A conceptual versus a pragmatic view of sustainability is dealt with as well as the conflict in communication between policymakers (authorities) and catering managers. Initially, analysing and discussing the use of organic food in the catering sector was focused on as the level of organic food use has been recognised as an unofficial indicator of sustainable work on a practical level. Making visible problems connected to a proposed increase in organic foods in the public catering sector, following a governmental proposal in 2010, was an important opening for research. The discussion focused on bottlenecks for increasing the use of organic foods but in mid-2000 I switched my interest to a broader concept: sustainability and sustainability problems in food and meal production. Also, in society the reflection of sustainability has successfully been introduced in organisations and authorities. The use of organic food is one of many governmental tools for achieving environmental targets and for working actively towards sustainable development, but whether organic food is the best alternative from an environmental perspective is the subject of debate. My intention is to move the discussion from the stress on organic and local/domestic food to a focus on the complexity in sustainable catering resulting from obstacles, political decisions and conflicting messages. The food market is flexible and unreliable – one example is the balance between supply and demand.

This thesis can be useful for people with an interest in the catering sector such as authorities, researchers and students but also for other stakeholders work-

ing in food systems, for example, professionals in purchasing and procurement departments. My intention is also to contribute to the research field in Sweden and in the Nordic countries.

I have studied a group of stakeholders interested in questions related to sustainability work and I have focused on the construction of the concept of sustainable development as well as on practical experiences of sustainability work. There are many reasons for choosing this topic. First of all, I am interested in the catering sector as I have a degree in Food Service Management and I have work experience from the commercial catering sector. I am interested in environmental questions and was motivated to do research on the organic food trend when the Swedish government agreed to increase the use of organic food in the public catering sector. Finally, the discussion has developed to focus on sustainability. The focus on everyday talk and communication is another important part in my research. How we talk reflects how we understand a phenomenon and discovering different ways of understanding (and constructing) sustainable development is important for how we can develop the work on sustainable meal production.

My thesis differs from traditional approaches on this field of research as it does not focus on retail businesses or solely on organic food but on other stakeholders important for our food production and distribution, i.e. a focus on professionals rather than consumers. Consumers are not specialists on food, but professional stakeholders are. This thesis communicates an extension of a relevant research topic, and moves the discussion from consumer responsibility to the practice of professional practitioners and the catering sector, which is an expanding sector in Sweden and the other Nordic countries.

My research contributes to current discussions on sustainable food production and consumption by focusing on the actual problem and asking the important questions. It stresses the relevance of the catering sector as important for sustainable development and the system perspective as a possible way of understanding and progressing in sustainable catering. Outsourcing meals is a growing phenomenon and is making it possible for stakeholders to increase their share of the market. This study contributes to the knowledge of how sustainable management is understood and carried out in a not so well-known market of the food businesses by the views of the people in the organisations. This study does not include private individuals as they have already been in-

investigated and focused on in previous studies. Private individuals depend on stakeholders' decisions to a high degree as the stakeholders control the market supply.

The title of this thesis indicates a Nordic approach but with an emphasis on the Swedish catering sector. The first study was carried out solely in Sweden (papers I and IV) and the second study (papers II and III) includes stakeholders in four of the Nordic countries. My focus has thus been expanded to also include Denmark, Finland and Norway. The uneven treatment of the countries is visible, particularly in the background section.





## ***BACKGROUND***

This section provides the reader with an introduction to the catering sector in Sweden and the Nordic countries. It introduces the different modes of eating out as well as different types of catering categories, such as restaurants, fast food outlets and school canteens etc. represented in my research. It also gives an introduction to system thinking and to the supply chain of which the catering sector is an important part. Finally, the field of sustainable catering is presented with Swedish and Nordic examples.

### **The catering sector in Sweden and the Nordic countries**

Eating out is a growing trend in many countries in the western world. In Sweden and the Nordic countries<sup>1</sup> approximately twenty percent of all meals are consumed outside the home (Delfi, 2008). For the population of 25 million people in the Nordic countries (Statistics Sweden, 2010) the high share of catered meals indicates the importance of the service in the everyday life of the Nordic people. The number of catered meals consumed annually has been slowly but steadily rising, reaching in 2007 more than 883 million meals in Denmark, nearly 800 million meals in Finland, nearly 950 million meals in Norway, and more than 1,6 billion meals in Sweden (Delfi, 2008). An average household spends approximately 25 percent of its food expenditure on food eaten out (Statistics Sweden, 2010). Sometimes, statistics are difficult to compare and analyse because there is no definition agreed on of the concept of “eating out”. In Statistics Sweden, catered meals are limited to including meals consumed in restaurants and canteens but not outlets without dining facilities such as “ready-to-eat-food” in grocery stores. The National Food Administration (2010) defines eating out as “all meals consumed outside the home” and Warde and Martens (2000) problematise the concept based on consumers’ different experiences of eating out and argue that where the cooking has taken place is important factor and that eating out also includes payment. This thesis does not problematise the concept but points to the fact that eating out has different meanings, which should be considered when using and comparing statistics. I distinguish between eating at home and eating out primarily on the basis of the circumstances of production.

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<sup>1</sup> Sweden has 9 million citizens and the population in the Nordic countries is 25 million (Statistics Sweden, 2010).

In the last ten years, the Swedish catering sector has grown on average 3 percent on a yearly basis with is the fast food sector, which accounts for almost 20 percent of the market, being the most expansive (Delfi, 2008). The leading category is commercial restaurants with 37 percent of the market.

There are many reasons for eating out but what most people have in common is the positive experience eating out generated by combining social interaction with a special occasion. As described in Ward and Martens (2000), most people eat out for pleasure, as part of their leisure time, but also because they have to. Recognised as a positive thing, eating out is something most people do occasionally or regularly. Ward and Martens (2000) also introduce three different modes of eating out that illustrate different settings where people eat (if not at home); besides eating together at friends and family<sup>2</sup> the other two modes are the commercial catering sector and the public catering sector. The commercial catering sector includes restaurants<sup>3</sup>, cafés, fast food restaurants and outlets, canteens at workplaces, outlets at recreational attractions and services at e.g. train stations and airports. Included in this sector are also places that do not primarily serve food; for example, pubs, bars in hotels and in-store restaurants. In the public catering sector, people eat one or more meals a day in school canteens, day-care centres and workplaces as well as in hospitals, homes for the elderly, in prisons and in military canteens. Altogether, the Swedish public catering sector serves approximately six million meals per day (Delfi, 2008). The commercial sector in Sweden has the largest numbers of entities, altogether 20,000, compared with 12,000 entities in the public sector. The total catering sector is dominated by small enterprises. Almost two thirds of the enterprises serve less than 150 portions a day. Only 10 percent serve more than 500 portions a day and most of the large-scale kitchens operate in the public sector. In this thesis, contract catering<sup>4</sup>, which has become important in the catering sector in recent years, is included in the commercial sector as it is funded by private financiers. Although they function in both the public and the commercial sector, the participating organisations in this thesis are divided strictly by ownership not by principal.

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<sup>2</sup> Eating at friends and family are not dealt with in this thesis.

<sup>3</sup> Restaurants are a large diverse group in itself, which includes ethnic restaurants, first-class restaurants, themed restaurants, bistros, etc. (Delfi, 2008; Ward and Martens, 2000).

<sup>4</sup> Reasons for outsourcing and contract catering can be to improve competitiveness on the market and as a cost saving arrangement (Spears and Gregorie, 2004).

The difference in organisation and particularly owner situation affects the catering sector in many ways. Public catering consists of outlets where meals are provided free of charge or at a subsidised price. Public catering has to consider goals and recommendations on national and international levels. In general, meal provision is not the primary function but rather a subsidiary activity and very few public outlets can choose their own market, which means that they sometimes have to include activities that would be regarded as unprofitable from a commercial perspective. Also, the public catering sector has to take political goals into account, which are sometimes contradictory and the result of compromises. Unrealistic economical goals set by politicians create situations where staff are forced to redefine their own goals and content (Jacobsen, Thorsvik, & Sandin, 2002; Mattsson-Sydner, 2002), sometimes dilemmatic situations regarding social sustainability are experienced concerning meals for elderly people (Mattsson-Sydner and Fjellström, 2007). Political goals and political decisions sometimes bring about rational methods and the public catering sector has faced periods of economic rationalisation. For example, rational production methods in large-scale kitchens encourage food preparation with a high proportion of processed food-stuffs.

Public catering also has to take into account the Public Procurement Act (Swedish Competition Authority, 2009). An act that regulates almost all public procurement done by contracting entities in local government agencies, county councils, and government agencies as well as certain publicly owned companies. The new Public Procurement Act came into force on 1 January 2008 and contracting entities must comply with the act when they purchase, lease, rent or hire-purchase supplies and services. Most catering authorities have specific purchase and procurement departments, which work to find companies willing to provide the supply needed. In order to make good deals, procurement contracting is used, often running for 2-year periods. The Swedish Environmental Management Councils support the environmental work of companies and public organisations by providing them with tools for green public procurement (GPP) (SEMCo, 2010). They also offer guidance in environmental management and the use of environmental product information. Green procurement tries to reduce environmental impact as well as being an effective way of reducing public expense (Falk, 2001). Swedish public procurement totals approximately SEK 500 billion on a yearly basis.

The commercial catering sector is sensitive to economic fluctuations. The economic situation makes the whole sector volatile and the number of businesses can radically change in a slump. During economic up-swings, the number of guests increases in restaurants as well as in fast food outlets. Swedish and Finnish people prefer to have a hot meal at lunch, and this has given rise to lunch restaurants that only serve food at midday (Kjaernes, 2002). These establishments blossom during an economic boom when people tend to consume more lunches away from home but during a depression they are vulnerable, as people tend to bring packed lunch with them instead. But the future seems bright for the commercial catering sector as a whole since total turnover is steadily increasing. Competition between entities makes the catering sector a difficult business to survive in. Today, the level of outsourcing of meals is as common as other domestic services (Ekström, 2006).

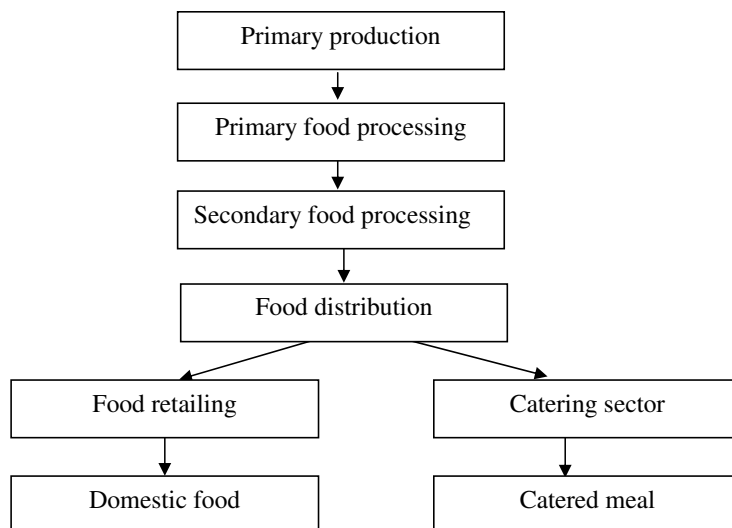
When people eat out, many decisions related to food choice and preparation are transferred from the consumer to the catering staff and management. For the consumer, this means less involvement in how the food is prepared, what ingredients are used and where the food originates, etc. As a result, the consumers become more dependent on stakeholders in the food system. Studies concerning food choices in relation to environmental problems often focus on the willingness of the consumer to purchase organic foods and on family and consumer environmental awareness (Magnusson, Arvola, Koivisto, Åberg & Sjöden, 2001; Leire et al., 2004; Grankvist, 2002; Grankvist & Biel, 2007; Shepherd, Magnusson & Sjöden, 2005). These studies assume that consumers themselves make all the decisions concerning their meals and that the consumers' main platform for meal consumption is the supermarket. In both the retail market and the catering sector, professional food purchasers are important stakeholders providing the market with food. Their decisions influence people's eating habits, for example, in schools, day-care centres, restaurants, etc. Professional food purchasers<sup>5</sup> are key participants in food supply management. The purchaser is described as (Zsidisin & Hendrik, 1998; Zsidisin & Siferd, 2001) having a boundary-spanning function connecting enterprises with the suppliers. The purchasers also enable necessary goods and services to be handled to satisfy market demands, and they play a strategic role in the attempt to control what strategies the food system has regarding environmental and sustainable performance (Zsidisin & Hendrik, 1998; Solér, 2001; Bergström, Solér & Shanahan, 2005; Biel, Bergström & Shanahan, 2006). On

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<sup>5</sup> The concept has been used by Engström and Carlsson-Kanyama, (2004) and Bergström (2007).

the other hand, these purchasers are not fully free agents, but must negotiate their activities within their organisation (Mikkola, 2009). Professional purchasers function at many stages of the food system, for example, at producers, wholesalers and authorities, in the catering sector and in the retail sector. In Figure 1, the food supply chain in the food system is described. In this thesis, the professional food purchaser is one of the key actors, but also other stakeholders are included in what we call the food system. The role of the professional food purchaser is also described in Bergström (2007).

The complexity of the food supply chain makes it difficult for consumers to influence the supply, but professional food purchasers, particularly at the wholesale level (in food distribution), are regarded as important stakeholders in supplying the market with more environmentally friendly products (Fuentes & Carlsson-Kanyama, 2006). Therefore, eating out is an important arena for a wide spectrum of important issues concerning the environment, sustainability, food choices and health (Hector, 2008; Vittersoe, et al 2008).



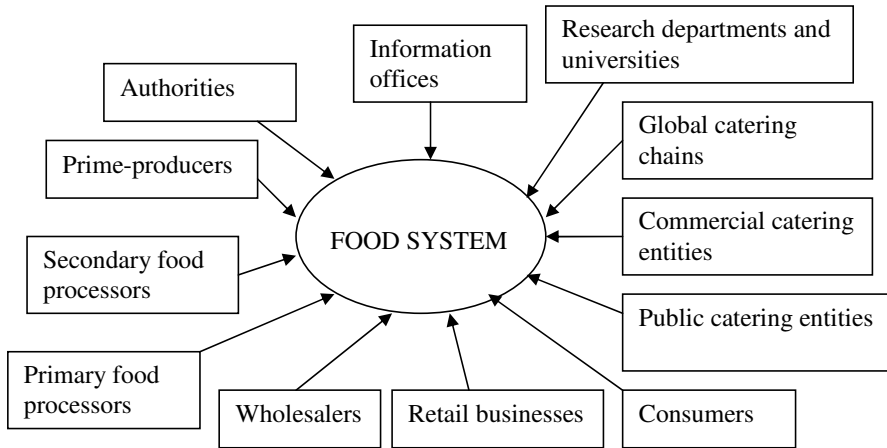
*Figure 1: The supply chain in the food system modified from WHO, cited in Lang & Heasman, 2004.*

## Food system and system thinking

The modern food system is a global phenomenon providing food from all over the world (Schlosser, 2002; Shanahan, et al. 2003). New technology in food processing and transportation makes possible large-scale production and global management (Johansson, 2005). Dahlberg (1996) discusses the importance of using a broader perspective, beyond the narrow focus on production, to better understand the basic structures of the food system, and to be able to develop strategies for making the food system more regenerative<sup>6</sup>. The term system implies that it is a system with interconnections and feedback between stakeholders in contrast to the term food chain, which is a linear pathway where only simple connections are recorded (WHO in Lang & Heasman, 2004). The food system focuses on human activity in communication (Fuentes & Carlsson-Kanyama, 2006), learning processes (Helenius et al., 2007) and interaction (Tansey & Worsley, 1995). It includes people working in primary production, food distribution, food preparation and processing, wholesalers' departments, procurers' department, catering units (in many positions), recycling and disposal management, and institutional consumers and individual consumers (Dahlberg, 1996; Fuentes & Carlsson-Kanyama, 2006; Bergström & Post, 2007). Also, depending on level and situation, various supportive systems, such as marketing systems, distribution systems, authorities, researchers, educational systems and opinion leaders, are part of the food system. In Figure 2, stakeholders in the food system are presented. In this thesis, a number of stakeholders have participated and they are further described on page 34-37.

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<sup>6</sup> Dahlberg (1996) talks about regenerative systems instead of sustainable systems as it relates more directly to basic reproductive and generational questions.



*Figure 2. Stakeholders in the food system.*

System thinking is an approach to problem solving that views problems as parts of an overall system. System thinking is based on the belief that the component parts of a system can best be understood in the context of relationships with each other and with other systems, rather than in isolation (Checkland & Scholes, 1990). The only way to fully understand why a problem or element occurs and persists is to understand the part in relation to the whole (Checkland & Scholes, 1990). System thinking has been used in research on the catering sector. Mikkola (2006) uses system thinking to stress the importance of language and communication within the food system to understand how environmental and human health is constructed in the catering sector. To be able to see the complexity, different models are used when analysing the food system (Helenius et al., 2007, Mikkola, 2008, Fuentes & Carlsson-Kanyama, 2006). Fuentes and Carlsson-Kanyama (2006) have elaborated a model showing the complexity in the communication between different stakeholders in the food system. Their model shows the direction of information flow as well as communication, and using this model proves that communication sometimes need to be simplified, and that the transparency needs to increase. The use of environmental information in the food system is to a great extent a question of inter-organisational communication and different stakeholders construct and uphold different frameworks of interpretation, which govern the perspective applied to environmental information (Fuentes and Carlsson-Kanyama, 2006). Fuentes and Carlsson-Kanyama (2006) describe the communication system as fragmented and the environmental in-

formation as being continually in need of being re-translated by the stakeholders. Helenius et. al. (2007) developed a conceptual system model to facilitate interdisciplinary communication and integration within the food system and analysed the effects and learning challenges of localising the food system at municipal and provincial levels. Their experience lends support to food-shed thinking. Using an economic sociological perspective, Mikkola (2008) has studied coordinative structures within the food system, proving that “networking” and good relations are important factors for exhibiting substantial growth. In research by Alander (2007), the public catering sector can relate to sustainable development in a variety of ways and especially take into account social, economic and cultural aspects (such as health, social care, participation, creativity and understanding) as the sector involves many people. Another important aspect presented by the same author is how material discursive practices such as technologies, machinery, people, and foodstuffs are involved in the more abstract world of values such as learning and abilities.

Problems in the catering sector can benefit from system thinking to facilitate an understanding of how sustainability can be improved; transparency needs to increase and the interaction between different organisations, such as governments, food industries, international organisations and consumer interest groups, must improve (Aiking & de Boer, 2004). On the other hand, a system is not a system without the parts. Activities promoting a sustainable development are made up of individual contributions. How these performances are developed and practised depends on where in the food system they are located. Different aspects are considered – whether the stakeholder is a producer, wholesaler or adviser.

## **Sustainable development and other concepts**

After the Brundtland report “Our common future” (WCED, 1987), the concept of sustainable development has occurred frequently in many contexts. Although the concept has its roots in environmentalism and the science of ecology, today it is mainly associated with political and economical debates. Sustainable development is often described as a process where human systems and natural systems work together contingently. As described in Halweil (2004), WHO’s definition on sustainable development differs from the UN declaration on Environment and Development in Rio de Janeiro but challenges how it is possible to define what the needs for future generations are. Today, WHO focuses on health and poverty and declares that sustainable de-



velopment cannot be achieved without a responsive health system and a healthy environment. Sustainability also impact assessments of trade policies and trade liberalisation. The basic idea of sustainable development is that the development of economic, ecological and social dimensions is equally important, providing strength and direction for a healthy future of nature and society (WCED, 1987). However, a clear definition of the concept has not yet been agreed on. One of the reasons is that different constructions of the concept mirror different disciplines and contexts where the concept is established (Redclift, 1993). A too generous definition of sustainable development causes “mainstream” progress and some researchers are critical of such progress since it encourages new versions, and the concept might lose its meaning (Sneddon, Howarth & Norgaard, 2008; Aikin & de Boer, 2004). Dryzek (1997) describe sustainability as a social discourse, proving environmental and economic conflicts as a possibility for societal change, and that the meaning of sustainability has no limits but “sustainability is the axis around which discussions occurs” (Dryzek, 1997, p.14). In other words, sustainability is the core of many discussions on environmental and economical actions. In Dahlberg (1996), sustainability concerns health and regenerative capacity of living systems, which means a system thinking approach to enable a better understanding of the basic structures and dynamics of the food system. The work toward sustainable development has not only been urgent for political governments but also for different sectors and businesses. In the food system, work towards sustainable development imply how to produce foods and meals that cause as little impact on the environment as possible with a focus on the environment, economy, health and social conditions.

Other concepts and constructions are used by stakeholders and organisations. In talks about environmental problems, many different vocabularies are used such as “green”, “environmentally friendly”, “eco-friendly” and so on. Problems occur when researchers and others use different words for this phenomenon since it obstructs comparisons between studies and recommendations. The concepts are often used in an interchangeable manner and can easily be confusing. Bhaskaran, Polonsky & Fernandez (2006) have studied attributes of different terminologies and tried to understand the reasons for using different words. In interviews with senior managers at food companies, they found that stakeholders constructed the concepts differently. This gives the impression that the vocabularies are not always interchangeable. Organic food was easiest to relate to due to its clear standards. Joutsenvirta (2009)

talks about how language facilitates understanding in debates and that: “certain ways of talking about corporate responsibility may hinder or facilitate our efforts to steer cooperate actions into a more balanced relationship with nature and society” (p. 574). This indicates how important it is to understand and be aware of the language of other stakeholders in which a relationship is vital as well as to acquire knowledge about how important a strong concept is for its survival and for its implementation.

## **Sustainable catering**

Food production and consumption have been identified as one of three major functions impacting the environment in the western world and they are behind roughly one third of environmental impact in the EU (Tukker, Eder & Suh, 2006; Tukker et. al., 2009). The sustainable deficit of modern food systems is widely reported (Atkins & Bowler, 2001; Johansson, 2005; Risku-Norja & Mikkola, 2009; Tansey & Worsley, 1995) and the political quest pushes for more sustainable food systems. Based on this, political programs for sustainable food production and consumption have been established in the EU and the Nordic countries (CEC, 1999; EC, 2005). Catering for sustainability (Morgan & Sonnino, 2005; 2008) is a notion that calls for more sustainable development in public catering with a particular focus on school meal provision. Sustainable development in this context is understood as a normative rather than a technical concept, aiming at better environmental, economic and social conditions (Morgan & Sonnino, 2008).

These programs concern the food sector, from cultivation to meal production. Cultivation concerns all steps before harvest; soil preparation and farming, for example, organic, biodynamic and local food agriculture. Meal preparation concerns how the food is prepared in the kitchen. Economisation is part of meal preparation and includes energy use, water, amount of waste and how the waste is handled, but also methods for cooking and storing. Food losses in catering institutions are about 20 percent of the food delivered to the kitchen (Engström and Carlsson-Kanyama, 2004).

Even though researchers disagree about whether or not organic agriculture is less harmful to the environment (Halweil 2004, Johansson, 2005), in society the choice of organic foods<sup>7</sup> has been understood as one of the better alterna-

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<sup>7</sup> Organic foods are produced according to certain production standards, meaning they are grown without the use of conventional pesticides and artificial fertilizers. Livestock is reared without the

tives from an environmental perspective. Many European countries have “adopted” organic food in order to be at the forefront of the development of sustainable food production and consumption. The Swedish government has decided on objectives<sup>8</sup> for organic production, and the public catering sector will become a generator of organic food consumption in Sweden. The public sector can influence the food industry, retail business and restaurants in the commercial sector, which in turn can generate increased volumes, accessibility and encourage product development (SOU, 2005). Increased volumes might have a positive effect on food prices in the retail sector. The ambition is to develop a substantial market for organic foods in Sweden and to increase consumption in the commercial catering sector as a side effect (Swedish government, 2006; SOU, 2005). In other Nordic countries, there is a similar trend. In Finland (Ymparisto, 2005), a proposed programme to promote sustainable consumption and production has been developed. Key objectives include increasing efficiency regarding material and energy use, and promoting environmental education and environmental technologies with a special focus on environmental public purchasing. The Danish and Norwegian governments have encouraged development towards more organic foods (Regjeringen, 2008). Denmark was one of the first countries in the world to introduce legislation covering organic production in 1987 (Ministry of Food, Agriculture & Fisheries, 2006) and various initiatives to convert from conventional to organic foods in the catering sector has been introduced in, for example, Copenhagen. In the Nordic countries, case studies have been performed to promote and encourage the use of organic foods (Mikkelsen, Kristensen, & Nielsen, 2002; Mikkelsen, Vittersoe, Roos, Wramo & Bergström, 2007; Knutsen, Lyng, Nymoer, Spisoy & Svennerud, 2007; Mikkola & Bergström, unpublished manuscript).

Using the public catering sector as a pioneer has also been suggested in several studies in Denmark (Illsoe, 2004, Mikkelsen et al., 2002; Mikkelsen et al., 2007). Conversion towards more organic foods is delegated to local authorities and the executive responsibility is further delegated to each

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routine use of antibiotics and without the use of growth hormones. In Sweden and most countries, organic produce may not be genetically modified. Production is legally regulated (IFOAM, 2009). The regulations not only apply to cultivation of plants and animal husbandry but also to processing, labeling, import and control of organically produced agricultural products and foodstuffs. The Swedish Board of Agriculture is responsible for organic production on the farm and the National Food Administration for issues concerning organic food (SOU, 2005).

<sup>8</sup> One relevant tool is to increase the level of organic foods in public catering by 20 percent before 2010.

catering entity or restaurant. “Best practice” and good examples are tools for promoting organic food (Mikkelsen et al., 2007). Other tools for promoting organic foods are combinations of subsidies and training programs in organic cooking for kitchen staff and, according to Heikkilä and Svensson (2007), training has had a positive influence on attitudes and consequently on purchasing behavior among kitchen staff and management.

When stakeholders in the food system refer to sustainable consumption and production, many of them consider organic foods. However, as organic production never includes transportation, local and regional foods are sometimes claimed to be a better alternative (Carlsson-Kanyama & Lindén, 1999). The effect of local and regional food production has not yet received political response as organic foods, perhaps because the definition of local and regional is unclear. Local/regional thinking was developed as a reaction to the global food system. Murdoch and Miele (1999) discuss the complexity of the globalization and standardization of the food system and question large transnational companies that dominate the market. They take as their starting point the fact that several food scares, for example, mad cow disease, have encouraged consumers to demand local food where the transparency of the food process is greater. Local foods are not only about food safety but about traditional and cultural values (Murdoch & Miele, 1999). A problem with local foods is the lack of definition and in the Swedish catering sector another obstacle is the law of public procurement making it difficult to make such requests. Public procurement laws regulate purchasing by the public catering sector in contracts for goods, works or services. This law does not specifically support local and regional food, which need to be purchased on the same terms as other foodstuffs.

Previous studies in catering show that many food producers and markets are not likely to switch to environmental standards only as a result of a rising demand (Bhaskaran et al., 2006; Bergström et al., 2005; Funetes & Carlsson-Kanyama, 2006). Professional food purchasers use different perspectives on environmental purchase decisions and are generally guided by business parameters such as price, quality and service (Bergström et al., 2005). Work promoting sustainability is actively carried out to reduce environmental impact on foods by tracing food to its origin and overhauling the use of cooling media, transportation and packaging. Fuentes and Carlsson-Kanyama (2006) have analysed how food purchasers perceive environmental information, and

found that environmental issues are defined and dealt with on financial rather than moral grounds. The same authors present four different perspectives on the use of environmental information held by professional food purchasers: disregard financial issues, work according to the law, adjust according to demand and to be in control. These different perspectives show that communication between stakeholders in the food system is fragmented and the information is interpreted and reinterpreted within the system. Different perspectives are constructed in relation to both the position of the stakeholder in the system but also the nature of the organisation in which s/he is situated.



# AIMS

Specific aims concerning paper I-IV and the overall aim are presented in this section. Thereafter, limitations of the thesis are presented.

## **Specific aims and overall aim**

This thesis is the outcome of four papers generated from two empirical studies. Each paper has an individual aim, which is presented as follows:

- Paper I aimed to examine whether food processing is a limiting factor when using organic potatoes and tubers and to suggest the catering categories most likely to purchase such products. An additional aim was to describe the use of organic foods in general, and the use of potatoes and tubers (divided into organic and conventional) in the Swedish catering sector.
- Paper II aimed to illustrate different ways of understanding the work promoting sustainability and how different ways of studying sustainable consumption in the catering sector and the food system can help us convert theory into daily practice. Another aim was to discuss how different analytical methods provide a deeper understanding of the concept of sustainable development.
- Paper III aimed to explore progressive stakeholders' understandings about and activities for sustainable catering as socio-cultural embodiments in the Nordic countries. The paper highlights conceptual and pragmatic differences regarding catering for sustainability by the stakeholders and suggests some focal points for development.
- Paper IV aimed to analyse the different ways professional food purchasers in the catering sector handle the conflicting communication concerning economic thinking and environmental thinking (framed by the use of organic foods).

The overall aim of the thesis is to analyse and discuss crucial factors for progress in sustainable catering, and to establish system thinking in research on food systems.

## **Limitations**

The limitations of this thesis originate from the uneven disposition of the focus on the four Nordic countries participating in parts of the research. The major part of this thesis concerns the Swedish situation rather than Nordic, although the title indicates a more homogenised Nordic approach. In cooperation with a Nordic research team, I had the opportunity to use material from Denmark, Finland, Norway and Sweden in the second empirical study. But to investigate all four Nordic countries would have been a too extensive for a thesis.



## *RESEARCH DESIGN*

The thesis is based on four papers generated from two empirical studies. This section presents the design of the two empirical studies and how they relate to each other, followed by a description of participating respondents/stakeholders, including a short presentation of the organisations they represent. At the end of section, a discussion about my reasons for selecting this data in particular is presented.

### **Design of two empirical studies**

The first study (paper I and IV) was a survey in combination with in-depth interviews focusing on food processing<sup>9</sup> both as an obstacle and as an opportunity for organic food in the Swedish catering sector. At that time, research in catering was limited in Sweden, and therefore a survey including different catering categories in both the commercial and the public catering sector was chosen to map out the catering sector as a field of research. Interviews with professional food purchasers and procurers were conducted in order to scan the field and be able to construct relevant questions for the survey. It also gave the researchers a good insight into the purchasing process. The study was carried out 2002/2003 and was funded by the Swedish Board of Agriculture. The starting point for the survey was to carry out a descriptive analysis concerning the use of organic foods, the use of processed foods etc. to be able to designate what catering category<sup>10</sup> that would most likely purchase processed, organic foods. It was important to capture a variation of catering units of different sizes (number of portions served per day), in both the commercial and the public catering sector. This justified a survey.

The second empirical study (partly paper II and paper III) was carried out in 2006 in a Nordic network entitled Network for Nordic Excellence in Sustainable and Healthy Catering (Vittersoe et al., 2008), which was a 3-year project funded by the Nordic Innovation Centre. Paper II was presented at SCORE!

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<sup>9</sup> Food processing is defined as the industrial preparation resulting in a substantial change in the state of the foods. The foods are, for example, washed and peeled, chopped and/or deep-frozen.

<sup>10</sup> Catering categories in the first empirical study were: commercial restaurants, fast food restaurants, school canteens, homes for the elderly and day care centres.

Conference in Brussels 2008 and is a synthesis of three papers<sup>11</sup> focusing on how theoretical knowledge about sustainable consumption can be transformed into daily practice. By the time the second empirical study was performed, the focus in society had expanded from organic foods to sustainable food consumption and production. Sustainable development is a complex concept that covers ecological, economic and social perspectives and as regards the catering sector, there are many ways of promoting sustainable performance. Paper III focuses on how the concept of sustainable development is constructed by stakeholders in the food system. The purpose of the second empirical study was to capture how sustainability is both constructed and practiced. All the Nordic countries have developed directives to increase the levels of organic food use and are interested in working to promote sustainability. Accordingly, the scope of the thesis was expanded to include the Nordic countries: Denmark, Finland, Norway and Sweden. The opportunity to expand the focus was facilitated by my membership of the Healthcat core group, which explored similarities in Nordic catering. A Nordic perspective on catering research has been used previously (Mikkelsen et al., 2002; Mikkelsen et al., 2007; Knutson et al., 2007; Mikkola and Bergström, unpublished manuscript). The four papers in the thesis are summarized in Table 1.

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<sup>11</sup> The three papers are: Mikkola, M. and Bergström, K. (unpublished manuscript). Intertwining ecological food into public catering. Post, A., Mikkola, M. and Kristensen, N.H. (manus). Sustainability as Developed in Catering by Nordic Forerunners. Bergström, K., Solér, C. and Shanahan, H. (2005), Professional purchasers' practice in using environmental information, *British Food Journal*, Vol. 107 No. 5, pp 306-319.

*Table 1. Title, methods, analysis and number of respondents participating in paper I-IV.*

| Study | Title                                                                                            | Methods                                   | Analysis                  | Respondents                        | Country              |
|-------|--------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------|------------------------------------|----------------------|
| I     | Food processing: a limiting factor or a new possibility for organic foods in the catering sector | Survey                                    | Descriptive statistics    | 368 caterers                       | SE                   |
| II    | Sustainable development in Nordic catering                                                       | In-depth interviews, telephone interviews | Synthesis of three papers |                                    | DK<br>FI<br>NO<br>SE |
| III   | Nordic stakeholders in catering for sustainability: chasm between ideology and practice?         | Telephone interviews                      | Discourse analysis        | 46 stakeholders in the food system | DK<br>FI<br>NO<br>SE |
| IV    | Food purchasers' experience of conflicting communication                                         | In-depth Interviews                       | Discourse analysis        | 11 professional purchasers         | SE                   |

## Description of the participating stakeholders

Stakeholders from different organisations participated in the two empirical data collections. The number of respondents participating in the first empirical study is presented in Table 2.

*Table 2. Number of respondents in the first empirical study (paper I and IV).*

| Interviews            |    | Survey            |     |
|-----------------------|----|-------------------|-----|
| Purchasers/ procurers | n  | Catering managers | n   |
| Producer              | 1  | Restaurants       | 109 |
| Wholesaler            | 2  | Fast food         | 80  |
| Authorities:          |    | School canteens   | 71  |
| Municipality          | 1  | Day care centres  | 53  |
| County council        | 2  | Homes for elderly | 55  |
| State                 | 2  |                   |     |
| Commercial catering   | 3  |                   |     |
| Total                 | 11 | Total             | 368 |

In following section, a short description of stakeholders and organisations participating in the first empirical study is presented.

- Purchaser in secondary food processing department– established in large scale business. They purchase processed and unprocessed food-stuffs from primary producers or primary food processors for further food processing and ready meal production. The secondary food processor provides food directly to public and commercial catering entities and retailers or through a wholesaler.
- Purchaser at a nationwide wholesaler – the wholesaler is the middle-man, who delivers foods from farmers and food industry to the customer, nationally and internationally. Food sourced from farms is often unprocessed and stored at the wholesalers until delivery to customers. When sourced from the food industry, the product is processed in various stages; from being peeled and packaged to ready-prepared meals. Wholesalers deliver to both public and commercial catering sector.
- Procurers at authorities – public catering is presented in municipalities and county councils divided into school canteens, day-care centres and homes for the elderly provided by local and regional authorities. In Sweden, lunches for school children are funded by the government and

in day-care centres, meals are subsidised (two main meals and two snacks). Homes for the elderly provide 24-hour service including all meals. Meal production mainly takes place in a large-scale kitchen and from there the meals are delivered to a satellite kitchen (end kitchen) with a dining room/hall. The procurement departments are responsible for drawing up contracts and signed agreements with suppliers and wholesalers. According to the terms of single agreements, a large number of catering entities are authorised to buy according to the terms of the contracts. Cooperation between regions can be favourable in the contract process if the procurement is carried out by a large group (two or more regions make collective agreements).

- Purchasers at contracted global catering chains – commercial catering chains are contracted to cater for different companies or for the public catering sector. Under the terms of their contract, they manage and control the preparation and service of meals and beverages and sometimes other services (Edwards, 2000). They are funded by private investors but function in the public sphere to improve competitiveness on the market (Spears & Gregoire, 2004). Reasons for outsourcing and contract catering can be cost savings and cost restructuring but sometimes also to improve quality. This is a growing phenomenon. The role of the purchaser is to enter into signed agreements with local, national or international food companies/wholesalers and local catering entities sub-order within the framework of these agreements.
- Purchaser in the commercial catering sector – includes commercial restaurants and fast food outlets provided by private investors. Generally, this sector is very complex since it includes entities from small hot dog stands to global catering chains. This means they vary in structure and organisation; some companies in the fast food business administer franchisers. It is mainly large scale organisations that utilise procurement agreements in the same way as public catering does. Small independent entities manage the purchasing process differently, often with local agreements.
- Catering managers in the public catering sector– see description above of procurers at authorities.
- Catering managers/owners in the commercial catering sector– see description above of purchaser in the commercial catering sector.

The participants in the second empirical study is presented in the following section. Table 3 presents the number of participants related to actor group and country.

*Table 3: Number of respondents related to actor groups and country (paper III).*

| Country | Researchers and information advisers | Practitioners within the public and commercial catering sectors | Producers and suppliers | Total |
|---------|--------------------------------------|-----------------------------------------------------------------|-------------------------|-------|
| Denmark | 4                                    | 3                                                               | 5                       | 12    |
| Finland | 2                                    | 3                                                               | 2                       | 7     |
| Norway  | 4                                    | 4                                                               | 7                       | 15    |
| Sweden  | 4                                    | 4                                                               | 4                       | 12    |
| Total   | 14                                   | 14                                                              | 18                      | 46    |

In the following section a short description of stakeholders and organisations participating in the second empirical study is given.

- Researchers at universities and research departments – internationally recognised researchers focusing primarily on research questions concerning sustainable food production (meal productions), many research questions focus on how to convert to organic foods. The role of the researcher is to gain new knowledge and to increase his/her understanding.
- Information advisers for interest organisations and authorities – provide the catering sector (managers and consumers/guests) with information about organic foods and green procurement. The main aim is to increase the demand for organic foods as a result of governmental decisions and to function as lobbyists of politicians, the food industry and the household sector.
- Catering managers in the public catering sector – see description from the first empirical study on procurers at authorities.
- Catering managers in contracted global catering chains – see description from the first empirical study of purchasers at contracted global catering chains
- Catering managers in commercial catering – see description from the first empirical study of purchasers in the commercial catering sector.

- Purchaser in prime and secondary food production – producers in small, medium and large scale businesses. Purchases processed and un-processed foodstuffs from primary producers or primary food processors for further processing and ready meal production. The producer supplies food directly to public and commercial caterers and retailers or via a wholesaler.
- Prime producers – prime producers of organic foods and/or conventional foods using integrated production (IP) including primary food processing.

Figure 3 summarizes the organisations represented in the two empirical studies. Participating organisations are highlighted.

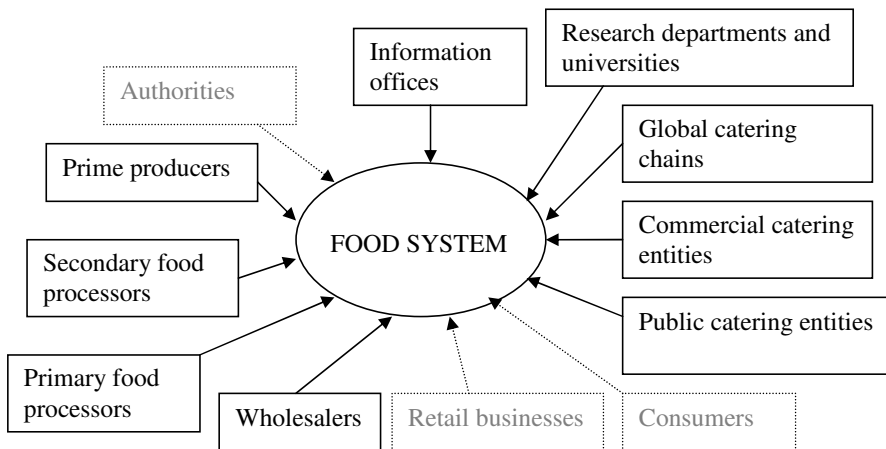


Figure 3: Organisations represented in the two empirical studies.





## *METHODS AND THEORIES*

This section will respond to two main questions: namely, how the data were generated and how they were analyzed. In other words, this is a presentation of how the results were obtained. In paper I, the data collection and analysis were carried out by a team of four researchers (including myself). Paper II is a synthesis of three papers. The data collections were performed individually and the joint analysis was carried out together with the three authors. In paper III, the data was collected by four researchers (one in each country. I did the Swedish interviews) and the analysis was done by me and the Finnish researcher. The data in paper IV was collected by two researchers (including myself) and I did the analysis.

### **In-depth interviews and survey (first empirical study)**

The first empirical study (paper I and IV) was a survey, and the data collection was done in a combination of interviews and questionnaires (see appendix I&II). The overriding purpose was to map out the use of organic food and processed foods in order to find out if food processing can be a limiting factor for organic foods. There has been very little discussion concerning the governmental ambition for an increased use of organic foods and the conditions under which the catering sector operate. Analysing how organic foods can be adopted by Swedish caterers and finding opportunities for increased use of organic food were the main topics for the survey. Interviews with purchasing managers were conducted for the purpose of developing a nationwide questionnaire. The material offered two levels to be investigated: professional food purchasers in the procurement and/or purchasing departments (interviews) and catering managers/ chefs in production kitchens (questionnaire). Altogether eleven semi-structured interviews were conducted (including two test interviews) with professional food purchasers in both public and commercial catering sectors. They were chosen from different parts of the Swedish food system such as producers, wholesalers, authorities and commercial global catering chains, all representing large-scale organisations. The reason for investigating professional purchasers and procurers in the study was that they are important key actors for purchases in the public sector and large-scale commercial catering such as catering chains. The interviews were semi-structured and an interview guide with ten open-ended questions was used. The questions concerned experience of and knowledge about processed foods

and organic foods in relation to usability, function, supply and demand. Also, barriers involving the use of organic food experienced by chefs and managers and the consequences of food management of today were discussed. All the interviews, except for one, were carried out at the respondents' workplace and lasted between 30-40 minutes. In six of the interviews, two researchers attended and in five of the interviews one interviewer and one respondent were present. In two of the interviews, two respondents and one researcher attended. In the interviews with two researchers attending, one lead the interview while the other participated with supplementary questions and comments. The length of the interview was sufficient to deal with all the topics, and gave a satisfying picture of knowledge and experience of organic foods and processed foods. All the interviews were tape-recorded and transcribed verbatim, which made it possible to use discourse analysis as an analytical tool for the analysis of the material. In discourse analysis, the whole interviews are analysed including the interview questions and therefore a full transcription is necessary. Discourse analysis as theory and analytical method are described in the next section. The interviews were conducted simultaneously with another interview study, but the two interview guides were separated. The respondents were informed about this in advance and there were no difficulties in separating the two bodies of data collected.

The questionnaire was distributed to 808<sup>12</sup> caterers in Sweden. The population was stratified so that both small and large groups of catering units were fully represented. It was also randomly selected from the five largest groups of catering categories, representing 94 percent of all catering units in Sweden (Delfi, 2006). The categories were commercial restaurants, fast food restaurants, school canteens, day-care centres and homes for the elderly. The former post office register was chosen, since it was updated on a more regular basis. A pilot questionnaire was distributed to 50 respondents, ten in each category. Since no major changes were made, these were included in the final sample. In total, the questionnaire covered 27 items and in 15 of them, an open alternative was available. The questionnaire contained ten background variables, of which two, category and size, were used in the analysis. Size was based on the number of portions produced per day. Catering units producing less than 100 portions were defined as small scale, those producing between 101 and 1,000 as medium scale, while those serving more than 1,000 portions were

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<sup>12</sup> The initial sample comprised 850 respondents, but due to incorrect selection from the random population register, 42 respondents were excluded, as they did not fulfil the criteria.

defined as large scale. It is common to use a three point scale when classifying catering units in Sweden (National Food Administration, 2006; Delfi, 2006). It was therefore logical to choose a three level classification in this survey. Attitudes were assessed using a four-point scale, ranging from 1 (strongly agree) to 4 (strongly disagree). Frequency was assessed using a six-point scale from 1 (daily) to 6 (never). The statistical analysis was carried out on the full six-point scale, although the results are presented in the form of a three-point scale, since very few answers were recorded in some of the groups. Finally, catering units using between one and five percent organic foods were classified as low users while those using more than five percent were classified as high users, and catering units that did not use organic foods at all were classified as non-users. The interviews exhibited a generally low use of organic foods in Sweden. The classification was made based on this knowledge.

The questionnaire had a response frequency of 46 percent (n=368). Dropouts were evenly spread between the five categories and the answers received contributed to some interesting findings. The study contributed to a new way of studying the catering sector, not only by category and sector but also by catering size. Catering units of the same size had a more similar situation than catering units belonging to the same sector or category. Therefore, in this study catering size was a better determinant of how food processing was perceived and used. This could encourage more studies analysed by size, not by catering category. Unexpectedly, differences between public and commercial catering sector concerning the use of organic foods could not be found. The expectation was to find more frequent use of organic foods among catering units in the public catering sector but the results from the study showed that 40 percent of school canteens never used organic foods at all. This discussion is further developed in the result section, Paper I.

### **Descriptive statistics (first empirical study)**

As the data were considered to be on an ordinal level scale (Dahmström, 2000) the non-parametric Kruskal-Wallis test and Mann-Whitney U test were used in the analysis of statistical data. The level of significance was set at  $P \leq 0,05$ . The Mann-Whitney U test method is used for assessing whether two independent samples of observations have equally large values and the Kruskal-Wallis test is an extension of the Mann-Whitney U test. The SPSS 13.0 program was used for data input and statistical analysis. These methods

were chosen since they are two of the most well-known non-parametric significance tests.

### **Telephone interviews (second empirical study)**

In the second empirical study, telephone interviews were carried out (see Appendix III). The reason for the study was an interest in getting closer to the concept of sustainable development in Nordic catering and to obtain an overview of how different stakeholders in the food system practice sustainability in their everyday work. The purpose was to create an understanding of how sustainable development is understood and practised. Altogether, 46 telephone interviews were carried out in Denmark, Finland, Norway and Sweden with stakeholders in different positions in the food system (see table 3). Four different interviewers were involved; one in each country. The group chosen for this project consisted of representatives from organisations included in the HealthCat network. This means that the stakeholders were already oriented towards health and sustainability and expressed an interest in sustainable development in the food system. The interviews were conducted in the respondents' native language.

The first contact with the respondents was taken in August 2006 by e-mail when they were asked to participate in the study. They were also informed about the procedure concerning data collection. The interviews were performed using an interview guide with six questions drawn up in such a way as to be useful in all four countries and the interviews were semi-structured to facilitate dialogue between the participant and the interviewer. The Finnish interviews were translated into English before the analysis took place while all the other interviews were analysed in original language. The interviews, varying in lengths between ten and twenty minutes, were tape recorded and transcribed verbatim. The Finnish interviews were recorded in shorthand and summarized by the interviewer.

Before the interviews took place, the stakeholders were split into three actor groups based on position in the food system; 1) researchers and information advisers, 2) practitioners in the public and private catering sectors, and 3) producers and suppliers. This was done in order to categorize the stakeholders according to their "social reality". It also simplified the analysis, and made it possible to compare professional groups (this was done although no major differences between professional groups were found).

As in the first data collection, the analysis was influenced by discursive psychology. The analysis aimed at finding patterns in the data. Short extracts from the texts were included in the analytical section. Using analytical tools provided by discursive psychology made it possible to explore how sustainable development was constructed in the food system actors' discourse and how the concept has been incorporated by the sector. Further information about discourse analysis and discursive psychology is presented in following section.

### **Reasons for selecting these data**

I have used a variety of data collection methods in my research. Using different methods, such as surveys and interviews, made it possible to study and capture the complexity of sustainable catering. Interviews in combination with a survey made the questions in the survey more relevant. Also, a survey made it possible to map out the catering sector as an interesting subject to research. The reason for doing telephone interviews was the need for spontaneous answers from the respondents. The participants were located all over the Nordic countries and conducting face-to-face interviews would not have been feasible.

### **Interpretative repertoires and ideological dilemmas**

The construction of the concept of sustainable development is studied as an attempt to develop sustainable catering. In my research, I find talk important in order to capture sustainability. Also, the importance of knowing the context in which sustainable development is to be incorporated is one of the results in my research and is further discussed in the result section.

Discourse analysis is a general term for a number of approaches to analysing written, spoken or sign language based on a language philosophy that enables us to understand reality through language (Winther Jorgensen & Phillips, 2000). Discourse analysis was used because it provides both theory and tools for the analysis. Theory concerns the role of language in social construction, but also how the subject is constructed in different discourses. Method includes analytical tools, instructions for data collection and problem formulation. Language in itself is more than just a way of expressing oneself; the social world is constructed in the conversations between people as an interactive process. For the analysis, this thesis briefly outlines key theoretical starting points based on discursive psychology (Potter & Wetherell, 1987). Using

tools from discursive psychology made it possible to find different discourses in which the talk about sustainable development (paper III) and the talk about food processing (IV) exist, but also how the stakeholders take on different identities in the discourses. Most relevant is the mix of a private and a professional identity (Fuentes & Carlsson-Kanyama, 2006).

Analysing discourses in texts involves searching for consistency (similarities) as well as variability (differences) in the texts. Consistency helps us to discover commonly occurring or overriding discourses and variability provides diversity; it is thus important to analyse both. Sometimes, contradictory discourses are found, which are an important part of the variability. One example of this is described in Winter Jorgensen (2000, pp. 107): “The consumer might be included in a consumer discourse with focus on freedom of choice, and by principals supporting value for money, but at the same time the consumer might also include an environmental discourse focusing on the advantage of the collective, and care for the environment.” These two discourses can be in conflict and during the interview a person can use both, which mean the same person can have different identities, even though they might be contradictory.

Edley (2001) highlights two key concepts of discursive psychology that are available as tools for the analysis: interpretative repertoires and ideological dilemmas. The concept interpretative repertoire has been used by Gilbert and Mulkay (1984) and by Potter and Wetherell (1987) and is defined as “a lexicon or register of terms and metaphors drawn upon to characterize and evaluate actions and events” (p 137). Interpretative repertoires are relatively coherent ways of talking about objects and events and form a conversation (Edley, 2001). Finding interpretative repertoires involves recognizing patterns across the interviews that prove different constructions of, in this case, sustainable development. Interpretative repertoires and discourses are two closely linked concepts, which can be used synonymously, but interpretative repertoires are often much smaller and more fragmented (Edley, 2001). In paper III, I found two different interpretative repertoires where talk about sustainable development takes place: a conceptual repertoire and a pragmatic repertoire. The conceptual repertoire is very complex as it represents a holistic, overriding description of the concept. The stakeholders’ talk comprises general ideas, for example, the three-pillar description presented by Brundtland (WCED, 1987). The pragmatic repertoire focuses on how sustainable development can be

achieved rather than what it means and transforms the definition of sustainable development into a concrete form. The second concept is ideological dilemmas. In paper III, the theoretical frame for reading the transcripts was established by Billig's idea of "lived ideology" and "ideological dilemma", according to which putting beliefs and values into effect in daily work is perceived to be problematic by practitioners (Billig, 1988). The notion of ideological dilemma was utilised in this study by introducing two initial categories into the analysis: one category of conceptual understanding and the other of pragmatic implementation. The four text corpora (one from each Nordic country) were at first coded into these two categories. Thereafter, subcategories were topically identified within both theoretically grounded categories. This text analysis followed Kvale's (1996) directions concerning qualitative interpretation of interviews as condensing the variation in meanings identified in the transcripts. In the result section, the text extracts are presented to make the interpretations of the interviewee's accounts visible. In paper IV, ideological dilemmas illustrate contradictory ways of talking about food processing and organic foods and of finding variability between the discourses. One example is when one of the wholesalers talks about the benefits of using processed foods and how rational thinking makes it impossible to use fresh products, while on the other hand organic foods should be natural due to emotional feelings about the product.

In my research, using the two analytical tools makes it possible to analyse conversations and dialogues concerning sustainability and conflicting communication since it is in the conversation that these concepts are constructed and used. But also being able to understand how dilemmatic nature of common sense has a broader cultural meaning, for example, in paper IV where the close cooperation with the food industry conflicts with culinary values; industrialised food preparation versus food preparation with fresh ingredients. The relation between the two analytical tools is the link between interpretative repertoires and ideological dilemmas as both of them can be contradictory. They are both influenced and informed by the surrounding conversational and wider context. Discourse analysis as an analytical tool for framing different constructions of a concept has been used in other research involving, for example, reviewing the potential of mediations and public participation for resolving environmental conflicts (Renn, Blättel-Mink and Kastenholz, 1997) and to clarify the concept of ambivalence in analyses of consumer culture (Halkier, Holm, Domingues, Magaouda, Nielsen and Terragni, 2008). Dis-

course analysis has also been used in research concerning food choice (Wiggins, 2001; 2002; Wiggins, Potter and Wildsmith, 2001).

The following section provides an explanation of how the analysis of the text was performed in practice and explains how part of the empirical data was examined. Edley (2001) argues that one way of facilitating the analysis of interpretative repertoires is to become as familiar with the material as possible. In my case, I read the transcripts several times to get to know the data properly. During my reading, patterns become evident and to be able to find heterogeneity the patterns were at first loosely structured by marking sections using different marking pens. Passages from the interviews concerning different or identical patterns were read together and potential text extracts were marked to exemplify the patterns. Words and expressions representing each pattern were gathered in a table where different interpretative repertoires could be outlined. The analysis was carried out in the original language, except for the Finnish interviews which were analysed in both Finnish and English. The original language may have been slightly distorted during the translation procedure.

### **Quality of the data and limitations of discursive psychology**

Concerning validity and reliability, it is difficult to talk about the level of replication as it is impossible to freeze a social setting and also talk about level of generalisation to a larger population. Instead, the quality in this research is based on trustworthiness and authenticity (Bryman, 2001), which means that the data collection and analysis have been carried out according to good practice. Procedures for data collection and analysis have been carried out according to procedures presented by well-known researchers and references have been given for the reader to follow the approaches. Also, complete records have been kept of all phases of the research and the analytical process and can be obtained from me. My own knowledge and experience of the field could have affected the analysis of the material. Performing qualitative research generally implies levels of individual involvement as the researcher is not only visible but also involved in the interviewing process. In discursive psychology, the researcher is as important in the analysis as the interviewee as the whole conversation between them is focused on in the analysis (Potter and Wetherell, 1987). In the second data collection, there were altogether four different interviewers who influenced the data. However, the analysis was carried out simultaneously by two researchers. As discourse analysis does not



provide “hard” data, the knowledge is instead based on debate and argumentation, and the reliability and the validity of the findings depend on the force and logic of the argumentation and how close to good practice the work has been performed.

Critique of discourse analysis is often based on how the quality of the research is measured. As already mentioned, the quality of the work is not easily measured using validity and reliability, but one must consider that discourse analysis provides one possible side of a certain problem or one solution to a problem, and that there might exist another “side of the story”. For that matter, discourse analysis is insubstantial because it cannot provide the solution of a problem (Winther Jorgensen & Phillips, 2000). One difficulty I have experienced in discursive analysis is the variety of directions on how to structure the work at the beginning of the procedure. The concept “discourse” has a variety of meanings, but at the same time it gives the freedom to adapt an approach suitable to my specific research. To facilitate my work, I have found support in other research using the same approach and among other researchers (Potter and Wetherell, 1987; Billig, 1988; Winther Jorgensen & Phillips, 2000). One way of preventing errors is to have a partner in the analytical part: for example, in paper III, the analysis was performed by the two authors individually and thereafter compared to make sure all data had been properly analysed. There is also no evident way of performing the design and analysis of discourse analysis. Instead, it is possible to use elements from different discourse analytical genres (Winther Jorgensen & Phillips, 2000).



# *RESULTS*

In this section, the results of the four papers are presented.

## **Paper I**

Post, A., Shanahan, H. & Jonsson, L. (2008). Food processing: barriers to, or opportunities for, organic foods in the catering sector? *British Food Journal*, vol. 110, no. 2, pp. 160-173.

This paper takes as its point of departure the Swedish government's proposal to increase the use of organic foods in public catering institutions to 20 percent before 2010 (SOU, 2005). The survey was carried out in 2002/2003 when organic foods were central in discussions. On both national and regional levels, the Swedish government has been anxious to promote the use of organic foods and public catering is regarded as a pioneer (SOU, 2005). But introducing organic foods has been complex due to high prices, limited budgets and unreliable supply (Bergström et al., 2005). The focus in this paper was on examining whether or not food processing is a limiting factor when using organic potatoes and tubers and to suggest catering categories most likely to purchase such foods, but also to describe the use of organic foods in general, and the use of potatoes and tubers. Working in the public catering sector involves a number of boundaries, which can affect sustainable choices: limited budgets, high prices, lower national subsidies and rationalisation of the public catering sector in the 1980s (Halling, Nordlund & Jacobsen, 1990).

The results of the study show that commercial restaurants generally use less organic foods than other catering categories, but are nevertheless familiar with the organic concept and a majority of commercial restaurants are positive towards processing since it gives the food more consistent quality. Processed foods contribute to a number of improvements such as a positive effect on the work environment and a reduction in kitchen equipment. The unprocessed nature of organic foods has an ideological meaning in commercial restaurants, irrespective of size. Two thirds insist that organic foods should also be locally produced.

In fast food restaurants, mostly processed foods are used in meal production. Lower personnel costs and a generally high level of management control are two reasons for purchasing only processed potatoes and tubers today. Many fast food

restaurants consider organic foods to be central to a sustainable strategy and almost two thirds use organic foods to some degree. The major obstacles concerning organic food were: varying quality, high prices and low quantity. Almost 42 percent of school canteens are low users of organic foods and, despite government encouragement, almost 40 percent never use organic foods at all.

School canteens are mainly medium-sized catering units and consider processed food convenient as it makes it easier to provide an even quality and a better work environment. If organic foods were processed, it could increase demand. Nevertheless, a majority of the caterers believe that organic foods should be produced locally. Keeping organic foods separate from conventional foods is perceived as an obstacle as are high prices.

Day-care centres prefer to buy fresh potatoes and tubers. Although the use of organic foods varies, this category has the greatest experience of organic foods and 30 percent are high users (18 percent purchase more than 15 percent of organic foods). A few caterers consider organic produce to be tastier than conventional foods and that organic production has a positive impact on the environment and human health. Since day-care centres rarely purchase processed products, processed organic ones are of little interest, and recipes and equipment are not adapted to processed foods.

In general, homes for the elderly are low users of organic foods and 36 percent never purchase organic foods at all. Homes for the elderly sometimes find the purchase and preparation of organic products problematic. Despite this, many caterers nevertheless insist on using fresh and locally produced organic foods. Organic foods are considered valuable as they contribute to a more sustainable society, and some catering managers were of the opinion that the environmental gain is lost in industrial preparation. They also find the high price of organic foods problematic.

To conclude, many medium-sized and large catering units have adopted a rationalised meal production system unsuitable for fresh foods. If organic foods are not adapted to a rational meal production system, the market for these products will be limited (Baecke et al., 2002; Wier & Calverly, 2002). On the other hand, small catering units, such as day-care centres and commercial restaurants often have the opportunity to circumvent the rational meal production system and prepare meals from the start with unprocessed ingredients (Mikkelsen et al.,

2002). Some small and medium-sized catering establishments in the public sector are facing the moral dilemma of whether organic foods should be processed or not. Food processing has a major impact on the environment (Engström & Carlsson-Kanyama, 2004) and the loss of the environmental benefit due to industrial processing is thus a dilemma. As in Mikkelsen (1993), their perception of organic production is that organic food should be locally produced and not be handled by the food industry.

## **Paper II**

Post, A., Bergström, K. & Mikkola, M. (2008). Sustainable Development in Nordic Catering. Conference of the Sustainable consumption Research Exchange (SCORE!), 10-11 March 2008, Brussels.

This paper is a synthesis of three papers. The aim is to illustrate different ways of understanding the work promoting sustainability in the Nordic catering sector and the food system. The following two questions constitute the point of departure for this analysis: How can different ways of studying sustainable consumption in the catering sector and the food system help us understand how theoretical knowledge can be transformed into daily practice? How can different analytical methods give us a deeper understanding of the concept of sustainable development from a Nordic perspective? In this paper, we present three different studies with focus on methodology. Using three different studies enables us to investigate different positions in the food system but with similar problems.

The way sustainable development is understood and practised in the food system is mainly based on the actors' own understanding and their own reality as regards practical work, which is very context specific and close to the actors' perspective and does not always align with overall instructions given on a societal level. To facilitate the work on promoting sustainable development, their situation needs to be understood and directives need to be more specific since overall instructions do not always help in a constructive way. The context is often missed when environmental and sustainability issues are dealt with. The context includes all the working conditions, education, "the main aim" of the work, from which point of view environmental and sustainability talk becomes a "secondary aim". Knowing the context is helpful when creating appropriate tools in addition to which different situations require different actions. Societal visions of sustainable development can be regarded as inspiration for companies and organisations that already have a strong environmental awareness and have created poli-

cies for environmental work. On the other hand, companies and organisations that want to act more environmentally friendly but do not know how are in need of more distinct guidance by society.

Another important question is the language used by employees, which is concrete and site specific. The generic environmental and sustainability aspects do not seem to translate well into practical work. The studies seem to emphasise a closer look at human and restrictive factors in the promotion of sustainability. However, the contradictions with other systemic layers of society need to be aligned with environmental and sustainable thinking; otherwise the “fight for sustainable development” will become a fight against windmills. Political regulations need to be formulated in accordance with the discourse in which they are intended to operate. In the food system, decision-making is important and crucial for how the work on promoting sustainability is established, developed and conducted. The procurers and purchasers do not want to disrupt the food market and prevent food products without an environmental perspective from being used in food production; they would rather protect their company’s interests, that is, satisfy the demands of their customers. Even though purchasing food for the public sector is subject to very restrictive and highly regulated procedures, including procurement contracting, the final decision lies in the hands of the catering manager of each unit. The public catering sector does not have a manager at the central level to organize and manage the large volumes of food purchased in the public catering sector. Instead of using their own position to improve the selection of food with an environmental perspective, procurers and purchasers allow the catering manager (closest to the kitchen) to make the decision whether to buy a certain product or not. Because of this, the procurers and purchasers do not have to take in that much environmental information since the decision is not in their hands, and the information falls “through the cracks”. Very few actors prioritise the ecological dimension, instead economic criteria dominate. This makes it difficult to keep the actors focused on the environmental questions.

Communication as such seems to be a vital question. Different interpretations of environmental aspects and the transfer of meaning from one actor to another make communication a complex matter, especially if economic criteria dominate the reasoning. The complexity of the food system is enormous in terms of number of actors, and types and sizes of organisations. The actors closest to oneself in the food system are best known. The driving force for development is not so-

ciety but the consumers whose ethical concern for the environment is important. In this discussion, the companies are in between two poles: society on the one hand and consumers on the other. Here, environmental communication is needed instead of environmental information, which is already there.

### **Paper III**

Post, A. & Mikkola, M. (2010). Nordic stakeholders in catering for sustainability: chasm between ideology and practice? (Submitted manuscript).

This paper explores progressive stakeholders' understandings of and activities for sustainable catering as socio-cultural embodiments in the Nordic countries. The main results show how the issue of catering for sustainability was dealt with in speech by resorting to conceptualisations on the one hand and pragmatic efforts on the other. This interpretation is confirmed by the rare occasions of 'translation speech' whereby some initial efforts to translate between these two main categories were presented (text extracts can be read in the original paper). The analysis discerned five conceptual topics such as the three dimensions of WCED (1987), food system, human health and environmental integrity as well as politics for democracy and societal agreements about justice and ethics. It was noteworthy how the stakeholders knew by heart the 'WCED jargon' in its more or less developed articulations. Tropes such as "from field to table" were presented including food chain or network stages, and life cycle thinking was suggested as a methodical approach for food system development. Individual health was sincerely focused on by all stakeholders, and healthy social interaction and occupational environments were seen as being included in the concept in addition to physical health. The stakeholders saw environmental integrity as essential, to be achieved by not wasting natural resources. The production process should be eco-friendly and avoid negative impact on the environment. As food traditions, food culture and landscapes are conceived as intertwined, they should be connected by means of high quality food products. Grand ideas of democracy, equality, justice and ethics were presented particularly by information professionals. Caterers and suppliers in particular called for ideas about responsibility for less powerful members of society such as young people. The philosophical dimension of sustainable development on the personal level was brought out by all stakeholders; they also found that sustainability is a lifestyle.

The pragmatic view was made up of five topics: agriculture, catering, economising processes, environmental management schemes and, finally, taking a stand

on the issue. The pragmatic topics were sector or profession specific, offering a level playing field for the application of conceptualisations of sustainable development. The stakeholders had a negative attitude towards the generic pattern of intensive modern agriculture and were concerned about pesticides impacting human and environmental health. The caterers and supply professionals were interested in agricultural products with added value such as local, domestic, organic and integrated production. The stakeholders also had interests in the catering industry and suggested cooking from scratch and administration of sustainable purchases would be the way to go for sustainable catering. These views correspond to the preferred use of organic vegetables and the use of seasonal menu planning and foods of identified origin. The caterers often feel hostile about excessive additives that seem to represent negative assessments of industrial agriculture and food processing. Economization focuses on combining cost saving management with environmental protection. However, there were also internal contradictions in the way that economising, in terms of saving labour, caused occupational stress. Environmental management schemes were seen as ways of structuring sustainable development into organizational activities (Mikkola, Risku-Norja & Post, 2010). These schemes included organic food as one concrete and well-known illustration of sustainable food, fair traded food and the Nordic eco-labelling of restaurants. Taking a stand on a sustainability issue often meant identifying sustainability deficiencies in one's own occupational environment. Ethics, democracy and justice were applied in economic and occupational terms in one Swedish business and the salaries and tasks were changed to share the burden and benefits more equally. It was felt that in general Nordic work regulations warranted reasonable ethical practices and occupational conditions. However, there were sustainability concerns about foreign labourers working in Nordic food systems in jobs not considered attractive by natives. Through its ideal categorisations, the concept of sustainability seemed to promote continuous pragmatic efforts to achieve more sustainable food systems. However, the stakeholders in agriculture, processing and catering seem to need considerably more support and tools for directing the change toward sustainability. R&D must increase in scale due to the need for contextual applications, which should be discussed by stakeholders as well as within organizations and their networks. The 'good life' appears as a dynamic, complex and far reaching goal, to be approached step-by-step. In this way, even changing ideas about sustainability and barriers to its implementation were understood as inherent in the concept of catering for sustainability.



## Paper IV

Post, A. (2009). Food purchasers' experience of conflicting communication. (Submitted manuscript).

This paper takes as its starting point the governmental directives to increase the level of organic foods in the public catering sector. A conflicting situation occurs when organic foods are introduced into rational meal production. Organic foods, especially organic vegetables, are rarely processed and therefore difficult to handle in large-scale kitchens. For economic reasons, many processed meal components are used in kitchens today. In this paper, the professional food purchasers are focused on as they are important stakeholders controlling the supply of food. The aim is to analyse the different ways professional food purchasers in the catering sector handle the conflicting communication concerning economic thinking and environmental thinking (framed by the use of organic foods). Analysing for interpretative repertoires (Edley, 2001) makes it possible to capture the different settings in which this conflict is visible.

The first interpretative repertoire is "economy as the guiding principle". In this repertoire, food processing is talked about as part of an economic context and according to financial calculations, processed foods are economically more beneficial than fresh foods. The advantage of using processed foods is lower expenditure since increased use of processed foodstuffs results in a trend towards fewer kitchen staff and kitchens with less equipment. The greater the pressure on the budget, the more processed foods are purchased. A history of rationalisation is behind this trend, especially in the public sector where the stakeholders describe a situation where the limit has been reached. Economy is the most dominant aspect to consider, especially in large and medium-sized entities whereas small kitchens are more flexible. Some purchasers in global catering chains heavily promote the use of processed foods for economic reasons. One strategy is to satisfy new demands by following other stakeholders' strategies instead of being a pioneer. Being a pioneer is risky and the stakeholders talk about economical risk-taking when they tried to introduce, for example, organic food before the market was ready.

The second interpretative repertoire is "trust in technology": this means focusing on the future in a way that emphasises technological development. One example is trust in the food industry to process foodstuffs for the catering sector. Cooperation with the food industry provides convenience in terms of new product de-

velopment directly adjusted to large-scale meal production, which in this case means potato-and tuber products can be developed to fit into production without further treatment in the kitchens. This makes cooking more efficient and enables less qualified staff to work in the kitchen and results in less waste; it also facilitates the economic calculations. Taking tubers as an example; it is often difficult to estimate the amount of waste and in some calculations the waste reaches 50-60 percent of total. They are often frozen and packed and the quality can more easily be guaranteed. Threats to this trend are in the form of chefs who want to use fresh ingredients and insufficiently processed food products. More processed foodstuffs also influence the trend towards less competent staff, i.e. the staff does not need to have a chef's education and experience. Since cooking largely consists of unpacking ready prepared foodstuffs, "anyone can do it".

The third interpretative repertoire is "culinary aspects" where processed foods are talked about as a complement in unexpected situations. Processed foods have a different structure compared to their fresh state and this affects the appearance of the actual meal. This is a matter of aesthetics and could have an impact on the customer's experience of a meal. Another aspect is the difficulty to judge the quality of the product and whether it is price-worthy. Organic food creates goodwill and is sometimes used in marketing. Using organic foods creates a dialogue about food quality and is part of the work on sustainability. Seasonally oriented menu planning favouring domestic foods and tubers could open the way for more organic foods. Organic foods are also related to an emotional aspect. Some stakeholders reflect on whether or not organic foods should be processed and the emotional experience when holding a fresh, muddy, organic potato.

The analysis suggests that further research addressing the complexity in the communication process and decision-making in the catering sector is important. In this paper, it is noted that the respondents face a conflicting message as regards economic thinking and environmental thinking. To deal with this conflict, purchasers in the catering sector cooperate with the food industry, which is an important partner in modern meal production today. Increased trust in technology affects meal production in many ways, one example is less transparency. The technological aspect of meal production originates in demands for cost savings. The whole catering sector has taken measures to protect itself against the uncertainty that usually accompanies economic downturns. It is relevant to understand this conflict as a dilemma on a societal level – on the one hand the actors face economic demands, and on the other there is the need to consider envi-

ronmental incentives. Referring to the issue as an ideological dilemma enables the conflicting messages to coexist and to be acknowledged without trying to solve the conflict. It is important to gain an insight into the ways the stakeholders struggle with conflicting messages. But to be able to allow both sides of the dilemma to be expressed, communication between stakeholders needs to be improved.



## *DISCUSSION*

In this section, I will initially discuss the crucial factors found in my research that could facilitate the development of sustainable catering. Secondly, I will discuss the barriers food system stakeholders experience concerning work promoting sustainable catering. Finally, I will discuss the role of the public purchaser as an important stakeholder in food system research, and underline system thinking as a highly relevant point of departure for this kind of research. Important factors are: communication, context, language, system thinking and to some extent organic foods as “debate keepers”. Barriers are: insufficient communication, not “knowing” the environment, organic food as the convenient solution, conflicting messages and ideological dilemmas. The discussions will be intertwined as the different factors are intimately connected.

### **Important factors**

Communication, context and language are three closely connected factors that are crucial for transforming sustainable development from a theoretical concept into practice (discussed in paper II). Environmental communication versus environmental information has been studied by Bergström et al. (2005) and Fuentes and Carlsson-Kanyama (2006), who showed that the environmental information is there but it needs to be communicated in a more satisfactory way. In my research, communication or insufficient communication was found to influence the development of sustainability. Conflicting messages between stakeholders and authorities have been problematic in the case of environmental commitments and economic directives. In a similar vein, other research has reported conflicting communication in the relations between catering staff and authorities (Mattsson-Sydner and Fjellström, 2007; Mikkola, 2009). Also, how the concept of sustainable development is constructed and practised among the stakeholders influences the development of such work. In paper III, the different understandings of the concept are analysed. Some of the stakeholders keep to a very theoretical understanding of the concept whilst others are more pragmatic and “down to earth”. Knowing how to communicate facilitates understanding in the debate (Joutsenvirta, 2007). Bhaskaran et al. (2006) found that stakeholders use different words/vocabulary interchangeably and that organic food was easiest to relate to. One could ask why? The reason could be the carefully developed criteria concerning organic food, which can easily be adopted as a convenient package. Although organic farming can be complicated, the regulations governing agri-

culture, food processing, etc. are quite extensive. In contrast to organic food, sustainable development has a vague definition even though the WCED's definition is familiar to most people today. There is intense critique of mainstream development (Sneddon et al., 2008; Aikin & de Boer, 2004). On the other hand, the sustainability discourse encourages the development of constructions and interpretations (Dryzek, 1997). The stakeholders in my studies have the ability to switch between ideological approaches and practical interpretations. Even though it is obvious that many of the stakeholders think positively about sustainable development, some of them state it is problematic to reach out from the social reality of their own business to meet the food system's "next door neighbour". Since work promoting sustainable development is system activity, it is important to know other stakeholders' understanding of the concept. One example concerns the supply and demand of organic food where stakeholders disagree. If supply and demand could be calibrated, the process of increasing organic food in the catering sector could be improved. This is why communication is an important factor. But communication can also be conflicting (see "Barriers").

Another important factor is the context in which the stakeholders work. The context is influenced by one's own reality, the kitchen environment, for example. Language is vital for satisfactory communication. But language is also built into the environment, the context. Differences between stakeholders in the food system could be due to their different environments; for example, farmers and catering staff concerning how sustainable development can be achieved. To be able to advance the work on promoting sustainable food production, the stakeholders need proper tools based on their language and context because they do not know "the environment" and sustainable development themselves. Some of them need others, experts, to develop proper tools that need to be sufficiently communicated. Some stakeholders had very little to say about sustainable development and environmental work in their organisation as it was not prioritised. Driving forces were referred to as essential for this kind of change.

Another crucial factor is system thinking, which enables different stakeholders' perspectives to become visible. Using a system thinking approach makes it possible to understand differences within the food system. A system thinking perspective helps to break up the mechanical thinking of the food chain, as the chain only has the connection to the "next door actor" and includes fewer actors/stakeholders than systems or networks. My research design has provided a

context for the qualitative research, and how the system thinking approach was developed is one example of this. The system thinking approach made it possible to include many different stakeholders in the studies but still provide the knowledge from different stakeholders' perspectives (study I). The survey identified conflicts between economic constraints and the use of organic foods, which was not obvious in the qualitative study, but other dilemmas such as the construction of the concept of sustainable development were found and discussed (paper III).

It is almost impossible to talk about sustainability without mentioning organic food. I view organic food as a “debate keeper” (maintaining the discussion about environmentally friendly food). Here, the political directive of 20 percent organic food in all public catering institutions is an important factor (SOU, 2005) and increasing the use of organic foods is one way for the Nordic governments to deal with national environmental goals. Many stakeholders in my research mention organic foods when they talk about sustainability in a food context, although their experiences of such foods vary a lot. The impact of organic food has made itself felt among the stakeholders. The concept of organic food is also discussed in Bhaskaran et al., (2006).

## **Barriers**

The different ways sustainability is constructed can obstruct progress towards sustainable catering. In paper III, conceptual and pragmatic ways of interpreting sustainable development provide the discussion with the basic idea of sustainability as both ideology and practice. In the analysis, the influence of discursive psychology focuses on communication and language as they are important for social change, and in my research they are identified as crucial factors for sustainable catering. The discussion can therefore be theoretically supported (Potter & Wetherell, 1987; Winther Jorgensen & Philips, 2000). Conceptual and pragmatic ways of constructing sustainable development illustrate different interpretations as well as practical experiences of sustainability. The mix between the two ways deals with what sustainable development is and how it can be achieved.

Not knowing the environment or the language in a specific context can hinder communication (Joutsenvirta, 2007). Some stakeholders are a bit far from nature as they do not talk very much about biodiversity and CO<sup>2</sup> and prefer to talk about societal agreements such as certificates and labels. It is also difficult to

reach nature from the kitchen as the stakeholders are embedded in daily work. Training can generate a positive attitude towards organic foods (Heikkälä & Svensson, 2007).

The barriers experienced by the stakeholders are based on what I choose to call “conflicting messages” and organic food as the convenient solution. As mentioned earlier, the focus has shifted from organic foods to sustainable foods in society as well as in research. Some supporters of organic foods claim that organic foods are still the most sustainable way of producing food and meals, as the absence of chemical fertilizers and pesticides makes the food “cleaner”. The Nordic governments support organic food and have specifically promoted organic foods in public catering. My first empirical study deals with organic food and if it is possible to increase the use of organic foods as a result of the governmental decision presented earlier. The intention was to view the public catering sector as a pioneer generating and encouraging other stakeholders in the food system to purchase organic foods. Instead, a dilemma was found. The political directive to increase organic food in all public catering institutions is an important factor but is also one of the barriers. The public catering sector faces a history of economic rationalisation and the directive to increase organic foods without extra funding (more expensive products and the reorganisation of kitchens is often necessary) has been difficult to handle. In the interviews with the professional food purchasers (paper IV), the main objective for discussion was that meal production in the kitchens comes in second place. Instead, the focus is mainly on rational thinking, economic constraints, and trust in new technology in talk about meal production. This conflicting communication also mirrors the working conditions in the public catering sector where political decisions are sometimes contradictory. There is a potential dilemma between economic food production and organic food and whether organic foods should be processed or not (paper I). This is a dilemma for the catering sector and affects the stakeholders’ ambition to achieve sustainability. One way of resolving this dilemma could be to work with product development (paper I). Since some of the purchasers and procurers processed food stuffs themselves, addressing the need of large and medium size catering entities could solve the dilemma, as large- and medium sized catering entities are most likely to purchase organic processed foods. But there is also the perspective of food culture/soft values which is replaced by other values. Public catering experiences conflicting communication when increasing demands on organic food conflict with the rational meal production.



The Nordic governments have individually agreed to increase the level of organic food purchases nationally. In Sweden, the public catering sector is looked upon as a pioneer. But tools for actually implementing/realizing sustainable catering are not provided and today, the political goal for 2010 as regards organic agriculture in Sweden has not been reached (Swedish Board of Agriculture, 2010). Political decisions can sometimes be unclear and change as the political situation changes. Professional food purchasers are important professionals in the process but they are not fully capable of handling the conflicting messages from economic and environmental directives.

### **The role of the professional purchaser**

The professional food purchaser is an important stakeholder in food system research. The food system consists of numerous purchasers located in different organisations and employing a system thinking perspective has been a highly relevant point of departure for this kind of research.

The purchasers and procurers (paper IV) have to handle the conflict between economic constraints and the increased use of organic foods. When dealing with this conflict, purchasers in the catering sector cooperate with the food industry, which is an important partner in modern meal production. Increased trust in technology affects meal production and results in less transparency in the process. The technological aspect of meal production originates from the demands for cost savings.



## *CONCLUSION*

- Context is specific and needs to be considered when working to promote sustainability. The language used by the stakeholders is similar to the one they use in their own practice and need to be considered as it is built into the environment/context.
- Communication between authorities and stakeholders needs to be less conflicting, for example, between economic demands and environmental incentives.
- System thinking makes different stakeholders' perspectives visible, and the concept of sustainable development has been identified
- Professional food purchasers and procurers are important in the process, but they do not have the tools to handle the conflicting messages from economical and environmental directives.

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**1. Vilken är din profession på arbetsplatsen?**

- restaurangchef  köksmästare  
 kostchef  husmor  
 annan, vilken? \_\_\_\_\_

**2. Hur många personer arbetar i köket? (räkna om eventuella deltidstjänster till heltidstjänster)**

- 1 - 4  
 5 - 8  
 9 - 12  
 13 - 16  
 17 - 20  
 21 <

**3. Inom vilken typ av köksverksamhet verkar du?**

- kommersiella restauranger  
 fast food- restauranger (inkl. gatukök)  
 skolmåltider  
 förskolemåltider  
 äldreomsorgsmåltider

**4. Ange typ av kök**

- köket tillagar både huvudkomponent och bikomponent i måltiden  
 köket tillagar endast bikomponent  
 köket är ett serveringskök

**5. Vem är huvudman/ägare för köksverksamheten?**

- privatägd restaurang  
 fast food- kedja  
 kooperativ/friskola/privat äldreomsorg  
 kommun  
 annan, vem? \_\_\_\_\_

**6. Vem har driftansvar för köksverksamheten?**

- huvudman/ägare  
 cateringföretag  
 franchisetagare  
 annan kommunal köksverksamhet  
 annan, vem? \_\_\_\_\_

**7. Genom vilken typ av inköpsavtal handlar du?**

- privat upphandlingsavtal  
 kommunalt upphandlingsavtal  
 eget inköpsavtal  
 inget avtal

**8. Hur många portioner serverar köket per dag?**

- < 100  
 101 - 500  
 501 - 1000  
 1001 - 5000  
 5001 <  
 vet ej

**9. Vilken omsättning i kronor har köksverksamheten per år? (exkl. moms)**

- < 1 miljon  
 1, 1 miljon - 5 miljoner  
 5,1 - 10 miljoner  
 10, 1 miljoner <  
 vet ej

**10. Hur mycket livsmedel köps in per år? (kronor, exkl. moms)**

- < 250 000  
 251 000 - 1 miljon  
 1,1 miljon - 2,5 miljoner  
 2,6 miljoner <  
 vet ej

**11. I hur stor utsträckning använder köket potatis i alla former?**

- dagligen  
 3 - 6 gånger/vecka  
 1 - 2 gånger/vecka  
 1 - 3 gånger/månad  
 sällan  
 aldrig

**12. I hur stor utsträckning använder köket rotfrukter i alla former? (Med rotfrukter menas i studien kålrot, morot, palsternacka, rotselleri och rödbeta)**

|              | dagligen                 | 3-4 gånger/<br>vecka     | 1-2 gånger/<br>vecka     | 1-2 gånger/<br>månad     | sällan                   | aldrig                   |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| kålrot       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| morot        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| palsternacka | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| rotselleri   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| rödbeta      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**13. Vilken betydelse har förädlingsgraden av potatis och rotfrukter för arbetet i köket?**

|                                                                     | instämmer<br>helt och<br>hållet | instämmer<br>delvis      | instämmer<br>knappast    | instämmer<br>ej          |
|---------------------------------------------------------------------|---------------------------------|--------------------------|--------------------------|--------------------------|
| högre förädlingsgrad ger<br>mindre personalstyrka                   | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| kvaliteten på maten blir jämnare<br>ju högre förädlingsgraden är    | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| utbildningsgraden på personalen<br>kan vara lägre                   | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| det blir färre tunga lyft för personalen                            | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| recepten är anpassade efter de<br>förädlade produkternas egenskaper | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| köket är anpassat efter förädlade livsmedel                         | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| graden av förädling är avgörande för<br>mitt val av produkt         | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| annan, vilken? _____                                                |                                 |                          |                          |                          |

**14. Vilken förädlingsgrad på potatis köper du? (du kan ange flera alternativ)**

- tvättad
- skalad
- finfördelad (skivad, strimlad, tärnad, klyftad)
- förfriterad
- kryddad
- halvkokt
- helkokt
- potatispulver
- potatisflingor
- potatisfiber
- ingen, jag köper endast naturell potatis
- annan, vilken? \_\_\_\_\_

**15. Vilken förädlingsgrad på rotfrukter köper du? (du kan ange flera alternativ)**

- tvättad
- skalad
- finfördelad (skivad, strimlad, tärnad, klyftad)
- riven
- som komponent i grönsaksblandning
- inlagd/konserverad
- ingen, jag köper endast naturella rotfrukter
- annan, vilken? \_\_\_\_\_



**16. I vilken utsträckning använder köket förädlad potatis?**

- dagligen
- 3 - 6 gånger/vecka
- 1 - 2 gånger/vecka
- 1 - 3 gånger/månad
- sällan
- aldrig

**17. I vilken utsträckning använder köket förädlade morötter?**

- dagligen
- 3 - 6 gånger/vecka
- 1 - 2 gånger/vecka
- 1 - 3 gånger/månad
- sällan
- aldrig

**18. I vilken utsträckning använder köket övriga förädlade rotfrukter?**

- dagligen
- 3 - 6 gånger/vecka
- 1 - 2 gånger/vecka
- 1 - 3 gånger/månad
- sällan
- aldrig

**19. Vilka fördelar finns det med att använda förädlade rotfrukter och potatis i köksarbetet?**

- det blir lägre personalkostnader
- det blir lägre övriga driftskostnader
- det ger en tidsvinst i köket
- kravet på viss utrustning minskar (t.ex. skalmaskin och renseri)
- det blir jämnare kvalitet på maten
- det blir mindre svinn
- annat, vad? \_\_\_\_\_

**20. Vad innebär det för dig att potatis och rotfrukter är ekologiskt odlade?**

|                                                          | instämmer<br>helt och<br>hållet | instämmer<br>delvis      | instämmer<br>knappast    | instämmer<br>ej          |
|----------------------------------------------------------|---------------------------------|--------------------------|--------------------------|--------------------------|
| de är naturella, d.v.s. oförädlade                       | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| de bör vara lokalt odlade/framställda                    | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| de har samma egenskaper som konventionellt odlade        | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| de är fria från kemiska bekämpningsmedel                 | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| de är ofta dyrare än likvärdiga konventionella livsmedel | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| de bidrar till en hållbar utveckling                     | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| det är endast ett försäljningsargument                   | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| annan innebörd, vilken? _____                            |                                 |                          |                          |                          |

**21. På vilket sätt skiljer sig ekologiskt odlad potatis från konventionellt odlad potatis?**

|                                                                                | instämmer<br>helt och<br>hållet | instämmer<br>delvis      | instämmer<br>knappast    | instämmer<br>ej          | vet ej                   |
|--------------------------------------------------------------------------------|---------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| ekologisk potatis har bättre<br>kokegenskaper                                  | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ekologisk potatis<br>har längre hållbarhet                                     | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ekologisk potatis<br>kräver mer omfattande<br>hantering i köket                | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ekologisk potatis kräver<br>förändring av recepten                             | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ekologisk potatis är lätt att<br>anpassa till befintlig matsedel               | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ekologisk potatis kräver<br>separat förvaring                                  | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| det är ingen skillnad mellan<br>ekologiskt och konventionellt<br>odlad potatis | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

annat sätt, vilket? \_\_\_\_\_

**22. På vilket sätt skiljer sig ekologiskt odlade rotfrukter från konventionellt odlade rotfrukter?**

|                                                                                    | instämmer<br>helt och<br>håller | instämmer<br>delvis      | instämmer<br>knappast    | instämmer<br>ej          | vet ej                   |
|------------------------------------------------------------------------------------|---------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| ekologiska rotfrukter har<br>bättre kokegenskaper                                  | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ekologiska rotfrukter har<br>längre hållbarhet                                     | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ekologiska rotfrukter<br>kräver mer omfattande<br>hantering i köket                | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ekologiska rotfrukter kräver<br>förändring av recepten                             | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ekologiska rotfrukter<br>är lätta att anpassa till<br>befintlig matsedel           | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ekologiska rotfrukter kräver<br>separat förvaring                                  | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| det är ingen skillnad mellan<br>ekologiskt och konventionellt<br>odlade rotfrukter | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

annat sätt, vilket? \_\_\_\_\_

**23. Vilka hinder upplever du för att öka andelen ekologiskt odlade rotfrukter och potatis i matlagningen? (du kan ange flera alternativ)**

- utbudet är litet
- produkterna finns ej i den form som önskas
- finns ej med i upphandlingsavtalet
- kvalitén blir sämre
- priset är högre
- tillgången är ojämn
- förpackningarna är ofta anpassade till det lilla hushållet
- kräver separat hantering
- kräver separat förvaring
- annat, vad?

\_\_\_\_\_

**24. Arbetar köket aktivt för att öka användningen av potatis på menyn?**

- ja
- nej
- om ja, på vilket sätt?

\_\_\_\_\_

\_\_\_\_\_

- om nej, varför inte?

\_\_\_\_\_

\_\_\_\_\_

**25. Arbetar köket aktivt för att öka användningen av rotfrukter på menyn?**

- ja
- nej
- om ja, på vilket sätt?

\_\_\_\_\_

\_\_\_\_\_

- om nej, varför inte?

\_\_\_\_\_

\_\_\_\_\_

**26. Arbetar köket aktivt för att öka andelen förädlade produkter i matlagningen?**

- ja
- nej
- om ja, på vilket sätt?

\_\_\_\_\_

\_\_\_\_\_

- om nej, varför inte?

\_\_\_\_\_

\_\_\_\_\_

**27. Hur stor andel av alla livsmedel som köket köper in är ekologiska?**

- Ingenting
- < 5 %
- 5,1 % - 10 %
- 10,1 % - 15 %
- 15,1 % <

\_\_\_\_\_

Har du några särskilda positiva eller negativa erfarenheter du vill förmedla kan du skriva till Institutionen för Hushållsvetenskap Att. Anna Adolfsson, Box 12204, 402 42 Göteborg eller [anna.adolfsson@ped.gu.se](mailto:anna.adolfsson@ped.gu.se)

eller skriva här:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**TACK FÖR DIN MEDVERKAN!**

Skicka in blanketten i bifogat svarskuvert. Göteborgs Universitet betalar portot.



## Göteborgs universitet

## Institutionen för hushållsvetenskap

H. Shanahan, L. Jonsson, K. Bergström, A. Adolfsson

2002-11-08

## Intervjuguide till

## Förädlingsgrad av ekologiska livsmedel i storhushåll, Jordbruksverket

1.A Vad menas med förädlingsgrad?

B Vilka olika förädlingsgrader finns?

C Vilka produkter köper ni förädlade idag?

D Vad avgör omfattningen av olika förädlingsgrad när du köper in rotfrukter och potatis? Allmänt.

|           | Potatis | Rotfrukter |
|-----------|---------|------------|
| Färskt    |         |            |
| Kylvaror  |         |            |
| Djupfryst |         |            |
| Kolonial  |         |            |

|                     | Potatis | Rotfrukter |
|---------------------|---------|------------|
| Rått, obehandlat    |         |            |
| Tvättat             |         |            |
| Skalat              |         |            |
| Sönderdelat         |         |            |
| Blandningar         |         |            |
| Förpackningsstorlek |         |            |
| Förvaringsmetod     |         |            |
| Hållbarhetsmetod    |         |            |
| Annat, vad?         |         |            |
|                     |         |            |
|                     |         |            |
|                     |         |            |
|                     |         |            |
|                     |         |            |

2. Beskriva de arbetsrutinen som finns i köket.

3. Kan förädlingsgraden vara ett hinder vid inköp/försäljning/användning av ekologiskt odlade rotfrukter och potatis? På vilket sätt?-

|           | Potatis | Rotfrukter |
|-----------|---------|------------|
| Färskt    |         |            |
| Kylvaror  |         |            |
| Djupfryst |         |            |
| Kolonial  |         |            |

*Rotfrukter: morot, kålrot, rotselleri, palsternacka, rödbeta*

4. På vilket sätt är förädlingsgraden en möjlighet vid inköp/försäljning/användning av ekologiskt odlade rotfrukter och potatis?

|           | Potatis | Rotfrukter |
|-----------|---------|------------|
| Färskt    |         |            |
| Kylvaror  |         |            |
| Djupfryst |         |            |
| Kolonial  |         |            |

5. Hur uppfattar du tillgången på råvaror med olika förädlingsgrad?

A allmänt

B ekologiskt

|           | Potatis | Rotfrukter |
|-----------|---------|------------|
| Färskt    |         |            |
| Kylvaror  |         |            |
| Djupfryst |         |            |
| Kolonial  |         |            |

6. Hur uppfattar du efterfrågan på råvaror med olika förädlingsgrad?

A allmänt

B ekologiskt

|           | Potatis | Rotfrukter |
|-----------|---------|------------|
| Färskt    |         |            |
| Kylvaror  |         |            |
| Djupfryst |         |            |
| Kolonial  |         |            |

7. A Beskriv hur personalinsatsen påverkas av att råvarorna är förädlade?

B Hur anpassad är er nuvarande utrustning för olika förädlingsgrader?

|           | Potatis | Rotfrukter |
|-----------|---------|------------|
| Färskt    |         |            |
| Kylvaror  |         |            |
| Djupfryst |         |            |
| Kolonial  |         |            |

8. När ni använder oförädlade rotfrukter och potatis, hur hanteras då rensavfallet?

(i köket och utanför)

|           | Potatis | Rotfrukter |
|-----------|---------|------------|
| Färskt    |         |            |
| Kylvaror  |         |            |
| Djupfryst |         |            |
| Kolonial  |         |            |

9. Hur ser prisbilden ut för rotfrukter och potatis med olika förädlingsgrad?

A allmänt

B ekologiskt

|           | Potatis | Rotfrukter |
|-----------|---------|------------|
| Färskt    |         |            |
| Kylvaror  |         |            |
| Djupfryst |         |            |
| Kolonial  |         |            |

*Rotfrukter: morot, kålrot, rotselleri, palsternacka, rödbeta*





## Appendix III

Namn:

Tjänstebenämning:

Företag/verksamhet:

Aktörsgrupp:

- a. Har du något förslag till vilka delar som ingår i begreppet hållbar utveckling?
- b. Hur kan hållbar utveckling praktiseras? Alt. Hur arbetar ni med hållbar utveckling i din verksamhet/ditt företag?
- c. Vilket intresse har ni att arbeta med hållbar utveckling?
- d. Ska hållbar utveckling vara certifierbart (trovärdighet, marknadsföring, statlig kontroll, ekologi i förhållande till hållbar utveckling)? Hur då?
- e. Finns det något annat begrepp som är bättre att använda i detta sammanhang istället för "hållbar utveckling"? Bärkraftig, miljövänlig...
- f. Hur ser du på nätverket HealthCat. Vilka uppgifter skulle du se att nätverket arbetade med?

