Eat local,
Think global?

The role of local food production chains in the Netherlands in achieving sustainability through environmental awareness, attitude and behaviour

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Abstract

This Bachelorthesis examines the role of local food production chains as a successful process in achieving sustainability through knowledge, awareness, attitude and behaviour. First of all, sustainable consumption appeared to be an important policy objective which relies upon informed ecological citizens that shape markets through consumption in accordance to their values and priorities. Cosmopolitan environmental awareness is essential for the viability of this process towards sustainable consumption, but is inherently political and also structurally limited. Local food production does increases local knowledge and environmental awareness in society at large by providing tactile spaces that enable social learning, but is mainly successful in attracting people with the 'fun' aspect of local food. In order to prevent that local food consumption becomes a red herring which conflates locality or fun with sustainability, it is crucial to connect the attractive character of local

food production to the meaning of this production process as a way of expressing values and priorities. Consumers need to be addressed more actively on their role of ecological citizens.

I. Introduction

"As the economy grows, its demands are outgrowing the earth, exceeding many of the planet's natural capacities. While the world economy multiplied sevenfold in just 50 years, the earth's natural life-support systems remained essentially the same. Water use triples, but the capacity of the hydrological system to produce fresh water through evaporation changed little. The demand for seafood increased fivefold, but the sustainable yield of oceanic fisheries was unchanged. [...] As human demands surpass the earth's natural capacities, expanding food production becomes more difficult." (Brown, 2005).

The world population is on the rise and as a consequence, food demands could rapidly be 'outgrowing the earth' (Brown, 2005). Additionally, even though the current food system has been very successful in efficiently producing increasing amounts of food (Fresco, 2009), globalised food systems are becoming more complex and it is therefore difficult to understand their dynamics. Consequently, people are less aware of the ways in which their food is produced and at what costs. Even if knowledge of exactly where our food comes from would not be enough in solving the problem of sustainability (Vitek, 2008), as a consequence of globalised food production chains the true costs of a product are often disconnected from the consumer both in price, experience and awareness. Sigrid Stagl remarks that *"[the] characteristics of common food systems enable both consumers and producers to borrow assimilative capacity and storage capacity for waste and emissions from people with lower consumption levels and from future generations. In contrast,* local food markets *make an attempt to confine themselves to the resources and capacities available at the specific time and place at a reasonable rate."* (Stagl, 2002, P. 150). Thus, people consume more resources than is available to them at their specific place and time and are assumedly unaware that this is so. *Local food production chains* are an attempt to straighten this misbalance by confining the means for production to the available resources within a definite time and place and increasing awareness among producers and consumers about the production process. This awareness would better enable them to act as responsible ecological and corporate citizens within the food production process; *"[t]he proximity of producers and consumers in [Community Supported Agriculture][1], provide an opportunity to trace consequences of action more easily and thus move information more effectively both from awareness to action"* (Stagl, 2002, P. 155).

This thesis will combine theory and practice in examining the role of local food production chains in achieving sustainability through environmental awareness, attitude and behaviour.

[1] Community Supported Agriculture is a model of local food distribution in which farmers and a community cooperatively work to produce food and thus share both the risks and harvest.

PART 1: Theory

In dealing with a growing world population and increased pressure on the world's resources, many scholars, civil society members, and concerned people overall have stressed the importance of 'ecological citizenship[2]' (Wilkins, 2004) on the one hand and 'corporate citizenship[3]' on the other (Hughes, 2006). As active agents, both the consumer and the producer of consumer goods—such as clothing, food, laptops and cars—are made responsible for shaping markets that reflect conscious choices about their priorities and values. With this status of 'citizens' also come rights and responsibilities with regard to the effects of their choices on a larger scale, linking individual consumers and producers to the ethics concerning environmentally, democratically and socially just processes world-wide (Lockie, 2004).

Making individuals directly responsible for the global consequences of their actions, ecological and corporate citizenship often requires a cosmopolitan view of the world. Placing the individual as part of the global human society enhances awareness about how a person affects the world around her or him. According to cosmopolitan thinkers, this awareness could help in addressing global issues such as international conflicts, human rights abuses and environmental issues such as global warming, food shortages and resource depletion (Nussbaum, 1997). By calling people to 'think global and act local' the individual is placed as a conscious agent in between processes of globalisation and localisation and is therefore made responsible for the consequences of his own actions.

But how viable is this concept of the globally aware ecological citizen? Are individuals capable of linking their personal behaviour to its global effects? One important impediment to the concept of global responsibilities for the individual is the *epistemic distance*[4] that exists between the locality of the personal life-sphere and the abstract global space of ecological citizenship.

Local food production is a food production system that combines current needs for more just and sustainable production with a renewed focus on the local place of the individual. Through more embedded production processes, local food production chains could strengthen relations between producers and consumers, and therefore enhance knowledge about how food is produced and how it affects the world around us. Exactly how and to what extent local food production chains could contribute to sustainability and fairness through increased local knowledge, environmental awareness and pro-environmental attitudes will be the subject of this bachelor thesis. Focussing on the case of food production in the Netherlands, it tries to achieve a better understanding of how local food production chains could contribute to sustainability by enhancing environmentally aware behaviour among Dutch consumers and producers. Thus, how does the personal place of food consumption fit into the abstract space of the global environment? A theoretical framework with a general character will suffice in exploring the overall dynamics *between knowledge, awareness, attitude* and *behaviour* in the first part of this thesis, with some empirical research focussing on the

[2] First coined by Dobson (2003), Environmental citizenship focuses on the environmental rights and responsibilities of individuals as active political agents, whereas ecological citizenship extends this concept to the private realm within a non territorial space based on the virtue of sustainability and justice. The concept is discussed in more detail in chapter 2. See also for example Lockie (2009) or Wilkins (2004)

[3] Corporate citizenship is a political theory of corporate social responsibility, focusing on business responsibility towards the local community, partnerships and global environment (Garriga, 2004).

[4] Epistemic distance reflects the structural limitations on knowledge about (socio-biophysical) objects, effects and relationships that are beyond direct perception (Carolan, 2007). For more information, see chapter three of the theoretical framework.

relation between producers and consumers in Dutch local food production chains in the second part. Through investigation of available theory and empirical research, this thesis will try to answer the following main- and sub questions;

How do local food production chains relate the awareness, attitudes and behaviour of Dutch consumers and producers and to what extend is this process successful in achieving sustainability through embedded and knowledgeable consumption?

1. How does the behaviour of consumers and producers relate to sustainable food consumption?
2. How does local knowledge about food production processes and environmental awareness relate to attitudes of ecological citizenship?
3. Are local food production chains more transparent and do they increase the 'embeddedness' and knowledge about food production among Dutch consumers?
4. Does the practice of local food production and consumption strengthen positive environmental attitudes and awareness?
5. Does local knowledge of the production process increase more cosmopolitan environmental awareness?
6. Does environmental awareness and positive environmental attitudes increase sustainable consumption in the Netherlands?

Scientific and societal relevance

Sustainable consumption has become an important policy objective for national and international institutions, as it is seen as a means for achieving sustainability and coping with environmental degradation, resource depletion and all its subsequent consequences, but without compromising on economic development. This reasoning, however, heavily relies upon individual responsibility and awareness. By examining the dynamics, restrictions and opportunities of individual global awareness and ecological citizenship among consumers and producers of local food products, this thesis explores the viability of sustainable consumption as an effective means for achieving sustainability. Additionally, focussing on the link between personal knowledge and more general global awareness, it examines the concept of cosmopolitanism. These theoretical assumptions of sustainable consumption are put to the test by applying them to the (Dutch) reality. Also, the empirical research has additional value as it offers perspectives from different actors in the production-consumption chain of local food and therefore offers a more extensive view on the agents within this specific *food democracy* of local food production in the Netherlands.

II. Theoretical framework

Argumentation

The theoretical framework will thus explain how sustainability relates to local food production through *knowledge, awareness, attitude* and *behaviour.*

First of all, the conceptual model will show how these concepts are believed to be mutually strengthening each other in the case of sustainable consumption and that the process therefore appears to be self-reinforcing. Sustainable food production can thus be achieved by enhancing local knowledge of the food production process, since local knowledge enhances environmental awareness and pro-environmental attitudes, which in its turn again lead to a change in behaviour, such as local food consumption.

Placing the subject in an even broader perspective, the political and ethical responsibilities of the cosmopolitan individual are related to the current trend towards sustainable consumption. The UN, national governments, civil society organisations and scholars put their faith in the hands of individual consumers and in their role of ecological citizens, since they believe that the individual consumer can be made responsible for achieving sustainability through his or her everyday choices.

Research has however shown that people only translate their pro-environmental attitudes into sustainable behaviour when supported by environmental knowledge. This makes that environmental awareness is a prerequisite in achieving sustainability through ecological citizenship. However, the *democratic food system* in which the ecological citizen functions has a political character which makes that the process is highly value-laden and requires constant debate on how to prioritise these values. This complicates the matter, as no consensus will probably be reached on what sustainability actually entails, or how to achieve it. Moreover, the complexity of food production systems further obscures any existing debate, due to the epistemic distance[5] between the individual and the global system. The relation between sustainable behaviour and either local knowledge or environmental awareness, is thus not clear-cut and even far from self-evident.

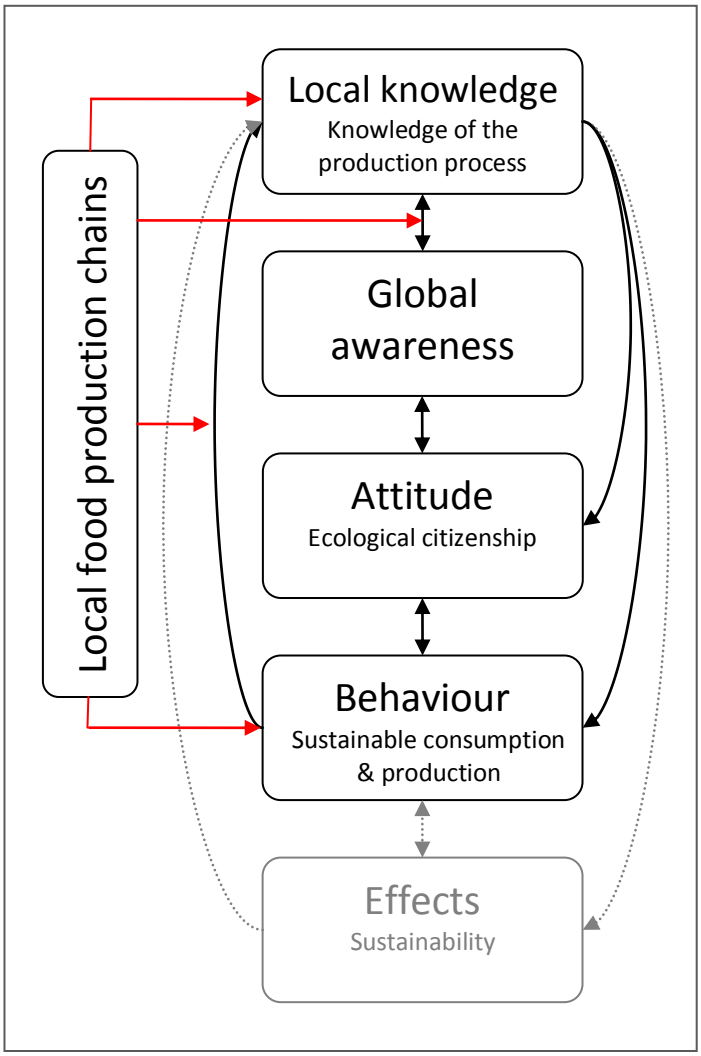
Holistic approaches to the exchange of knowledge, such as eco-labelling, are called upon to streamline communication between producers, consumers and science, but true understanding of the food production system and its effects appears to stay out of reach for the individual consumer (at least for now).

Focussing on the added value of locality in the process of environmentally aware behaviour, geographical concepts such as *tactile space* are introduced as a means of 'educating' consumers. By re-emphasising the meaning of place in food production and consumption, local food production chains are assumed to enhance local, spatial knowledge of the production process and (re)connect the environmental impact to the consumer's life-sphere. Local food production chains are deemed to enhance environmental awareness through local environmental knowledge, more embedded food production and closer relations between the producers and consumer. Other motives for local production are economic development, reducing food miles, political empowerment and local identity and culture, which make that local production does not necessarily equals more sustainable production.

[5] See chapter three of the theoretical framework

1. Conceptual model

Figure 1: Conceptual model on the relation between knowledge, awareness, attitude, behaviour and effect in local food production chains



Based on existing literature on ecological citizenship and environmental awareness, the following conceptual model is created in which knowledge, awareness, attitudes and behaviour are extracted as the core aspects in the process of environmentally aware behaviour in food production systems (See Seyfang 2006, Zhang 2007, Pe'er, 2007)

At first sight, the model might look complicated, but basically, it indicates that most aspects mutually strengthen each other. While stressing that the relation between these concepts is complex, knowledge and awareness have proven influential in promoting sustainable behaviour, and the model will therefore still be of interest (Hostetler, 2010).

First of all, local knowledge about the production process of food, such as when where and how a certain vegetable has grown, is deemed to increase more general environmental awareness. Second, awareness and attitude are closely related; Pe'er found that environmental attitudes strongly correlate to environmental awareness (Pe'er, 2007). Thereby, an attitude of ecological citizenship[6] is only viable when people are globally aware. Third, as described by Ilbery and Michalopoulos, labelling and available local knowledge about the effects and characteristics of certain food products is essential in enabling individuals to make educated choices in their behaviour (Ilbery 2007, Michalopoulos 2007). In the case of local food production, transparency is especially important, as, local knowledge of the production process is assumed to create environmental awareness, and would thus affect attitudes towards sustainable food production even more than regular 'alternative agro-food systems'[7] (Seyfang 2006, Hassanein 2003). In this process towards environmentally aware behaviour, local food production chains are thus expected to increase local knowledge and the way in which this local knowledge is translated into environmental awareness. Fourth, as examined by Hassanein, framing attitudes of ecological

[6] Narrowly defined, ecological citizenship is not as much an attitude, but a concept that depicts the entirety of an individual whose behaviour is based on conscious, cosmopolitan considerations of sustainability and justice. However, due to its subjective character, ecological citizenship also depicts a specific outlook that people choose to adopt, and can thus be treated as an attitude in this model.

[7] *"Alternative food supply chains or alternative agro-food networks gather very different initiatives, from international initiatives to local box schemes and farmers markets. [… T]hey rely on the idea that consumption is not only 'a purpose of the economy' but also equally a political issue These alternative systems raise questions about the redefinition of governance processes and of the social relations in food chains."* (Dubuisson, 2008: 55)

citizenship as a part of a larger 'food democracy[8]' is capable of explaining sustainable behaviour among consumers (Hassanein 2003), indicating that attitudes could be effectively changing peoples' behaviour. Fifth, Seyfang found that environmental awareness, ecological citizenship and the organization of organic food networks mutually reinforce each other, indicating that behaviour (the practice of organising and working within organic food networks) also strengthens ecological attitudes and increases environmental awareness (Seyfang 2006). Sustainability and behaviour thus both trace back to awareness, as people are assumed to learn from the behaviour of others and the effects of sustainability that this behaviour brings. This is important, as it could indicate that the practice of (assumedly)[9] sustainable food production strengthens attitudes and behaviour, making the process self-reinforcing. As the model describes collective actions, this would generate a snow-ball effect, increasing environmentally aware behaviour in society at large. In short, it means that practices of environmentally aware behaviour are 'contagious'. The last link between behaviour and the ultimate goal of inherently important matters such as sustainability will not be addressed elaborately; to thoroughly investigate whether local food production chains are truly successful in lowering the costs of food production in practice is beyond the scope of this thesis. But as my aim is to explore the ways in which behaviour relates to *awareness* and *attitude*, it will prove interesting but unnecessary to verify whether local products irrefutably help attain sustainability (for more information see Edward-Jones et al., 2008).

2. Ethical eating

"Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature. […] The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations. […] In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it."
—Report of the UN conference on environment and development, Rio-summit in 1992

"The great challenge faced by economies today is to integrate environmental sustainability with economic growth and welfare by decoupling environmental degradation from economic growth and doing more with less. […] Sustainable consumption and production maximises business' potential to transform environmental challenges into economic opportunities and provides a better deal for consumers."
—European Commission

"When we do our shopping, surely we choose what we find tasty, healthy and affordable. But there is more to choose. How does our food affect the climate? Do we waste too much? And how did our food live before it became food? Choose truly what you eat! Ask more questions about you shopping cart."[10]
—Voedingscentrum, Dutch food centre[11]

Aiming to achieve sustainability while upholding trends of growing expenditure, 'sustainable consumption' is an often cited solution in addressing problems of sustainability while maintaining current lifestyles, and has

[8] Food democracy means that members of an agro-food system equally and effectively participate in shaping that system, based on enough and relevant knowledge of the functioning of and alternatives to that system (Hassanein, 2003)

[9] As mentioned before, in would be beyond the scope of this paper to examine whether alternative agro-food systems really are more sustainable. However, based on existing literature and for the sake of the argument, I will assume that these systems are at least aiming to be more sustainable.

[10] Translated from Dutch. Original text: "Als we boodschappen doen, kiezen we natuurlijk al wat we lekker, gezond en betaalbaar vinden. Maar er is meer te kiezen. Wat doet ons eten met het klimaat? Verspillen we niet teveel? En hoe leefde ons eten voordat het eten werd? Kies écht wat je eet! Stel meer vragen bij je winkelwagen."

[11] Sponsored by the ministry of agriculture, nature and food and the ministry of health, wellbeing and sports

thus become a core policy objective of many (Seyfang, 2006). *"[S]ustainable consumption is the use of goods and related products which respond to basic needs and bring a better quality of life, while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations"* (Norwegian Ministry of Environment, 1994, cited in OECD, 2002. Seyfang, 2006, P. 384).

Attention for sustainability is clearly growing among scholars, politicians, corporations and think tanks,[12] but just as much so among consumers and citizens in general. A quick browse through YouTube will for example yield a wide variety of home-made documentaries, animations and calls for action in favour of fairer and more sustainable consumption[13]. Through modern media, popular support is given to a wide range of alternative systems addressing unsustainable practices. Fears of depletion of natural resources and forthcoming food, water and oil shortages lead to calls for more sustainable production processes; ethical concerns of social inequality and animal welfare demand fairer production; and worries about pollution and related diseases lead to a plea for more environmental friendly production. This 'democratisation' of environmental concern also puts emphasis on the individual responsibilities of consumers in particular.

Food democracy, ecological citizenship

The reasoning that underlies sustainable consumption gave rise to the concept of *food democracy and ecological citizenship*, which invoke individuals to use their political power as citizens in achieving a more sustainable society. As consumption is perceived to be the driving force behind many unsustainable processes, consumers are ascribed with the power to change the status quo. However, in order to make measured decisions, thoughtful of long term consequences, consumers will have to become well-informed citizens, responsible political agents and drivers of change (Michalopoulos 2007). Carolan for example states that *"Ultimately, an ecological citizen presupposes an informed citizen, in the sense of having access to information about the consequences of their actions—otherwise, how would such an individual know which decisions are more "sustainable" than others?*" (Carolan, 2006: 7).

Characteristics of a sustainable society are therefore that participatory democracy, decentralisation and social justice are essential (Carter, 2007). Sustainable consumption in particular is based on participation from all and requires profound changes in the behaviour of every individual. *"[T]here is a consensus over the need for active ecological citizenship because of the recognition that the transition to a sustainable society requires more than institutional restructuring; it also needs a transformation in the beliefs, attitudes and behaviour of individuals."* (Carter, 2007, P. 65)

However, the decentralised and individual character of a sustainable society is necessary but also problematic. While sustainability is such a 'hot-topic, it has also been a contested concept and no agreement will probably be reached on its exact definition nor the way to achieve it. As Hassanein explains, this is probably *"the results from the wide variety of interests— such as environmentalists, alternative farmers, food security advocates, farm worker unions, and consumer groups—that have a stake in building more sustainable agriculture and food systems"* (Hassanein 2003, P. 78). This denotes that in general people are 'on the same side', but discussions are inevitable because opinions on sustainability relate to core values and that the issue is inherently political.

The concept of *food democracy* explains that individuals have rights and responsibilities in achieving sustainability, but that socio-political frameworks are needed to work out these fundamental differences about what is valuable and important. *"Food democracy seeks to expose and challenge the antidemocratic forces of*

[12] Some of the most extensive reports and policies on sustainable consumption are those from the EU, OECD, UN, World Bank and the World Business Council for Sustainable Development (WBCSD), a CEO-led, global association of some 200 companies dealing exclusively with business and sustainable development.

[13] See for example: *The story of stuff* or *The store wars*

control, and claims the rights and responsibilities of citizens to participate in decision-making." (Hassanein, 2003, P. 83). Power is thus relocated from the market to the citizen. However, to make these debates meaningful they need to combine the values and expertise of consumers, producers as well as policymakers (Tukker, 2008). Together with the constant technological innovations in food production and the transnational character of production systems, food democracies are inevitably becoming unpredictable and immense phenomena (Stevenson, 2002).

Effective mobilisation

How are these socio-political frameworks of sustainable consumption effective in mobilising towards sustainable behaviour? As to be expected, there are several challenges to these concepts in combining sustainability with consumption[14] through the behaviour of the citizen-consumer. First of all, tension arises when efficiency of sustainable production falls short of addressing the impact of increasing consumption overall. The idea of sustainable consumption is often seen as a method that increases resource productivity and eco-efficiency of production, but does not necessarily lowers current levels of consumption (Mont, 2008). Schools of thought such as the *New economics* stress that in order to fully address the environmental impact of production, levels of consumption in general should decrease (Seyfang, 2006). This would entail an overall shift from material-intensive consumer cultures towards less materialistic societies (Mont, 2008), a line of thinking echoed in the *New social movements theory* which contrast modern movements with 'old' movements by its ambition to create new social identities through changing values, lifestyles and symbols (Seyfang, 2006). Alternative food systems are thus an attempt in changing the status quo by challenging ruling values and priorities.

However, if environmental attitudes require such a thorough paradigm shift, alternative food production systems could become an exception instead of a sign of meaningful change in mainstream processes. Alternative food production systems are often criticised for being an addition instead of an alternative to main stream food supply systems (Seyfang, 2006). This is exemplified by characterising local food production as defensive or organic as elitist (Feagan, 2007). This contradicts the idea that alternative food systems are and need to be inclusive in order to have a real impact. "*Opportunities for movement participation are crucial because a high level of mobilization needs to occur if the alternative agro-food movement is going to affect transformational change."* (Hassanein, 2003, P. 81). This issue of inclusiveness also denotes the lack of leverage power among individual consumers and the need for coordinated action to get institutions and corporations on board as well; *"powerful coordinated global businesses must be tackled by coordinated, global networks of consumers rather than isolated individuals"* (Seyfang, 2006, P. 391).

The complexity and value-laden nature of democratic food systems makes that pro-environmental attitudes and ecological citizenship are neither a panacea nor a univocal process towards sustainable consumption, but nonetheless give an opportunity to frame consumption within a movement towards sustainability. As mentioned before, for sustainable consumption to have an effect requires that consumers have the freedom to act and the knowledge to make educated decisions. In the next section will look further into the importance of awareness in the practice of sustainable consumption.

3. The importance of awareness

Knowledge and awareness are very important in understanding sustainable consumption and attitudes of ecological citizenship for three reasons. Firstly, examining the environmental attitudes and knowledge of 1st

[14] Consumption and production are closely related when examining the impact of production-consumption chains on the environment. While keeping in mind that differentiating between the two could be very insightful, the term *consumption* will often suffice where the production phase of this chain is equally important

year students, Pe'er et al. found that positive attitudes towards the environment did not lead to sustainable behaviour when these attitudes were not backed up by environmental knowledge or awareness. *"We may expect individuals whose positive environmental attitudes are unsupported by knowledge to be less inclined to take environmental aspects into account in daily living and less willing to make sacrifices in personal behavior and demonstrate responsible behavior, especially if the behavior conflicts with economic considerations or entails special effort."* (Pe'er, 2007, P. 57).

This will assumedly relate to the second value of awareness, namely that it is prerequisite in bridging the local-global gap between personal behaviour and environmental impact. Carolan remarks that a structural limitation to knowing about food production systems creates an *epistemic distance* between our consumption behaviour and its effects (Carolan, 2006). While we do not need to be bothered with eliminating all limitations to our understanding *"much would be gained by developing a greater sense, literally, of the world into which we are thrown."* (Carolan, 2007).

This indicates that thirdly, just as in 'normal' democracy and citizenship, without knowledge of how a system works, rights and responsibilities would not be viable concepts, since ignorance impedes people to act consciously and to participate fully. "*Food democracy ideally means that all members of an agro-food system have equal and effective opportunities for participation in shaping that system, as well as knowledge about the relevant alternative ways of designing and operating the system"* (Hassanein 2003). To make responsible choices, people need to understand a food system and its alternatives.

Cosmopolitanism and epistemic distance

Cosmopolitan[15] environmental awareness is especially important, as the global character of current consumption-production systems makes that addressing its environmental impact requires transnational solutions (Sáiz, 2005). Also, globalised consumption patterns move power from the individual towards the collective, since the geographical distance becomes to great, the amount of stakeholders to large, and the different connections to complex for one person to comprehend. *"[P]eople all over the world resent loss of control over their lives, over their environment, over their jobs, over their economies, over their governments, over their countries, and, ultimately, over the fate of the Earth. The task, then of cosmopolitan forms of citizenship must be to connect local experiences to a more global agenda."* (Stevenson, 2002, P. 316).

However, the unsustainable effects of consuming behaviour often stay out of sight of the consumer. *"Some of the relationships in virtue of which the earth now constitutes one world are so pervasive and far-reaching that they are difficult to pinpoint or to measure. There are also actions that may have harmful consequences without any direct involvement between agents and those affected. For these reasons it is easy to ignore them as sources of obligation."* (Lichtenberg, 1981, P. 87). The impact of stretching food production chains further and in more complex ways around space is manifold. *"The geography of the modern food system reveals that […] we experience both the physical and psychological displacement of production from consumption, and all of the other disconnections and disembedding which follow in that stead – loss of rural agricultural resilience and diversity, degradation of the environment, dislocation of community, loss of identity and place."* (Feagan, 2007: 38). According to Carolan, this is the consequence of the epistemic distance between consumer and environmental impact. *"Epistemic distance speaks to structurally constrained ways of knowing the world that must be "opened up" if we are to be able to make well informed decisions as consumers."* (Carolan, 2007: 1265). According to Carolan, this distance arises through temporal and spatial extension, the complexity of and confusion about food production systems and the socio-material context of how we learn. (Carolan, 2006). The complexity and physical distance in food production systems thus require cosmopolitan awareness to link effect back to those responsible.

[15] Cosmopolitanism is a worldview that frames individuals as part of a global humanity, and emphasises the importance of global awareness so as to enable individuals to act in accordance to the goal of sustainability and global responsibility.

This also touches upon the problem of externalised costs, which indicates that many of the costs of a production process are not transmitted into the price of products and therefore not burden the producer nor the consumer, but a third party. Future generations or third world countries could be such a third party in the case of for example pollution.

Challenges in defining environmental awareness

Local knowledge and cosmopolitan environmental awareness are thus important in understanding how personal behaviour affects the world around us. This section will shortly discuss the characteristics of local and environmental knowledge.

Beforehand, putting this discussion in the right perspective, it is important to stress the challenges and difficulties with defining awareness as part of achieving sustainable food production. The first and foremost problem with environmental awareness is simple; there is no way of knowing it all. If anything, the effects of food consumption chains on sustainability are confusing and far from clear. Additionally, the content (the knowledge about what is sustainable and what is not) is often very much contested; different opinions exist on what is valuable or sustainable. This indicates a tension between knowledge and awareness; whereas the former seems to be based on true facts, the latter also denotes some subjective feeling of 'what is right'. This subjective understanding of what is right and what is valuable certainly functions as personal knowledge in promoting sustainable behaviour and defining sustainability, but makes it difficult to understand awareness in the light of sustainability; *"the concept of agricultural sustainability is value-loaded in the sense that no dimension or definition is neutral, as objective and scientific as it may seem."* (Boogaard, 2008, P. 25).

Knowledge, awareness and values

In dealing with the concept of awareness in the context of this research, we can bluntly make a distinction between *local knowledge*, which is explicit and objective and *global awareness*, which is much more tacit and subjective.

The subjective character of awareness becomes evident when we follow the definition of Kouwen (2007) that *information* is data put into context, but that *understanding* requires analysis of information (Kouwen, 2007). In order to truly understand a food production system, individuals thus also have to analyse and value the available information so that it becomes their personal understanding. Additionally, the difference between *explicit knowledge* which is made public in some form and *tacit knowledge* which is only captured in a person's mind, illustrates how personal tacit knowledge, while often vague, implicit and subjective, affects the behaviour of individual consumers (Kouwen, 2007). In order to examine the awareness of consumers, this tacit knowledge must be made explicit and negotionable. While environmental awareness thus seems to be based on knowledge of objective facts, true understanding is sensitive to values and thus subjective in nature.

Additionally, environmental awareness is not based on facts, as we can only base our ideas on what is *assumedly* sustainable. This is exemplified in the *New Ecological Paradigm* (NEP), a method of measuring attitudes of 'pro-environmental orientation'. This instrument tests ecological attitudes on three facets; *"beliefs about humanity's ability to upset the balance of nature, the existence of limits to growth for human societies, and humanity's right to rule over the rest of nature".* (Dunlap et al., 2000, P. 427). Based on 'facts' that are not falsifiable, the New Ecological Paradigm has become a debated model. This shows that while the content of awareness seems to be based on clear facts of what is sustainable and what is not, due to the high level of subjectivity, the meaning and value of sustainability could not easily or univocally be defined, transferred nor discussed.

Thus, awareness and understanding are subject to personal analysis of information, making it inherently subjective. This subjective character combined with the limited possibilities of true understanding when it comes to sustainability causes that awareness is onerously based on all the right and complete facts. This could mean that it is unlikely that individual consumers can truly comprehend how food production systems function and that it might be much more difficult than often assumed for an individual to act as an ecological citizen, conscious of how he or she affects the world through consumption.

Labelling; transference of information

So, policymakers and people in general rely on the ability of individual consumers and producers to achieve sustainability through informed choices in their everyday behaviour. This requires understanding of the systems within which they function. But as awareness is inherently subjective and only partial, knowledge exchange should be improved, so as to educate consumers and producers.

How could the information about the impacts and characteristics of food products be communicated between producers and consumers? Labelling is one of the most direct and widespread means of communication available to the consumer. Currently, there are a myriad of different labels when it comes to sustainability and the environmental impact in general and the locality in specific. These are some of the most important eco-labels in the Netherlands;

> *EKO, Demeter, Erkendstreekproduct, Fair trade, AH Puur & Eerlijk, Milieukeur, Ik kies bewust, Max Havelaar, PVE/IKB, Bio+, CPE, SPN, Oké, Tetra, Beter Leven, MSC, Label Rouge, Waddengoud, Weidezuivel, Naturland*

The question arises whether this is an effective way of communicating to consumers what are sustainable choices when it comes to food. Michalopoulos states that the absence of appropriate information about *"imperceptible and ethical food characteristics limits the opportunities for concerned consumer/citizens to take ethical issues into account during their inescapable food consumption."* (Michapoulos, 2007: 1). Lack of transparency of food production chains is apparently a problem when it comes to sustainable food production. Additionally, the different values captured in the decision making process such as fair trade, organic or local, makes choosing problematic. How should someone for example choose between an organic kiwi, a fair trade banana or a local pear? (Wereldomroep, 9 September 2007). The binary between 'sustainable with label' and 'sustainable without label' furthermore complicates the issue.

In response, scholars call for more holistic approaches to sustainability and labelling, rather than standardised labels *"Given the complexity inherent in these interactions, they can neither be understood nor controlled completely. This is why evolutionary theories replace the search for static "optimal" solutions to present environmental problems"* (Stagl, 2002: 152). Information about sustainability is thus stiffly exchanged and holistic and dynamic approaches are needed to enhance true environmental awareness. Michalopoulos offers such an approach which nonetheless remains simple enough to communicate to consumers. It would be excessive to describe the exact realisation of his criteria here, but it comes down to a rating of food products on several aspects which are deemed as important for sustainability by a panel of citizens and tested on their credence, pragmatism and reasonableness (Michalopoulos, 2007).

3. The value of locality

Recapitulating, sustainable consumption is potentially an effective behaviour in achieving sustainability. Environmental attitudes of ecological citizens subsequently function to achieve sustainable consumption through a food democracy, but only when these citizens are well informed. The transference of awareness to consumers is however problematic and far from univocal. Increasing environmental awareness among

consumers requires holistic and dynamic approaches that increase environmental awareness and link it to the personal life-sphere of the consumer. As I will argue, local food production could enhance this global awareness by offering a *tactile space* which could reconnect the locality of personal *place* to the abstract of global *space.* This chapter will explore the characteristics of local food production that make this so.

Defining local food production

First and foremost; what does local food production entail? Local can have different meanings and the locality of a region can be based on geographical, ecological, social or economical aspects. Famous geographical examples focus on the travelling distance between production and consumption or 'food miles' such as the 100-mile diet, which can austerely be reduced to a 50-mile diet, within 'biking distance' or 'day-goods-distance' (DGD). Ecological definitions stress that it is the similarity of the ecosystem within a certain area that counts. This means that locality is based on similar climate, soil type, agricultural mode or species of flora and fauna. *Streekeigen Producten Nederland,* the most important labelling organisation of local products in the Netherlands, holds that same stance. Social or cultural definitions focus on regions of tradition and the connection between food, culture and local identity (CORASON, 2006). Economically, the locality of food productions chains is subject to its value as stimulating local economies. Altogether, the meaning of locality in local food production systems is a flexible definition, but distinctly focuses on a specific place, a tangible location, contrary to conventional food production systems which seem to connect to abstract spaces. (Feagan, 2007).

Local food production chains take form in many different networks with varyingly intense relations between consumers and producers. The greatest distance between production and consumption arises when locally grown foods are traded by retailers and sold in shops and supermarkets. Farmer markets are based on more direct contact between producer and consumer, but are still part of a market of supply and demand. More equal distribution of power and responsibility arises in local food networks such as CSA where consumer and producer share the risks and revenues. In more intimate networks such as community gardens, consumers take over the role of producer and are thus most closely tied to the production process and its effects.

Sustainability and place

Local food production has been motivated by several different arguments, and seems to be at the intersection of two growing trends. First of all, alternative food production systems (AFPs) have become increasingly common as a response to conventional food production which does not seem to meet people's need for food security, health, gender equity, decent livelihoods and cultural identity. AFPs are called upon to challenge these ruling systems and instigate food system reform towards more sustainable and just methods (Anderson, 2008). Local food production is one such alternative system and is often motivated by several rationales of more embedded and therefore sustainable and ethical production methods (Lockie, 2009. Hassanein, 2006). Local food production however differs from other AFPs by its connection to a specific territorial place. (Anderson, 2008). This aspect relates to a second trend, the so called 'turn to the local' which emphasises the role of specific place, community and the local *"as the structuring or mediating context for social relations"* (Feagan, 2007: 30). Opposing the growing importance of holistic entities of space such as the national state, place recently regained importance as a site of local agency in the face of globalisation. *"The fact that regions/places are imagined and constructed, and that they are dynamic and contingent upon both agency relations from below and structural relations from above (stable but impermanent) does not impede them from regaining both legitimacy and urgency in the face of global capitalist processes"* (Agnew, 2000; Paasi, 2002). Local food production systems are thus part of and fostered by existing trends that call for more just, sustainable and embedded food systems.

Embeddedness

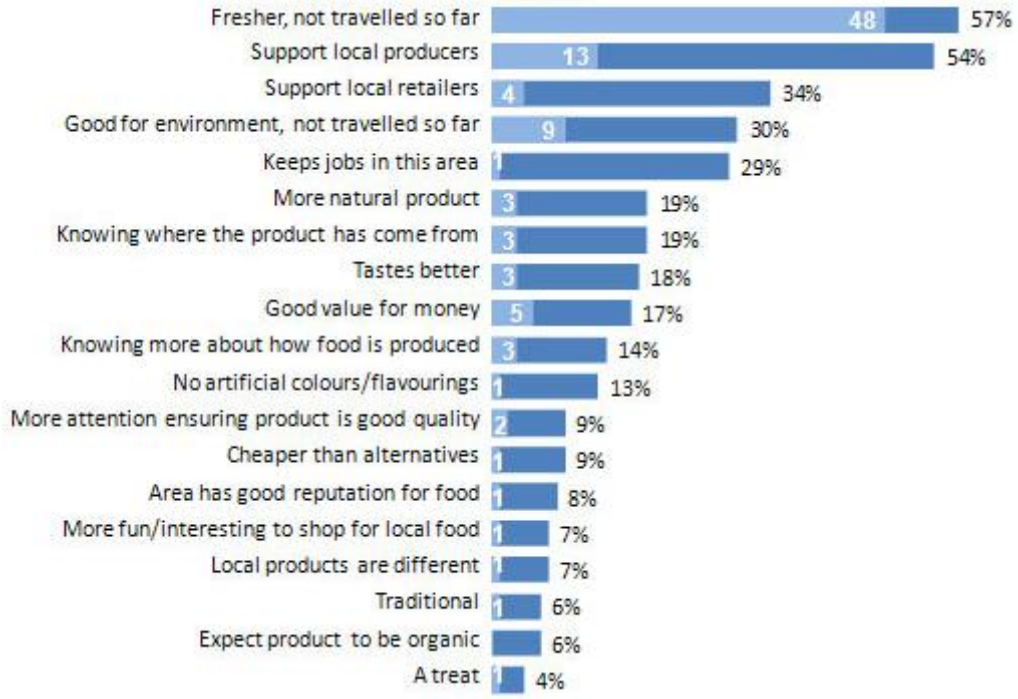
The spatial closeness between production and consumption is a very important aspect of more locally embedded production systems. *"Reducing the physical distance between producers and consumers is thought to sort out the effect of re-vitalising the rural community, while benefiting local farmers, on one side, and consumers' and environment health, on the other."* (Fonte and Grando, 2006: 5). This argument thus rests on the idea that local food production chains shorten the distance between producer, consumer and the environment. On the one hand, limiting the distance between consumption and production reduces food miles and creates more environmentally embedded production. On the other hand, by re-emphasising the meaning of place in itself, local food production chains could *"rework 'power and knowledge relationships in food supply systems that have become distorted by increasing distance (physical, social, and metaphorical) between producers and consumers'."* (Anderson and Cook, 2000: 237–38 in Feagan, 2007: 25). One other important factor that is mentioned in this rationale is that consumers can get to know much more about their food and the way it is produced, as local food production chains are more transparent. Carolan stresses that the places of local production are specific sights for learning as what he calls *tactile space "offers a spatially sensuous supplement to the limited representational knowledge we have of the world by its ability to nurture non-representational knowledge." "In short, tactile space seeks to further embed and embody individuals within the social and natural worlds; a move that, in turn, nurtures new intelligibilities and thus behaviors towards others and the environment."* (Carolan, 2007: 1265).

Locally produced foods are also assumed to be more in tune with local discourses and identity. *"Crucial also is the recognition that food chains play important communication and rural developmental roles, embodying, for example, certain sustainability and food related discourses"* (Ilbery, 2007: 507). Agriculture can in this case fulfil many different roles connected to the locale through self sufficiency, in achieving environmental awareness and strengthening regional identity (Feagan, 2007). Thus, through re-spatialising food production, local food chains enhance awareness, empower the local, decentralise power and shorten the distance between producers and consumers

Why local food production?

When asked about their motivations to participate in local food production, consumers mention a wide range of economic, environmental and social arguments. Environmental motives mainly focus on the reduction of food miles and a subsequent smaller contribution to climate change, but also on the assumption that local production enhances animal welfare, the expectation that local food is more natural or organically produced and that it reduces socio-environmental damage. Moving to the more social aspects of local production, arguments of local empowerment, democratic value, more just production methods, a closer relation between producer and consumer, more knowledge about the production process and 'more fun' are mentioned. More economic social aspects emphasise the support to local producers, retailers and economy in general. Specific food-related arguments are better taste, freshness and tradition.

Figure 2: Reasons for buying locally produced foods. More answers were possible. Numbers is white indicate first mention



Source: IGD Shopper trends 2010 report

While theoretical and political interpretation thus expect people to buy food in accordance to their ethical values and priorities, most people appear to take the decisions to buy locally produced food based on what seem to be mainly practical reasons, such as freshness and support to the local economy (see figure 2). While there is thus much to say for local food production as a contributor to more sustainable, knowledgeable consumption, individual consumers are often actually attracted to it on much more pragmatic grounds.

Limitations

As to be expected, local food production offers no straight line towards sustainability. Consumers do not base their choice to buy local products solely on the argument of sustainability, but there are also a few direct limitations to the value of local food production within the context of sustainable consumption.

Local production might for example conflate locality with the inherently important aims of food system reform, such as economic, social and cultural human rights. *"This conflation confuses means, ends, and complementary goals; and it may lead activists trying to help communities to regain control of their food system choices into less productive strategies."* (Anderson, 2008: 593). Local food production can thus become a *red herring*, a hype that does not pay attention to and even distracts form the goal of sustainability. Other problems with local food production are that the market for local food is smaller than often assumed and that even if consumers are interested in local production, this does not always result in their behaviour, making that its effects should not be overestimated. The effects of local food production on awareness, attitude and behaviour are also largely dependent upon the context, such as the region, type of food and type of market (AEFL, 2010).

What is the value of local?

Concluding, local food production chains seem to arise from environmental awareness and positive environmental attitudes, but the act of producing and consuming locally—an environmentally aware behaviour, can also again strengthen this awareness and attitude. When applied to ecological citizenship, this means that the act of sustainable consumption is a self-reinforcing behaviour; local food production seems to strengthen the prerequisites of food citizenship. The spatial aspect of local food production appears to be especially important in this process; *"the emergence of visible practices around the recreation of place – the local and the region simultaneously – as tangible geographies, appears directly correlated with an emerging awareness and concern around global change* (Agnew, 2000 in Feagan, 2007: 30). Carolan also argues that local, tactile spaces enhance environmental awareness and therefore add to the process of sustainable consumption through informed ecological citizens. "*Ecological citizenship could arguably be viewed as less something one learns (in the sense of being "schooled" on ecological citizenship) and more something one tacitly experiences. This brings us back to the point concerning the epistemic distance of the world around us and how it can problematize our abilities to think and act in sustainable ways. For as long as individuals remain epistemologically distant from many of the processes, effects, and artifacts of modernity, teaching individuals about the finer points of ecological citizenship will have only limited success."* (Carolan, 2006: 24).

Besides fostering environmental awareness, local food production also seems to be a process of 'social learning'[16] (Krasny, 2009). Local food production can be very useful in promulgating environmental awareness and attitudes, because it is a 'grassroots' and social process, which speaks and appeals to many people. Lautenschlager for example found that the practice of working in a community garden strengthens environmentally aware behaviour by connecting new found knowledge to personal responsibility. In this example, community gardens functioned as small-scale food democracies wherein values and awareness were shaped (Lautenschlager).

Keeping in mind the social context of food democracy, the value of local food production could thus be that it generates a snowball effect spreading awareness bit by bit and fostering discussion on the values associated with sustainability. *"The pragmatic practice that is food democracy seems ideally suited to the pursuit of agrofood sustainability, because we cannot answer with certainty the question ''how should we live sustainably?'' Therefore, continuing inquiry and engagement are needed. Food democracy facilitates and encourages making choices that creatively and constructively involve all the voices of a food system."* (Hassanein, 2006: 84).

[16] *"Social learning is defined as a collaborative process among multiple stakeholders aimed at addressing management issues in complex systems"* (Krasny, 2009: 2)

5. Preliminary conclusion and hypothesis

Anticipating the findings of the following empirical research, some assumptions can be made about the answers in response to the sub-questions posed at the outset of this thesis. A complete list of hypotheses is included in annex G.

1. How does the behaviour of consumers and producers relate to sustainable food consumption?
2. How does local knowledge about food production processes and environmental awareness relate to attitudes of ecological citizenship?
3. Are local food production chains more transparent and do they increase the 'embeddedness' and knowledge about food production among Dutch consumers?
4. Does the practice of local food production and consumption strengthen positive environmental attitudes and awareness?
5. Does local knowledge of the production process increase more cosmopolitan environmental awareness?
6. Does environmental awareness and positive environmental attitudes increase sustainable consumption in the Netherlands?

First, sustainable food consumption seems to rely on the informed choices that consumers and producers make in their every-day behaviour. Since the relation between the behaviour and effects on sustainability were not thoroughly investigated, it will suffice to state that local food production is an attempt and potential contribution to sustainable food production. Second, general trends of sustainable consumption could indicate that Dutch consumers in general will have pro-environmental attitudes. Moreover, consumers and producers of local food will probably have more positive attitudes towards the environment than 'regular' consumers, as they are more often confronted with the places of food production. Third, local food production chains are assumedly more transparent and more embedded within society than regular food production systems. We could thus expect that knowledge of the production process and environmental awareness will be higher among 'local' consumers. Due to the complexity of food production systems and the structural epistemic distance between production and consumption, we could however expect that local production does not substantially increases knowledge about the effects of food production. Fourth, the practice of local food production is assumed to strengthen local knowledge, environmental awareness and pro-environmental attitudes. Local consumers and producers are therefore expected to have more pro-environmental attitudes due to their behaviour within local food production chains. Fifth, local knowledge does assumedly also translate into more environmental awareness, but only if the epistemic distance between locality and the global can be bridged. Due to the intricate nature of production systems, true understanding of the food production system is most likely limited. Sixth, when environmentally aware attitudes are combined with limited knowledge of the production process, consumers could possibly be overwhelmed by the complexity of the production process, impeding a change towards more sustainable consumption behaviour.

The main- question of this thesis is; *"How do the awareness, attitudes and behaviour of Dutch consumers and producers function in local food production chains and to what extend is this a successful process in achieving sustainability?"* Based on this theoretical framework we could hypothesise that *local food production chains are effective in achieving sustainability by increasing sustainable behaviour as an effect of strengthened environmentally aware attitudes.* However, in order to answer this question substantiated by theory as well as empirical evidence, the following part of this thesis takes a more profound look into the Dutch practices within local food production.

PART 2: Practice

III. Methods

This research is set up to be explorative, since the subject matter is quite complex and the information not yet fully available. As explained in more detail before, the nature of the subject of this research (sustainability and environmental awareness, attitude and behaviour) asks for a holistic approach which explores and clarifies the values involved. The empirical research of this thesis will therefore be mainly based upon an interpretative approach, seeking to understand the unique drivers and values in the consumer-producer relation. However, the general trends of consumer behaviour will be explored through an empirical-analytic approach. The research will therefore use qualitative as well as quantitative instruments. Based on four in-dept interviews and a structured questionnaire, conclusions will be drawn with regard to the following sub-questions of this research;

1. How does the behaviour of consumers and producers relate to sustainable food consumption?
2. How does local knowledge about food production processes and environmental awareness relate to attitudes of ecological citizenship?
3. Do local food production chains increase the 'embeddedness' and knowledge about food production among Dutch consumers?
4. Does the practice of local food production and consumption strengthen positive environmental attitudes?
5. Do embedded food productions chains increase environmental and cosmopolitan awareness in the Netherlands?
6. Does environmental awareness and positive environmental attitudes increase sustainable consumption in the Netherlands?

In answering these questions, five groups of actors in local production chains are examined on account of inclusivity and context-sensitivity. These fields are civic engagement, legislation, production, science and consumption. This method of triangulation also increases external validity, since different sources and methods are combined in the research. Deriving from the deductive nature of the previous theoretical framework, the following research will be mainly inductive, testing and formulating the general statements by examining concrete observations.

1. Research population & place

The units of analysis of this study are the awareness, attitude and behaviour of producers and consumers of local food products in the Netherlands. The units of observation are consumers, producers, retailers and a labelling organisation of local food products. Due to the limited size of this paper and the use of non-probability sampling, the results of this sample test will not be representative for the research population; producers and consumers of local food in the Netherlands. As the subject of this research involves many stakeholders and is highly context-sensitive, stakeholders from different groups are taken up in the research. The research will be performed in the Netherlands and will not be representative for consumers and producers world wide.

2. Instruments

As mentioned before the research will be based on mixed methods, namely in depth interviews and a short, structured questionnaire (See Annex A, B, C, D and E).

The qualitative research will be carried out through several semi-structured in-depth interviews. The participants of these interviews are chosen based on the principle of purposive and theoretical sampling. This means that the choice in participants was strategically based on their relevance in answering the research question, as set out in the existing literature. (Bryman, 2008). The participants were chosen to represent different groups in society. However, since based on non-probability sampling approach, generalisation of the results to a population is not possible. Since Dutch is the native language of both the researcher and the participants, the interviews will be conducted in Dutch and transcribed in English later on.

- *Civil society*. The first interview will be face-to-face with a spokesperson of Transition Town Deventer and will cover the different motives for civic engagement with local food production (Annex C).
- *Labelling*. The second interview will be with a spokesperson of 'Erkend streekproduct', an independent organisation that issues certification marks to local products and will be done by e-mail (Annex D)
- *Retailing*. A third interview will be held with a spokesperson of 'Willem & Drees', a Dutch organisation of local food distribution (Annex B)
- *Production.* The fourth interview will be with a producer of locally grown vegetables at a farmers market in Utrecht (Annex A)

The quantitative research will take place through a small, selective and thus unrepresentative sample test. Consumers of a local market in Utrecht will be asked to fill in a short, structured questionnaire regarding their local knowledge, attitude, environmental awareness and behaviour. Consumers are approached differently than other actors within local food production chains, since they are a group that is often not officially organised, and comprise many different motivations, values and characteristics.

- *Consumers*. A small sample test will be done among 20 consumers on a farmers market in Utrecht. This market is not exclusively based on local products, but is selected for this research since it is the place where consumers can find local products easily, and as it is a site where producers and consumers directly meet it will assumedly also give a better insight in the relation between consumers and producers in local food production chains (Annex B).

Through 'informed consent', all participants and respondents were notified of the goals and set-up of this research, and also of the use of their names.

3. General information of respondents and participants

In this section, short description of the general characteristics of participants and respondents will be provided. The interviews were conducted with the following participants and respondents, who were assumed to be indicative of several groups of actors within local food production chains

Civil society

The first interview focussed on civil society and discussed issues such as responsibility, social context of engagement and the importance of attitude. Participants were Janny Kerssies en Tara Notenbomer, both members of Transition Town Deventer (TT Deventer). Transition Towns are NGOs that aim to reduce dependence upon oil within their community and thereby hope to achieve more sustainable ways of living. They organise meetings, projects, discussions and so forth with the aim of mobilising towards communal sustainability, and are therefore considered indicative as a civil society organisation.

Farmer/producer

Mieke Baldé was interviewed for her illustrative role as a 'local farmer'. She grows and sells locally produced[17] organic fruits and vegetables at a farmers market in Utrecht and through a CSA project. The interview explored how she experiences the meaning of sustainability, her relation with consumers and the relations between awareness and sustainable food production chains.

Retailing

Willem & Drees is an organization that mediates between farmers and retailers or shops, so as to facilitate local food production chains in the Netherlands. The interview looked into the distribution of local products and the relation between consumers, producers, local food, knowledge and sustainability. Participant Peter van den Bosch has set up this organization together with Willem Treep in 2009. Currently, they are selling their products at 100 locations and hope to extend their business in the coming years. Bosch studied at Wageningen University and worked for Unilever for 10 years.

Labelling

Dr. Ir. René de Bruin is the secretary of *Streekeigenlijk Producten Nederland,* an organisation which publishes the certification 'Erkend Streekproduct'. This interview focused on how knowledge about the production process and sustainability is communicated through labelling by the organisation Streekeigen Producten Nederland.

Consumers

A structured questionnaire was set out to explore how the knowledge, environmental awareness, attitudes and behaviour relate to each other among consumers of local and regular markets.

Table 1: General information of respondents. N = 20					
		Local market		Regular market	
Mean age		46,9		45,5	
Female		6	60%	7	70%
Male		4	40%	3	30%
Percentage within education					
	Low	1	10%	2	20%
	Middle	2	20%	5	50%
	High	7	70%	3	30%
Non-Dutch		2	20%	2	20%

In total, 20 people participated in this sample, of which 10 at each market. The mean age of respondents at both markets was around 46-47. The majority of respondents were female, 60% at the local market and 70% at the regular market. The education level was higher at the local market than at the regular market, with 70%

[17] In this case, local indicates a geographical distance of 5,5 km, or within municipal boundaries

having a degree from higher education or university. The majority of the respondents at the regular market finished middle level education[18]. 20% of the respondents were non-Dutch, both at the local and regular market (table 1).

4. Instruments of analysis

The information gathered in the qualitative research will be thematically analysed by coding the data in accordance to the research questions. The quantitative results will also be used to answer the research questions. These results of the empirical part of thus study were subsequently analysed through a process of analytic induction, trying to falsificate existing theories and hypotheses, thereby testing the theoretical framework as set out in part 1. Since this field of research is very extensive, the research was based on a cyclical process of getting growing insights into the topic and gathering information. Likewise, this research could give ground to more detailed study.

5. Time

The time frame for this research is quite limited. As part of a finalising course of a bachelor thesis, the time span is twenty hours a week for a total of ten weeks. Four weeks are available for doing the empirical investigation. Additionally, it is important to note that the research is performed during the summer due to the timing of the course. This could affect the results since local food production will assumedly bring forth a wider variety of products in the summer which could affect consumer behaviour.

6. Definitions and constructs

Since the largest part of this research is based on qualitative methods, the operationalization of 'fuzzy' concepts and constructs should not be used as strict definitions. Rather, it is an attempt to clarify *"a general sense of reference and guidance in approaching empirical instances."* (Bryman, 2008: 373). This section will therefore provide a limited exploration of the main concepts in context of this research. In annex F, a more extensive operationalization will be provided.

Local knowledge. Local knowledge refers to actual, theoretical and practical expertise of a certain subject. In the context of this research, local knowledge refers to personal understanding of the food production process and its effects.

Environmental awareness. Environmental awareness relates to the concept of context-awareness regarding sustainability and the environment. "*A system is context-aware if it uses context to provide relevant information and/or services to the user, where relevancy depends on the user's task"*, in which context is explained as *"any information that can be used to characterize the situation of an entity."* (Dey and Abowd, 2000: 3 and 6). Environmental awareness thus implicates understanding of information about the environment which can be used in achieving sustainability.

Environmental attitude. Pro-environmental attitudes are measured by means of 'The New Ecological Paradigm', which tests the *"beliefs about humanity's ability to upset the balance of nature, the existence of limits to growth for human societies, and humanity's right to rule over the rest of nature".* (Dunlap et al., 2000, P. 427). A high score on the NEP scale indicates 'ecological concern' and ecological rather than an anthropocentric viewpoint, but is often used as suggestive for pro-environmental attitudes (Dunlap et al., 2000).

[18] For a detailed operationalization of, for example, education level, see Annex F

Ecological citizen. Ecological citizens are individuals holding rights and responsibilities in preserving the environment through their everyday behaviour. These responsibilities are not bound to a specific place or time, and are non-reciprocal (Dobson, 2005).

Local food production chains. Local food production chains refer to the production, consumption as well as all related activities in between, of locally produced foods. The exact meaning of local depends on the situation and perspective taken, so no single meaning can be given. In this research, local food production and consumption are both seen as environmentally aware behaviour.

7. Validity and trustworthiness

Several characteristics of this sample test form a risk for the validity and/or trustworthiness of this research. Both in the qualitative and quantitative research, the context of the research could affect the answers of respondents (reactivity). Consumers could for example give socially desirable answers, systematically distorting the results and thus decreasing the validity. Moreover, since the research is not representative, no conclusions can be drawn about general trends. Due to the complexity of the constructs in this research, the internal validity could also be at risk. It is not sure whether the intended concepts will be measured. The trustworthiness of this research could be impeded by the limited size of the sample, which could lead to inaccurate measurements.

IV. Results and analysis

This chapter will set forth the results and analysis of four in-depth interviews and one structured questionnaire. The qualitative data was thematically analysed and coded in accordance to the core concepts of the sub questions of this research. Being based on some existing literature, these sub questions focus on the links between the following core concepts;

1. Behaviour—Sustainability
2. Knowledge & Awareness—Attitude
3. Local food production—Knowledge & Attitude
4. Behaviour—Knowledge
5. Knowledge—Awareness
6. Awareness & Attitude—Behaviour

Reflecting upon the theoretical framework in part I, the hypotheses that were posed at the outset of the research, will subsequently be analysed by making use of the empirical data. Every section will thus deal with a connection between core concepts, a sub-question and several hypotheses from the theoretical framework.

Quantitative results; the relation between knowledge, awareness, attitude and behaviour in short

In the sample questionnaire, respondents were tested on their knowledge of the production process, environmental attitude, environmental awareness and environmentally aware behaviour. When differentiated on market type, they scored as following;

Table 2; Knowledge, attitude, awareness and behaviour of consumers at a local market and a regular market in Utrecht (N = 20)

	Local market	Regular market	Average
Knowledge of the production process (% of answers right)	63,3%	36,7%	50,0%
Environmental attitude (score between 0 and 1)	0,59	0,47	0,53
Environmental awareness (% of answers right)	60,0%	23,3%	41,7%
Environmentally aware behaviour (score between 0 and 10)	6,9	6,6	6,8

Remarkably, consumers of local products score higher on knowledge of the production process, attitude and awareness, but this does not show in a significant difference in environmentally aware behaviour. Consumers of local products thus seem to know more about the effects of a production process and have more positive attitudes towards the environment, but both local and 'regular' consumers show relatively high levels of environmentally aware behaviour (table 2). This could however also be due to the reactivity effect; respondents might have answered differently as they knew this research would examine their behaviour and therefore give socially desirable answers.[19]

[19] In some instances, respondents claimed to always bring their own bag when shopping, while it could be observed that they we carrying some newly purchased shopping bags.

Results and analysis

1. **Concepts: Behaviour—Sustainability**
   Question: ***How does the behaviour of consumers and producers relate to sustainable food consumption?***

The participants had different views of what sustainability entailed and who should be responsible for achieving it. Tara and Janny from TT Deventer regarded sustainability as people's 'way of life' in relation to carrying capacity of the earth, and the concept of 'People Planet Profit'. They noticed a tension between the main stream and 'alternative' trends as not all people share their goals and perspectives. This tension was reported by all participants. De Bruin especially mentioned that there is a large difference between different groups of consumers.

Moreover, the role and responsibility of farmers and consumers in achieving sustainability was cautiously approached. For example, the communication to consumers of exactly how and why certain products are sustainable or fair, is a role that supermarkets and other retailers should carry out more actively according to Bosch. Giving this responsibility to consumers is not realistic, because finding out what is sustainable and what is not is too complicated. Moreover, Willem & Drees try to promote different and special breeds of vegetables and fruit, based on motivations of taste, tradition and biodiversity, but caution that we should not overemphasise the role that farmers can play in these instances.

Hypothesis: Implicit; local food production/consumption is an attempt towards sustainable behaviour

The validity of this hypothesis was not elaborately discussed, but most participants reported that consumption behaviour is an important aspect in achieving sustainable production.

2. **Concepts: Awareness—Attitude**
   Question: ***How does local knowledge about food production processes and environmental awareness relate to attitudes of ecological citizenship?***

Some participants stressed that becoming too normative is a risk that arises when food consumption is linked to sustainability. Overemphasising the environmental effects of food production generated a negative attitude towards these foods. *"I just want to buy tomatoes, and if I buy organic nine times and tasty toms once because I like how they taste, I do not want to feel guilty about it."* (Bosch, 2010, Annex B).

Participants from TT Deventer stated that lack of knowledge of how to put positive environmental attitudes into practice generated a feeling of apathy and powerlessness, as many want to contribute towards sustainability but do not know how.

Looking at how attitudes affect awareness, positive attitudes were reported to be a good starting point for sustainable consumption, which would later on enhance awareness. *"Most of all eating has to be fun. [...] Of course these products are also responsible, but most of all they are fun [...], sustainability should be a prerequisite, but not the main issue."* (Bosch, 2010, Annex B). Participants Bosch and Baldé do not see a risk in local food production becoming a hype. As Bosch noted, most people are simply interested in buying local, but not in buying organic. Attracting people with the 'fun' aspect of locality of food will also later on enhance their environmental awareness.

Table 3: Cross tabulation of environmental attitude (NEP) and environmental awareness among consumers at a farmers market and regular market in Utrecht										
Attitude (NEP)	Environmental knowledge									
	Low		Medium		High		Very high		total	
Neutral	1	20%	2	29%	0	0%	0	0%	3	15%
Fairly positive	3	60%	4	57%	4	67%	1	50%	12	60%
Positive	1	20%	1	14%	2	33%	1	50%	5	25%
Total	5	100%	7	100%	6	100%	2	100%	20	100%

In table 3, we can see that no strong correlation occurs between environmental awareness and environmental attitude. Higher awareness seems to generate slightly more positive attitudes, but the numbers are too small to conclude whether there is a connection. Irrespective of environmental awareness, most people seem to have relatively positive attitudes towards the environment.

Hypothesis: Dutch producers and consumers have positive attitudes towards the environment

From all interviews appeared that there is a growing trend and increasing interest in sustainability. This positive attitude was seen to apply to both consumers and producers. From the sample test it appeared that consumers on average scored an NEP of 0,53, which is fairly positive. Consumers of local food products scored higher NEP scores than consumers at the regular market. Based on the collected data, environmental attitudes thus appear to be quite positive, but with much variety between different consumers and producers.

Hypothesis: Consumers and producers of local food have more positive attitudes towards the environment than regular customers

Consumers of a farmers market in Utrecht scored a 0,59 on the New Ecological Paradigm (NEP) scale[20], indicating relatively high pro-environmental attitudes. Consumers on the regular market scored an average NEP of 0,47, which thus reflects less positive attitudes, but are still not negative. As all participants reported a tension between main stream and alternative attitudes, it could be concluded that people are divided about the value and meaning of environmental sustainability. On average, local food consumers appear to be on the pro-environmental side.

3. **Concepts: Local food—Knowledge & Awareness**
   Question: ***Are local food production chains more transparent and do they increase the 'embeddedness' and knowledge about food production among Dutch consumers?***

From a research set up by the Task Force *Multifunctional Agriculture*[21], consumers of local products could be divided into a group that motivates their behaviour on grounds of sustainability and a group that focuses more on embeddedness within the locality and the economy of local products. Environmental awareness is thus not the only motive functioning to underlie local food consumption.

Transferring information about the food production process in local food production seemed to be of importance to all participants. Bosch for example stated; *that is exactly what the locality adds; [...] nothing is better then putting food on the table about which you know a story".* Baldé supposes that many consumers are not very considerate of the environment when shopping for food, even if those buying food from her stand are

[20] NEP scores range between 0 and 1

[21] http://www.multifunctionelelandbouw.nl/

probably more environmentally aware than 'regular' customers. However, she herself and a large share of her customers are interested in talking about the production process and origin of her products and consumers often learn new things about how foods are produced. She also likes to educate consumers a little bit.

The 'education' of consumers is also important to Willem & Drees; when asked about the importance of educating consumers about the availability of certain products, Bosch states that they just explain how food production works and how it affects food production, which most people find interesting or funny.

To Baldé's opinion, the production process of the local food she sells is very transparent, as she can tell much about the origin and production of her vegetables. The information about how, where and when her products are coming from might however, not always be clear. She does not label their products fair trade or organic dynamic, because those labels to not always reflect her idea of what is sustainable. Her customers however trust that her way of producing is right. *"That is the benefit of having direct contact with your customers. They have trust in me and many know how the garden looks. Even if it does not have a label, they know that the vegetables have been grown with care and attention."* Her association with a CSA system has not strengthened Baldé's relation with consumers, while talking to customers on the farmer market has. She does organise meetings with her CSA-group as she wants to get customers involved with the garden, educate them and foster commitment with the business.

Hypothesis: Local food production chains increase transparency of the food production process

To a certain level, local food production chains seem to be more transparent than regular systems. Especially when producers and consumers meet face-to-face, communication about how food is produced increases local knowledge. The 'fun'-aspects of local food attracts people to learn more about their food. However, with increasing distance between producers and consumers, their interaction also decreases. More impersonal ways of communication such as eco-labelling appear to be much less informative.

Hypothesis: Environmental awareness is higher among Dutch consumers of local food products than among 'regular consumers'

In the sample test, local food consumers had a mean score of 60% correct answers, whereas regular consumers had a mean score of 23%. Local food consumers thus appear to be more environmentally aware than regular consumers, a remark also made by all participants. However, it is not sure whether environmental awareness arises from local knowledge or whether environmental awareness drives people to seek for more information about their personal relation to the environment.

Hypothesis: Transparency of the food production process in local production does not substantially increase knowledge about the effects of food production

Again, it is difficult to asses what true knowledge about food production entails; should people know where their food comes from, how long it takes to grow or how much water is used during production? Especially in the interview with Willem & Drees it appeared that people are not often confronted with the limitations to food production, as supply is always high and diverse; consumers can buy anything they like and at any moment, even if the local environment could not produce such food items.

4. Behaviour—Attitude & Awareness

Does the practice of local food production and consumption strengthen positive environmental attitudes and awareness?

Does environmental behaviour, such as participating in local food production strengthen attitudes and awareness? With regard to the causality in the relation between environmental awareness, attitudes and behaviour, Tara and Janny mentioned that people joining TT Deventer are usually already engaged with positive environmental attitudes. However, the action of being involved with the organisation also again strengthened their awareness and attitudes. Due to a pleasant atmosphere, cooperation and the exchange of knowledge within the organisation, their environmental awareness and feeling of urgency strengthened. Their communal goal of sustainability strengthened their attitude and gave direction to their daily activities. The social nature of developing environmental awareness was stressed in relation to the need for cooperation between all groups of society in taking little steps towards sustainability.

Moreover, the direct incentive for getting involved with local food production varied among participants, but always gradually increased their commitment to sustainable production. For example, producing food herself in combination with working together at projects within TT Deventer thought Janny that living sustainably is easier and more fun than expected. For Baldé, her relation to local food production arose by chance, but later on developed into different personal motivations for local production. *I just started producing locally, as my consumers were located near the business. It started spontaneously, but later on my awareness grew. And I started to use it to sell my products, as a selling pitch I stressed that the products are fresh, from nearby, it hasn't been dragged around and is seasonal."* Her customers often seem to go through the same process in which they get introduced to local food production incidentally, but eventually get more connected to sustainable consumption. *"When people have a baby they buy organic fruits, and later on they start buying increasing amounts of organic food. People start to think about what is in their food."*

Hypothesis: Transparency of the food production process in local production strengthens environmentally aware attitudes

As mentioned before, people are attracted to local food production by the fun aspect to it. People like to eat foods about which they know a story. Eating locally thus increases interest in the production process. However, eating locally because it is fun might downplay the importance of producing sustainably. Most participants did not see this as a problem. Hypes were seen to be an effective way of attracting people towards sustainable consumption. In this instance, it is however important to note that all participants have some stake in increased sustainable consumption through hypes.

5. Knowledge—Awareness

Does local knowledge of the production process increase more cosmopolitan environmental awareness?

The effect of local knowledge about the production process on general environmental awareness was generally expected to be positive. The opinion of Baldé is that local food production does contribute to environmental awareness, as the locality of food also links to organic and other sustainable production modes. This trend consequently also affects the more main stream production systems.

Altogether, Bosch also thinks that buying local products increases knowledge about the production process and that this knowledge also strengthens more general environmental awareness. *"Awareness, I've noticed in my own situation, comes with little steps at a time. Awareness is nothing less then knowing and understanding."* However, after learning about the effects of a production process, it also is important that people really understand what it means, and connect this understanding to an attitude which gives value to this knowledge.

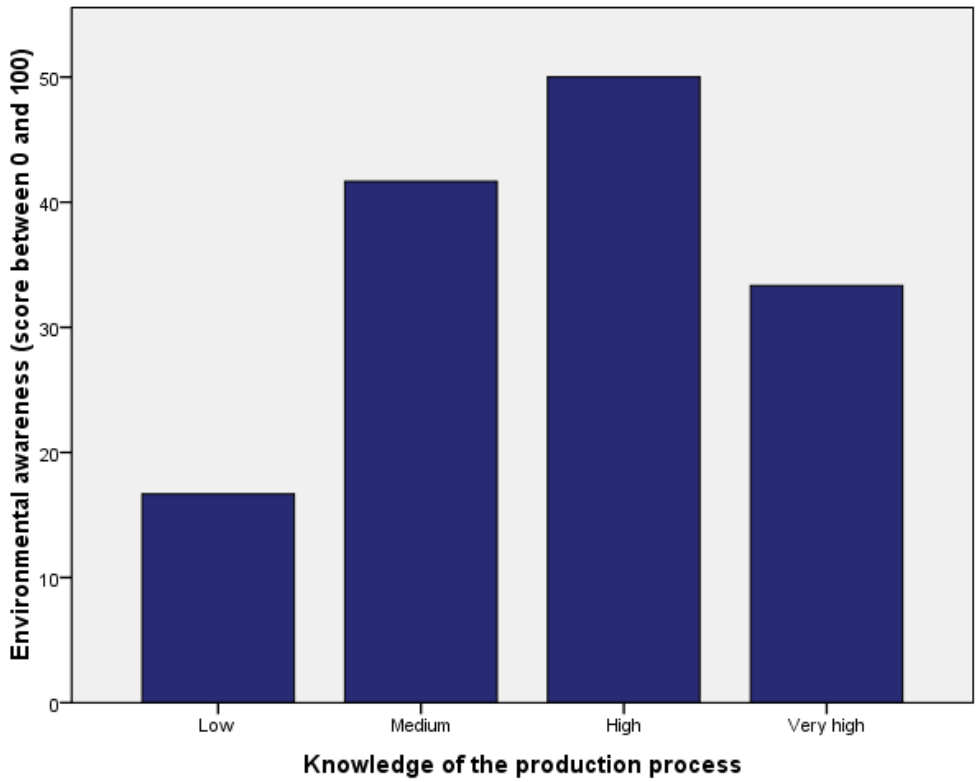
Communication about how local behaviour relates to environmental problems was often seen to be a 'bottle neck' especially since it requires to explain a complex phenomenon in simple terms (De Bruin). The myriad of labels, for example, was often seen to lead to confusion, but it could also be that those labels raise

awareness among larger groups of customers (Bosch, 2010, Baldé, 2010). De Bruin stated that their label is very reliable, but probably not very accessible for all consumers. Moreover, many 'fake' labels harm the trustworthiness of labels such as *Erkend Streekproduct.* SPN tries to streamline communication between the producing and consuming side of food production, by for example setting up a website which helps people to find what products are produced in their locality.[22]

Placing local next to fair trade or organic, Bosch recognises an obscurity in what these definitions exactly entail with regard to sustainability or fairness. He explains that eating bananas is not that harmful for the environment, while flying in organic beans from Kenya, or Peruvians using up their last water in order to produce our asparagus, is a completely different story. *"Not everything from far away is wrong, but it is important to eat seasonal and it is most of all positive to get connected to what you eat. This connection is most easily made when food comes from physically nearby places".* SPN appear to refrain from defining the *sustainability-aspect* too specifically in their criteria and label. *"Sustainability is central; it is the background of SPN."*

Among the respondents at the local and regular market in Utrecht, knowledge of the production process did seem to affect environmental awareness to some degree. As shown in figure 3, environmental awareness increases in up to reported 'high' local knowledge. Respondents with very high local knowledge remarkably scored lower on environmental awareness. The sample was too small to check whether the connection between local knowledge and environmental awareness is significant.

Figure 3; Environmental awareness differentiated by knowledge of the production process of food among consumers at a farmers market and regular market in Utrecht. N=20.



Note: Low knowledge: 0-25% correct answers; Medium knowledge: 25-50% correct answers; High knowledge: 50-75% correct answers; Very high knowledge: 75-100% correct answers

[22] www.doedestreekproef.nl

Hypothesis: Knowledge about the effects of food production among Dutch consumers of local food products is limited

Testing this hypothesis appears to be quite difficult; as the researcher herself has insufficient knowledge about food production processes to asses whether respondents correctly understood the effects of food production. However, the in-depth interviews revealed that food production systems in the Netherlands are assumedly too complex for consumers to fathom. Consumers appear to be interested in learning more about food production and how 'nature works', which could denote an entry-point for increasing local knowledge.

Hypothesis: Increased knowledge about the effects of food production among Dutch consumers of local food products increases environmental awareness

All participants concurred that knowledge of the food production process strengthens environmental awareness. Linking local knowledge to environmental awareness however appears to be a long term process, in which little by little people get more drawn into the subject. The data about consumers at a local and regular market showed that environmental awareness increased in accordance to local knowledge up to a certain level (see figure 3). It is not sure whether this is significant, but could be due to the complexity of food production and it's relation to environmental issues.

6. **Concept: Awareness & Attitude—Behaviour**
   Question: ***Does environmental awareness and positive environmental attitudes increase sustainable consumption in the Netherlands?***

Incentives for sustainable consumption

Tara and Janny mentioned that a feeling personal responsibility binds them to the goals of sustainability. However, many people do not seem to see the same urgency for changing their behaviour, as living unsustainable is now the norm. Conveying other of this feeling of urgency is complicated, as they think it is important to attract people without downplaying the content of their message.

In several interviews, examples figures ware seen to be helpful in setting an example and give direction to the process towards sustainable behaviour, but also because this position seemed to give the participants some advantage. Being a 'precursor' focussing on what is (for now) a niche market allows Willem & Drees to get higher prices for their products, even if this does require communication with the customer of why the prices are higher. Bosch also does feel that Willem & Drees has an 'example role' for producers when it comes to their approach to local production and sustainability, and that their method is 'contagious', especially since many do not want to 'miss the boat' of the current 'local trend'. Producers influence each other as well when it comes to working with (alternative) sustainable methods.

All participants noticed that a trend of local food production is evolving. Bosch thinks that there is at this time a social 'undercurrent' of sustainability developing which drives this trend. However, after learning about the effects of a production process, it also is important that people really understand what it means, and connect this understanding to their personal attitude which gives value to this knowledge. *"Many people already know a lot about sustainability, but the largest step is to draw conclusions from this knowledge about your own behaviour. But sooner or later this will happen. You can prefer things to be different, but when you do not do it yourself, nothing will happen."*

Making the decision to change you behaviour towards sustainability is largely dependent upon personal attitudes and interests. Personally, Bosch got involved in local food production after experiencing the paradoxes that the current food production chains can give rise to, and was based on a personal drive to

contribute to society, familiarity with food production chains and an interest in knowing where his food comes from and how it is produced. All participants reported feelings of responsibility but also much satisfaction in their work.

A feeling of apathy and powerlessness on the other hand was seen to impede people from putting their positive environmental attitudes into practice (TT Deventer, Annex C), as many want to contribute towards sustainability but do not know how. Bosch emphasizes that consumers are very interested in buying local products, but do not have the time to track down alternative production modes, and that local food products should thus be easily available. Bosch also comments that most consumers do want to buy sustainable products, but not at any price. Also, people are interested in finding out how nature works, but it does not translate in their behaviour directly, as most people will buy regular products as soon as a shops runs out of sustainable alternatives. Mieke Baldé experiences the same issue; personally she thinks that eating regular local beetroots is better than importing organic foods. But as a retailer, she wants to offer a diverse range of products even if they are not locally available, because consumers will otherwise buy imported goods in other shops or supermarket.

Market system

The way in which the current food market functions seems to have a large effect on the viability of local food production. Bosch commented that the difficulty with setting up local food production chains is that the main share of Dutch vegetable production is in hands of large companies. *"When analysing the market, fruits and vegetables yield 3 billion in the Netherlands, of which 83% is bought in supermarkets. I could focus on those last 17%, but then I would never become successful. Thus, how could I fit [local food production] in those 83%?"* However, in most food conventional food chains, distribution is centrally coordinated, based on standardised methods which does not permit the many different flows of supply linked to local food production; local food production is therefore too complex for shops and retailers. These supermarket chains do realise that local food production is a trend and are interested in these kinds of initiatives. *"So, what you need is someone that can make central agreements, because large companies are willing to sell local products, but do not know how to do it."*

Additionally, farmers usually have poor bargaining positions, as their business requires long term investments, but few possibilities of 'changing strategy' when demand is low. This also affects the price of fruits and vegetables by keeping prices very low, often even below cost price. Baldé assents that it is difficult to make profit as a farmer, also because people do not know about the local market. Promoting the market happens for example though cooperation of local producers. These producers of local products do try to cooperate through networks, so as to enhance their position. They do this by organising happenings together, buying supplies collectively but not so much by exchanging information and know-how.

From the interview with Drees Peter van den Bosch emerged the idea that the viability of local food production is strongly correlated to the attitudes and priorities of retailers. *"The main concern of retailer is whether they have enough of a certain product; the worst thing for a supermarket is to run out of strawberries on Saturday morning. This is not our main concern; this is just how we work." "It is part of our concept to sell what is available at that moment and place [..] supermarkets cannot do this because consumers want those strawberries." "If you think like that, local food sourcing is impossible" "in other words, we think in completely different ways".*

> **Hypothesis: Environmentally aware attitudes combined with limited environmental knowledge among Dutch consumers and producers of local food products do not increase sustainable behaviour such as local food production/consumption**

Limited knowledge of how to make effective changes towards sustainability seems to be an important impediment for people to change their behaviour. The discrepancy between local and global knowledge can

lead to feelings of powerlessness, apathy and resentment of too normative approaches towards food. In this case, addressing people's knowledge or rationale is not a good entry point for mobilising them towards sustainable behaviour.

V. Concluding remarks

The aim of this thesis was to combine theory and practice in examining the role of local food production chains in achieving sustainability through environmental awareness, attitude and behaviour. It posed the question of how *"local food production chains relate the awareness, attitudes and behaviour of Dutch consumers and producers and to what extend this is a successful process in achieving sustainability through embedded and knowledgeable consumption?"* Based on the existing literature, the following hypothesis was formulated; *Local food production chains are effective in achieving sustainability by increasing sustainable behaviour as an effect of strengthened environmentally aware attitudes.* The empirical evidence found in the second part of this thesis partially supports this hypothesis, but generated some ground for nuance. We will here deal with the most important conclusions about the relation between knowledge, awareness, attitude, behaviour and sustainability.

Whether local food production is successful in increasing local knowledge is largely dependent upon communication between producers and consumers. The link between local and global effects of food production is often too complex for consumers to comprehend, making that communication needs to be abstracted in order to convey the message. Among consumers, this discrepancy between local knowledge and the global environment might lead to feelings of apathy, powerlessness and resentment of too normative characterisations of food. While most people thus seem to share a concern for the environment, focusing too much on sustainability appears to scare main stream consumers, leading to large differences among consumers and producers in their willingness to change their behaviour towards more sustainable ways.

Reducing the physical distance between production and consumption does increase transparency and embeddedness of food production systems, and this rather strengthens positive attitudes and interest in the food than knowledge about the production process. Local food production and related local knowledge thus appear to correlate more strongly with pro-environmental attitudes than with environmental awareness. The positive image of local food production seems able to bypass the need for increased awareness in mobilising towards sustainable consumption.

Dutch producers of local foods seems to understand these difficulties with framing consumption as a site for political debate on sustainability, and focus on the attractive assets which are specific to local food production, such as taste, freshness, tradition and fun. Stressing the 'fun' aspect of sustainable consumption might be more effective in mobilising people than addressing their rationale, since food production systems are too complex to comprehend. However, focusing too much on fun aspects and too little on the value of sustainability, risks conflating locality with the ultimate goal of sustainability and therefore downplays the importance of sustainability.

The nature of conventional food production chains makes that supply always meets demand and that consumers therefore might get 'spoiled'; they expect all foods to be available at any time. Therefore, retailers need to be taken into account as units of analysis in following research as they carry specific responsibility in altering the status quo of the conventional food production systems in the Netherlands. Moreover, in the case of the Netherlands, where unsustainable consumption patterns are currently the norm, most people lack feelings of responsibility and urgency which are needed to make a change in their behaviour towards sustainability.

Recommendations

Among many of the authorities as well as among consumers themselves, sustainable consumption is seen as an effective means for achieving sustainability. Often, this reasoning seeks to preserve or even increase levels of consumption and/or well-being, but without compromising on the means of future generation to meet their needs. Achieving sustainability might however potentially require more drastic changes, based on individual feelings of urgency and a thorough paradigm shift towards less materialistic ways of living.

Whether pro-environmental attitudes translate into environmentally aware behaviour is dependent upon personal interests and feeling of responsibility and urgency. Since food democracy functions within a social setting and is inherently normative, communication about values concerning sustainability should not be avoided. This means that the ecological citizen is a highly desirable and essential agent within the process of debating values and priorities and therefore challenging the status quo.

There appear to be many entry points for attracting consumers to sustainable behaviour through local food production, but it is much harder to mobilise consumers to substantially change their practices.

Attracting consumers towards sustainability through local food production is successful as it is based on and supported by existing trends towards sustainability on the one hand and personal interests in more embedded consumption on the other. Local food production chains offer sites for learning in the form of tactile places that combine awareness with experience. Stimulating local food production will therefore shorten the epistemic distance between the local and the global and enhance pro-environmental attitudes and sustainable consumption behaviour.

In order to prevent local food consumption to become a red herring which conflates locality or fun with sustainability, it is crucial to connect the attractive character of local food production to the meaning of this production process as a way of expressing values and priorities. Consumers need to be addressed on their role of ecological citizens. This could for example be done by linking environmental awareness to personal experience in tactile places within local food production such as community gardens, farmers markets and so on, but also in more main stream sites for consumption such as supermarkets and so forth.

Future research is needed to find out more about the effects of feelings of apathy and powerlessness among consumers. Also, the importance of the epistemic distance in relation to active participation in tactile spaces of local food production could give rise to more concrete methods of stimulating ecological citizenship.

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VII. Annexes

Annex A: Interview Farming Organisation 'De Volle Grond', transcribed in English

Interview Farming organisation 'De Volle Grond'

Goal of the interview is to explore whether local food production and consumption lead to increased environmental awareness and strengthen environmentally aware behaviour.

Mieke Baldé has set up the farming organisation 'De Volle Grond' on January 1st 2010 because of high demands for a form of CSA, namely the so called 'Groente Abonnement', a system whereby consumers pay in advance for the vegetables they will get throughout the year. Before that, she has been working on another local farming organisation. She has studied cultural anthropology and has had an agricultural education.

Local production is important in her way of producing now, but she did not started out with the intention to produce locally. "*I just started producing locally, as my consumers were located near the business. It started spontaneously, but later on my awareness grew. And I started to use it to sell my products, as a selling pitch I stressed that the products are fresh, from nearby, it hasn't been dragged around and is seasonal."* Role models haven't been really important in her decision for local food production, as local was not as much a topic when she started out. Local has been of interest to farmers for about ten years.
At the local market she is profiling her products as local, because many products on the market are organic, but not produced locally. They are the only business selling products from within Utrecht, most come from 50 km. from the market or further.
She also explained that there can be a tension between selling strictly local and organic. For the market they have been importing products, such as beans in the winter, because consumers will otherwise buy these at other, more mainstream, shops or supermarkets. As a producer and retailer, she wants to offer a more diverse range of products and not only tubers. Personally, she thinks that eating regular local beetroots is better than importing organic foods.
Embeddedness of the production process is important to her personally, as she wants to know where, when and how a vegetable has been growing. Many consumers are interested in getting products from within a local living sphere, but many also show less interest. *"At the stand we are now selling pears from Argentina while in three months we will be selling Dutch pears, but many people just buy those pears."* She does not know whether consumers do not know or do not care for the locality of food products. However, she supposes that many consumers are not very considerate when shopping for food, even if those buying food from her stand are probably more environmentally aware than 'regular' customers.
Promoting locality strengthens more general environmental awareness, as locality also links to organic and other sustainable production modes. This trend consequently also affects the more main stream production processes.
The production process of the food she sells is very transparent to her opinion, as she can tell much about the origin and production of her vegetables. Consumers and she herself like to talk about where, when and how vegetables grow, and consumers often learn new things about how foods are produced. She also likes to educate consumers a little bit.
Environmental attitudes are significantly more positive on the local market. Whether these attitudes are determinative in environmentally aware behaviour she does not know. She recognises a tension between the citizen and the consumer.
Consumption of her local products has not increased, as she has many 'steady customers'. People do get more interested in local, sustainable food when they have children. *"When people have a baby they buy organic*

fruits, and later on they start buying increasing amounts of organic food. People start to think about what is in their food." Besides health, freshness, taste and sustainability are important motivations for buying local.

The more 'intense' mode of CSA production does not create stronger ties between her and her customers. The market is actually a good place of talking with consumers as you meet them face to face. She meets those customers only a few times a week for special occasions, as her tuinderij organises meetings and picnics. There are plans to organise even more events so as to introduce customers to the gardens. The reason for this is that they want to get customers involved with the garden, to educate them and to foster commitment with the business.

The information about how, where and when products are coming from might not always be clear. She does not label their products fair trade or organic dynamic, because some forms of producing (such as organic dynamic) is too strict and she finds organic more important. Her customers also trust that her way of producing is right even it is not labelled. *"That is the benefit of having direct contact with your customers. They have trust in me and many know how the garden looks. Even if it does not have a label, they know that the vegetables have been grown with care and attention, that we for example do not use monoculture."* The myriad of labels often lead to confusion, but it could also be that those labels raise awareness among larger groups of customers. She wants to attract more 'main stream' customers, as long as people start to think about the production process.

She contents that it is difficult to make profit as a farmer, also because people do not know about the local market. Promoting the market also happens though cooperation of local producers. These producers of local products do try to cooperate through networks, so as to enhance their position. They do this by organising happenings together, buying supplies collectively but not so much by exchanging information and know-how.

Annex B: Interview with retailing business of local food products, 'Willem & Drees' transcribed in English

Interview Willem & Drees

Goal of the interview; Exploring whether local food production reduces the distance between producer and consumers, whether this increases knowledge about the production process, and how this relates to more general environmental awareness.

Willem & Drees is an organization that mediates between farmers and retailers, so as to facilitate local food production chains in the Netherlands. Drees Peter van den Bosch has set up this organization together with Willem Treep in 2009. Currently, they are selling their products at 100 locations and hope to extend their business in the coming years. Drees studied at Wageningen University and worked for Unilever for 10 years.

Both Willem and Drees enjoyed working at multinationals Heineken and Unilever, but realized that they wanted to contribute more to society in some way. The food production chain was a subject they were already familiar with and that was of personal interest to Drees. He wondered why food needed to be dragged around the world in large quantities, while as a consumer he wanted to know where food was coming from, how it is produced and so forth. The direct incentive was experiencing the paradoxes that the current food production chains can give rise to; *"When biking nearby I passed an apple farmer who harvested delicious apples, but could not get a reasonable price for them. When I stopped at the supermarket later on they were celebrating the apple harvest with French apples. I wondered why the supermarket sold French apples while three kilometres ahead a farmer could not sell his delicious Dutch apples."*

Drees understands the difficulties with local food production and why this production mode might not work in all situations, but wants to explore in what situations local production is possible and viable. The difficulty with local food production is that the largest share of Dutch vegetable production is in hands of large companies. *"When analyzing the market, fruits and vegetables yield 3 billion in the Netherlands, of which 83% is bought in supermarkets. I could focus on those last 17%, but then I would never become successful. Thus, how could I fit [local food production] in those 83%?"* Drees emphasizes that consumers are very interested in buying local products, but do not have the time to track down alternative production modes, and that local food products should thus be easily available. Supermarkets are probably also interested in selling local products, but find it problematic since their distribution is centrally coordinated, based on standardised methods and does not permit the many different flows of supply linked to local food production; local food production is simply too complex for these shops and their retailers. Currently, large retailers have one distribution centre within the country from which all products are sorted and sent to shops. Tracking where the different products are coming from and are going to would be too complex for them. However, most supermarket chains do realise that local food production is a trend and are interested in these kinds of initiatives. *"So, what you need is someone that can make central agreements, because large companies are willing to sell local products, but do not know how to do it."* Willem & Drees thus want to act as a central contact for farmers and shops and makes sure that the 'standardised' demand from shops is met and supplied with locally produced food. Willem & Drees aims to be a mediator between the different shops and farmers within specific regions.

This mode of distribution could be easily taken up by large retailers, but Drees thinks that it will be very difficult for them to put it into practice. *"The main concern of retailer is whether they have enough of a certain product; the worst thing for a supermarket is to run out of strawberries on Saturday morning. This is not our main concern; this is just how we work." "It is part of our concept to sell what is available at that moment*

and place [..] supermarkets cannot do this because consumers want those strawberries." "If you think like that, local food sourcing is impossible" "in other words, we think in completely different ways".

Drees comments that most consumers do want to buy sustainable products, but not at any price. If sustainable alternatives are not available, these consumers will buy regular since they want their demand met (*"you want your strawberries, so you will not leave the supermarket without them"*). When asked about the importance of educating consumers of when and where certain products are available, Drees states that they just explain how food production works. *"Yesterday we started with the cherry season. If it starts to rain this weekend, I will not have those cherries next week.*[23] *So what I do is that I send a sign to the supermarkets that states that there are no cherries due to the rain. [..] Most consumers find this funny and might not buy those cherries, but most will probably buy regular cherries anyway."* Communicating the circumstances that affect food production is important but also difficult. Due to cold weather in the spring, Willem & Drees ran out of vegetables in May this year. They responded by communicating this to customers by putting up signs in shops explaining the circumstances. Some people get angry, but most people are just surprised. Drees thinks that people are interested in finding out how nature works, even if it does not translate in their behaviour directly, as most people will buy regular products as soon as a shops runs out of sustainable alternatives.

Altogether, Drees does think that buying local products increases knowledge about the production process and that this knowledge also strengthens more general environmental awareness. *"Awareness, I've noticed in my own situation, comes with little steps at a time. Awareness is nothing less then knowing and understanding."* Getting environmentally aware is a long term process whereby you learn more and more about the environment. After learning about the effects of a production process, it also is important that people really understand what it means, and connect this understanding to an attitude which gives value to this knowledge. *"Many people already know a lot about sustainability, but the largest step is to draw conclusions from this knowledge about your own behaviour. But sooner or later this will happen. You can prefer things to be different, but when you do not do it yourself, nothing will happen."*

Linking local awareness of a production process to global issues is possible, but again difficult. One important risk is becoming too normative. According to Drees, 'pointing fingers' about what is right and what is wrong has kept organic food production back for fifteen years. Organic farmers are very much opposed to the 'conventional' way of producing, disapproving the use of pesticides and so forth. Consumers, however, really hate this normative tone, because they do not want to be punished when they are standing in the supermarket. *"I just want to buy tomatoes, and if I buy organic nine times and tasty toms once because I like how they taste, I do not want to feel guilty about it."* Eating cabbage all winter long is not something that consumers will do and retailers thus have to be careful about focussing too much on the normative, ethical aspects to their products. *"Most of all eating has to be fun. And that is exactly what the locality adds; [for example] when you go to the supermarket in Amersfoort and you buy potatoes from Gert Verweij in Leusden" "Nothing is better then putting food on the table about which you know a story". "Of course these products are also responsible, but most of all they are fun." "Most of all, food has to be attractive and accessible, sustainability should be a prerequisite, but not the main issue."* Drees does not see a risk of local food production becoming a hype, which could de-emphasise the importance of sustainability. Most people are simply interested in buying local, but not in buying organic. Organic is often just not popular and has a negative image. Attracting people with the 'fun' aspect of locality of food will also later on enhance their awareness.

When placing local next to other alternative food production modes such as fair trade or organic, Drees recognises an obscurity in what these definitions exactly entail with regard to sustainability or fairness. He explains that eating bananas is not that harmful for the environment, while flying in organic beans from Kenya, or Peruvians using up their last water in order to produce our asparagus, is a completely different story. *"Not everything from far away is wrong, but it is important to eat seasonal and it is most of all positive to get*

[23] Apparently, cherries tear when it rains. This is an example of how little I know about the production of what I eat.

connected to what you eat. This connection is most easily made when food comes from physically nearby places". Communicating to consumers exactly how and why certain products are sustainable or fair, is a role that supermarkets and other retailers should carry out more actively. He thinks that supermarkets are often aware of the consequences and 'degree' of sustainability of their products, and should communicate this more clearly and openly with their consumers. Advertising with the image of sustainability, while at the same time selling unsustainable products, shows that large supermarket chains do not take their responsibility. Giving this responsibility to consumers is not realistic, because finding out what is sustainable and what is not is too complicated. It is also not clear what labels of sustainability mean which confuses consumers even more. *"You can hardly expect consumers to know whether the 30,000 products in a supermarket are produced sustainable or not. That role should thus be one of supermarkets and retailers."*

Drees does feel that Willem & Drees has an 'example role' for producers when it comes to their approach to local production and sustainability, and that their method is 'contagious', especially since many do not want to 'miss the boat' of local production. Producers influence each other as well when it comes to working with (alternative) sustainable methods.

Personally, Drees was surprised to see how conventional production methods are based on quantity and not on quality or taste. What is most important to retailers is to have a wide range of products available to their customers at any time they like. Farmers are therefore also hardly ever concerned with the quality and taste of their products and only focus on delivering large quantities of food, of which they lose track as soon as it is picked up. Willem & Drees make personal agreements with farmers, explain where their products will be sold and show their picture next to their product at the supermarket.

Motivations of taste and biodiversity also make that Willem & Drees try to promote different and special breeds of vegetables and fruit. It appears as if tradition also plays a role in this issue; *"Many breeds are disappearing, not because of taste, but because it is convenient on the market to have only a few breeds; then you can buy large quantities. But actually it is a pity."* Demand and supply of a few breeds does however also take power away from farmers. On average, farmers do have poor bargaining positions, as their business requires long term investments, but few possibilities of 'changing strategy' when demand is low. This also affects the price of fruits and vegetables by keeping prices very low, often even below cost price. When supply is higher than the demand, power immediately shifts to the top of the food production chains. *"There are a few large retailers who buy all the products and thousands of farmers behind them, who can only hope that a retailer contacts them with the question of buying their goods."* Willem & Drees do not reason from the demand side in food production, but look at how much a vegetable should cost in order to cover all expenses. This empowers farmers, but also makes them responsible for the retail price. Willem & Drees are competitive compared to the price of organic products, but usually more expensive than regular products. The reason for these costs is communicated to the customer in the hope that consumers will pay a higher price. They do not mind being a precursor, focussing on what is (for now) a niche market.

Drees thinks that there is at this time a social 'undercurrent' developing, which is echoed in the interest of the 'youth generation', who are much more interested in sustainability. His generation focussed much more on achieving wealth. The luxury and wealth of people might be an important incentive in driving them towards sustainable behaviour. Making the decision to change you behaviour towards sustainability is largely dependent upon personal attitudes and interests. Personally, the position and work of Willem & Drees brings some feelings of responsibility but also much satisfaction.

Annex C: Interview with Transition Town Deventer, in Ducth

Interview Transition Towns Deventer
Bijeenkomst 'Wortels voor lokale veerkracht', 28 mei 2010

Doelen en motivaties

Hoe voel je je persoonlijk betrokken bij duurzaamheid t.o.v. anderen en maatschappij?
Zelf niet aan mee doen, erover praten, onderwijs. Frustratie; waarom luistert niet iedereen? Waarom moet ik de enige zijn die zuinig is?
De kracht van Transition Town (TT) is het hebben/ontwikkelen van een ***visie***

Zijn mensen bij TT zich meer bewust?
Ja

Waarom?
Mensen die bij TT komen zijn er sowieso al meer mee bezig.

Versterkt de deelname het gevoel ook?
Ja, prettige samenwerking. Meer bewustzijn van de urgentie, maar ook veel plezier, erg motiverend. Ontwikkelen van een visie; gezamenlijk doel helpt in je herinneren aan de noodzaak.
Dagelijkse bezigheden als een moestuin zijn invulling aan het leven richting een ultiem/uiteindelijk doel.

Definities en persoonlijke ideeën omtrend het onderwerp

Duurzaamheid?
Niet per se lokaal zelfvoorzienend zijn. Deze tijd kent vooral veel onduurzame processen; teveel gebruiken/consumeren/weggooien. Duurzaam is hergebruiken, denken in kringlopen, van te voren bewust zijn wat er met spullen gaat gebeuren.

Bedoel je hiermee dus een verandering van denken (paradigmashift)?
Verwijzing naar permacultuur; Goed voor de aarde, goed voor de mens en goed voor elkaar
Sustainable betere term dan duurzaam, want het gaat om de draagkracht

Lokaal
Eerder al omschreven als 'op fietsafstand'.

Engagement
Niet besproken

Belang van jongeren

Belang van jongeren
Kinderen staan er erg voor open; vinden het logisch. Jongeren waarschijnlijk moeilijker te bereiken, veel eigen interesses, landbouw niet hip.
Voor jongeren moeilijk de urgentie in te zien; alles is nog in overvloed aanwezig en nog goedkoop ook. Heel belangrijk dat jongeren gaan beseffen dat alles ergens vandaan moet komen.

Later: kinderen zijn belangrijk voor lange termijn, maar op dit moment is urgentie hoog; jongeren moeten ook al aangesproken worden.
Kinderen staan voor duurzame ideeën open, zij vinden het logisch
Bij jongeren is dat moeilijker, vanwege de groepsinvloed en het is gewoon niet hip

Hoeveel jongeren bij TT?
Niet veel.
Later; verkeerde moment van samenkomen (door de week). Meerdere oorzaken, ook nog niet echt een prioriteit. Denken wel dat het belangrijk is voor de lange termijn.
Bij TT vooral 30/40ers, zijn nog niet lang genoeg (nu 1,5 jaar) bezig en hebben beperkt mankracht, zien wel de noodzaak

Hoe kan je jongeren bereiken?
Gevaar geitenwollensokkenimago. Aantrekkelijk maken, niet te moeilijk. Dit is wel lastig, want de boodschap is niet per se erg leuk. Te laagdrempelig is niet misschien gevaarlijk.
Ontwikkelen onderwijsprojecten/lessenprojecten; leerkrachten onderwijzen in duurzaamheid. Op dit moment gebeurt dat nog niet op centraal niveau. Vooral belangrijk toekomstbeeld te koppelen aan eigen handelen.
het beste: informatie vereenvoudigingen, deelname aantrekkelijk maken, laagdrempelig. Dit is echter problematisch, want het mag ook pijnlijk zijn.

Gevaar van hypes
Geeft niet, als mensen maar mee gaan doen. Niet erg als mensen om andere redenen beginnen. Belang van voorlopers.
Later: Belangrijk om bestaande netwerken en processen te gebruiken. Voorbeeld de religie.

Persoonlijk; film over doemscenario.

Hoe kan je lastige groepen onder jongeren bereiken?
Besef van urgentie dringt nog niet door. Mensen moeten weten dat het echt niet vol te houden is op de lange termijn.

Maatschappelijke inbedding van consumptiemethoden
Is inderdaad belangrijk. Hoe ver kunnen mensen kijken in afstand en tijd. Alleen is het ook niet haalbaar. Niet focussen op wat niet meer kan, maar kijken naar wat helpt.

Rol van organisaties als TT/maatschappelijk engagement in bereiken duurzame landbouw

Rol van organisaties als TT/maatschappelijk engagement voor verandering?
Bewustwording is heel belangrijk. Belangrijk om voorloper te zijn; om een voorbeeld te geven. Mensen moeten weer leren dat ze een bepaalde radius/voetafdruk hebben.

Is het misschien te ingewikkeld? Is het mogelijk?
Wel ingewikkeld, maar moet; serieus over na gaan denken. Is een streven; persoonlijk in het onderwijs. Aan kinderen de stappen laten zien heeft veel effect.

Belang engagement t.o.v. politiek, consumeren en professie

Duurzaamheid komt steeds meer; supermarkten met fair trade, duurzaam ondernemen.
Moet ook niet alles of niets denken; belangrijk kleine, persoonlijke stappen te nemen. Moet niet onhaalbaar worden. Maar wel belangrijk urgentie te onthouden; zoveel tijd hebben we niet.
TT: Bewustwording is nodig, politiek, economie, supermarkten, … ***alle zijn ervoor nodig***

Politiek
Geen tijd om op de politiek te wachten; het moet van onderop komen, anders wil de politiek ook niet. Moet breed gedragen zijn. Kracht van mensen om samen te werken, daar moet het van komen.
Wel belangrijk om met plannen naar b.v. gemeente te stappen.
kracht van TT: samenwerken (ook bijvoorbeeld met gemeente), elkaar inspireren

Belang van lokaal produceren
Speerpunt TT is onafhankelijk worden van (piek)olie en andere eindige grondstoffen. Minder transportkosten, meer bewustzijn van waar producten vandaan komen.
Je kan niet alles goed doen, maa het is een handvat; geeft mensen een handelsmogelijkheid.

Belang van de handeling; het het zelf doen
Focusses op wat je zelf kan doen om duurzamer te leven. Mensen hebben vaak al interesse als ze bij TT komen, maar wel sneeuwbaleffect; als je er eenmaal mee bezig bent werkt het aanstekelijk.
Persoonlijk; heeft heel aanstekelijk gewerkt, intresse groeit steeds meer. Opmerken dat het makkelijker kan dan ze dacht. Leren dat het gewoon leuk kan zijn.
Maar niet genoeg om de urgentie 'eer aan te doen'. Kleine projecten zijn niet genoeg, maar in de hoop dat er een sneeuwbaleffect ontstaat, zodat andere mensen mee gaan doen. Je moet doen wat je kan.

Kwestie van een keerpunt?
Ja. Werkt vooral goed bij kinderen. Mensen denken dat het niet leuk is omdat ze het nooit hebben gedaan. Veel mensen zijn zich er niet van bewust dat hun pizza ook van landbouwproducten gemaakt is. Kennen het prettige gevoel niet dat je het ook zelf kan.

Relatie consument-producent
Bij TT nog niet veel werkelijke relatie bouwen tussen boeren en consumenten. Wel contact met CSA organisaties, meer contact/lobbyen bij boeren. Geen lopende projecten in de landbouw. Mensen worden bewust gemaakt van het proces van produceren; makkelijke moestuin, moestuin maken voor anderen, eigen moestuinen, wandelingen door de stad, samenbrengen van mensen met interesse.

Lokale versus globale duurzaamheid
Link hier en daar heel erg belangrijk. Wel lastig om mensen zo 'ver' te laten kijken.

Belang van bewustzijn
Preventief bewust worden van belang duurzaamheid. Voordat het 'fout gaat' moeten mensen bewust zijn dat het fout kan gaan, anders is het te laat.

Later in gesprekken:
Angelique:
Jongeren zijn gedeprimeerd, je moet hen handelingsmogelijkheden aanbieden

Iemand anders (heeft zelf een keer een stukje geschreven voor ILEIA):
Graag samenwerking met ILEIA → verslagen ervan hoe zij het kleinschalig aanpakken
Interesse in de kennis van ontwikkelingslanden aangezien zij veel meer ervaring hebben in het bedrijven van kleinschalige, lokale landbouw maar wel met behulp van moderne technieken en media. In nederland (westen) hebben mensen hier weinig kennis meer van.

Annex D: Interview with labelling organisation of local food products, Streekeigen Producten Nederland, in Dutch

Waar bent u werkzaam, in welke positie en hoe lang? *Secretaris St. Streekeigen Producten Nederland (10 jaar) daarnaast eigen adviesbureau Streekwijzer*

Studie of andere voorkennis? *WUR Rurale Sociologie*

Wat zijn voor u de redenen om betrokken te zijn bij lokale voedselproductie? Betrokkenheid bij plattelandsontwikkeling, alternatieve ontwikkelingsrichtingen voor landbouw en platteland

- Milieu/economie/sociaal
- Hoe op het idee gekomen?

Betrokkenheid bij plattelandsontwikkeling, alternatieve ontwikkelingsrichtingen voor landbouw en platteland. Op idee gekomen o.a. door mijn werkzaamheden in Italie begin jaren 90.

Erkend streekproduct & lokale productie

Wat is het belangrijkste doel dat SPN wil bereiken met het keurmerk 'Erkend Streekproduct'? *Bijdrage aan duurzame plattelandsontwikkeling, handvatten bieden aan ondernemers om betere prijs en afzet voor hun producten te realiseren*

Wat vindt u van de door SPN gehanteerde criteria?

- Flexibel genoeg? Strikt genoeg? In de praktijk goed werkbaar, maar we moeten werken aan een betere positionering van het streekproduct t.o.v. allerlei ´neppers´
- Wat zijn de waarden die achter deze criteria liggen? Duurzaamheid, streekeigenheid

Wat is de rol van maatschappelijk verantwoord ondernemen in de organisatie SPN? *Staat centraal, is achtergrond van SPN*

Wat is er anders aan lokale voedsel productie ten opzichte van andere manieren van (duurzaam) produceren? *Regionale herkomst, veelal korte ketens, (mogelijk) directe betrokkenheid van consumenten bij product*

- Ruimtelijk aspect

Kennis & bewustzijn

Denkt u dat het keurmerk 'Erkend Streekproduct' succesvol is in het communiceren met consumenten over de betekenis van dit keurmerk? (Weten mensen wat het betekent?)

- Betrouwbaarheid, toegankelijkheid, begrijpelijkheid van informatie Betrouwbaarheid=goed, toegankelijkheid = matig

Denkt u dat de consumenten van streekproduceten veel kennis hebben van het productieproces?

Is het voor consumenten makkelijker om kennis te nemen van lokale productieprocessen dan in 'normale' ketens?

- Mogelijkheid alles te weten
- T.o.v. andere voedselketens
- Relatie milieubewustzijn

Zie boven, dat is in essentie de bedoeling van onze werkwijze Dat doen we onder meer door de ontwikkeling van de website www.doedestreekproef.nl

Denkt u dat kennis van het productieproces van lokale producten ook meer 'algemeen' milieubewustzijn creëert bij consumenten?

- Verschil lokale en globale kennis
- Oorzakelijkheid (consumenten van lokale producten zijn al milieubewust, of wordt het bewustzijn ook versterkt?)

Heeft kennis van het productieproces ook meer 'algemeen' milieubewustzijn gecreëerd bij uzelf? Nee

Wat voor knelpunten ziet u bij het overbrengen van informatie over duurzaamheid naar consumenten? Complex verhaal dat je in heel eenvoudige termen moet vertalen, is niet altijd makkelijk

Attitude

Denkt u dat consumenten van lokale producten positiever staan t.o.v. milieu?

Ja, zeker. Maar er zijn feitelijk 2 groepen die streekproducten kopen, de ene groep uit overtuiging en belangstelling voor eerlijke producten, de andere uit betrokkenheid bij de streek en vanwege evt. lagere prijzen bij directe verkoop vanaf de boerderij. De Task Force Multifunctionele Landbouw heeft onderzoek laten doen naar verschillende consumentenprofielen.

- Verschil met gewone consumenten
- Oorzakelijkheid (eerst positief of wordt deze attitude ook versterkt?)
- Verband met bewustzijn en kennis van de effecten van productie

Gedrag

Zijn consumenten van streekproducten over het algemeen meer bezig met milieubewust handelen?

Zie boven, er zijn grote verschillen tussen groepen consumenten

- Verschil met gewone consumenten
- Belang van kennis
-

Worden mensen als het ware 'opgezogen' in het proces van steeds milieubewuster leven?

Denkt u dat lokale voedselproductie bijdraagt aan een algemeen milieubewustzijn onder consumenten en producenten?

Ik hoop het wel, maar ben bang dat het beperkt blijft tot een beperkte groep consumenten.

Afsluiten

- Bedankt voor uw tijd graag gedaan
- Gebruik van uw naam in uiteindelijke scriptie? Geen probleem
- Meer weten over uitkomsten? Graag
- Nog vragen?

Annex E: Semi-structured questionnaire for consumers of a local market in Utrecht in Dutch

Enquête

Milieubeuwstzijn van producenten en consumenten in lokale voedselproductie-ketens

Doelpopulatie: Consumenten op een boerenmarkt in Utrecht, Nederland

Datum:
Interviewer:
Enquêtenummer:

Deze enquête is bedoeld voor een mondelinge survey en is onderdeel van een onderzoek naar de relatie tussen producenten en consumenten in lokale voedselproductie-ketens. Respondenten zijn consumenten van een lokale boerenmarkt. Alle (relevante) antwoorden dienen te worden ingevuld door de interviewer. Ten zij anders vermeld is per vraag slechts één antwoord mogelijk. In dit onderzoek wordt de anonimiteit van de respondent gewaarbord.

1. Weet u waar het door u gekochte product geproduceerd is?

☐ Nee
☐ Ja, namelijk .....

2. Weet u in welk seizoen dit product geproduceerd kan worden?

☐ Nee
☐ Ja, namelijk .....

3. Weet u hoe lang het duurt om dit product 'rijp' te krijgen voor consumptie?

☐ Nee
☐ Ja, namelijk .....

4. Geef aan in hoeverre u het eens bent met de volgende stellingen:

	Zeer oneens	Oneens	Geen mening/ weet niet	Eens	Zeer eens
1. De natuur is stabiel genoeg om de effecten van moderne industrieën op te vangen					
2. We komen in de buurt van de grens aan de hoeveelheid mensen die op aarde kunnen leven					
3. Mensen zullen uiteindelijk genoeg leren over de natuur om deze onder controle te krijgen					
4. Ik ben persoonlijk verantwoordelijk om het milieu niet te schaden					
5. De bescherming van het milieu is van belang voor ieder mens ter wereld					

5. Hoeveel liter water is er nodig om één liter melk te produceren?

☐ 0,5 liter
☐ 10 liter
☐ 200 liter
☐ 1000 liter

6. Hoeveel procent van de gebruikte energie ter wereld komt van herbruikbare bronnen?

☐ 2 procent
☐ 8 procent
☐ 20 procent
☐ 42 procent

7. Wat is schadelijker voor de gezondheid van mensen; uitlaat gassen van auto's of industriële schoorstenen?

☐ Auto's
☐ Industrie

8. Hoe vaak doet u een van de volgende handelingen;

	Nooit	Soms	Vaak	Altijd
1. De lichten uitdoen als ik een kamer verlaat				
2. Een eigen tas meenemen tijdens het boodschappen doen				
3. Scheiden van afval (papier, glas, plastic)				
4. Actie nemen in het belang van het milieu (in een organisatie meedoen, petitie)				

Kenmerken respondent

9. Geslacht
   ☐ Man
   ☐ Vrouw

10. Leeftijd: ……. Jaar

11. Hoogst afgeronde opleiding:
   ☐ Basisschool
   ☐ VMBO, AVO-3 (3-jarige HAVO of VWO), MAVO
   ☐ Middelbaar beroepsonderwijs (MBO)
   ☐ Hoger Voortgezet onderwijs (HAVO, VWO)
   ☐ HBO/ Universiteit
   ☐ Anders nl……

12. Zou ik u mogen vragen welke nationaliteit u heeft?
   ☐ Nederlands
   ☐ Turks
   ☐ Marokkaans
   ☐ Antilliaans
   ☐ Surinaams
   ☐ Anders nl…….

Annex F: List of operationalized concepts

Knowledge. Refers to actual, theoretical and practical expertise of a certain subject.
Factual; based on (scientifically) proven facts
Theoretical; ability of understanding and explaining, based on several hypotheses
Practical; the practice, execution of phenomena
Environmental knowledge; measured by the factual and theoretical understanding regarding sustainability and the environment
Environmental awareness; measured by the factual and theoretical understanding regarding sustainability and the environment
Environmental attitude; measured by means of *The New Ecological Paradigm. Testing the "beliefs about humanity's ability to upset the balance of nature, the existence of limits to growth for human societies, and humanity's right to rule over the rest of nature".* (Dunlap et al., 2000, P. 427).
Ecological citizen; belief that individuals have rights and responsibilities in preserving the environment through their everyday behaviour and that these responsibilities are not bound to a specific place or time, and are non-reciprocal
Behaviour; Behaviour will be tested by answering several questions in Likert scale manner (ranging between never and always). Based on Goldman et al (2006).
Sustainable behaviour; Based on Pe'er et al. (2006) five questions were posed with relation to behaviour that is considered sustainable
Consumer; all people who buy food products
Local food consumers; people that buy local food products
Producer; Producers are all people who cultivate and sell their harvest for profit. Producers need not necessarily sell their products to consumers directly.
Local food producer; producers who sell local food products
Civil society; Active agents, organizations and movements concerned with values and priorities in public issues such as politics, environment, and economy but also in private spheres (Kohler-Kocha, 2009).
Local; Geographical as well as economic and ecological definitions as explained in chapter three are accepted.
Geographical locality; travelling distance between production and consumption or 'food miles' are limited and made available to the consumer
Ecological locality; Following the definition of 'Erkend Streekproduct', based on similarity of ecosystem within a certain area. At least some characteristics of the following; similar climate, soil type, agricultural mode, species of flora and fauna.
Local food products; food products that are claimed to be largely produced and sold within a local range of where it is consumed
Transparency; Degree to which facts about a production process are available and understandable for those interested
Education level: Based on the Dutch system. Lower education is Basisschool, VMBO, AVO-3 (3-jarige HAVO of VWO), MAVO. Middle level education indicates Middelbaar beroepsonderwijs (MBO) or Hoger Voortgezet onderwijs (HAVO, VWO). High level education depicts HBO/ Universiteit

Annex G: List of hypotheses

1. Dutch producers and consumers of local food products have positive attitudes towards the environment
2. Knowledge about the effects of food production among Dutch consumers of local food products is limited
3. Increased knowledge about the effects of food production among Dutch consumers of local food products increases environmentally aware attitudes
4. Consumers and producers of local food have more positive attitudes towards the environment
5. Environmental knowledge is higher among Dutch consumers of local food products than among 'regular consumers'
6. Environmentally aware attitudes combined with limited environmental knowledge among Dutch consumers and producers of local food products do not increase sustainable behaviour such as local food production/consumption
7. Implicit; local food production/consumption is an attempt towards sustainable behaviour
8. The practices of consumers and producers within local food production chains increase transparency of the food production process
9. Transparency of the food production process in local production strengthen environmentally aware attitudes
10. Transparency of the food production process in local production does not substantially increase knowledge about the effects of food production

In response to the main question, the following hypothesis is formulated;

11. Local food production chains are effective in achieving sustainability by increasing sustainable behaviour as an effect of strengthened environmentally aware attitudes