# Understanding food culture in Scotland and its comparison in an international context: implications for policy development

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Responsibility for the report, and for any errors, rests with the authors.

## Summary

### Introduction

The purpose of this project was to explore how contemporary food cultures influence diet in Scotland and to provide possible pointers to future food and health policy development in Scotland. The objectives were to:

- Develop a working definition of food culture that is relevant to Scottish policy makers and their partners, based on a review of grey and peer-reviewed literature.
- Using this definition, describe how contemporary food culture varies in Scotland.
- Compare and contrast the culture in Scotland as it pertains to food with three other countries.
- Assess the extent to which recent policy initiatives in Scotland have considered issues of food culture.
- Make recommendations to be taken into account in developing future food and health policy, wider food and drink policy, and/or food-related practice in Scotland.

### Methods

Our approach centred on a review of peer-reviewed journals, published books and grey literature, supported by eleven interviews with food policy, health and nutrition experts. Based on an initial review of widely cited overviews of 'food culture' we developed a working definition and analytical framework. We sought to identify all peer-reviewed studies that were explicitly about food cultures in Scotland and the other three case study countries. We also explored research into practices, attitudes or other phenomena that were within the scope of our working definition of food culture but were not identified in the literature as being about 'culture'.

Informed by a matrix of socio-economic and health data for Scotland, the United Kingdom and seven other countries, we selected France, Finland and Greece as case studies. We explored the literature on the cultural aspects of food consumption and production in relation to each country, and undertook a review of Scottish food and health policies.

### Defining 'food culture'

'Culture' is referred to in a diversity of ways within the academic and Scottish policy literature pertaining to food. We suggest that a working definition which can accommodate this range of uses is that 'food culture' refers to '**shared practices and meanings relating to food**'. This definition includes phenomena such as aspirations, tastes and knowledge about food, as well as shared behaviours. It potentially concerns the production and governance of food as well its consumption. Crucially, 'culture' is used not only to describe such phenomena but also to explain them. Some research relating to food culture therefore considers the social, economic and other determinants of shared practices and beliefs relating to food. Furthermore, a cultural approach invites scrutiny of how such variables are identified and defined.

For this review, we sought to filter the research that lies within this domain to focus on that which was most directly relevant to the project's purpose, namely to explore how food cultures influence diet and to provide pointers for food and health policy development. Since diet is a direct outcome of food consumption practices, we chose those as the starting point for the review. We considered food consumption practices to be relevant to the purpose of this project if they influence diet in ways that could be expected to have implications for health. We treated other cultural aspects of food consumption, production and policy as relevant inasmuch as they were identified within the literature as direct or indirect influences on those food consumption practices.

Thus, section 4 of the report focuses on cultures of food consumption. Section 5 briefly explores how food production influences food consumption practices. Section 6 considers policy as an influence on consumption practices.

**Cultures of consumption**

We reviewed research relating to 11 types of food consumption practice identified in the literature or in expert interviews as potentially relevant to health outcomes: consuming convenience and fast food; meal timing; eating breakfast; snacking; eating fruit and vegetables; eating out of the home; home cooking; shopping; weight management; drinking alcohol; and breastfeeding and weaning. For each, we outlined the relevance to health, and seek to identify evidence on the incidence of different practices across the case study countries and the factors influencing that incidence. These wider influences include beliefs, and aspects of the socio-economic and physical environment.

Where evidence was available, people in Scotland or the UK appeared generally to:

- Eat more takeaways than people in France and Finland,
- Skip breakfast more frequently than in France and Finland, but less frequently than in Greece,
- Snack more on soft drinks and confectionary than in the other countries,
- Eat comparatively very small amounts of fruits and vegetables,
- Be less satisfied with their bodies and more inclined to diet (among 15 year old girls),
- Drink more alcohol than in France or Greece, but less than in Finland.

On the basis of the evidence reviewed, it would not be appropriate to infer that these differences substantially contribute to explaining/accounting for differences in health outcomes between the countries. However, it is possible to identify the key factors cited in the literature which are seen as influencing these practices. Time pressures – perceived and/or actual – were the most widely cited factor. Income and social class, and people's perceptions of their own autonomy, were also widely cited. Inasmuch as the research relating to people's perceptions of their own autonomy identifies class differences in such perceptions, these two headings are closely related: middle class adults and teenagers experienced a greater sense of autonomy than their working class counterparts (Wills et al., 2009). The autonomy experienced by middle

class families enables them to invest in food-related practices that are implicated in reproducing social class and, potentially, economic opportunity.

Other influences on food consumption practices identified in the literature included the associations people have with particular foods; the relative costs of foods and their availability; group norms for appropriate behaviour in specific contexts; and the assessments people make of their own and their peers' health and disease risk.

**Production influences**

Food production affects food consumption practices by: influencing the availability of food; contributing to wider socio-economic trends such as industrialisation and urbanisation; and indirectly by influencing policy.

The geography of Scotland and the other case study countries limits the foods that they can readily produce yet, within those limits, there has been historical change and there remains considerable leeway for innovation and strategic influence. Similarly, the primary production of a country by no means determines the diet of its population, but may be loosely associated with availability. It is plausible, for example, that further developing fruit production in Scotland, including for export, could have knock-on benefits for fruit consumption. However, the evidence we reviewed was not sufficient to identify any patterns in the volumes of foods produced in different countries and their availability or price to consumers.

Employment conditions, housing and the economic history might all be expected to shape the wider determinants of food consumption practices. Average weekly hours worked are comparable in the UK with France and Finland, and lower than in Greece, suggesting that other factors besides employment may play a part in shaping the time pressures that people feel are driving them to eat convenience and fast food. While we found no data on kitchens, people in the UK on average have more space at home than in the other case study countries. Whether the economic importance of food and drink has implications for relative food and drink prices and availability, Scotland's high levels of alcohol consumption, or the policy influence of the food and drink industries, warrants urgent scrutiny.

We could find no research specifically on approaches to business lobbying in Scotland, nor comparing the cultures of policy-making in Scotland and the other case study countries. However, the relationship between industry and government is highlighted as relevant issue by the review of the Scottish Diet Action Plan (Lang et al., 2006).

**Policy influences**

We reviewed the sensitivity to cultural issues of Scottish and UK policies from the past 20 years against 10 indicators. We assessed 18 key policy documents, selected for their importance and relevance by NHS Health Scotland. The key findings were that:

- ‘Culture’ is mentioned on occasion in the policy documents, but is not generally addressed explicitly in terms of underlying philosophy, objectives and recommended actions.

- The documents referred to some specific cultural practices, mainly eating out of the home and shopping, but tended to focus on the foods available in such contexts, the information provided and the consequences for ‘food choice’, as opposed to seeking to understand what behaving in a certain way means to the people involved, and norms and wider influences on their habits.

- It is notable that while Recipe for Success (Scotland’s National Food and Drink Policy) highlights the importance of local and Scottish food in sections focused on the economy, the consumption of regional foods as a cultural practice is not included in the section on healthy eating, in terms of the barriers or opportunities that it might present.

- ‘Choice’ is a major and explicit theme in the policy documents we reviewed, featuring in two main senses: (a) the diversity of options presented to consumers, where ‘more choice’ is in general treated as desirable; and (b) the food purchase and/or consumption decisions made by consumers, where the policies aim to influence choices in ways that promote health, i.e. where ‘appropriate choice’ is the desired policy outcome.

- The cultural practices which underpin how the Scottish population make the choices they do are rarely unpacked, so the cultural aspects of food consumption are left as an unexamined notion that sits between the food environment and its potential to influence consumer food choices on the one hand, and actual food choices and health outcomes on the other.

- There was a very clear and strong emphasis throughout the documents on the need for change in the food environment, and particularly on the responsibility of government to effect this change.

- The majority of documents were explicit in an expectation of government working with the food industry to address the problem of ‘unhealthy eating’; this expectation seemed to become increasingly pronounced over the period that we reviewed. This emphasis was particularly prominent in recent documents, despite comment in the review of the Scottish Diet Action Plan in 2006 that one reason for the failure of the SDAP to encourage significant change was that:

  > ‘The SDAP has adopted a wholly consensual partnership approach to ‘working with’ the food industry and thus underplayed the powerful role of the food supply chain in shaping food content, access, availability and consumer demand over the last 10 years, such as the period of rapid restructuring of the food industry or the undermining of health messages by powerful marketing and advertising of foods and drinks. The SDAP has not deployed the full set of policy tools available, most

notably those of exercising regulatory and legislative powers of government to control the food supply chain and help create demand.' (Lang et al., ix)

**Conclusions and recommendations**

We proposed a working definition of food culture as 'shared practices and meanings relating to food' and a selective review of literature relating to this definition, centred on factors that influence food consumption practices, diet and health. The research that we found could inform the following aspects of food and health policy development:

- Implementation, strengthening and validating the knowledge of practitioners working in communities to improve people's health.
- The evidence base, advancing understanding of the causes of health inequalities and the opportunities to address them.
- International context, informing debates about the relevance of the experience of other countries to health improvement in Scotland.
- The objectives, contributing to debate about the role of the state in tackling health inequalities.
- Accountability, supporting the scrutiny of commitments to 'change culture'.
- Policy culture, enabling policy makers to question their own practices and norms, improving the effectiveness of policy.

Specifically, we recommend that:

- NHS Health Scotland convenes a dialogue among independent researchers and health practitioners to determine the value added to policy implementation by a more strategic engagement with research into food culture.
- Scottish Government policy makers are guided by existing work being undertaken in the field of health and social inequalities, including research which takes a cultural approach.
- Policy makers define 'culture' precisely wherever the term is used in policy, and subject any uses to rigorous critical scrutiny.
- The Scottish Government formally reviews whether its economic policies, approach to regulating business and relationships with the food industry are compatible with achieving its commitments to improving health in Scotland.

# 1. Introduction

## 1.1 Purpose

The purpose of this project was to explore how contemporary food cultures influence diet in Scotland and to provide possible pointers to future food and health policy development in Scotland.

NHS Health Scotland commissioned this work in order to begin building understanding of an issue that is avowedly complex, yet has been highlighted as important to effective policy. The Review of the Scottish Diet Action Plan (Lang et al., 2006) noted the importance of culture in shaping how people eat, and a dearth of evidence available to understand the implications for policy. Recent policy and actions in Scotland, such as the Healthy Eating, Active Living Action Plan (Scottish Government, 2008a) have sought to address issues that have a clear cultural dimension, such as food access, cooking skills, and attitudes and beliefs about healthy food. However, NHS Health Scotland is inquiring whether more strategic engagement with wider socio-cultural issues and trends shaping people's relationships with food is needed before a measurable and lasting impact can be made on food and drink intake at a population level in Scotland.

## 1.2 Objectives

The project had five specific objectives, summarised as follows:

- Develop a working definition of food culture that is relevant to Scottish policy makers and their partners, based on a review of grey and peer-reviewed literature.
- Using this definition, describe how contemporary food culture varies in Scotland, for example between socio-economic, ethnic, rural and urban groups, identifying key subcultures.
- Compare and contrast the culture in Scotland as it pertains to food with three other countries that are on a par economically but have lower levels of adult obesity, seeking to identify potentially protective aspects of their cultures or organisation that might be promoted in Scotland over the long term.
- Identify policy initiatives since 1996 that have targeted people who express these subcultures or the population as whole, and assess the extent to which they have considered issues of food culture and how far this is likely to have affected their success.
- Make recommendations for key considerations in relation to food culture which should be taken into account in developing future food and health policy, wider food and drink policy, and/or food-related practice in Scotland.

## 1.3 Report outline

This report contains the project's findings. Section 2 outlines the approach we took to the review. Section 3 outlines a working definition for food culture, relevant to Scottish policy makers and their partners, and an analytical framework. The subsequent three sections (4-6) are structured around this

framework, considering in turn cultures of food consumption, production and policy in Scotland and three other case study countries. The conclusion sets out the key findings relevant to policy and includes recommendations.

## 2. Methods

Our approach centred on a review of peer-reviewed journals, published books and grey literature, supported by eleven interviews with food policy, health and nutrition experts.

### 2.1 Scope of the review

Much has been written about the broader field of health and diet, though comparably little about the relationship between food cultures and health. We began by searching for existing reviews of research relating to food and culture (searching in titles and abstracts for combinations first of 'food' and 'culture', then using a broader range of terms including 'identity', 'body', 'choice', 'attitudes', 'meaning' and 'behavio(u)r', using ISI Web of Knowledge), to identify existing definitions of food culture and key concepts to structure an analytical framework for the remainder of the review (section 3). We then searched for studies that related explicitly to key aspects of food, culture and health identified within our framework, in relation Scotland and three other case study countries.

The largest body of literature that we explored concerned research into practices, attitudes or other phenomena that were within the scope of our working definition of food culture but were not identified in the literature as being about 'culture'. This final body of literature included analyses of surveys and observational data, and historical accounts of food consumption and production in Scotland and the other case study countries.

Articles in journals such as Appetite, British Food Journal, British Medical Journal, European Journal of Public Health, European Journal of Clinical Nutrition, and International Journal of Obesity, as well as a number of books including Belasco (2008), Caplan (1999), Hattersley and Dixon (2009), and Lang (2004, 2009), contained the most explicit references to food culture. Much of this literature referred to the United Kingdom, United States, and various European counties, with little literature available for Scotland. The most useful international study that included Scotland was the World Health Organization's collaborative cross-national study on health behaviour in school-aged children, 'Young People's Health in Context' (2004).

Aiming to identify all peer-reviewed studies that were explicitly about food cultures in Scotland and the three case study countries, we found a little over a dozen studies related to Scotland, and a dozen more that were relevant to the three other case study countries. A further 40 studies were identified which examined attitudes and practices related to food culture, such as shopping and snacking, in Scotland and the case study countries. The majority of these studies were found in peer-reviewed journal articles, with a proportion found in the food trade press, government reports and newsletters. Where appropriate, we supplemented our search with literature from the United States and other countries.

## 2.2 Interviews

Using the research team's existing networks, and in discussion with NHS Health Scotland, we conducted interviews with eleven experts and key policy stakeholders. These experts were selected on the basis of their research knowledge and involvement in one of three areas: the study of food culture per se; aspects of food culture in Scotland; and food and health policy in Scotland. The aim of these interviews was to:

- identify literature and datasets,
- identify relevant policy actions and initiatives,
- test interim findings and potential recommendations.

The first three interviews were undertaken at an early stage in the project in order to test and further develop our data extraction framework, discuss the selection of country case studies, and identify relevant literature and datasets. These were carried out with Bill Gray (Community Food and Health Scotland), David Smith (University of Aberdeen) and Pete Ritchie (One Planet Food). Eight further interviews were carried out in order to supplement our list of policy documents and provide critical reflection on our analytical framework. These interviews were carried out with Kathryn Backett-Milburn (Centre for Research on Families and Relationships), Martin Caraher (City University London), Adam Crosier (National Social Marketing Centre), Debra Gimlin (University of Aberdeen), Cathy Higginson (Registered Public Health Nutritionist, Edinburgh), Peter Jackson (University of Sheffield), Bill Slee (Macaulay Land Use Research Institute) and Wendy Wills (University of Hertfordshire).The interviews followed a semi-structured format, and were all carried out by phone and recorded, with detailed notes taken both during the interview and immediately after.

## 2.3 Country evaluation matrix

In order to compare Scottish food culture with the international context, we initially selected five countries, in addition to the United Kingdom, which could offer valuable points of comparison: France, Italy, Netherlands, Norway and Japan. These countries were chosen because they had a broadly comparable economic standing to Scotland, and were known to have lower levels of obesity. We subsequently added Greece and Finland to this list, which have lower adult female obesity but higher adult male obesity. The reasons for this are discussed below.

We created a simple comparison matrix of:

- Socioeconomic indicators: total population, Gross Domestic Product (GDP) per capita, and economic inequality (known as the Gini coefficient)
- Health indicators: adult obesity rates, life expectancy at birth, per capita expenditure on health, mortality rates, per capita consumption of alcohol and tobacco, and self-reported levels of physical activity
- Health inequality: percentage in poorest fifth and richest fifth who self-report bad and very bad health
- Fruit and vegetable consumption patterns

- Physical activity: self-reported figures for walking, moderate exercise and hours spent sitting
- Consumer behaviour: percentage of income spent on food and non-alcoholic drinks, on alcohol and tobacco, and on restaurants and hotels.

A variety of sources were used to collect these data including: Data Food Network (DAFNE), European Association of Communications Agencies Website, European Commission, National Diet and Nutrition Survey, Scottish Health Survey, Office for National Statistics, and World Health Organization Data and Statistics.

A number of difficulties were faced collecting data for Scotland. Given that Scotland is a devolved government within the UK, socioeconomic and health data easily available from United Nations (UN) databases for other countries were not available for Scotland. We relied in some instances on Scottish Government statistics that were incompatible with the UN data. Wherever data for Scotland were unavailable, data for the United Kingdom were used instead. Data were nevertheless collected for the case study countries and there were clear variations between countries for a number of variables related to health, diet, physical activity and consumer behaviour. Since comparative data was used only to inform our selection of case study countries and to illustrate headline similarities and differences in between them, the data limitations had no serious consequence for the robustness of our approach.

We considered the country evaluation matrix and the value of different international comparisons with the aim of selecting three case study countries for the main literature review.

Finland appeared to offer more interesting comparative data than Norway, partly because of the abundance of data for Finland due to its membership of the European Union. Japan had the potential to offer interesting data on inter-cultural variation, given that its food culture is so markedly different from that of European countries, but it was decided that the cultural differences might be so wide as to offer little insight for policy implementation in Scotland. Italy, with high levels of fruit and vegetable consumption, and its low levels of adult obesity yet relatively high levels of childhood, offers a useful contrast to Scotland. However, we considered that Greece might offer more interesting comparative material than Italy for a number of reasons. With a less widely regarded food culture than Italy, it is nevertheless a Mediterranean country with a diet high in fruit and vegetables – higher than Italy – yet also with high obesity statistics among both adults and children and one of the highest rates of tobacco consumption in the world.

Both France and the Netherlands offer interesting case study material, although more data on consumption habits was available for France. Additionally, France, with the ‘French Paradox’, suffers a relatively low incidence of obesity and coronary heart disease despite a diet rich in saturated fats. However, recent studies show that rates of ‘overweight’ (Body

Mass Index (BMI) of between 25 and 29.9) are rising fast in France and rates of obesity (BMI over 30) will continue to rise slowly (Sassi et al., 2009).

We decided to use Finland, France and Greece as our comparative case studies. The benefits of comparing Scotland with Greece and Finland were considered to outweigh the fact that while both countries have lower adult female obesity rates, adult male obesity is higher than in Scotland. We were also concerned that focusing only on countries with lower adult obesity might invite specious inferences (e.g. assuming that cultural differences were protective against obesity). Data from the country comparison matrix for these three countries and Scotland is shown in Table 2.1 (overleaf). Here and in later comparative tables, where data is not available for Scotland, UK data has been used instead. Where data is readily available from the same source for England as well as Scotland, this has been included for further comparison. We reviewed the available literature relating to these three case study countries and to Scotland, based on the analytical framework described in section 2.2 and set out in section 3 below.

### 2.4 Policy review

Over 20 major policy documents have been published in Scotland in the last 15-20 years that deal with diet in some way, and many UK-wide documents also apply to Scotland. To address the project's fourth objective, this report assesses how 18 of these policy documents, selected for their importance and relevance by NHS Health Scotland, treat 'food culture'. The list from which they were selected can be found in Appendix 1.

Each policy document was assessed according to 10 indicators, based on the analytical framework elaborated in section 3. For each policy document, the aspects relevant to each indicator were reported in a table, accompanied by a brief description of the policy. The policy content of each was then summarised according to these indicators (as reported in section 6.2). The key themes relating to 'food culture' arising from the full set of policies were then identified, as reported in section 6.3.

Table 2.1 Headline socio-economic and health indicators for Scotland, United Kingdom, Finland, France and Greece

| | Scotland | United Kingdom | Finland | France | Greece |
|---|---|---|---|---|---|
| Total population (millions)(2008)[c] | 5.2[a] | 61.4 | 5.3 | 61.7 | 11.23 |
| GDP per capita ($) (2008)[c] | 38,163 | 43,544 | 51,409 | 44,675 | 31,954 |
| Life expectancy at birth (years) both sexes (2006)[d] | 77[b] | 79 | 79 | 81 | 79 |
| Adult mortality rate (probability of dying between 15 to 60 years per 1000 population) both sexes (2006)[d] | - | 80 | 96 | 91 | 76 |
| Mortality rate for cancer (per 100,000 population) (2002)[d] | - | 143 | 115 | 142 | 132 |
| Mortality rate for cardiovascular diseases (per 100,000 population) (2002)[d] | - | 182 | 201 | 118 | 258 |
| Mortality rate for non-communicable diseases (per 100,000 population) (2002)[d] | - | 434 | 422 | 368 | 457 |
| Percentage of overweight males – BMI 25-29.9 kg/m2 (%)[e] | 41.4[b] | 42.6 | 46.2 | 40.8 | 38.7 |
| Percentage of overweight females – BMI 25-29.9 kg/m2 (%)[e] | 33.1[b] | 31.1 | 30.8 | 23.0 | 28.1 |
| Percentage of obese males – BMI =>30 kg/m2 (%)[e] | 24.9[b] | 31.1 | 30.8 | 23.0 | 28.1 |
| Percentage of obese females – BMI =>30 kg/m2 (%)[e] | 26.5[b] | 23.2 | 16.9 | 17.0 | 20.2 |

[a] General Register Office for Scotland (2009)
[b] Scottish Government (2009a)
[c] UNSTATS (2010); Office of National Statistics (2010); BP were converted to USD using 2008 exchange rates
[d] WHO (2010)
[e] IASO (2008) for all non Scotland data

# 3. Defining ‘food culture’

## 3.1 Definitions in the literature

The academic literature relating to food and health, and relevant Scottish policies, are lightly peppered with references to ‘culture’ and ‘food culture’. Often, these terms are left undefined and their implicit meanings vary. Such semantic flexibility is common to many widely used and valued terms, and is not necessarily a problem. Where the academic literature spells out what is meant by ‘food culture’, it does so broadly and, though there is some congruence among the term’s different uses, there is no single widely shared definition. In this section we describe these different uses and seek to delineate a conceptual space that accommodates them all.

### 3.1.1 Recent uses in Scottish policy

Recent references to ‘culture’ in Scottish policies relating to food and health include:

- Preventing Overweight and Obesity in Scotland, which talks of the need for systemic change in ‘culture and social norms’ in order for health improvement policies to be effective (Scottish Government, 2010a).

- The Healthy Eating, Active Living action plan describes how increasing access to healthier food choices will help people break away from ‘the negative impact of culture and lack of food skills’ (Scottish Government, 2008a: 19).

- In a speech concerning the national food and drink policy, Richard Lochhead, the Cabinet Secretary for Rural Affairs and the Environment, associated the concept of ‘food culture’ with ‘quality, health, wellbeing and environmental sustainability’, and described a change in food culture as a change ‘in the way we behave and our national attitudes toward food’ (Scottish Government, 2008b).

- In the foreword to Recipe for Success: Scotland’s National Food and Drink Policy, Lochhead describes the cultural importance of food to Scotland – how the nation’s identity at home and abroad is linked to products such as beef, salmon and whisky:

  > ‘Yet there is a strange Scottish paradox, despite producing fantastic food and drink we have one of the poorest diet-related health records in the developed world... our culture must change if we are to prosper as a nation.’ (Scottish Government, 2009b: iv)

- The National Food and Drink Policy document on public procurement, Walking the Talk – Getting Government Right, speaks of arriving at a ‘better food culture in Scotland by providing good information on health and diet,

food quality, and the characteristics and provenance of food offered to customers' (Scottish Government, 2009c: 17).

Section 6 of this report provides a structured analysis of how these and other policy documents address issues relating to culture. However, these preliminary examples highlight three points:

- The nearest these documents come to a definition is Lochhead's description of culture as 'the way we behave and our national attitudes toward food' (Scottish Government, 2008b).

- In none of these instances is 'culture' or 'food culture' explicitly defined. As noted above, this is not intrinsically a problem.

- However, it does present difficulties that 'culture' is generally mentioned as an underlying cause of health problems and/or a target of change. Identifying a poorly defined concept as a target of change has the affect of diluting responsibilities and obfuscating accountability.

### 3.1.2 Academic uses

Within the academic literature, definitions of 'food culture' are wide and diverse. By some uses, it is broadly synonymous with the concept of a 'national diet'. The book series 'Food culture around the world' (Abramson, 2007; Parasecoli, 2004; Long and Vargas, 2005; Mason, 2004) focuses on the major foods and ingredients which make up the diet, and the variations of foods across meal times and on special occasions, with a final chapter in each volume reserved for the health implications of that particular country's diet. By this meaning, Italian or French 'food culture' is perceived as healthy because the Italians and French give considerable attention to fruits, vegetables and freshly prepared meals.

Within the work of anthropologists and sociologists of food, and food policy scholars, the term is defined more explicitly and used more critically. Mintz (1996: 23-24) describes food culture as food preferences or 'deeply cherished tastes' which are 'rooted in underlying economic and social conditions'. Others have described how food cultures vary at both the micro-level (family) and macro level (countries, regions and social groups), and are made up of a number of cultural components including taste criteria, meal timing, eating situations, gender associations relating to food products, and values attached to particular foods (Askegaard and Madsen, 1998). By these definitions, food culture is not simply the meanings, practices, and knowledge about agriculture and food maintained by a group of people in a particular place (Lang and Rayner, 2001; Lang and Heasman, 2004; Lang and Heasman, 2006; Lang et al., 2009). It is the sum of how we relate to food, 'where and how we shop, our tastes, the experience, how we get to and from the food point of contact, our conceptions of quality and normality, and our aspirations' (Lang, 2009: 323).

According to these uses, ‘food culture’ concerns shared meanings and practices, as well as phenomena that might be regarded as combining elements of both, such as tastes and knowledge. In addition, however, these definitions encompass factors that influence such phenomena, including their history and structural determinants. In effect, ‘food culture’ is used both to describe practices and meanings, and to explain them. The kind of explanation that a focus on meaning can provide is less a ‘mechanical’ approach to demonstrating the correlations between different variables, and more a characterisation and questioning of how the variables are defined and identified (Murcott, 1995: 730).

Food culture in this broader sense is therefore not only about what is eaten and how, but also about the motivations, institutions and meanings that surround food (Blay-Palmer, 2008). For example, Jacobsen (2008) describes how ‘food culture’ stretches from the eating experience and variations of taste and flavour, to catering practices in public institutions such as hospitals (Jacobsen, 2008). Counihan and Esterik (2008) describe the role of public institutions and educational programmes in Italian food culture, deliberately facilitating and perpetuating a culture that respects and endorses slow food over fast food. Private sector institutions and commercial influences are also relevant, for instance with the emergence of time-poor convenience food culture associated with the promotion of ready-meals and processed food through advertising, and their increased availability in supermarkets (Hattersley and Dixon, 2009). In a study of Japanese cuisine, Ashkenazi and Jacob (2000) describe how food culture is influenced at both a micro level, by shops, families and the media, and at a macro level by three kinds of institutions: home, school and public eating places or restaurants. Belasco (2008: 7) considers that people sort through the personal, social, and global factors involved in eating through a rough negotiation between the ‘dictates of identity and convenience, with somewhat lesser guidance from the considerations of responsibility’. Sundbo and Darmer (2008: 13-14; also Jarvenpa, 2008) describe how the meaning of food culture has changed from the more neutral concept of ‘eating habits’, to a more politicised notion of nutrition, health and the food economy in a globalised world. Overall, it is clear that ‘food culture’ concerns not only the consumption of food, but also its production and governance.

Some have judged the domain of ‘food culture’ to be relatively stable and, because of its central role in many basic social rituals and situations, to change slowly (Mennell et al., 1992). Fieldhouse (1996) describes culture in relation to food as a learned experience – since it not biologically determined it can be modified or unlearned. He suggests that culture is a group phenomenon and is transmitted from one generation to the next. He argues that ‘change occurs because of ecological or economic changes leading to altered availability, or innovation of foods and diffusion or borrowing of food habits from others’. He suggests that people are generally are unconscious of their culture, which is internalised and as such becomes an inseparable part of their identity.

### 3.2 Analytical framework

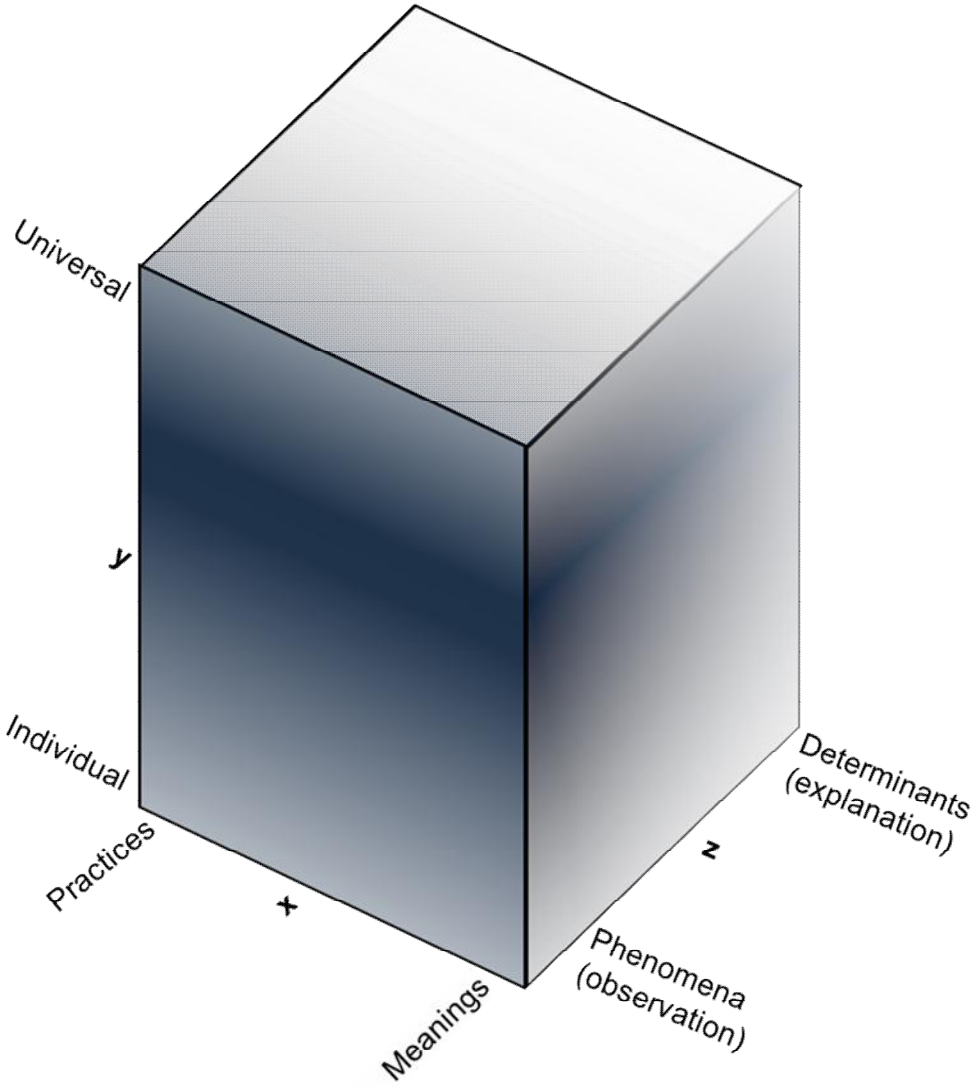
The term food 'culture' is used in diverse ways within policy and the academic literature pertaining to food. We suggest that a simple working definition which can accommodate this range of uses is that 'food culture' refers to '**shared practices and meanings relating to food**'.

Figure 3.1 (overleaf) illustrates the conceptual space covered by this definition. The x-axis shows the range of phenomena covered, including practices and meanings, as well as tastes, attitudes, aspirations, knowledge and other features that combine elements of practice and meaning or are broadly synonymous with either.

The y-axis shows how those phenomena are shared, in the sense of their incidence or distribution among groups of people. The shading illustrates that 'food culture' is used to describe practices or meanings that are neither completely idiosyncratic nor completely universal. They are cultural practices or meanings inasmuch as they are shared by a defined group of people.

The z-axis captures how 'food culture' is used not only to describe phenomena but also to explain them. The term refers not only to how practices and meanings are shared in the sense of their distribution or incidence, but also to the mechanisms by which they are reproduced. Thus, the cultural practices and meanings shared among a group play a part in defining and perpetuating that group. The shading along this axis illustrates that all uses of the term 'culture' encompass potentially observable phenomena but only broader definitions, such as those used in anthropology, sociology and policy studies, treat inquiry into the factors that influence those phenomena as integral to a cultural analysis.

Figure 3.1 The conceptual space of ‘food culture’




For this review, we sought to filter the research that lies within this conceptual space to focus on that which was most directly relevant to the project’s purpose, namely to explore how food cultures **influence diet** and to provide pointers for **food and health policy** development.

- First, we decided to include research on practices and meanings associated not only with food consumption, but also with food production and food policy. Consumption, production and policy provide the headings for the three review chapters that follow.

- Second, since diet is a direct outcome of food consumption practices, we chose those as the starting point for the review.

- Third, as the purpose concerns the influence of cultural factors on diet and health, we considered food consumption practices to be relevant to the purpose of this project if they influence diet in ways that could be expected to have implications for health. We treated other cultural aspects of food consumption, production and policy as relevant inasmuch as they were identified within the literature as direct or indirect influences on those food consumption practices. For example, the lobbying practices and related norms of food producers may influence food policy, which in turn may influence food consumption practices, diet and health.

Thus, section 4 of this report focuses on cultures of food consumption. We consider 11 diet-related practices that emerged from the literature and from interviews as potentially relevant to health (Table 3.1). For each, we present evidence of their impact on health, their incidence and the factors that influence them. These wider influences include meanings, norms, and aspects of the socio-economic and physical environment.

Table 3.1 Food-related consumption practices relevant to health

| Section | Consumption practice |
|---|---|
| 4.2 | Consuming convenience and fast food |
| 4.3 | Meal timing |
| 4.4 | Eating breakfast |
| 4.5 | Snacking |
| 4.6 | Eating fruit and vegetables |
| 4.7 | Eating out of the home |
| 4.8 | Home cooking |
| 4.9 | Shopping |
| 4.10 | Weight management |
| 4.11 | Drinking alcohol |
| 4.12 | Breastfeeding and weaning |

Section 5 focuses on production. Since the focus of this study is on diet we do not provide an equivalent discussion of production practices relating to food, nor an overview of all respects in which the productive economy in general influences the food consumption practices discussed in section 4. Instead, to illustrate the key concepts that (a) there is a cultural dimension to food production and (b) the economy including food production influences food consumption, we briefly explore three key ways in which food production influences food consumption practices:

- Influencing the availability of food
- Contributing to wider socio-economic trends such as industrialisation and urbanisation
- Indirectly by influencing policy.

Similarly, in section 6, we consider policy as an influence on consumption practices. We begin by identifying areas of policy that bear on the influences set out in section 4. These extend beyond health intervention, including other areas that affect the socio-economic and physical environment. We then specifically consider food and health policy, reviewing the sensitivity to culture of Scottish and UK policies from the past 20 years (section 2.5). We assess each of the policies that we review against the ten indicators detailed in Table 3.2 (overleaf), which we derived from the framework set out above through discussion within the project team. These indicators recognise that policy documents could be sensitive to relevant aspects of culture even if they do not use the word 'culture'.

So the ensuing chapters are a selective review of research relating to food and culture, filtered to identify the material most relevant to the project's purpose. One effect of this applying these filters is to bring to the fore work within this field that complements the style of explanation and evidence – the epistemological approach – associated with food and health policy-making. Yet, as described in section 3.1, there are also respects in which a cultural approach questions efforts to identify the 'influences on food choice' (Murcott, 1995: 729). The implications of this issue are explored in the conclusion (section 7).

Table 3.2 Indicators of sensitivity to ‘food culture’ in policy documents examined

| Indicator | Detail |
|---|---|
| Explicit mentions of culture | Does the document refer specifically culture? How is the term used or defined? |
| Interventions to influence any of the 11 consumption practices outlined above | Does the document seek to influence specific practices relevant to diet and health, or is it focused more loosely on ‘food choice’? Where it mentions specific practices, is the focus on influencing the practices as such or on influencing the foods the foods they involve (e.g. is an initiative concerning school dining focused on how people eat or on what they eat?). |
| Specific attention to the mechanisms by which practices and meanings are shared | Does the document seek to explain how practices and meanings that are relevant to health, presenting opportunities or barriers to health improvement, are common to specific populations? |
| Measures to tailor interventions to the practices or meanings of specific groups | Does the document not simply target effort at specific populations, but adapt interventions in light of practices or meanings known to be shared within those groups? |
| Quality of evidence to support such interventions | If the document provides any evidence to support such interventions, is it based on unpublished research, published material or peer reviewed studies? |
| Whether support is provided long-term | Inasmuch as the document includes such interventions, does it commit to supporting them long-term, given that the literature on food culture emphasises how cultures change slowly? |
| Measures to influence features of the socio-economic and physical environment that enable or constrain relevant practices | Does the document discuss interventions to shape wider environmental factors that directly or indirectly influence practices related to food consumption? If so, is the relevance to consumption practices specific (e.g. to influence breastfeeding) or generic (e.g. to influence food availability and therefore ‘food choice’)? |
| Expectations of the food industry | What relationship does the document assume or propose between the food industry (food production), consumers and government? |
| Reflection on own institutional culture | Does the document reflect on practices and meanings within the institutions responsible for policy design and implementation (e.g. by explicitly analysing or challenging previous practice)? |

# 4. Cultures of consumption

Consumption practices are the aspects of food culture most immediately relevant to the purpose of this project. This section reviews evidence relating to 11 types of food consumption practice considering, for each in turn: the relevance to health; the incidence of different variants of that practice within Scotland and the other case study countries; and influences on that practice. The section begins with a brief overview of diets and related health data in the four countries.

## 4.1 Overview of diets in the case study countries

The Scottish diet contributes to one in five men dying of cardiovascular disease before the age of 75 (Leishman and Dalziel, 2003). The European Prospective Investigation into Cancer and Nutrition (EPIC) project (EPIC, 2010), characterised the United Kingdom as whole as having a diet with higher than average (among EPIC countries) consumption of a certain beverages (tea, soft drinks, coffee and alcohol among women), dairy products, sauces, cakes, potatoes and sugars (Slimani et al., 2002).

In Finland, where the majority of the population lived in the countryside until rapid urbanisation from the 1960s onwards (Prättälä, 2003), the diet is high in potatoes, bread and berries, fish and dairy products – among the highest in the world with 174.5 kg per person per year of milk products consumed compared to 109.6 kg in the United Kingdom (IDF, 2004) . Fruit and vegetable intake rose sharply between 1970 and 1980, continued to rise steadily until 2000 and is now maintained. Significant change in intakes of saturated fats, salt, fruits and vegetables were attained over a twenty-year period by the population based North Karelia project (Puska, 2009).

The Greek diet is characterised by high levels of fruit, vegetable and legume consumption, with higher levels of vegetable consumption than many other European countries including Italy and Spain. According to the EPIC study, meat sugar products, cakes, potatoes, butter, coffee and tea, are consumed at lower than average European levels (Slimani et al., 2002).

France exhibits strong regional variations in diet. For example butter consumption is considerably higher in the North-west (290% higher than the EPIC mean) and North-east (243% higher) regions than the South (207%) and South coast (167%) (Slimani et al., 2002). Alcohol consumption throughout France is between 25% and 30% higher than the EPIC mean, with the exception of the South of France. Fruit consumption is slightly lower than the EPIC mean but vegetable consumption is between 113% and 132% higher than the EPIC mean in all parts of France (Slimani et al., 2002). Research has suggested that smaller portion sizes and more time spent eating may contribute to lower rates of obesity among people in France than are prevalent in the United States (Rozin et al., 2003). Further cross-cultural studies of eating and well-being have shown that people in France tend to experience less stress and more pleasure in

relation to eating compared with people in America (in a sample of students and adults), give more importance to eating as a feature of life, and have a diet which tends to contain more micro-variety than American meals (Rozin, 2005: S109).

## 4.2 Consuming convenience and fast food

We defined convenience foods as meals eaten in the home that require minimal preparation, for example ready meals or takeaway food. Evidence relating to 'fast food', depending whether or not that food would be eaten outside of the home, was considered in this section or in section 4.7 (eating out of the home). The research we reviewed used various definitions of these terms and, in some cases, left them unspecified.

### 4.2.1 Health impact

Regular consumers of fast foods are likely to consume excess energy which will contribute to their weight gain and obesity: in their review of determinants of weight gain, overweight and obesity, the World Cancer Research Fund (2007) identified fast food consumption (in addition to high intakes of sugary drinks and energy dense foods) as a key contributor to weight gain. There has been little analysis of the specific causal mechanism, or aetiology, which links fast food consumption to weight gain. One study suggests that the high energy density (defined as the energy content per unit weight of foods) of many fast foods 'challenges our appetite control systems with conditions for which they were never designed' (Prentice and Jebb, 2003: 191).

Salt is also an issue for convenience and fast foods. High salt content has been shown to increase blood pressure, incidence of strokes, fluid retention, and to cause calcium deficiency (Gilbert and Heiser, 2005). A UK study estimated that 76% of daily salt intake derived from processed food consumption, which included ready meals, fast foods, bread and breakfast cereals (Gilbert and Heiser, 2005).

Eating convenience and fast foods has implications for the healthiness of rest of a person's diet. A US study showed that increased purchases of fast food by families were associated not only with higher consumption of salty snack foods but a decreased intake of vegetable servings among adults (Boutelle et al., 2007). Studies in the USA and other countries have shown how fast food consumers reported lower intakes of vegetables, fruits and legumes and had a less favourable nutrient intake profiles than non-fast food consumers (Paeratakul et al., 2003; French et al., 2000; Schröder et al., 2007). Data from a Taylor Nelson Sofres (TNS) Family Food Panel shows that fresh vegetables are considerably less likely to form part of a meal if the meal is based around convenience foods (Ofcom, 2004). For example, fresh potatoes, fresh vegetables and salad are more likely to be eaten with fresh fish rather than fish fingers.

### 4.2.2 Incidence

A number of books describing the history of fast food have pointed out that it is neither a recent nor exclusively Western phenomenon (Ehrman et al., 1999; Belasco, 2008). Londoners in the 19th century could choose from a variety of quick meals from street stands and takeaway shops. Earlier still, the inns of the middle ages provided quickly available food across many parts of Europe. The famous noodle shops in the streets of Japan's cities have been around since the 17th century (Pilcher, 2006). Some suggest that the very idea of convenience is inextricably linked to urbanisation and the time pressures created by cities (Wilk, 2006).

One study showed that 6% more Chinese takeaways and 3.6% more Indian takeaways were eaten in Scotland than in the rest of Great Britain (Blades, 2004). Families in Scotland eat out or eat takeaways 9.5% more often than families in the rest of Great Britain (ibid.). A report on childhood obesity showed that in the UK 52% of children aged 8 to 15 years eat a takeaway once a week or more, while 42% of children eat at a restaurant once a week or more (Ofcom, 2004).

Across the UK, demand for convenience food is considerably higher than anywhere else in Europe. Eighty percent of households in the UK own a microwave, compared to only 27% in Italy (Food & Drink Europe, 2003). Ready meals are consumed by 77% of the population of Britain, with the figure dropping to 71% in Germany, 68% in France, 46% in Spain and only 35% in Italy (Food & Drink Europe, 2003). Takeaway meal consumption is higher in the UK than the other case study countries (Table 4.1). One study found that more than three times as many people in England (23.9%) purchased a take-away meal at least once a week than people in France (7.0%) (Pettinger et al., 2006). A larger percentage of the French went out for a sit-down meal and cooked a meal from raw ingredients at least once a week than the English (Pettinger et al., 2006).

Table 4.1 Takeaway meal consumption in the case study countries (no data for Greece) (ACNielsen, 2004)

| | United Kingdom | Finland | France |
|---|---|---|---|
| Consumers who have never eaten a take away meal (%) | 9.0 | 9.0 | 23.0 |
| Consumers who have eaten a take away meal once a month or less (%) | 42.0 | 55.0 | 44.0 |
| Consumers who have eaten a take away meal more than twice a month (%) | 48.0 | 35.0 | 34.0 |

### 4.2.3 Influences

The factors found in the literature to influence people's consumption of convenience food include the relative costs of different foods, class and income, time pressures, attitudes to healthy eating, and the built environment.

The Going Hungry report shows that while the cost in the UK of an unhealthy food shopping basket went up 33% in 2003 compared to 1988, the cost of a healthy basket went up 49% (NCH, 2004). The Food Commission established that the average cost of healthy basket of food was £25.69 in 2004, while an unhealthy basket was £22.29. Regional variations were considerable with the highest costs in South West England (£31.59 for the healthy and £29.84 for the unhealthy baskets) and among the lowest costs in Scotland (£25.12 for the healthy and £21.45 for the unhealthy basket).

There are also social class and income-related variations in consumption practices. The Growing up in Scotland (GUS) report (Scottish Government, 2009d) showed that while 41% of children from low-income households had eaten takeaway food in the last week, either from a fish and chip shop or in the form of an Indian or Chinese meal, only 23% of children in more affluent areas had eaten takeaway in the same period. In another study, however, only 17.4% of the least affluent reported purchasing ready-prepared main meals in the previous week compared to 28.5% of the most affluent (Caraher et al., 1999). This study emphasises that the affluent do not always prepare their meals from basic ingredients while poorer households do not eat only take-away foods.

The GUS report suggests that the higher rates of takeaway meal consumption among lower-income households is surprising given the relatively high cost of takeaway meals and the importance given to the price of food in shopping decisions. This contradiction is borne out through data that show that of children whose mothers described the importance of food prices in deciding what to eat, 32% had eaten a takeaway meal in the last week. The GUS report suggests that low-income households rely on takeaways and convenience food because of an obligation they feel to provide a family meal (Scottish Government, 2009d).

A number of socioeconomic factors influence beliefs and behaviours related to food choice. Notions of 'providing a family meal' play an important role but other factors, whether economic or related to time availability or cooking knowledge, can put pressure on these deeply held beliefs. One survey found that 55% of UK adults, and 70% of those with families, regularly felt under time pressure. The study also found a correlation between people who felt they were under time pressure and the consumption of takeaway foods. Across the UK there has been a 27% increase in home-delivered meals between 2002 and 2005, as more people feel under time pressure (Cabinet Office, 2008).

Despite time pressures and various other intersecting socio-cultural factors, evidence shows that while people know that fried foods are not good for them,

they also know that there are plenty of people who eat unhealthily and still live to 100. This is what Davison et al. (1992: 982) refer to as 'the fat Uncle Norman figure', mentioned by many of their respondents during his research, who lives to a healthy old age despite heavily drinking and smoking. Similarly with teenagers, one study emphasised that although they associate fast food with weight gain and skin problems, they enjoyed eating it because it represented freedom from parental restraint (Chapman and Maclean, 1993).

Another study points to how environmental factors play a part in changing consumption practices. The eating habits of Greek students who moved to Glasgow showed significant decreases in frequency of fresh fruit, vegetable, fish, legume and meat consumption, and increases in eating convenience foods, including biscuits, snacks, fizzy drinks, alcohol, mayonnaise, and dips and sauces (Papadaki and Scott, 2002). The main perceived barriers to maintaining their traditional eating practices were the price of foods, greater availability of convenience food as well as the limited variety of customary foods in Glasgow, compared with Greece.

Environmental and socio-economic factors may overlap. A number of studies have shown an association between the presence of fast food outlets and economic deprivation in Scotland and England (Cummins, 2007; Macdonald et al., 2007). However, this association has been contradicted by a study that showed that fast food outlet density was actually higher in a more affluent area of Glasgow with fewer outlets in more deprived areas (Macintyre et al., 2005). Other studies have shown that while the availability of fast food is associated with economic deprivation, this is equally the case with supermarkets, where a greater diversity of foods is available (Pearce et al., 2007).

## 4.3 Meal timing

The concept of a 'meal' has been defined in a number of ways including by duration, time interval, energy content (above a certain amount of kcal of energy), social interaction (more than one person), and food quality (more than one food item) (Oltersdorf et al., 1999). World-wide, there are considerable variations in meal and eating patterns. A cooked meal in the evening is common to the UK, Finland and the USA for example, whereas a cooked meal at lunch time is more common in the Mediterranean region, Germany and Switzerland (Oltersdorf et al., 1999).

### 4.3.1 Health impact

Intuitively, one might imagine that frequent eating is associated with obesity. However, a study among elderly Greeks showed that those who had two cooked meals daily or more episodes of eating daily had lower BMI and lower total body fat. This is largely attributed to their snacks being fruit, bread and crisp bread (Wahlqvist et al., 1999).

A survey among children in France showed that lean and medium-weight children tended to have a higher percentage of their total daily energy ingested at breakfast, while overweight and obese children tended to get a higher proportion of their daily energy from evening meals (Bellisle et al., 1988). Other studies have reported similar findings. A US study of 867 adults concluded that people who ate more in the morning generally ate less later in the day while people who ate late in the day tended to eat more, increasing the likelihood of the development of obesity (de Castro, 2004; Bellisle, 2004).

A study of meal patterns in Finland showed that people who followed a conventional meal pattern tended to have a higher intake of cereals, potatoes, rice and pasta and a lower intake of cheese, fruits, berries, snacks, coffee and tea, although nutritionally there were few differences between the two groups (Roos and Prättälä, 1997).

#### 4.3.2 Incidence and influences

Increased availability of convenience foods and the changing structure of people's daily lives have fundamentally shifted our eating habits and meal patterns. Fischler (1988) argues that eating rituals and practices becoming less traditionally structured has created a 'gastroanomy' (Fischler, 1988).

People in the UK are less bound than in previous decades to particular meal times. In 1975, we spent an average of roughly 57 minutes preparing food at home each day and 71 minutes eating at home (Future Foundation, 2005). This has decreased to only 41 minutes preparing food and 56 minutes eating at home in the 2000. In 1975 we spent 11 minutes each day eating out, compared to 25 minutes in 2000 (Cheung et al., 2007).

We found little data comparing meal timing in different countries. One study found that people in France took more time with their meals at McDonald's restaurants than diners in the US, with respective mean eating times of 22 and 13 minutes (Rozin, 2005). Nearly two-thirds of respondents in France reported eating together as a household every day, compared to only half of respondents in England (Pettinger et al., 2006). Younger adults in both countries were less likely to eat as a household. People in France ate breakfast (84.9% ate daily) and lunch (91.3% ate daily) more frequently than the English (71.3% and 77.5% respectively).

The influences on meal timing are discussed more fully in the sections below on 'eating breakfast' (4.4) and 'snacking' (4.5).

### 4.4 Eating breakfast

#### 4.4.1 Health impact

A study in Scotland concluded that breakfast, particularly one containing fortified breakfast cereals, helped to reduce the proportion of energy from fat and increase micronutrient intake in young children (Ruxton et al., 1996). Studies

have also shown that breakfast consumption is associated with lower levels of cholesterol (Ruxton and Kirk, 1997). A review of 47 studies, which examined the impacts and effects of breakfast on nutritional intake, body weight and academic performance in the United States and Europe, supports the claim that breakfast is the most important meal of the day (Rampersaud et al., 2005). Evidence from these studies showed that children eating breakfast regularly tended to have better nutritional profiles than those regularly skipping breakfast. Breakfast eaters were also less likely to be overweight and performed better at school (Pollitt and Mathews, 1998; Kennedy and Davis, 1998; Meyers et al., 1989; Murphy et al., 1998). Breakfast skipping, and indeed meal skipping in general, tended to be higher among girls and children from lower socioeconomic backgrounds, and was associated with other lifestyle factors such as smoking, low rates of physical activity and dieting or weight-watching (Rampersaud et al., 2005).

### 4.4.2 Incidence and influences

Comparative research on breakfast consumption among 11 to 15 year olds, finds rates lower in Scotland than in France and Finland, but higher than in Greece (Table 4.2). For all groups in this study besides 15 year old boys, breakfast consumption is higher in Scotland than in England.

Table 4.2 11 to 15 year olds who eat breakfast every school day (%, WHO, 2004)

| | Scotland | England | Finland | France | Greece |
|---|---|---|---|---|---|
| 15 year olds (girls) | 41.1 | 39.7 | 54.8 | 57.4 | 30.8 |
| 15 year olds (boys) | 61.2 | 62.4 | 66.4 | 72.9 | 42.2 |
| 13 year olds (girls) | 48.7 | 46.2 | 57.1 | 65.5 | 41.0 |
| 13 year olds (boys) | 64.3 | 62.0 | 72.6 | 76.5 | 53.4 |
| 11 year olds (girls) | 65.3 | 60.1 | 75.2 | 75.0 | 47.0 |
| 11 year olds (boys) | 74.5 | 66.1 | 78.7 | 80.8 | 59.0 |

In Scotland, programmes such as ‘breakfast clubs’, which aim to increase the number of children eating breakfast as well as improve punctuality and educational performance, have had some success. Despite a drop in percentage of girls eating breakfast – likely linked to the increased percentage of girls dieting with almost 60% in 1998 stated they had been on a diet – there had been a significant increase in breakfast eating in 1998 compared to the period 1990 to 1998 (Todd et al., 2002: iv).

A Finnish study showed that children of breakfast-skipping parents were more likely to have high BMI and low levels of physical activity than the children of regular breakfast eaters (Keski-Rahkonen et al., 2003). Additionally, rates of daily breakfast-eating were higher among adult women than adolescent girls (71% and 68.4% respectively), while rates were lower among adult men than adolescent boys (59.8% and 73.5%) (Keski-Rahkonen et al., 2003). A number of Scandinavian studies have also linked breakfast skipping with poor dietary

intake, and low socio-economic status and poverty (Nordlund and Jacobson, 1999; Höglund et al., 1998; Keski-Rahkonen et al., 2004).

In France, studies have shown similar patterns of breakfast skipping, as well as meal skipping more generally (Roux et al., 2000). Older teenagers were shown to have a less adequate breakfast intake than younger teenagers due to less regular breakfast eating habits (Michaud et al., 1990). Forty-five percent of older boys (16 to 19 years) were characterised as having 'inadequate' breakfasts compared to 32.1% of younger boys (13 to 15 years), with a similar, but higher, distribution among girls (62% of 16 to 19 year olds, and 47.2% of 13 to 15 year olds).

When asked why they did not eat breakfast, 46% of Greek adolescents stated they did not have time in the morning, 42% mentioned lack of hunger, 7% that they were following a particular diet and 5% that breakfast was not ready in time (Gikas et al., 2003). Breakfast eaters were associated with higher rates of daily fruit and vegetable consumption as well as higher intakes of legumes and fish than breakfast skippers (ibid.).Greece has one of the lowest rates of breakfast eating in Europe – the lowest among Scotland and the case study countries. The same study reported that 29.4% of high school students skipped breakfast and that, of those who ate it, 70.6% had only consumed milk (most of these had consumed processed chocolate milk) (Gikas et al., 2003).

## 4.5 Snacking

### 4.5.1 Health impact

Snacking was defined in diverse ways within the literature we reviewed. The key element of most definitions was that snacking involved 'taking food ad hoc and informally at a time and place convenient to the individual' and unrelated to the other members of the household (Booth, 1990: 2).

Snacking is seen as having potentially positive or negative health impacts, depending what is eaten. Several studies have linked 'grazing' throughout the day rather than eating three proper meals to the development of obesity (Booth, 1988; Forslund et al., 2005). Less healthy snack foods – confectionery, salty snacks and savoury sandwiches – are much more likely to be linked to the consumption of less healthy drinks: carbonates rather than milk or pure fruit juice (Ofcom, 2004). However, frequent snacking is in some studies associated with lower Body mass Index figures (Wahlqvist et al., 1999).

### 4.5.2 Incidence

Snacking practices vary considerably between countries, genders, socioeconomic groups and rural or urban environments. A WHO report found that rates of snacking and consuming soft drinks among 11-15 year olds were considerably higher in Scotland than England, Wales and most European countries (Table 4.3). In another survey, over half (58.8%) of the respondents in England reported eating fried snacks at least once a week compared with 6% of

those in France (Pettinger et al., 2006). Additionally almost two-thirds of respondents in England reported eating cakes and biscuits at least once a week, compared with just over half of those in France. Dubuisson et al. (2010) find a trend towards 'snacking and convenience' among younger French people.

Table 4.3 Daily soft drink and sweet consumption among 11 to 15 year olds in the case study countries (%) (WHO, 2004)

| | | Scotland | England | Finland | France | Greece |
|---|---|---|---|---|---|---|
| Soft drinks | 15 year olds (girls) | 45.2 | 36.0 | 5.1 | 25.0 | 13.8 |
| | 15 year olds (boys) | 53.9 | 45.3 | 11.5 | 34.1 | 24.6 |
| | 13 year olds (girls) | 44.9 | 35.4 | 5.9 | 26.8 | 15.8 |
| | 13 year olds (boys) | 51.6 | 40.1 | 11.3 | 22.7 | 26.3 |
| | 11 year olds (girls) | 40.4 | 37.8 | 4.6 | 24.9 | 11.5 |
| | 11 year olds (boys) | 47.3 | 36.4 | 7.5 | 30.4 | 18.4 |
| Sweets | 15 year olds (girls) | 38.8 | 32.5 | 9.0 | 26.0 | 18.6 |
| | 15 year olds (boys) | 47.5 | 32.7 | 9.2 | 32.1 | 17.0 |
| | 13 year olds (girls) | 48.4 | 31.2 | 10.1 | 28.8 | 18.1 |
| | 13 year olds (boys) | 48.9 | 32.1 | 11.3 | 32.0 | 17.4 |
| | 11 year olds (girls) | 41.6 | 30.8 | 6.8 | 25.4 | 9.6 |
| | 11 year olds (boys) | 45.8 | 30.2 | 7.3 | 26.5 | 12.2 |

According to the FSA's (2007) Low Income Diet and Nutrition Survey, 43% of respondents in Scotland had snacked between meals the day before. The most popular food type was biscuits and cakes (35%), followed by fresh fruit (34%), savoury snacks (29%) and chocolate bars (16%). Fruit consumption was higher (40%) and all other figures lower in the UK as a whole. The most popular snack category in Scotland was biscuits, cakes and bakery products, while fresh fruit was the most popular in England. In Scotland, those living in rural areas (37%) were less likely to snack than those in both semi-rural (48%) and urban areas (48%) (FSA, 2007).

In a recent survey of sugar intake in among children in Scotland (Sheehy et al., 2008) the percentage of food energy from Non Milk Extrinsic Sugar (NMES), which are 'added sugars' and those in fruit juices and honey, was 17.4%. This was considerably higher than the Scottish Dietary Target for children (<10% of total energy). Total sugar intake did not differ significantly by socio-economic category but in the children from more deprived backgrounds, NMES contributed a higher proportion of food energy. However, even in the most affluent groups the intake of NMES as a percentage food energy was high at 16.3%. Sugary drinks were the major contributors to NMES (17%), along with confectionery (12%) and biscuits, cakes and pastries (12%)

#### 4.5.3 Influences

We found evidence that rates and types of snacking are influenced by perceptions of convenience. A study of the perception of fruit as a snack food among women in Edinburgh showed that although all fruits were considered healthy and refreshing, some fruits were considered considerably more convenient (apples and bananas) than others (oranges and kiwis). Fundamental qualities of a snack were considered to be its ability to provide a quick energy boost between meals, and whether it is 'ready to consume' (Jack et al., 1997: 181).

Advertising is one influence on how people perceive foods. In the UK, around £500 million a year is spent on food advertising, a large proportion of which focuses on snack foods (Lang and Heasman, 2004). Advertising for foods high in fat, salt or sugar shown during television programming for children under 16 was banned in 2006 (Ofcom, 2006).

The International Association of Consumer Food Organizations argues that food marketing directed towards children puts their health at risk. They calculate that for every dollar spent by the World Health Organization trying to reduce the incidence of diseases associated with a Western diet, more than $500 is spent by the food industry promoting this same diet (IACFO, 2003). A 1996 survey of children's television in 13 countries found that food advertising accounted for more than half of all advertising broadcast and more than half of all food advertising was for confectionary, pre-sweetened breakfast, cereals and fast-food restaurants. Advertising of fruits and vegetables was very rare, and completely absent in eight countries (IACFO, 2003). Television advertising targeted at children has been found to increase food intake, increase weight and encourage unhealthy food choices (Halford et al., 2004).

Another potential influence on snacking is the relative prices of different foods. The relative price of 'other food products', a category including sugar, jam, honey, chocolate and confectionary, is lower in the UK than the other case study countries (Table 4.4).

Table 4.4 Relative price index for 'other food products' (index, EU27=100, 2008 figures) (Eurostat, 2009)

| United Kingdom | Finland | France | Greece |
|---|---|---|---|
| 94.4 | 117.2 | 98.5 | 118.8 |

### 4.6 Eating fruit and vegetables

#### 4.6.1 Health impact

Fruit and vegetable consumption plays an important role in reducing the incidence of cardiovascular diseases and a large number of cancers (Joffe and Robertson, 2001). A report by the UK Cabinet Office (2008) suggested that of

four different possible dietary changes, including reducing salt, sugar or fat intake, a 136g increase of daily fruit and vegetable intake could have the largest effect on reducing premature mortality.

The East Finland berry and vegetable project, launched in 1986 as part of the North Karelia Project, has contributed to increasing the availability and consumption of domestic berry and vegetable products with a significant positive impact on health (Kuusipalo et al., 1986; Pekka et al., 2002). Between 1972 and 1992, coronary heart disease in Finland declined by 55% among men and 68% among women (Pietinen et al., 1996).The three-fold increase in fruit and vegetable consumption over that period played an important role in the improved Finnish health profile together with a number of other factors including a reduction in dairy fat and salt intake and increased consumption of fish.

### 4.6.2 Incidence

People in Scotland purchased the same amount of fruit as people in England during 2008 for domestic consumption, and roughly 9 kg less of vegetables (excluding potatoes) (DEFRA, 2010). We could find no recent comparable data on fruit and vegetable purchasing for the other case study countries. However, data on 'apparent consumption', which refers to the availability of fruit and vegetables, puts Greece and France at the top of the European scale, Finland fifth and the UK bottom out of 22 member states included in the comparison (Figure 4.1 overleaf)

Recent data from the Expenditure and Food Survey in Scotland shows that there have been small increases in fruit consumption in Scotland (Barton et al, 2010). In addition, analysis by area of residence suggested that fruit and vegetable intake was highest in remote (rural) areas compared with urban areas (although this difference was inconsistent over time and reduced after adjustment for deprivation). Analysis by socio-economic position suggested that those from poorer backgrounds consumed significantly less fruit and vegetables than those from least deprived areas (for both the 2001 to 2003 and 2004 to 2006 time periods) with intakes of 196 g/day and 304 g/day respectively for the period of 2004 to 2006.

Among children in Scotland, fruit and vegetable consumption was generally higher than in England and Wales, and very similar to the average for 37 countries detailed in a World Health Organization study (WHO, 2004). Among 11 year olds in Scotland, 45% of girls and 37% of boys ate fruit every day. In England the figure was considerably lower, with 30% of girls and 28% of boys (Table 4.5). Some of the highest levels of fruit consumption were found in Israel, Portugal, Malta and Poland, while vegetable consumption was highest in Belgium, Israel, Ukraine and France (WHO, 2004).

Figure 4.1 Gross human apparent consumption (availability for human consumption) of selected fruit and vegetables, average of latest data available (2003-2007) (kg per head) (reproduced from Martinez-Palou and Rohner-Thielen, 2008: 2) (1)

Table 4.5 Daily fruit and vegetable consumption among 11 and 15 years olds in the case study countries (%) (WHO, 2004)

| | | Scotland | England | Finland | France | Greece |
|---|---|---|---|---|---|---|
| Fruit | 15 year olds (girls) | 29.3 | 28.3 | 26.7 | 30.1 | 31.8 |
| | 15 year olds (boys) | 25.1 | 21.1 | 13.5 | 28.4 | 25.3 |
| | 11 year olds (girls) | 45.3 | 30.3 | 25.9 | 39.1 | 47.6 |
| | 11 year olds (boys) | 37.1 | 28.4 | 21.0 | 40.5 | 41.7 |
| Vegetables | 15 year olds (girls) | 30.4 | 32.4 | 26.3 | 40.5 | 22.3 |
| | 15 year olds (boys) | 29.5 | 25.6 | 21.5 | 35.8 | 13.3 |
| | 11 year olds (girls) | 39.5 | 29.2 | 27.5 | 51.8 | 25.6 |
| | 11 year olds (boys) | 29.0 | 25.6 | 21.0 | 45.8 | 21.8 |

### 4.6.3 Influences

Studies in Scotland and other countries of the UK point to the influence that perceptions of fruit and vegetables have on consumption, as well as socio-economic factors. Asked whether they believed that fruit was part of a healthy diet, 83% of children supported this statement (Seaman et al., 1997). However, of the same sample of children, only 47% said they ate at least one piece of fruit per day. Children perceived fruit to be an insufficiently filling snack to be eaten between meals.

A survey of healthy eating beliefs among parents found that while many mothers think they know what makes up a healthy diet, they find it difficult to make this attractive to their children. Their understanding often entails a wholesale rejection of certain food categories such as sugar, carbohydrates and dairy products, leading to a perception of healthy food as 'austere' and 'unattainable' (Ofcom, 2004: 10).

Perceptions of a healthy diet as austere and unpleasant are linked to the notion of a healthy diet as a remedy for obesity or health complications, rather than considering a healthy diet as an end in itself – a healthy diet for 'being healthy' (Stevenson et al., 2007: 431). One study in Scotland found that people perceived fruit and vegetables as 'boring', 'associated with slimming' and 'lacking in taste' (Anderson et al., 1994).

Advertising could influence these perceptions and related eating behaviour. Not only is considerably less money spent on media advertising of fruits and vegetables than other food categories but, between 1996 and 2000, the amount actually decreased from £8.6 million to £4.5 million. This compares with £35.3 million spent in the UK advertising crisps and snacks and £25.1 million spent advertising vitamin and mineral supplements (Pollard et al., 2002). A report by the National Consumer Council found that 54% of promotions in supermarkets were for foods high in fat and sugar with only 12.5% of promotions related to fruit and vegetables (Scottish Government, 2009d).

A large number of socioeconomic factors influence fruit and vegetable consumption practices. Evidence shows that low-income families in Scotland eat less fruit and vegetables than high-income families (Mainland, 1998), although whether this is due to price disincentives, cultural or social norms, or fruit and vegetable availability is hard to pin down. Across the UK, low-income households have extremely low levels of fruit and vegetable consumption. According to the Low Income Diet and Nutrition Survey study of people on low incomes, 36% of men and 28% of women had consumed no fruit in the last 24 hours, and 24% of men and 21% of women consumed less than one portion of fruit and vegetables in the same time period (FSA, 2007). Fewer than 10% of men and women met the government recommendation of at least 5 portions of fruit and vegetables per day.

Socioeconomic differences in consumption patterns are outlined in a recent report on the eating habits and nutrition of children (Scottish Government, 2009d). These include that 27% of children whose mothers have completed Higher grades at school ate four or more types of fruit per day, compared with only 12% of children whose mothers had no qualifications, as well as evidence that children in the lowest income group and living in deprived areas were much less likely to eat four or more types of fruit each day (Scottish Government, 2009d). The report shows that parents often feel unable to control the amount of unhealthy food their child eats, and that some of the most significant influences on what children eat at home related to cooking knowledge, time available to prepare meals, and things a child will or won't eat, with the cost of food playing a considerably less central role than might have been expected (Scottish Government, 2009d).

Inside schools there is evidence that the pressure of short break times, long queues and social pressures related to healthy foods being seen as 'uncool' have an impact on fruit and vegetable intake (Wills et al., 2005).

Within the UK there is considerable variation between ethnic groups, with Chinese men and women consuming almost 5 portions of fruit and vegetables daily, followed closely by Indian, Pakistani, Caribbean, Black African and Bangladeshi groups. The White population consumed the smallest number of daily fruit and vegetable portions (Cabinet Office, 2008).

We found little evidence concerning the influences on fruit and vegetable consumption in the other case study countries. Prices of fruit and vegetables relative to purchasing power do not appear to be associated with variations in apparent consumption. Table 4.6 shows that relative prices for fruit and vegetables are above they EU average in all the case study countries except Finland.

Table 4.6 Relative price index for fruit and vegetables (index, EU27=100, 2008 figures) (Eurostat, 2009)

| United Kingdom | Finland | France | Greece |
|---|---|---|---|
| 110.1 | 75.1 | 108.6 | 127.0 |

What evidence we found points to more complex influences. A study of Greek students in Glasgow, cited above, describes how the estimated daily consumption of fruit and vegetables decreased from 363g in Greece, to just 124g in Glasgow, almost a third of the original and even further below the World Health Organization and UK Department of Health target of 400g per day (Papadaki and Scott, 2002). In Greece, meanwhile, relatively high vegetable consumption may in part explained by the tradition of olive oil, since many vegetables are cooked or served with olive oil which makes them more palatable (Trichopoulou, 2000).

## 4.7 Eating out of the home

### 4.7.1 Health-impacts

International studies have found a close association between obesity and eating outside the home (Bes-Rastrollo et al., 2006; Bowman and Vinyard, 2004; Paeratakul et al., 2003; Schlosser, 2001; Pereira et al., 2005). People who regularly eat out tend to consume a diet higher in total energy as well as higher salt, compared to those who eat out less (Nordlund and Jacobson, 1999; Höglund et al., 1998; Keski-Rahkonen et al., 2004). A US study reported that women who ate out a greater number of times per week tended to consume a poorer quality diet (Clemens et al., 1999) A study comparing European countries found that increased frequency of eating outside the home was linked to increased energy intake, and therefore to obesity (Orfanos et al., 2007).

Research in the UK has found more frequent eating out to result in adults obtaining a higher proportion of their energy from fat and protein than from carbohydrate (Kearney et al., 2001).The UK Expenditure and Food Survey estimated that around 250 kilocalories are consumed per person per day outside the home, of which 42.9% are derived from fat (DEFRA, 2008a). Behind these overall associations, where and how people eat outside of the home can make a difference to health, with particular concerns over the uptake of school meals among children.

### 4.7.2 Incidence

While eating for some is considered to be ‘quintessentially a domestic activity’ (Warde and Martens, 2000: 17), eating in public has a long history in the UK, beginning at least as far back fifteenth century England with the network of inns relied upon by traders, travellers and pilgrims. Dining out for pleasure, rather than as a result of being away from home, began in the eighteenth century with the gentleman’s club. In the nineteenth century, hotels increasingly sold food and the restaurant emerged first as an annex to the hotel and then as independent business altogether.

Among British adults, one study reported that 71% of all meals were consumed inside the home while 29% were consumed outside (Kearney et al., 2001). Consumers today spend less of their incomes on eating in their home than they did 40 years ago, yet have continued to spend roughly the same amount eating out (Cabinet Office, 2008). In the year 2000, an estimated 675 million restaurant meals were eaten in the UK, an increase of 13% since 1995 (Ofcom, 2004)

### 4.7.3 Influences

Besides the research on fast food (some of which is eaten out of the home) described in section 4.2, above, we discovered little evidence on the factors driving eating out of the home in the case study countries. However, we found research about what and how children eat when they are out of the home, at school.

In research carried out in the UK for Barnardo's (Ludvigsen and Sharma, 2004) primary and secondary school children were shown a photograph of either a healthy meal (rye bread with cottage cheese, tomato, milk, yoghurt and an apple) or an unhealthy meal (burger, chips, soft drink, crisps and popcorn) and asked to imagine the sorts of girls and boys who would eat these foods. The groups of children, who found it hard to imagine anyone eating the healthy meal, described the healthy-food eaters as 'posh' 'goody-goody', skinny or thin girls. Others thought it might be food for someone on a diet (Ludvigsen and Sharma, 2004: 21-22). The unhealthy meal was imagined to be eaten by a 'burger boy': chubby, fat or overweight; a boy with few hobbies who would spend any spare time eating sweets and popcorn (Ludvigsen and Sharma, 2004: 19).

Research on children's eating behaviour in schools shows that they dislike queuing for food, having little time to eat and be with their friends, and the lack of choice on the menus (Wills, 2005). Many children perceive their ability to purchase food outside the school – usually food considered unhealthy – as a means of allowing them to make their own decisions (Wills, 2010). Nevertheless, recent data (Scottish Government, 2010b) has reported that 46.1% of children in Scotland take school meals, including 81.5% of children eligible for free school meals. In primary schools, 50.4% of pupils present on the day of survey took a meal, which is the highest rate recorded for 10 years.

## 4.8 Home cooking

### 4.8.1 Health impact

The Department of Health outlined a likely relationship between cooking skills and healthy eating in Our Healthier Nation: A Contract for Health (1998), yet there is little conclusive evidence of a causal link between cooking skills and health (Caraher et al., 1999). Caraher et al. (1999: 605) suggest that poor cooking skills 'could be a barrier to widening food choice' and 'particularly confidence to use them [skills], could be a psycho-social factor in people's general health outlook and behaviour'. Benson and Finlay (1999) consider that normalising cooking as a part of everyday life could offer more opportunities for health promotion.

### 4.8.2 Incidence

TNS data reports that 13% of all meals in Scotland were made from scratch, compared to 11% in the UK as a whole (Food & Health Alliance, 2009). This is an increase of 4% of meals cooked from home in the UK in 2008 from the previous year, and almost double that with 8% in Scotland, potentially influenced by the recession. However, what people count as home cooking varies. In a study of the perceptions and understandings underpinning dietary practices in eastern Scotland, almost all interviewees described 'home-made' meals as prepared and served at home. However, the descriptions of meals revealed that only a minority of households actually prepared their meals from basic ingredients with a heavy reliance on ready-made foods such as bottled sauces (Backett-Milburn et al., 2006).

A comparative study of England and France shows that two-thirds of respondents in France cooked a meal from raw ingredients daily, compared to less than a quarter of those in England (Pettinger et al., 2006). This corresponded with data showing that people in France were more willing to set aside time for cooking and valued it more than the English. Among both groups, the numbers of respondents who cooked daily from raw ingredients increased with age.

In Finland, the number of daily cooked meals has declined during the last century, as in other western countries. The main factors which have promoted meal pattern changes have been urbanisation, industrialisation and the increased availability of convenience food, which have all given rise to increased consumption of snacks and a decrease in 'proper meals' (Roos and Prättälä, 1997: 11)

### 4.8.3 Influences

Notwithstanding that affluent people do not always prepare their meals from basic ingredients (section 4.2.3), income and class are highlighted in the literature as influences on how much people cook at home. The National Consumer Council (2003) reported that although respondents with low incomes believed pre-prepared foods were more expensive and less healthy, they were either too tired or unable to cook their own meals (Caraher et al., 2004). One study reported that mothers often felt they didn't have time to cook something properly, felt reluctant about making the effort to cook, and often felt that cooking was hard work (Ofcom, 2004).This same study reported that only 20% of parents and 21% of children were enthusiastic about cooking, 16% of parents actually disliked it and 43% of children said they disliked helping with the cooking.

There are significant gender differences in the frequency and confidence of cooking meals. In one report, 68% of women said they cooked every day, compared with only 18% of men. On average, women cooked on 5.8 days a week and men on only 2.5 days (Caraher et al., 1999).

A study among people in France on low incomes distinguished four groups: 38% preferred fresh foods and enjoyed cooking; 26% were uninterested in cooking; 23% preferred to use ready meals; and 13% looked for cheap and tinned food (Roux et al., 2000). Of the 38% who enjoyed cooking, 97% cooked for themselves because they found it cheaper than buying convenience food and because they associated home cooking with better tasting food, pleasure and conviviality. For the 26% of the sample who did not enjoy cooking, the main motivations were to prepare food quickly because of lack of time (Roux et al., 2000).

## 4.9 Shopping

### 4.9.1 Health impact

How people shop can affect what food and drink they buy and consume. An increasing proportion of the population uses supermarkets for their shopping. By promoting and offering discounts on certain food items, supermarkets can have a direct impact on the health of their customers. In the UK, alcohol, particularly wine and beer, is sold in similar ways to any other supermarket produce (Scottish Government, 2006). A study by the National Consumer Council found 17% more in-store promotions in 2007 than 2006, and 83% more than in 2005. Over half of all price promotions were for items high in fat or sugar and only 12% were for fruit and vegetables (Yates, 2008).

Supermarkets are able to exert their influence in a variety of geographical and socioeconomic contexts and promote an ‘eat more’ message which has a direct influence over people’s eating practices (Hawkes, 2008). Supermarkets have been criticised for contributing to the erosion of knowledge and practices related to home cooking (Hattersley and Dixon, 2009), as well as for promoting processed foods and contributing to nutritional confusion with ‘choice overload’ (Hattersley and Dixon, 2009: 192).

### 4.9.2 Incidence

The UK grocery retail market is concentrated in a small number of large companies: Tesco has 31% of the market, and the largest four retailers account for a combined 76% (DEFRA, 2010). Independent retailers comprise 2.5% of the market, with the difference made up by The Co-operative, Waitrose, Aldi and other small multiples. A 2003 study of elderly shoppers in Scotland showed that 61% of them used one of the main grocery shops, 33% used a co-operative, 5% used a discount shop and 1% another, with no respondents reporting they used any of the small independent shops for their main shopping (Hare, 2003).

In a comparative study, a larger proportion of respondents in England (89.9%) used a large supermarket at least once a week than those in France (74.5%), a trend that was repeated with smaller grocery shops (66.2% of the English and 52.1% of the French). It was the small specialist shops that the French used more frequently than the English – the French used bakers, butchers, fishmongers and so forth more frequently whereas the English tended to buy everything in one place (Pettinger, 2008).

There have been considerable changes to the proportion of income that families spend on food, and there are also significant variations between countries. In the United Kingdom the figure is estimated to be 8.3%, in France 13.6%, in Germany 10.9% and Japan 13.4%. In poorer countries around the world, the figures are much higher: 24% in Mexico, 48.4% in India, and 52.9% in the Philippines (Belasco, 2008).

Within the United Kingdom, England had the highest purchases of fruit and fish for household consumption between 2006 and 2008, while Scotland had the highest purchases of soft drinks and confectionary for household consumption. Wales had the highest purchases of alcoholic drinks, cheeses and vegetables (excluding potatoes), and Northern Ireland had the highest purchases of potatoes, meat, milk and soft drinks for consumption outside of the home (DEFRA, 2008a: vii)

### 4.9.3 Influences

Within Scotland, geography and class are reported to influence shopping patterns. The rural sector is larger than in other parts of the UK with 21% of the population (and growing) living in rural areas. Food prices in these parts of the country tend to be higher as a result of the concentration of retailing in urban areas (Scottish Government, 2009e; Dawson et al., 2008). On a smaller scale, the physical distribution of shops can have a serious impact on populations with limited mobility. It is estimated that 90% of elderly shoppers in Scotland who depend on a pension and live alone do not have access to a car (Leighton and Seaman, 2007).This limits their shopping choices and access to reasonably priced healthy food.

Meanwhile, lower-income groups spend a larger proportion of their total income on food than families with higher incomes. According to one report, the poorest households spend an average of £216 per week on all goods and services, 15% of which is spent on food and non-alcoholic drinks. The richest households spend an average of £890 per week of which only 7% is spent on food and non-alcoholic drinks (Cabinet Office 2008).

Do geography, low income and constraints on mobility combine limit the availability and affordability of healthy food in deprived areas? In Glasgow, one study found that large supermarkets tended to be located in deprived neighbourhoods rather than being out-of-town and inaccessible. Additionally these supermarkets were found to have slightly cheaper foodstuffs available in the poorer areas (Macintyre, 2007). This seems to dispute the notion of ‘food deserts’, a term coined by residents in a deprived urban housing scheme in west Scotland to describe the lack of access to healthy, reasonably priced food (Whitacre et al., 2009).

There is mixed evidence on ‘food deserts’. One study in the west of Scotland found that food was more expensive in deprived areas (Sooman et al., 1993). Other studies have shown that low-income areas have fewer chains and more large, independent stores and greengrocers per capita (White et al., 2004), as well as finding a greater variety of food stores in deprived areas compared to more affluent areas (Cummins and Macintyre, 1999).

However, differences in shopping are by no means determined only by economic geography. Shopping is conceived differently across populations: according to

one study, people in France included shopping as part of their leisure time and incorporated it with food preparation and eating, which they also spend more time on. People in England prioritised 'convenience' and preferred shopping 'under one roof' while the French preferred shopping in individual shops (Pettinger, 2008: 113).

## 4.10 Weight management

### 4.10.1 Health impact and incidence

We have defined weight management to mean taking deliberate measures to eat or otherwise behave in ways that affect your weight or body shape. These actions are not necessarily effective at changing weight or body shape, or improving health, and can be associated with eating disorders and other behaviours detrimental to health.

A World Health Organization study shows that many children across Europe are concerned with their body weight (Table 4.7). Levels of concern about weight and rates of dieting in Scotland are among the highest in Europe, and higher among girls at age 15 than for all the other case study countries (WHO, 2004).

Table 4.7 Dieting and dissatisfaction with body weight among 11 and 15 year olds in the case study countries (WHO, 2004)

| | Scotland | England | Finland | France | Greece |
|---|---|---|---|---|---|
| 15 year olds dissatisfied with their body weight (%)(girls) | 52.3 | 46.4 | 43.4 | 41.8 | 33.2 |
| 15 year olds dissatisfied with their body weight (%)(boys) | 20.6 | 24.4 | 19.8 | 20.6 | 24.0 |
| 11 year olds dissatisfied with their body weight (%)(girls) | 34 | 29.6 | 30.7 | 29.8 | 27.6 |
| 11 year olds dissatisfied with their body weight (%)(boys) | 22.5 | 24.6 | 23.2 | 21.6 | 20.6 |
| 15 year olds who are engaged in dieting (%)(girls) | 29.3 | 25 | 15.5 | 20.5 | 25.4 |
| 15 year olds who are engaged in dieting (%)(boys) | 7.8 | 9.3 | 3.7 | 6 | 10.3 |
| 11 year olds who are engaged in dieting (%)(girls) | 13.7 | 11 | 8 | 13.2 | 15 |
| 11 year olds who are engaged in dieting (%)(boys) | 11.2 | 8.3 | 6.9 | 7.1 | 9.1 |

### 4.10.2 Influences

The background to dieting and body dissatisfaction is the high percentage of obese adults and children in the UK. Obesity has trebled in 20 years with predictions that 40% of Britons will be obese by 2025 (60% by 2050), and 70% of

girls and 55% of boys either overweight or obese by 2050 (Cabinet Report, 2008).

However, of dieting and body dissatisfaction are far from simply determined by body shape or weight. A study of migrant and British-born Italians shows how different body perceptions can be in different sociocultural settings (Bush et al., 2001). British-born Italians were much more likely to be either very happy or very unhappy with their body weight than migrant Italians. Additionally, British-born Italians were more likely to say they ate food when they were not feeling hungry than migrant Italians, and more British-born Italians than migrant Italians had tried to lose weight in the past. (Bush et al., 2001).

Studies have also shown that there are differences in the conception of diet, weight and health between middle-class and working-class families (Wardle et al., 1995; Wardle and Griffith, 2001; Wills et al., 2009). Middle-class parents supervised their children's eating habits daily leaving little room for their own choices. In working class families, which were marked by 'risk, insecurity and a strong focus on the here and now' (Wills et al., 2009: 10), concerns about food, weight and health became secondary to more pressing concerns with everyday life.

Middle-class children perceived obesity as a problem indicative of laziness and unhealthy eating habits, and considered it detrimental to 'taking advantage of life opportunities' (Wills et al., 2009: 11). Another study has shown that people from working-class backgrounds tended to be more satisfied with their overweight bodies than people from middle-class backgrounds (Wardle and Griffith, 2001). Whereas middle-class teenagers tended to value thinness more and have negative attitudes towards overweight and obesity (Wardle et al., 1995), teenagers from working class backgrounds may value their bodies simply for being free from illness (D'Houtard and Field, 1984).

How far does healthy eating advice promote 'healthy' efforts at improving diet or other forms of weight management? A study by the Centre for Research on Families and Relationships found that many interviewees seemed to construct their idea of what a balanced diet was in relation to symbolically 'bad foods' such as the fried Mars bar. A balanced or healthy diet was perceived as the result of avoiding these foods and others which form part of the stereotype of unhealthy eating in Scotland (CRFR/RUHBC, 2003). A similar study suggested that the public may be prevented from making any changes to their diet because they consider that healthier eating advice does not apply to them (Fuller et al., 2003). It attributed the Scottish media some responsibility for this by perpetuating the stereotype of the unhealthy "Scottish diet" through television programmes and newspaper articles. People can feel that they are constantly under bombardment with information about health and food, leading them to simply ignore the bulk of it (Fuller et al., 2003).

## 4.11 Drinking alcohol

### 4.11.1 Health impact

As well as the direct effects of alcohol consumption on health, drinkers tend to consume more meat and fewer dairy products, fruit, and cereals than non-drinkers (Hebert and Kabat, 1991; Colditz et al., 1991; La Vecchia et al., 1992; Sieri et al., 2009). There are also social and economic costs associated with alcohol consumption such as domestic violence and family breakdown, crime and disorder, and the loss of productivity due to sickness resulting from over drinking.

According to a report on the Costs of Alcohol Use and Misuse in Scotland (Scottish Government, 2008c), alcohol misuse is estimated to cost Scotland £2.25 billion every year. A more recent document estimates the cost as somewhere between £2.5 billion and £4.6 billion per year (Scottish Government, 2010a).

### 4.11.2 Incidence and influences

In Scotland, 30% of men and 20% of women reported drinking above the recommended limit of units of alcohol per week in 2008 (Scottish Government, 2009a). Per capita alcohol consumption is higher in Scotland than in France, Greece and the UK as a whole, but lower than in Finland (Table 4.8). Eleven to fifteen year olds in Scotland drink more frequently than their peers in the other three case study countries (Table 4.9), and more report having been drunk (Table 4.10). The equivalent figures in England are higher than in Scotland.

Table 4.8 Per capita recorded alcohol consumption (litres of pure alcohol) among adults (>= 15 years), 2003 (OECD, 2009a; Scottish Government, 2008d).

| Scotland | United Kingdom | Finland | France | Greece |
|---|---|---|---|---|
| 11.8 | 11.2 | 13.4 | 9.3 | 9.0 |

Table 4.9 Percentage of 11 to 15 year olds in the case study countries who drink any alcoholic drink weekly (%) (WHO, 2004)

| | Scotland | England | Finland | France | Greece |
|---|---|---|---|---|---|
| 15 year olds (girls) | 42.0 | 48.6 | 15.5 | 11.1 | 18.2 |
| 15 year olds (boys) | 44.3 | 55.9 | 18.1 | 22.7 | 37.5 |
| 13 year olds (girls) | 18.8 | 24.8 | 7.4 | 4.6 | 8.1 |
| 13 year olds (boys) | 19.3 | 34.0 | 7.3 | 8.6 | 15.1 |
| 11 year olds (girls) | 4.1 | 8.1 | 1.0 | 1.9 | 3.2 |
| 11 year olds (boys) | 7.9 | 13.9 | 2.9 | 6.1 | 10.7 |

Table 4.10 Percentage of 11 to 15 year olds in the case study countries who have been drunk two or more times (%) (WHO, 1994)

| | Scotland | England | Finland | France | Greece |
|---|---|---|---|---|---|
| 15 years olds (girls) | 51.8 | 54.9 | 55.7 | 15.0 | 19.9 |
| 15 years olds (boys) | 51.9 | 55.9 | 53.3 | 22.2 | 23.4 |
| 13 years olds (girls) | 21.3 | 27.5 | 18.5 | 3.1 | 4.9 |
| 13 years olds (boys) | 19.0 | 29.9 | 18.1 | 4.8 | 10.2 |
| 11 years olds (girls) | 3.2 | 6.4 | 1.0 | 0.4 | 1.3 |
| 11 years olds (boys) | 6.3 | 10.7 | 1.6 | 2.5 | 3.5 |

A European Comparative Alcohol Study showed that although frequencies of drinking were highest in Italy and lowest in Finland and Sweden, larger volumes of alcohol were consumed in the UK, Sweden and Finland compared to Italy (Kuntsche et al., 2004).There is also substantial variation in terms of the age at which children first get drunk in different countries. In the UK, 25% of students have been drunk by the age of 13 or younger, while only 19% in Finland, 9% in France and 6% in Greece (Gill et al., 2010).

Policy has focused on the availability of alcohol, largely based on evidence that cheaper alcohol tends to be bought by more harmful drinkers and young drinkers, that increasing the cost of alcohol significantly reduces consumption, and that price increases are associated with reduced incidences of cancer, stroke, accident, injuries and violence (Scottish Government, 2009f). Yet there has been little research in Scotland aimed at understanding the Scottish ‘culture of drinking’ as explanation for heavy drinking (O'Donnell, 2006: 369).

The Nicholson Committee which reviewed Scottish licensing laws in 2003, recommended a shift from the culture of binge drinking to the continental approach to alcohol characterised by moderate drinking with meals – a shift from ‘pub culture’ to ‘café society’. O’Donnell (2006) points out that Scotland has a long-established culture of heavy drinking – a recent government document states that ‘Alcohol is an integral part of Scottish life’ (Scottish Government, 2009f) – and that changing this culture will require ‘a long-term commitment to work in partnership to achieve a major cultural shift’ (O'Donnell, 2006: 372).

## 4.12 Breastfeeding and weaning

### 4.12.1 Health impact

A number of studies have shown that breastfeeding can reduce the risk of being obese or overweight (von Kries et al., 1999; Arenz et al., 2004). Other studies have shown that a mother’s eating patterns lead to early exposure to certain flavours, either from amniotic fluid or breast milk, which may be associated with the development of a child’s own food preferences (Mennella and Beauchamp, 2009). Breastfeeding has been shown to have a protective effect against infections, allergies, atopic eczema and cognitive development (Yngve and Sjöström, 2001). A study carried out in Dundee, Scotland, showed that the

probability of respiratory illness occurring during childhood was significantly reduced if the child was exclusively breastfed for 15 weeks (Wilson et al., 1998). A study among Greek mothers found that overweight and obese mothers had a smaller probability of breast-feeding for 40 days and 6 months after giving birth compared with mothers of normal weight (Theofilogiannakou et al., 2006).

#### 4.12.2 Incidence and influences

The proportion of women exclusively breastfeeding has been increasing in many parts of the world thanks to changes in general attitudes, the influence of international campaigns, and work by national and regional health authorities. There is a strong association between this increase and the increased maternity leave provided in many countries since the 1970s (Verkasalo, 1980). Initial breastfeeding rates have increased from 63% to 70% in Scotland compared to 71% to 77% in England and Wales between 2000 and 2005 (The Information Centre, 2006). Rates at the 6 to 8 week review in 2009 varied within Scotland from 18.6% in NHS Lanarkshire to 38.4% in NHS Shetland (Information Services Division Scotland, 2009). Table 4.11 compares breastfeeding rates in the UK and the other case study countries.

The combined effect of the age of the mother and deprivation on breastfeeding rates is such that for children born between 2001 and 2008 only 4.8% of younger mothers (under 20 years of age) in the most deprived areas were exclusively breastfeeding at 6-8 weeks compared with 18.6% of mothers aged 40 and over. In comparison, 11.7% of younger mothers in the least deprived areas were exclusively breastfeeding at 6-8 weeks compared with 50.1% of mothers aged 40 and over (Information Services Division Scotland, 2009).

Table 4.11 Percentage of infants breastfed at 3 and 6 months of age (European Health For All Database, 2005)

| | United Kingdom | Finland | France | Greece |
|---|---|---|---|---|
| Percentage of infants breastfed at 3 months of age (%)(2005 data or latest available) | 24 | 76 | 20 | 29 |
| Percentage of infants breastfed at 6 months of age (%)(2005 data or latest available) | 25 | 60 | | 6 |

## 4.13 Discussion

#### 4.13.1 International differences

There was sufficient comparative research and data to identify clear differences between food consumption practices among the case study countries, plausibly contributing to differences in health outcomes. For example, for groups where evidence was available, people in Scotland or the UK appeared generally to:

- Eat more takeaways than people in France and Finland
- Skip breakfast more frequently than in France and Finland, but less frequently than in Greece
- Snack more on soft drinks and confectionary than in the other countries
- Eat comparatively very small amounts of fruits and vegetables
- Be less satisfied with their bodies and more inclined to diet (among 15 year old girls)
- Drink more alcohol than in France or Greece, but less than in Finland.

It is possible to speculate on how the influences on these practices might vary between those countries in ways that contribute to explaining such differences, and it would be possible to find additional comparative research on, for example, working hours (related to perceived time pressures) in the different countries. One influence for which we found such comparative data is the relative costs of 'other food products' (Table 4.4). For the most part, however, studies which observe differences between food consumption practices in different countries do not explain those with reference to measurable differences in factors considered to influence those practices. Furthermore, even if ample and robust comparative data existed relating to the influences in Table 4.4, and these showed a close association with observed differences in eating behaviour, it would be inappropriate to infer any causal link between them.

### 4.13.2 Key influences

Table 4.12 (overleaf) summarises the literature reviewed in sections 4.2 to 4.12. It codes the influences listed in each of these section under 19 headings emerging from the evidence, and indicates whether a heading is attributed influence in relation to each of the consumption practices discussed above. Several of the headings would appear to be interdependent, but none is logically determined by any other. The headings have been sorted by the number of practices against which they have been cited in the literature. While this approach cannot show which influences have the greatest efficacy, and is limited by the coverage of the research literature and the choices made in categorising practices, it nevertheless illustrates the reach that each type of influence is attributed within the evidence reviewed here.

Time pressures – perceived and/or actual – were cited across the largest number of practices. Time pressures might in turn be influenced by other headings included in Table 4.12, such as employment conditions (e.g. working hours and leave) and the changing structure of people's lives. Time pressures might also be closely related to fatigue.

Income and social class, and perceptions of autonomy, were cited across the next largest number of headings. Inasmuch as the research relating to people's perceptions of their own autonomy (e.g. Wills et al., 2009) identifies class differences in such perceptions, these two headings are closely related: middle class adults and teenagers experienced greater autonomy than their working

class counterparts. For middle class teenagers, eating junk food can be an expression of autonomy from their parents (Wills et al., 2009). For their parents, influencing their child's eating practices is a project in forging the child's middle class identity. Thus, the autonomy experienced by middle class families enables them to invest in food-related practices that are implicated in reproducing social class and, potentially, economic opportunity (Wills, W. and Backett-Milburn, K. interviews; cf. The Marmot Review, 2010).

Table 4.12 Summary of influences by behaviour, sorted by incidence

| | Influences | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Practices** | Time pressures | Income and social class | Perceptions of autonomy | Associations of specific food types | Relative cost of foods | Relative availability of foods | Body image concerns | Norms for specific activities | Lay epidemiology | Parental behaviour | Perceptions of leisure | Changing structure of people's lives | Breakfast clubs | Food promotion and advertising | Fatigue | Skills | Mobility | Media portrayals of food, diet and health | Employment conditions |
| *Count* | *6* | *5* | *5* | *4* | *3* | *3* | *3* | *2* | *2* | *2* | *2* | *1* | *1* | *1* | *1* | *1* | *1* | *1* | *1* |
| Consuming convenience f&d | ■ | ■ | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | | | | | | | | | |
| Meal timing | | | | | | | ■ | | | | | ■ | | | | | | | |
| Eating breakfast | ■ | | | | | | | ■ | | ■ | | | ■ | | | | | | |
| Snacking | | | | ■ | | | | | | | | | | ■ | | | | | |
| Eating fruit and vegetables | ■ | ■ | ■ | ■ | | | | | | | | | | | | | | | |
| Eating out of the home | ■ | | ■ | ■ | | | | | | | | | | | | | | | |
| Home cooking | ■ | | ■ | | ■ | | | | | | ■ | | | | ■ | ■ | | | |
| Shopping | ■ | ■ | | | ■ | ■ | | | | | ■ | | | | | | ■ | | |
| Weight management | | ■ | ■ | ■ | | | ■ | | ■ | ■ | | | | | | | | ■ | |
| Drinking alcohol | | | | | | | | ■ | | | | | | | | | | | |
| Breastfeeding and weaning | | ■ | | | | | | | | | | | | | | | | | ■ |

The associations people have with specific foods were identified as influential in relation to snacking, eating fruit and vegetables, and eating out of the home. The evidence concerned whether the characteristics of the foods were suited to eating in particular settings, and were associated with convenience and with perceived time pressures. The evidence also concerned stereotypes of the kinds of people who might each particular food, and thus relate to identity.

The relative cost of foods and their availability both featured in the evidence on shopping and on eating convenience food. Body image was unsurprisingly highlighted as an influence on weight management practices, but also featured in the evidence on whether people eat breakfast and eat takeaway foods.

What Table 4.12 refers to as ‘norms for specific activities’ refer to the expectations people share of how it is appropriate to behave in particular circumstances, whether when feeding your family or going to the pub. ‘Lay epidemiology’ is the term given to assessments people make of their own and their peers’ health and disease risk, and is related to media portrayals of food, diet and health. The heading ‘parental behaviour’ refers to how the behaviour of parents has been shown to influence the behaviour of their children. Perceptions of leisure, which featured in a comparative study of the England and France (Pettinger et al., 2006), concerns whether people see cooking and shopping as a pleasure or a chore.

A key message from this overview of the evidence is that the empowerment people experience – whether as freedom from time pressures or perceptions of their personal autonomy – influences many different aspects of how and what they eat, with potential implications for their health. While empowerment and autonomy are experiential phenomena – perceived qualities – they are nonetheless also shaped by the material risks and opportunities that people face in their lives, for example through employment, housing and mobility. In the evidence we reviewed, food availability and cost were cited less often as influences on consumption practices than these wider considerations of empowerment, related to economic and social class.

This has implications for how we understand differences in food culture within Scotland and between the case study countries, in relation to the objective of this study to identify ‘subcultures’. Class and perceived autonomy are examples of influences that are attributed causal efficacy in the literature yet also relate directly to group identity. The literature explained differences in the practices of middle class and working class parents and teenagers, for example, with reference not simply to their demographic characteristics but also to their shared identities as groups (Wills et al., 2009). The evidence revealed other demographic differences associated with variations in consumption practices, including gender and ethnicity, but was less explicit about the part food practices played in reflecting and reinforcing group identity.

# 5. Production influences

The research literature on food culture highlights the importance of understanding the interplay between culture, power and economics. From the 1970s, research in anthropology and cultural studies became increasingly attuned to the importance of seeking to understand the meanings attached to food in the context of political and economic developments – a well-known early example is Mintz's (1985) study of sugar, slavery and industrialisation, *Sweetness and power.* Meanwhile research in political economy, which had hitherto focused on economic interests in production, began to take consumption and culture seriously, focusing particularly on food (Fine et al., 1996).[1]

The relationship between food consumption and cultures of production in Scotland is also highlighted as an issue in the policy literature. The Foreword to Scotland's National Food and Drink Policy highlights the cultural importance of food production to Scotland yet also 'a strange Scottish paradox' that 'despite producing fantastic food and drink we have one of the poorest diet-related health records in the developed world… Whatever the reasons for our dietary habits, our culture must change if we are to prosper as a nation' (Scottish Government, 2009b: iv).

Since the focus of this study is on diet and health, and is therefore most immediately concerned with consumption, we have concentrated on the respects in which production influences consumption rather than on cultures of food production as such. In this section, we briefly explore three key ways in which food production influences food consumption practices:

- Influencing the availability of food
- Contributing to wider socio-economic trends such as industrialisation and urbanisation
- Indirectly by influencing policy.

The analysis in section 4.12 suggest that the indirect influences – the contribution production makes to socio-economic trends – may be at least as important as the direct influences on food availability.

## 5.1 Food availability

### 5.1.1 Scotland

Historically, the diets of people in Scotland have been heavily shaped by what the nation's land and sea can produce. Before the industrial revolution, the lifestyle of most Scots was characterised by a diet based on oatmeal, barley, potatoes, dairy foods and, in some regions, fish– and high energy expenditure (Steven, 2003). Cabbage and kale were the main vegetables consumed until the

[1] Recent research on 'cultures of consumption' should be understood as correcting a previous neglect, rather than implying that culture is exclusively about consumption (Nützenadel and Trentmann, 2008).

eighteenth century, and fruit was virtually nonexistent until the introduction of vitamin C-rich bush fruits such as blackcurrants, gooseberries and raspberries in the mid eighteenth century. The early nineteenth century saw the incorporation of developments in food processing with white wheat-based bread replacing oatmeal and barley meal, and margarine replacing butter. During this period new food products such as tea and sugar were introduced – the latter of which continues to have a serious impact on nutrition and health today. According to McNeill's (1929) account of the history of food and eating in Scotland:

> 'In the early Scots kitchen the fare consisted of game or fish boiled or seethed in primitive fashion over the peat embers; barley bannocks and oatcakes baked on the ancient *greadeal*; cheese and butter; wild fruit, wild herbs, and the honey of the wild bee…The water in which a piece of mutton or venison was boiled, thickened with oatmeal and flavoured with wild herbs, formed the morning and evening meal in the hall of a highland chief.' (McNeill, 1929: 33)

Historical accounts of agriculture in Scotland suggest relatively stable outputs of crop and animal production throughout the 19$^{th}$ century, with the shift towards increasing cattle and decreasing vegetable production beginning in the 20$^{th}$ century (Houston, 1961). Such historical trends have influenced contemporary Scottish agriculture, which today has a surplus of beef and lamb and a trade deficit in most fruit and vegetables. This historical pattern of production has left a mark on both the availability and cost of a healthy diet, as well as what most people consider 'Scottish food' in their day to day lives.

Scottish agriculture is today dominated by extensive animal-based production, together with five main food crops – wheat, barley, oats, oilseed rape and potatoes – and fruit and vegetable production. Agricultural output for most foods has declined in the last decade with pig numbers falling by 30%, sheep by 20% and cattle by 10% (Scottish Government, 2009e). The main vegetables produced are carrots, turnips and swedes, broccoli, Brussels sprouts and peas. Strawberries, raspberries and other soft fruits are produced in relatively small amounts, and although vegetable production has increased in the last decade, fruit production has decreased. A large share of Scottish wheat is taken up by the distilling industry and barley is used to make animal feed, with around 70% of Scottish beef exported to England (Scottish Government, 2009e).

The production of food in Scotland is influenced – but not fully determined – by the quality of land and the climate. The majority of the land area – the highland and island regions, and much of western, central and southern Scotland – is devoted to cattle and sheep production and dairy farms. Cereal production, horticulture, chicken and pig production, and mixed agricultural systems are largely in the east of Scotland – particularly in the regions of Fife, Angus and Dundee, and Aberdeen City and Shire (Scottish Government, 2009e). While the land area devoted to 'rough grazing' in Scotland is almost four times that in

England, land devoted to cereal production is just 48% of that in England, with fruit and vegetables only 6% and 11% respectively (Scottish Government, 2009e). All this has an impact on the availability of locally produced foods in Scotland, since large amounts of fruit and vegetables have to be imported from elsewhere. This imbalance between Scottish production and consumer demand has to the emergence of campaigns such as the 'Fife diet', a network of consumers committed to sourcing the majority of their food from within the region of Fife (The Fife Diet, 2010).

The Healthy Eating Indicator Shopping Basket (HEISB) was developed as a tool for the study of the availability and price of healthy food in different parts of Scotland (Anderson et al., 2007). The components of the HEISB are reproduced in Table 5.1, with items which are currently produced at significant scale in Scotland marked in bold.

Table 5.1 HEISB food items (Anderson et al., 2007)

| **Food group** | **Food item** |
|---|---|
| Bread, cereal and potatoes | Brown rolls, **porridge oats, potatoes, oven chips**, brown and white rice, spaghetti, weetabix (breakfast cereal), wholemeal bread |
| Fruits and vegetables | Apples, bananas, grapes, oranges, orange juice, pineapple, **berries (frozen),** baked beans, **broccoli, carrots**, cucumber, **lettuce, onions, peas (frozen),** peppers, sweetcorn (canned), **tomatoes,** |
| Dairy | **Semi-skimmed milk, skimmed milk, low-fat yoghurt** |
| Meats and fish | **Beef mince,** lasagna, **chicken breast, haddock fillets, salmon fillets** |
| Fatty and sugar foods | Low-fat spread |

A considerable number of food items in the HEISB are currently not produced in Scotland and have to be imported from other parts of Britain and beyond. A report on Food Affordability, Access and Security (Scottish Government, 2009e), outlines estimated increases in quantities of fruit and vegetables required to allow the Scottish Government to achieve its dietary targets, as well as the kinds of agricultural changes these increases of production would create. With fruit and vegetable production, for example, sections of current cereal production would have to be replaced with soft fruit and vegetables to increase total output by 17% to 370.7 thousand tonnes, or a projected increased of 73 kg per person per year. (Scottish Government, 2009e: 49).

### 5.1.2 Finland

Agriculture in Finland is limited by its northerly climate and poor soils, with much of the land being claimed from forest or swamp. Production of wheat and oilseed plants is centred in the south of the country while rye, oats, barley and potatoes

are grown throughout the country. Eighty-five percent of fruit and berry products are imported (Kuusipalo et al., 1986) as well as a large proportion of vegetables. Similarly to Scotland, the rising domestic and foreign demand for meat and dairy products encouraged a switch from grain production to cattle production around the end of the 19th century. Today almost 60% of the livestock in Finland is cattle with a further 30% of pigs and a small percentage of sheep and goats (Eurostat, 2009). Finland produces less than a quarter of the cereal production of the UK – 4,229 million tonnes compared to the UK's 19,354 million tonnes in 2008. Limited access to suitable agricultural land is one of the main reasons for these relatively low production figures: of a total agricultural land use area of approximately 34 million hectares, only 2.2 million hectares (6.5%) is actually utilised (FAOSTAT, 2010).

### 5.1.3 France

France, with almost 56 million hectares of agricultural land, is one of the largest and most populous countries in Europe. It is also one of the most agriculturally productive, growing the largest volume of cereals (wheat, barley and maize), field peas, and sugar beet of any country in Europe (Eurostat, 2009). France also produces large amounts of citrus fruit, apples and apricots, and has the second largest amount of vineyard in the EU.

Agriculture varies region by region. Dairy, pig, beef and poultry production is focused in the north-west of France, while cereal production is clustered around the north, and horticulture and fruit production is centred on the south-east regions (Arfa et al., 2010). France produces 10% of all the pig meat, 20% of the cattle and 15% of the poultry in the EU (Eurostat, 2009). The difference in agricultural production rates between the UK and France is considerable. With a total agricultural land area just over two times larger (56 million hectares in France compared to 24.4 million hectares in the UK), France produced (in 2008) almost four times as much cereal, twice as much cattle, ten times as many apples and three times as many pigs as the UK (Eurostat, 2009).

### 5.1.4 Greece

Agriculture in Greece suffers from poor quality soils, droughts, and hilly terrain – 50% of the agricultural land is in hilly areas. Since the 1970s, the agricultural sector has shrunk rapidly from employing 40.6% of the population in 1972 to employing 21.6% in 1992 (Ieneca Report, 1999). The main cultivated crops are wheat, cotton and maize, together accounting for 40% of total arable land use. Other crops include potatoes, sugar beet, sunflowers, a large amount of tomatoes – 1.3 million tonnes compared with 0.7 million tonnes in France in 2008, accounting for 56% of total vegetable production (CBI, 2006). Greece is the fourth largest fruit producer in the EU, producing 7% of the EU total. It is the third largest producer of olive oil. Almost 40% of the livestock is made up of sheep and goats – Greece alone produces almost half of the goat meat produced in the EU (Eurostat, 2009). Overall, Greece is a net exporter of fruit and vegetables, although it does import exotic and citrus fruit such as bananas,

lemons, and grapefruits. In 2005, Greece exported €339 million Euros and 696 thousand tonnes of fruit, importing €162 million Euros and 222 thousand tonnes (CBI, 2006).

#### 5.1.5 Key points

The geography of each country limits the foods that it can readily produce yet, within those limits, there has been historical change and there remains considerable leeway for innovation and strategic influence. Similarly, the primary production of a country by no means determines the diet of its population, but may be loosely associated with availability. It is plausible, for example, that further developing fruit production in Scotland, including for export, could have knock-on benefits for fruit consumption. However, the evidence reviewed here is not sufficient to identify any patterns in the volumes of foods produced in different countries and their availability or price to consumers.

### 5.2 The economy

As well as influencing food availability, food production contributes to wider economic trends that are relevant to the influences identified in Table 4.12, including time pressures, income and social class.

#### 5.2.1 Agriculture and industrialisation

Changes to the Scottish economy were relatively piecemeal in the early modern period until around the 1760s. The scale of economic growth from the mid 19th century onwards was staggering, with exports of manufactured foods rising nine fold between 1785 and 1835 (Devine, 2005). This growth was largely concentrated in the production of cotton, linen, wool, silk and jute (Dundee becoming known as 'Juteopolis') as well as coal, paper, chemicals and alcohol (Devine, 2005). Demand for skilled and unskilled labour caused thousands to migrate from the highlands, lowlands and Ireland to cities throughout Scotland. Glasgow grew from a city of a quarter of a million in the 1830s to one million in 1914 (Devine, 2005). These rapidly transforming cities placed increasing demands on the rest of the country for food, drink and other commodities. The middle class grew from comprising 15% of the urban population in the 1750s to around 25% in the 1830s (Nenadic, 1992). While a small number of families were able to make enormous fortunes from the export industry, the vast majority of the population failed to benefit from success of Scotland's industrial growth (Devine, 2005). Into the 20th century, Scotland's economy relied on a limited number of industries producing commodities for export.

The history of industrialisation goes hand in hand with the history of agricultural change in Scotland. Growth in agricultural productivity and food production underpinned the rapid economic growth of the 18th and 19th centuries. In turn, the growth of Scotland's population, and large rural to urban migration, created increased demand for food and raw materials from rural parts of Scotland. Just as the production of manufactured goods increased considerably from the mid-1800s, so too did agricultural production, with large increases in wheat and

barley production as well as sheep farming and fishing: catches of herring rose six-fold between around 1810 and the 1950s (McCrone, 2001). The development of the railways in the 1850s helped to open up the growing London market to Scottish goods, particularly cattle. The railways also allowed perishable goods such as milk to be delivered to cities, and guano (sea bird manure) and newly developed industrial fertilisers to be easily transported to farms, thus increasing agricultural productivity.

Towards the end of the 19th century, Scotland's competitive edge in grain and cattle production was being threatened by North American markets that were producing the same goods at a lower cost. By the turn of the century, Scotland had become an export-oriented industrial society, with a large working class – as many as three out of four people belonged to the 'manual working class' (McCrone, 2001: 13) – and a small but powerful middle class. The twentieth century saw growth in new industries – business, banking, electronics – and decline in agriculture, fishing and forestry (McCrone, 2001). A pattern of relying on food imports was reinforced throughout the twentieth century by the availability of cheaper imported substitutes (Devine, 2005). This contributed to the erosion of Scottish agriculture, which had once enjoyed high levels of productivity and attracted foreign visitors to admire 'the well-ploughed fields, the efficiency of technique and the pioneering innovations in both crop and animal husbandry' (Devine, 2005: 71).

Nowadays, food and especially drink manufacture plays an important part in the Scottish economy. Food and drink exports from Scotland are worth £4.06 billion per year, with whisky the top export at £3.13 billion and food accounting to £934 million of the total (Scottish Government, 2010c). Almost half (46%) of the UK's total Gross Value Added (GVA) from beverage manufacturing arises in Scotland (DEFRA, 2008b). Overall, agriculture and food and drink manufacturing are around twice as important to the economy of Scotland as to England, in 2007 accounting for 2.23% of England's GVA compared with 4.07% in Scotland (data from ONS, 2009). Comparable figures were not available for the three case study countries, so Table 5.2 instead compares them with the UK as a whole on the basis of value added by agriculture as a share of GDP.

Table 5.2 Agriculture, value added (% of GDP) (World Bank, 2008)

| United Kingdom | Finland | France | Greece |
|---|---|---|---|
| 0.7 | 2.7 | 2.0 | 3.3 |

### 5.2.2 Urbanisation and housing

The diet of the industrial poor in nineteenth Scotland was nutritionally inadequate and of low quality (Steven, 2003). Peasants moving from rural to urban areas in increasing numbers were living in cramped and unhygienic conditions with

inadequate access to food and water. In Glasgow, it was noted that the urban poor were physically stunted by their poor diets (Komlos, 1994) while rural populations continued to have access to nutritious vegetables grown in their 'kailyard' (Komlos, 1994: 63).

Food and diet-related health, which are so tightly interwoven with the domestic sphere, are closely related to the issue of housing as well as the availability of adequate kitchen space and kitchen appliances for food preparation and consumption. The Scottish home has undergone considerable changes in the twentieth century. In the early 1900s, 26% of the population of Glasgow lived in a one-roomed house and 44% lived in two-roomed houses (Abrams and Brown, 2009), while in 1951, 5% of Scottish homes lacked piped water and 5% and lacked stoves (ibid.). At the start of the twentieth century, the Scottish kitchen was the heart of the household, used not only for cooking and eating but for working, washing and – in many cases – sleeping. In the inter-war period the kitchen became less a gathering site for the family and more a site of labour (Abrams and Brown, 2009) as multiple-room houses became more common and the kitchen became a separate room.

According to experts interviewed for this study, housing remains a constraint on people's food practices and their access to a healthy diet through limiting facilities for food preparation. We did not find detailed research on this issue, nor statistics on kitchen space. However, comparative data shows that, on average, people in the UK have access to more space within their homes than those in the other case study countries (Table 5.3). Indeed:

> 'Available floor space per person in the home has increased, from 38 $m^2$ in 1991, to 43 $m^2$ in 1996, to 44 $m^2$ in 2001… [T]his increase in the floor space available per person [in the United Kingdom] is caused by a decline in average household size, mostly expressed by an increasing number of single person households' (Goodchild, 2008: 184)

These average figures may, of course, mask significant disparities in housing space among the population.

Table 5.3 Average useful floor area per person for occupied dwelling stock ($m^2$/person) (Federcasa, 2006)

| United Kingdom (2001) | Finland (2002) | France (2004) | Greece (2001) |
|---|---|---|---|
| 44.0 | 36.3 | 37.5 | 30.6 |

### 5.2.3 Employment

Changes in the economy have gone hand-in-hand with changes in employment. These are potentially relevant to diet in multiple ways, including by their implications for the time pressures people experience, identified in section 4.13

as an influence on multiple food consumption practices. We did not search specifically for literature on trends in employment. Nor did we seek comparative research on the relationships between working time and people's experiences of time pressure.

Table 5.4 compares the time that employees on average spend working in the UK and the three case study countries. We did not find comparable data for Scotland. While these average data may mask significant variation, they do not highlight major differences between the UK, Finland and France. Greece stands out by having an average one third higher than the other three countries. If time pressure is considered to drive practices such as convenience eating across a range of demographic groups in Scotland or across the UK, then the average figures are potentially relevant, and raise the question of how far other factors besides working time shape the time pressure people feel.

Table 5.4 Average weekly hours actually worked per worker (hours per week) (OECD, 2009b).

| United Kingdom | Finland | France | Greece |
|---|---|---|---|
| 31.7 | 31.8 | 29.9 | 40.8 |

5.2.4 Key points

Employment conditions, housing and the economic history might all be expected to shape the wider determinants of food consumption practices. Average weekly hours worked are comparable in the UK with France and Finland, and lower than in Greece, suggesting that other factors besides employment may play a part in shaping the time pressures that people feel are driving them to eat convenience and fast food. While we found no data on kitchens, people in the UK on average have more space at home than in the other case study countries. Whether the economic importance of food and drink has implications for relative food and drink prices and availability (section 5.1), Scotland's high levels of alcohol consumption (section 4.11), or the policy influence of the food and drink industries (section 5.3) may warrant further scrutiny.

## 5.3 Influencing policy

A third respect in which food production can influence food consumption practices is indirectly, through the influence of food producers on policy. There are many instances in food policy-making internationally where industry lobbying is widely accepted to have influenced decisions (Lang and Heasman, 2004). A recent example, widely reported, concerns lobbying by the food and drink industries to influence a European Parliament vote on nutrition labelling (Hickman, 2010).

Food and drink are important to Scotland's economy and therefore important politically. It may be noteworthy that the development of Scotland's food policy

has been led by the Government's food and drink industry group, rather than health policy makers. Indeed, according to Keating (2010: 239):

> 'One can see a rather continuous trend since the early 2000s to emphasise economic policy more strongly and to accommodate the interests of business in pursuit of competitive growth, while overlaying this with a mildly social democratic strategy of service development and social inclusion.'

This trend strengthened from 2007, Keating argues (2010: 238), since the 'arrival of the SNP brought a higher profile to economic development, seen as the leading theme around which a new vision of Scotland would be built'. The style of post-devolution policy-making invites industry and public interest groups to have an influence through participation in consultative processes, more than through lobbying (Keating, 2010).

We could find no research specifically on approaches to business lobbying in Scotland, nor comparing the cultures of policy-making in Scotland and the other case study countries. However, the relationship between industry and government is highlighted as relevant issue by the review of the Scottish Diet Action Plan (Lang et al., 2006) and one recent commentary (Ritchie, 2010), and is discussed in section 6.

So the influence of business interests on food and health policy warrants urgent scrutiny but, in this, Scotland is hardly unique among the case study countries: Finland's food strategy has been developed jointly by government and industry; in France, a proposed ban on food advertising has failed twice to pass and Sarkozy personally intervened when a US company tried to take over a French food company; in Greece, a draft nutrition policy suggesting additional regulation of the industry remains un-passed.

# 6. Policy influences

## 6.1 Policy and culture

In section 4 we identified differences in food consumption practices among different groups within Scotland, particularly with regard to income and social class. These differences are potentially relevant to policy approaches to health intervention, since they suggest how interventions might be shaped around the needs and the challenges faced by particular groups.

Many of the influences on those food consumption practices highlighted in section 4.13 are, in turn, potentially amenable to policy. Indeed, in some cases they may have been heavily influenced by historical policy interventions. However, the policy instruments that might affect them are by no means confined to food or health intervention. They also concern employment, housing, welfare, transport, planning and education, among other areas. Issues such as working time are not simply diffuse aspects of the socio-economic environment that affect people's aggregate 'food choices'; rather, they influence people's opportunities, constraints and experiences in concrete ways, for example through time pressures, which have been shown in the research literature to shape specific food consumption practices.

The cultures of policy-making may themselves be important in understanding policy outcomes. Section 5.3 suggested that the relationships between policy-makers and industry is worthy of further scrutiny. In interview, we furthermore heard how experts considered the attitudes of policy makers to be important, and to vary over time and between groups. An example concerned preferences for longer or shorter-term intervention.

In the remainder of this section we focus on food and health policy, reviewing the sensitivity to culture of Scottish and UK policies from the past 20 years. We assess each of the policies that we review against the ten indicators detailed in Table 3.2 above. These indicators recognise that policy documents could be sensitive to relevant aspects of culture even if they do not use the word 'culture'. Section 6.2 provides an overview of the policy documents we reviewed (the full list can be found in Appendix 1). Section 6.3 highlights five key points to emerge from this review.

## 6.2 Review of food and health policy documents

The earliest policy document reviewed was the **Scotland's Health: A Challenge to Us All: The Scottish Diet** (referred to as the James Report). This report, published in 1993, set out dietary targets but also recommendations to improve diets. The report discussed how to change the food supply as a whole and is significant in that it positioned diet as being influenced by the food supply and food environment. The document has a chapter providing a historical overview of dietary trends in Scotland and barriers to dietary change in adults.

**Eating for Health: A Diet Action Plan for Scotland** (SDAP), published in 1996, focused on 'choosing food' as a cultural practice through a series of recommendations for actors throughout the food supply chain – primary producers, manufacturers, retailers and caterers – on improving the food choice environment from a health perspective. As such it took an environment-focused approach. Apart from the recommendations that focus on food choice, there are recommendations that affect weaning, shopping, eating out, and fruit and vegetable consumption, but they are all focused on the *food* rather than the *practice*. There are specific recommendations for specific socioeconomic groups, but these do not refer to specific practices or meanings among these groups. The recommendations make it clear that the food industry will need to take action. No particular evidence is provided to support the suggested recommendations. There is no explicit mention of food culture. Nevertheless, the review of the SDAP (Lang et al., 2006: 23) notes that:

> 'Understanding Scottish food culture – local customs and structures, social determinants of food choice and relationships between food access, food choice and family life – was fundamental to the SDAP actions encouraging appropriate consumer change.'

The first White Paper on public health in Scotland was published in 1999. **Towards a Healthier Scotland** calls for action at three levels, including 'lifestyles', which includes diet. Owing to the existence of the SDAP, its core action is to 'support the SDAP', with no specifics. Culture or cultural practices relating to food were not mentioned. The paper was therefore not analysed further.

Published in 2003, **Improving Health in Scotland: The Challenge** aims to build on the foundation of 'Towards a Healthier Scotland' and set out actions to improve health, including through healthier eating. It does not contain many details; its key action points are to implement the SDAP and support a communications strategy to increase demand for healthier foods. It makes no mention of culture, and it refers only to the generic issue of food choice with some reference to eating out of home. It focuses strongly on the importance of the food environment, but does not deal with specific socioeconomic groups or provide supporting evidence. Its only content that could be viewed as an effort to focus on the sharing of practices is the communications campaign. There is an expectation of working with the private sector, although the food industry is not specifically mentioned.

Of all the policy documents reviewed, **Hungry for Success: A Whole School Approach to School Meals in Scotland** (Scottish Government, 2003), appeared to take 'food culture' most seriously. While the term 'culture' is not actually used, the clear intention of the strategy is to change the culture of school food and to use school food as a means of encouraging healthy eating habits that will last throughout life. As a document on schools, it explicitly deals with

‘eating out of home.’ Beyond this, the focus is on ‘influencing choice’, including for snacks (sold in vending machines and tuck shops), and encouraging breakfast consumption through breakfast clubs and fruit and vegetable consumption through the nutrient standards. Since the document is about schools, it implicitly deals with shared practices – learning and eating food at schools, and it also refers to stigma – but nowhere does it talk in greater depth about what is known of the meanings children associate with school meals. It does reflect on institutional culture in that it intends to change the ‘whole school food’ environment, but again the cultural dimension is not discussed explicitly. The expectations of the food industry are limited since this is a public sector endeavour, but there is an expectation of ‘working with’ caterers and vending machine operators.

In 2004, the Scottish Executive published **Eating for Health: Meeting the Challenge**. With no significant reference to food culture, its strategic objectives were firmly focused on influencing ‘food choice’. It highlighted the key actions needed to improve food choice, including actions focused on eating out (catering and schools), shopping (information provision) and marketing. It is clear in its expectation of working with the food industry.

In 2005, the FSA published its **Strategy for 2005-2010** for the UK. The strategy emphasised ‘putting the consumer first’ and actions needed to help consumers make healthier choices, with some reference to eating food away from home, in schools, and labelling being an action point relevant to shopping. The strategy emphasises the importance of changing the food environment in order to make those choices easier. It stresses the importance of paying particular attention to socially disadvantaged groups (which was not included in the more recent strategy). It is also clear that its expectation is to work with the food industry.

The SDAP was evaluated in 2006. **The Review of the Scottish Diet Action Plan: Progress and Impacts 1996-2005** found that the SDAP had not achieved the dietary targets, nor sufficiently changed the ‘food culture’ in Scotland. With explicit reference to the importance of food culture, it finds that the SDAP had no significant effect on improving specific cultural practices, including the consumption of fruit and vegetables, breakfast and weaning foods, as well as eating out of home (schools). It states that the most progress has been made in improving school food, and that where progress has been made it reflects the longevity of the intervention and the investment of resources. It notes that failure to make more progress was likely to be in part due to lack of attention to the problem of social inequalities in Scotland, and also the entirely ‘consensual’ approach taken to ‘working with’ the food industry.

**Dietary Goals for Scotland** (2007) noted that an improvement in food culture is needed in Scotland, but the report itself deals with targets in terms of level of consumption of specific foods and nutrients rather than practices. A target for fruit and vegetable consumption is included, but nothing on practices such as

snacking or eating out of home. How people choose food is not addressed since this is not the purpose of the document. Although only referred to briefly, there is an expectation of working together with industry to implement the targets.

The **Better Health, Better Care: Action Plan** (January 2008) includes the importance of improving diet in a general way but it is scarcely mentioned, so the document was not further analysed. The **Equally Well** (2008) policy document on health inequalities also illustrated a range of policy options for dietary change, noting the current risk of increasing health inequalities through information-based approaches.

The importance of changing food culture is referred to in the introduction of **Healthy Eating, Active Living: An Action Plan to Improve Diet, Increase Physical Activity and Tackle Obesity (2008-2011)**. Published as the action plan following on from the SDAP, the document recognises that little is understood about the influence of food culture on eating and health in Scotland and that more research is needed. The document provides few actions targeted at specific practices, since it is mainly a list of projects and programmes in different areas. What there is focused mainly on food choice in a generic sense: encouraging 'healthy/healthier food choices' is stated explicitly in three of the plan's objectives, as is a recognition of the importance of changing the food environment. Targeting the means through which practices and meanings are shared is in theory tackled by the social marketing campaign it plans. However, the campaign aims to change levels of consumption, not the cultural practices that underlie them. In common with many of the other policy documents reviewed here, there is an expectation that government will work with the food industry.

The standards for school meals set out in Hungry for Success were revised in **Healthy Eating in Schools: A Guide to Implementing the Nutritional Requirements for Food and Drink in Schools** (2008). Culture is referred to in a limited way in the background and introduction, and is not referred to explicitly as a rationale for setting the standards, which are focused on levels of intake rather than habits (e.g. standards set for snacks but not for snacking), and in only two cases refer to the 'culture' of eating in Scotland (setting a standard limiting deep fried foods given the culture of regular intake in Scotland; and a standard for fruit and vegetables given low consumption). The importance of institutional culture is implicit in that the document appears to be based on the recognition of the role of schools in shaping children's attitudes to foods. There also appears to be a recognition that schools are places where food practices are shared. But these issues are not explicitly dealt with. The importance of the food environment is also implicit in that the standards are for school food.

In 2009, **Recipe for Success: Scotland's National Food and Drink Policy** was published, intended to cover all aspects of food policy including diet, economy and sustainability. Healthier choices were just one component, dealt with quite briefly, but again focused on food choice in a generic sense with some reference

to eating out and shopping. Culture is only mentioned in the foreword, and there is no discussion of how practices are shared. However, the food environment is a clear focus, given that several of the proposed measures involve seeking to change it. The expectation is of working with the food industry. A substantial section on the Scottish food and drink industry and 'Scottish food' includes initiatives to support local and/or Scottish food marketing, but no connection is made with this – in terms of the opportunities and challenges that it might present – in the section on healthier eating.

The **FSA Strategy for 2010-15** is brief and entirely focused on 'choosing food' and 'putting the consumer first,' through the provision of 'healthy' food choices It makes some reference to eating out (provision of healthier meals in catering establishments) and shopping (availability of healthier choices and labelling). The strategy emphasises the need to change the food choice environment. There is no reference at all to culture or how practices are shared, with the exception of a reference to 'business culture' in the scientific strategy. The document states that the FSA intends to work with the food industry.

The DEFRA **Food 2030** strategy (2010) deals with many aspects of food, of which healthier (and more sustainable) eating is one. It makes only limited reference to cultural aspects of food (as 'values'). The Strategy sets out recommended points for action, which mention only one specific consumption practice considered in section 4 (home cooking), though it also discusses the practice of consumers 'growing their own'. Indeed, the strategy is atypical among the documents we reviewed for discussing the link between production and consumption, and the importance of understanding the origins of foods as a means of 'knowing food'. Nevertheless, the action points emphasise the more generic issue of 'food choice', with relatively little attention to specific practices of cooking and growing. Food promotion is identified as an influence on food choice. There is no specific reference to the practices and meanings of different groups, although socially excluded groups are mentioned as a target group. The food environment is strongly emphasised, with a focus on increasing access to food and improving the food choice environment as action points. Industry is included as a key actor in the action points.

**Preventing Overweight and Obesity in Scotland: A Route Map Towards Healthy Weight** (2010) is notable in that it covers many of the relevant cultural practices around eating – more so than any of the other policies. But its emphasis is still on 'food choice' – the terminology 'supporting healthy choices' is used – and many of the specific practices that amount to 'food choice' are not considered. The focus is on changing the environment, particularly food availability, but it pays relatively little attention to how practices are shared, or to cultural differences between social groups. No evidence is provided in support of the actions suggested to change practices. It is also notable in that its emphasis is on actions that focus on working with the food industry, or providing incentives

for them to change. There is a strong emphasis on reformulation, but with legislation suggested if the pace of change not fast enough

### 6.3 Key points

Five clear points emerged from using our analytical framework to review these policy documents:

- **Lack of explicit reference to culture:** Food culture is on occasion mentioned in the policy documents – the forewords and background sections of a handful of the documents refer to the importance of changing Scotland's food culture, and some of the documents refer to values relevant to food. The SDAP review notes also that 'Understanding Scottish food culture – local customs and structures, social determinants of food choice and relationships between food access, food choice and family life – was fundamental to the SDAP actions encouraging appropriate consumer change' (p.23). But culture is not dealt with explicitly in the policies in terms of underlying philosophy, objectives and recommended actions. The most recent document which deals most comprehensively with 'culture' is Hungry for Success. 'Culture' is not mentioned explicitly, but it is clear that the intention of the policy is to change the culture of school food in Scotland, not just by changing the food available but also the attitudes to that food, with the notion that this can help children develop a healthy relationship with food in and out of school that will last throughout their lifetimes. Food 2030 also brings in the notion of food culture in terms of the importance of 'knowing food' (e.g. through growing it).

- **Focus on food and information about that food but not on the cultural practices of consuming it:** The documents referred to some specific cultural practices, mainly eating out of home (which includes the efforts made on school food) and shopping (usually with regard to labelling). But these mentions tended to focus on the foods available in such contexts, the information provided and the consequences for 'food choice', as opposed to seeking to understand what behaving in a certain way means to the people involved, and norms and wider influences on their habits. Snacking and eating convenience food were referred to far less often but, when they were, it was also in the context of the food (nutritional value) rather than the practice. After eating out and shopping, the next most commonly referred to practice was fruit and vegetable consumption, but again this was in the context of levels of consumption rather than cultures of consumption. Home cooking, weaning and eating breakfast were referred to on occasion (twice for each), but meal timing (except breakfast) and weight management behaviour were not discussed. It is notable that while Recipe for Success highlights the importance of local and Scottish food in sections focused on the economy, the consumption of regional foods as a cultural practice is not included in the section on healthy eating, in terms of the barriers or opportunities that it might present. There was no noticeable evolution of reference to different practices over time, but the document that deals most

with specific cultural practices is the most recent one – 'Preventing Overweight and Obesity in Scotland'.

- **Focus on 'choice' instead of specific practices:** Choice is a major and explicit theme in the policy documents we reviewed, featuring in two main senses as: (a) the diversity of options presented to consumers, where more choice is in general treated as desirable; and (b) the food purchase and/or consumption decisions made by consumers, where the policies aim to influence choices in ways that promote health. Overall, the focus of policies is to influence choices by changing the food environment (see below) (that is, shaping the choice of foods available). Yet the cultural practices which underpin how the Scottish population make the choices they do are rarely unpacked. The documents contain very little significant discussion, objectives or actions concerning how the cultural practices and meanings that influence food choice emerge and are shared (the only examples were social marketing, food promotion to children and, implicitly, eating in schools). There was also negligible reference to institutional cultures. Socioeconomic groups of special concern were referred to, but not their practices or beliefs. So the cultural aspects of food consumption are left as a 'black box' that sits between the food environment and its potential to influence consumer food choices on the one hand, and actual food choices and health outcomes on the other.

- **Focus on changing the food environment as a means of influencing choice**: There was a very clear and strong emphasis throughout the documents on the need for change in the food environment, i.e., changing the environment that enabled or constrained choice. Thus while 'choice' dominated, it was not so much in the context of personal responsibility, but in the context of the responsibility of government to change the food environment in which consumers are making choices. This is a very important distinction in policy terms. According to the review of the SDAP, the James Report was a key influence here by highlighting the importance – over 15 years ago now – of the food environment and the food supply chain. Many of the documents were in fact organised around the food supply chain, highlighting actions for all players.

- **Policy culture of working with food industry**: The vast majority of the documents were explicit that there was an expectation of working with the food industry to solve the problem of unhealthy eating. This emphasis appeared to have strengthened over time as the policy documents developed. It is particularly notable in Preventing Overweight and Obesity in Scotland, in which the large majority of the actions are focused on the food industry, largely because of the (new) emphasis on product development and reformulation as a policy strategy (again focusing on the food rather than the culture of consumption). This is despite comment in the SDAP review that

one reason for the failure of the SDAP to encourage significant change was that:

> ‘The SDAP has adopted a wholly consensual partnership approach to ‘working with’ the food industry and thus underplayed the powerful role of the food supply chain in shaping food content, access, availability and consumer demand over the last 10 years, such as the period of rapid restructuring of the food industry or the undermining of health messages by powerful marketing and advertising of foods and drinks. The SDAP has not deployed the full set of policy tools available, most notably those of exercising regulatory and legislative powers of government to control the food supply chain and help create demand.’ (Lang et al., ix)

# 7. Conclusions and recommendations

## 7.1 Definition and relevance

We proposed a working definition of food culture as 'shared practices and meanings relating to food'. The preceding sections have provided a selective review of literature relating to this definition, centred on factors that influence food consumption practices, diet and health.

The research that we found could inform the following aspects of food and health policy development:

- Implementation, strengthening and validating the knowledge of practitioners working in communities to improve people's health
- The evidence base, advancing understanding of the causes of health inequalities and the opportunities to address them
- International context, informing debates about the relevance of the experience of other countries to health improvement in Scotland
- The objectives, contributing to debate about the role of the state in tackling health inequalities
- Accountability, supporting the scrutiny of commitments to 'change culture'
- Policy culture, enabling policy makers to question their own practices and norms, improving the effectiveness of policy.

These points are elaborated in the sections below.

## 7.2 Implementation

The research literature we reviewed provided insights into the meanings, norms and wider influences on food consumption practices relevant to diet and health. These findings are potentially useful to practitioners working within communities to improve health. For example, in seeking to improve the uptake of healthy school meals it could be useful to understand that many children find healthier foods alien, associating them with 'posh' people and 'goody-goodies' (section 4.7.3). The studies that we found in this genre represented a rich resource but there were few that pertained specifically to groups within Scotland.

In reality, health practitioners working within communities have first-hand experience of the practices, meanings, knowledge, tastes and aspirations of the groups they are working with. A more strategic engagement with the research could improve the effectiveness of their work by:

- Providing analytical tools and frameworks to support a more structured and systematic approach to such issues.
- Offering insights into cultures of food consumption among specific groups or in relation to specific practices that are priorities for health practitioners.

- Validating the knowledge that practitioners have gained through experience, for example through publication, so it carries greater weight in the design of policy.

Whether this potential to improve the effectiveness of policy implementation is significant and worth pursuing is a practical question, which we suggest would most appropriately addressed through a dialogue involving practitioners and researchers.

We recommend that NHS Health Scotland convenes a dialogue among independent researchers and health practitioners to determine the value added to policy implementation by a more strategic engagement with research into food culture.

### 7.3 Evidence base

The research literature that we reviewed can contribute to understanding the complex influences on diet and health. Rather than being distinguished by explicit references to 'culture', research falling within our definition is characterised by seeking to understand practices of particular groups, and the meanings, norms and wider influences associated with those practices. This kind of research can generate and refine hypotheses about the causal relationships that underpin correlations between health outcomes and demographic, economic, geographical or other factors. A cultural approach also invites critical scrutiny of how such factors are defined, and their validity as explanatory variables (Murcott, 1995)

We found little reference to research of this kind within the policy documents we examined. However, this may reflect the fact that we mainly reviewed high-level documents, which only in a few cases included detailed discussions of research evidence. We are aware that research falling within our definition of food culture informs policy development more generally within the field of public health, particularly efforts to address health inequalities (e.g. Commission on Social Determinants of Health, 2008; The Marmot Review, 2010). In engaging more strategically with research into food culture, we suggest that the priority for policy is to make the most of the evidence that already exists. It is a matter of reflecting on the balance between the different types of research that already inform policy, rather than introducing an entirely new body of evidence. New research explicitly focused on 'food culture' is probably not necessary to explain the persistence of health inequalities in Scotland or the nation's poor health record compared with others.

Research into the 'Glasgow effect' illustrates the place that research into culture (including food culture) can play in strengthening the evidence to support policy (Walsh et al., 2010). Much of the poor health experienced by Scottish people can be explained by social deprivation, without considering cultural explanations. It becomes necessary to consider cultural aspects in order to explain the

exceptions, such as the excess mortality experienced in Glasgow over and above other deprived cities such as Liverpool and Manchester. Attributing such differences to 'culture' is a precursor to in-depth research into other determinants, rather than an adequate explanation in its own right. Thus, in the design of health policy, understanding culture provides a way of refining and complementing epidemiological evidence, rather than substituting for it.

Our review of evidence on factors that influence the food consumption practices of specific groups of people underlined the importance of wider social and economic determinants, for example time pressures and social class. Key levers by which government can influence these factors lie outside the traditional realm of food and health policy, concerning issues such as employment and the welfare system. In this respect, an analysis of food culture reinforces a key message from research into health inequalities that health policy makers have a responsibility to advocate change across other fields of policy.

We recommend that Scottish Government policy makers are guided by existing work being undertaken in the field of health and social inequalities, including research which takes a cultural approach.

### 7.4 International context

Research to compare food cultures in different countries should be seen in this light. An objective of this project was to identify potentially protective aspects of food culture in the other case study countries that might be promoted in Scotland. We found evidence of practices in which Scotland differed from France, Finland and Greece. In many instances, there appeared to be an association between the practices and health outcomes. However, without robust epidemiological analysis, beyond the scope of this research, it is impossible to infer the importance of particular practices in contributing to health outcomes. Furthermore, in order to inform health policy, such inferences would need to be backed up by further analysis of factors affecting those practices which might be amenable to change.

The aspiration to 'import' protective aspects of food culture to Scotland may therefore be a distraction. The evidence we reviewed suggests that differences between practices and meanings among countries are most usefully understood as a complex product of national circumstance: about how one does things in Scotland/ Finland/ France/ Greece, more than about what it means to be Scottish/ Finnish/ French/ Greek. We found little research linking differences directly to national identity but, even if we had, that could only inform policy inasmuch as it was further unpacked to pinpoint factors that influence national identity. We therefore suggest that there is no reason to prioritise international comparative research in seeking to understand food culture in relation to health policy: the priority should be to draw on well-designed studies that unpack influences on the practices of well-defined and relevant groups at any scale of analysis.

Indeed, focusing on 'national' cultures may be counterproductive. Where data was available comparing England and Scotland, the differences were rarely striking and in some instances practices in England appeared to be less healthy. This suggests the stereotype of a distinctively unhealthy Scottish diet is inaccurate. Furthermore, there is some suggestion that this mythology contributes to unhealthy eating by being understood by consumers to imply that not eating the stereotyped foods is tantamount to a healthy diet (Fuller et al., 2003).

### 7.5 Objectives

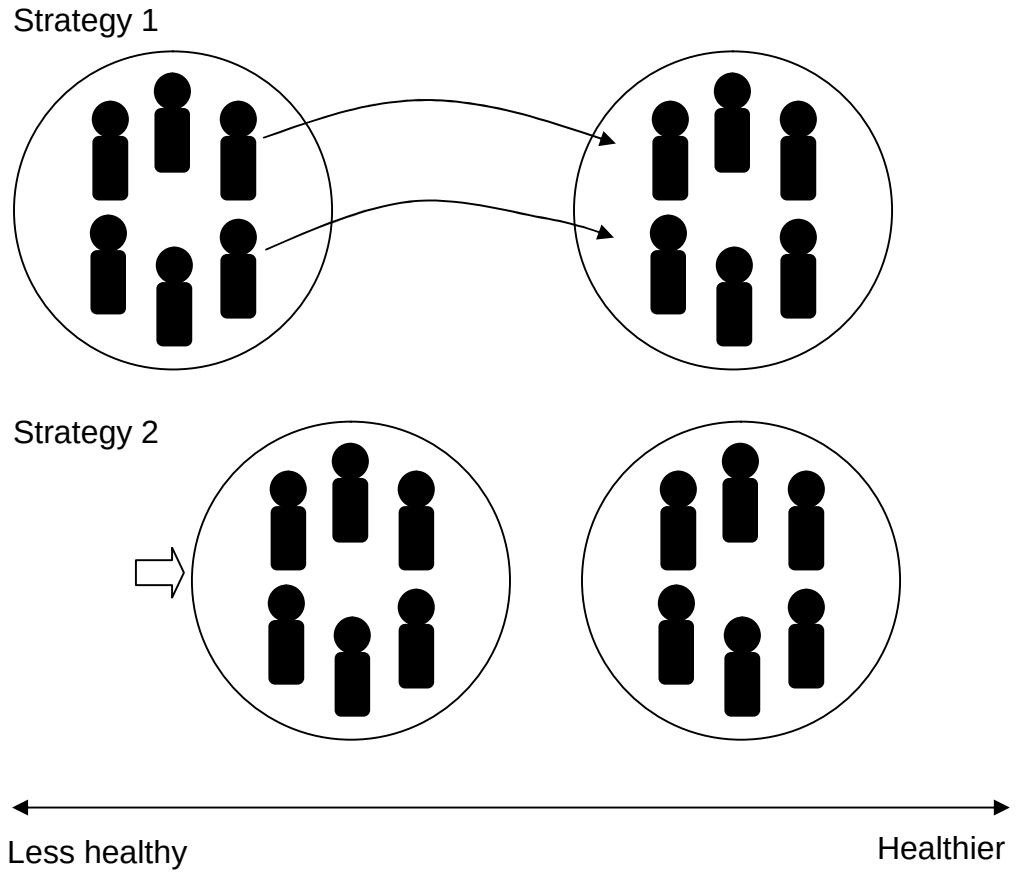
Where research into cultures of food consumption can potentially add most to policy is by revealing not simply how economic and social determinants are translated into behaviour, but the roles that food practices and aspirations themselves play in reproducing and reinforcing those determinants. In other words, food culture can cement people's membership of a particular social group, which may be associated with better or worse health outcomes. In some instances, the practices may directly contribute to those outcomes.

The hallmark of these instances is where factors related to group identity – for instance class or ethnicity – explain variations in food consumption practices. The prime example we discussed in section 4 was the work of Wills, Backett-Milburn and colleagues (e.g. Wills, 2009) on middle class and working class families. More or less healthy eating practices reinforced people's senses of their own autonomy, or lack of it, and their belonging to particular groups. These shared practices might be understood as an expression of solidarity and of coping strategies in the face of the opportunities and challenges faced by particular groups, yet may also militate against efforts to reduce economic and social inequalities. Group cohesion, played out in food practices, is a barrier to social mobility.

This has implications for the implementation (section 7.2) and design (section 7.3) of health policy. In addition, however, it contributes to debate about the objectives of policy and the role of government. First, it highlights the malleability, context-dependence and history of practices and meanings that groups of people experience in relation to food. This might imply that 'changing culture' – changing specific meanings and practices to improve health – is an appropriate objective for public policy. Yet, second, this research also underlines how much people have invested in such practices and beliefs. Group cultures warrant respect as they are associated with people's sense of themselves and can help them cope with the circumstances they face, even as they can also hinder efforts to change those circumstances. Negotiating the tension between these two implications poses a political and ethical question about policy approaches to tackling health inequalities and attitudes towards social mobility (Figure 5.1). For example, if working class people are less healthy than middle class people, is it more respectful of people's identity and autonomy to seek to make individuals less

working class (strategy 1) or to make being working class healthier (strategy 2)? Both strategies require that health interventions are based on an understanding of the relationship between practices, meanings, personal autonomy and group identity, though in distinct ways. The difference is whether the focus is on people's individual or their collective experiences of empowerment. In either case, strengthening people's feelings of autonomy can only support, not substitute for, efforts to tackle the concrete social and economic inequalities that place direct constraints on the opportunities different groups have to eat healthily.

Figure 5.1 Approaches to tackling health inequalities between groups




### 7.6 Accountability

One implication of the interplay between food practices, meaning and identify is that trying to 'change culture' is a political act. It has much wider consequences than simply changing people's health, potentially changing who they are. Where this is presented mechanically, as an unproblematic means to other ends such as improving health outcomes, it is therefore questionable, not least since because it 'blames the victim'. Hence, while research into food culture can make a valuable contribution to health policy, uncritical pledges to 'change culture' have little to offer efforts to meet specific public health objectives.

Where ‘culture change’ is presented as an explicitly political objective, actively inviting debate about ‘who we want to be’, it is potentially more legitimate. This might be appropriate in policy contexts where health is defined holistically (e.g. the WHO (1946) definition as ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’), or in relation to broader food policies (Hunter, 2008). For example, a political commitment could be made to promote a ‘slow food culture’ in schools, as in Italy (section 3.1.2). For any such debate to be credible, it must engage the people whose culture is implied to be problematic, and be precise about the kinds of change envisaged and the ways those might be achieved.

Our review of food and health policies (section 6, also section 3.1.1) found that explicit references to ‘culture’ were unusual, but often had the effect of diluting responsibilities and obfuscating accountability through imprecision. The term ‘culture’ has become a short-hand for that which cannot be explained, and is rarely defined in policy statements that refer to it. Insisting on a more precise use of the term within policy could strengthen accountability, yet the fact the term encompasses both description and explanation (section 3) will make it persistently slippery.

We recommend that policy makers define ‘culture’ precisely wherever the term is used in policy, and subject any uses to rigorous critical scrutiny.

### 7.7 Policy culture

The most important and urgent arena for ‘culture change’ may be within the policy-making community, with a cultural approach enabling policy makers to question their own practices and norms, and improving the effectiveness of policy. The review of the SDAP (Lang et al., 2006) identified a particular aspect of policy culture as a problem: that the policies had tended to ‘work with’ the food industry in preference to exercising regulatory control. Indeed, those authors emphasised this factor above all others, including other aspects of food culture, in explaining respects in which the outcomes achieved by the SDAP fell short of the plan’s ambitions. Our own review provides evidence that this consensual approach to food and health policy remains the norm following the SDAP review, and is consistent with a wider trend within the Scottish Government towards prioritising economic policy and accommodating the interests of business (Keating, 2010).

We recommend that the Scottish Government formally reviews whether its economic policies, approach to regulating business and relationships with the food industry are compatible with achieving its commitments to improving health in Scotland.

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# Appendix

## Appendix 1: policy statements relevant to food and health in Scotland, 1990–2010

The asterisked documents were identified by NHS Health Scotland as crucial to the review in Section 6 of this report, and therefore included.

| DATE | BODY | PUBLICATION | TYPE OF DOCUMENT |
|---|---|---|---|
| Mar 1991 | Scottish Office | Health Education In Scotland | Policy statement on health education |
| 1992 | Scottish Office | Scotland's Health: A Challenge To Us All | Policy statement |
| Dec 1993 | Scottish Office | Scotland's Health: A Challenge To Us All: The Scottish Diet* | The James Report |
| 1993 | Scottish Office | Consultation Document On The Scottish Diet Report | Consultation |
| Nov 1994 | Scottish Office | Scottish Diet Action Plan Working Party Created | Creation of structure |
| 1996 | Scottish Office | Eating For Health: A Diet Action Plan For Scotland* | Chaired by Health Minister |
| 1998 | HM Government | Food Standards Agency – A Force For Change | White Paper, leading to Act |
| 1999 | Scottish Office | Towards A Healthier Scotland* | White Paper |
| 2000 | Scottish Executive | Our National Health: A Plan For Action, A Plan For Change | Action plan |
| 2000 | WHO Europe | First Action Plan For Food And Nutrition Policy In Europe* | International policy context for member states |
| 2001 | Scottish Executive | A Forward Strategy For Scottish Agriculture | Agricultural policy |
| 2001 | Food Standards Agency Scotland | Strategic Plan 2001-2006: Putting Consumers First | Plan for the new FSA regarding safety and nutrition |
| 2002 | Scottish Executive | Building A Better Scotland | Spending review |
| 2003 | Scottish | Improving Health In | Strategic framework for health improvement |

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|---|---|---|---|
| | Executive | Scotland – The Challenge* | policy |
| March 2003 | Scottish Executive | Nutritional Guidance For Early Years: Food Choices For Children Aged 1-5 Years In Early Education And Childcare Settings | Guidance |
| 2003 | Scottish Executive | Organic Action Plan | Action plan |
| 2003 | Scottish Executive | A Strategic Framework For Scottish Aquaculture | Strategic framework |
| Feb 2003 | Scottish Executive | Hungry For Success – A Whole School Approach To School Meals In Scotland* | Final report of the Expert Panel on School Meals |
| July 2004 | Scottish Executive | Eating For Health – Meeting The Challenge: Co-Coordinated Action, Improved Communication And Leadership For Scottish Food And Health Policy 2004* | Strategic framework |
| Aug 2004 | Scottish Executive | Healthy Working Lives: A Plan For Action | Action plan |
| 2005 | Food Standards Agency | FSA Strategy 2005-2010* | Strategy |
| Sept 2006 | Health Scotland | Scottish Diet Action Plan (SDAP) Policy Review Report* | Review of action plan |
| 2007 | Scottish Government and Food Standards Agency Scotland | Dietary Goals For Scotland – The Future (Report Of Stakeholder Meeting)* | Goals |
| Jan 2008 | Scottish Executive | Better Health, Better Care: Action Plan: What It Means For You* | Action plan |
| June 2008 | Scottish Executive | Healthy Eating, Active Living: An Action Plan To Improve Diet, Increase Physical Activity And Tackle | Action plan |

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|---|---|---|---|
| | | Obesity* | |
| Sept 2008 | Scottish Executive | Healthy Eating In Schools: A Guide To Implementing The Nutritional Requirements For Food And Drink In Schools (Scotland) Regulations 2008* | Guide to school food policy |
| Dec 2008 | Scottish Executive | Good Places, Better Health: A New Approach To The Environment And Health In Scotland* | Implementation plan |
| June 2009 | Scottish Executive | Recipe For Success – Scotland's National Food And Drink Policy* | National policy |
| Nov 2009 | Scottish Executive | National Food And Drink Policy: "Walking The Talk – Getting Government Right" – The Procurement Of Food By Public Sector Organisations | Food strategy for public sector |
| Dec 2009 | Scottish Executive | Health Works: A Review Of The Scottish Government's Healthy Working Lives Strategy | Action plan review |
| Dec 2009 | Food Standards Agency | FSA Strategy 2010-2015* | Agency strategy |
| Feb 2010 | Scottish Executive | Preventing Overweight And Obesity In Scotland: A Route Map Towards Healthy Weight* | Strategic framework / route map |
| Jan 2010 | DEFRA | Food 2030* | Food strategy |