Technical report: Methods

WA combination of qualitative methods that included a rapid literature review followed by a primary research phase which consisted of: elite interviews, retailer discussions, workshops (virtual and in-person), one-to-one follow-up interviews and feedback sessions. With input from the FSA, this project was designed to use a combination of qualitative methods that included a rapid literature review followed by a primary research phase which consisted of: elite interviews, retailer discussions, workshops (virtual and in-person), one-to-one follow-up interviews and feedback sessions. All data collection was informed by an initial scoping review and the rapid evidence synthesis of evidence use literature. The project underwent ethical review and approval through the Social Sciences Ethical Committee at the University of York (footnote 1). The methodological process for the project was as follows:

- 1. Scoping review to define boundaries and project scope
- 2. Application of general evidence use literature to diet shift
- 3. Definition of project scope, assumptions and boundaries
- 4. Aim 4: Rapid review of literature: barriers and enablers to evidence use
- 5. Primary research methods:
- a) Elite interviews
- b) Workshops 1 (virtual) and 2 (in person)
- c) Retailer discussions
- d) One-to-one workshop follow-ups
- e) Feedback one-to-one sessions

Literature review

The literature review was a combination of a scoping review and a rapid evidence synthesis. The aim of the literature review was:

- 1. To scope the project and identify research boundaries:
 - contextualise the project within the wider context of evidence optimisation and food systems literatures
 - identify the relevant stakeholder groups for, and processes of evidence use
 - identify gaps that exist within and between the different literatures
- 2. To develop a conceptual framework to inform the primary research phase:
 - to investigate research questions including:
 - o what is current practice by policymakers and practitioners for evidence communication and adoption?
 - o what are the barriers to good practice in evidence communication and adoption?
 - o what are the enablers to good practice in evidence communication and adoption?
 - summarise insights and current thinking from implementation studies, including implementation science and (policy) implementation research, on the topic of evidence communication and adoption within and across different stakeholder groups
 - summarise insights and current thinking on best practice and barriers to evidence communication and adoption

Aim 1: Scoping review to define boundaries and project scope

Research on evidence use across the relevant literature bodies was evaluated, analysed and synthesised. Potential sources for review were collated based on the authors' own knowledge and experiences working at the food policy-research interface. These sources were then cross-checked with reference lists and database and grey literature searches (SCOPUS, Google, academic libraries) to make sure all key evidence for the topic was covered. Due to practical constraints, limited scope and gaps in available evidence, the findings are generalised to evidence use as a whole.

The Evidence on Evidence Use and Improving Evidence Use

The study of evidence use is a multidisciplinary space. A mapping of the field by the Transforming Evidence project found Use of Research Evidence (URE) in policy and practice crosses many academic disciplines, policy and practice domains, and most academic disciplines have a group of scholars working on the use of evidence (footnote 2). A survey of URE researchers identified disciplinary traditions including: sociology, political science, organisational studies, psychology, science and technology studies, and communications (footnote 3). Different bodies of literature tend to address evidence use by policymakers to evidence use by practitioners. A forthcoming book by Boaz et al (footnote 4). describes the difference between policy and practice settings for evidence use:

"Policy studies and political science may be the dominant viewpoints on the policy arena, emphasising the role of interests, ideas and ideology. Practice settings, in contrast, tend more often to be explored by management and organisation studies, or industrial and social psychology, looking at managerial and professional norms, cognitive processes, social identity and the like."

Relevant Literature Bodies

The multidisciplinary nature of evidence use literature is further complicated by the multidimensional nature of diet shift evidence (for example the wide range of practitioner groups with a role in diet shift). The time-limited nature of the project meant it was not possible to exhaustively review all of the literature bodies. Instead, the project employed a snowballing approach and drew on existing expertise of the project team to identify a range of the most relevant thinking, some more general and some more targeted to relevant participant groups. Actors and practitioners in policy and public, private and third sectors were identified as the most relevant groups regarding diet shift (see Table 4). Two bodies of literature were identified at the outset of the project as particularly relevant: 1) policy sciences and 2) implementation science (IS). However, there are stakeholders who are included in the project but are not directly addressed by the policy implementation research, use of research evidence, and implementation science literatures. These are non-health practitioners, including in the third sector, and commercial practitioners. In particular, these literatures do not address evidence use by commercial practitioners.

Policy sciences (addresses the role of evidence in policy making)

Evidence is a dominant theme in the policy sciences, particularly in the sub-field study of 'policy implementation research' (PIR). The focus of PIR is broader than its name suggests (for example, the implementation phase of evidence use); it includes everything related to "how governments put policies into effect" and has been conducted since the early 1970s (footnote 5). Classic studies include Lipsky's (1980) work on the important discretionary influence of street-level bureaucrats on-the-ground, and Pressmann and Wildavsky's (1984) 'Implementation (How Great Expectations in Washington Are Dashed in Oakland)', both of which highlight the complex pathway from

evidence to policy adoption. Beyond this, policy sciences emphasise the role of politics in policy making and tend to reject the notion of "rational technical linear processes" (footnote 6). In other words, they assert that the policymaking process is unpredictable, complex and iterative in practice, despite the "idealised, rational and predictable" process that is commonly assumed in research fields (such as academia) (footnote 7). Policy sciences instead investigate the influences that competing values and interests, organisational structures and complex stakeholder groups (such as networks or coalitions of interested parties) have on the policy process (footnote 8). Policymaking is understood as "messy, complex and serendipitous", an idea illustrated by several classic political science studies, which describe how governments operate by 'muddling through', and that a range of circumstances (beyond the provision of evidence) must come together to enable a policy to reach the agenda (footnote 9).

Policy sciences literature is therefore particularly useful for identifying factors other than evidence that influence policymaking (and beyond); for example:

- the experience, expertise and judgement of policy officials and ministers
- · values and ideologies
- available resources
- · habits and tradition
- lobbyists, pressure groups, and the media
- the pragmatics and contingencies of everyday political life (footnote 10).

Policy sciences literature also heavily informs the study of URE as a whole. The rapid evidence review draws on policy sciences literature, including on PIR, URE and food systems policymaking.

Implementation Science

Another key body of literature with relevance to evidence use is implementation science (IS). Specifically targeted to the health professions, IS examines how healthcare practitioners can use research findings more effectively in routine clinical practice to develop research-informed practice (footnote 11). The implementation object is a specific clinical practice such as ordering of laboratory tests or delivering health promotion advice (footnote 12). The origins of IS are evidence-based medicine and its wider application as evidence-based practice, which emerged in the 1990s with the premise that research findings should be more widely implemented in practice (footnote 13).

Commercial Practitioners

Much of the existing academic literature focuses on implementing evidence into policy rather than practice. Where practitioners are covered, they tend to be public sector practitioners, such as health professionals, often treated as a single group along with policymakers (footnote 14). Commercial practitioners are rarely an explicit focus, and it is unclear how transferable the literature on policy and practice is to these users, given they have different evidence needs, and different objectives (for example commercial imperatives, competitive positioning). One possible lens for understanding evidence uptake in businesses is the concept of 'diffusion of innovations' (Rogers 1995), which has roots in Rural Sociology, where innovations are "ideas or practices perceived as new by practitioners" (in this case, farmers) (footnote 15). Diffusion is understood as the spread of ideas among individuals, largely by imitation. Interventions aimed at spreading innovation harness the interpersonal influence of opinion leaders and change agents, and research mapped the social networks and adoption decisions of targeted individuals (footnote 16). Similar findings are reported in a recent paper on farmer use of peer networks for accessing information on agricultural innovation (footnote 17). Such conclusions may also be relevant to diet shift evidence.

Third Sector

No specific body of literature could be identified which addresses evidence use by the third sector. Several reports which address evidence and charities (footnote 18), or evidence and communities (footnote 19), focus more on the use of evidence which organisations have themselves created, or using evidence on the context they operate within for example demographic statistics). It is not clear how much these types of evidence use are relevant to diet shift third sector groups which are the focus of the project. Some insights are provided by the Food Research Collaboration (FRC) - an initiative of the Centre for Food Policy, at City University of London - which was established in 2014 to bring together academics, civil society organisations (CSOs) and practitioners "to produce and share the evidence-based knowledge needed to protect and expand the UK's sustainable food sector". As part of a scoping exercise the FRC conducted a review of evidence on collaboration, and on the relationship between research and CSO activities.

The What Works approach

There are many different methods and approaches to measuring, evaluating, promoting and describing the various ways in which evidence and policy/practice interact (footnote 20). The What Works Network (WWN) has become one of the most prominent actors in, and influencers of, evidence use. The WWN launched in 2013, with the purpose of "embedding robust evidence at the heart of policy-making and service delivery." (footnote 21) The network is made up of nine independent What Works Centres (WWC), three affiliate members and one associate member, covering a range of issues from ageing to policing (footnote 22).

The programme's work is broadly positioned as taking an evidence-based approach to addressing three parts of the evidence ecosystem:

- evidence generation (create): synthesising, systematically assessing and evaluating evidence on a specific topic as well as identifying and filling any gaps in research through commissioning new research or encouraging other organisations to do so (footnote 23).
- evidence translation (share): identifying, filtering, interpreting, adapting, contextualising and communicating evidence through formatted mechanisms (for example, evidence comparison toolkits, advice and guidelines, digital media and outreach programmes) which are then disseminated to relevant audience groups (footnote 24). This is understood as being "the central role of WWC -- [to] 'bridge' institutions between producers of evidence and the consumers of evidence" (footnote 25).
- evidence adoption (use): "putting evidence into action" in a way that has lasting impact
 (footnote 26). This assumes that the availability of evidence is not enough -- evidence needs
 to be effectively communicated and individuals need "the right opportunities, incentives and
 skills" to adopt evidence (footnote 27).

Figure 1. What Works Network Activities Across the Research Use Ecosystem

Source: Gough et al. (2018)

In practice, evaluation of the WWN_(footnote 28) has noted that it prioritises certain activities, as illustrated by Figure 1_(footnote 29). Generation does not tend to include generation of primary research, as most WWC "do not have the necessary resources to run extensive research programmes or have decided that these resources are better allocated differently" (footnote 30). There is also a stronger focus on translation than adoption. In addition, each WWC takes a different approach to its coverage of the evidence ecosystem and tools it uses.

The COM-B Model

COM-B is a behaviour change model, designed to help understand what drives behaviour and how to effectively influence behaviour change (footnote 31). It was identified by the commissioners of the project as a useful framework to help understand diet shift evidence use.

What is COM-B?

This model proposes that capability, opportunity and motivation are the key elements to behaviour, and in order to change a behaviour, all three elements must be addressed in some form:

- Capability: "the knowledge, skills and abilities required to engage in a particular behaviour," including and physical (for example, facilities, equipment, time availability) and psychological capabilities (i.e. individual skills, knowledge) (footnote 32);
- Opportunity: "external factors which make the execution of a particular behaviour possible," including physical (for example, timing, access) and social opportunities (for example, norms) (footnote 33);
- Motivation: "the internal processes which influence our decision making and behaviours" (for example, biases, perceptions) (footnote 34); and
- Behaviour: the action performed by an individual or group

"In order to perform a behaviour, [the individual] must feel they are both psychologically and physically able to do so, have the social and physical opportunity for the behaviour, and want or need to carry out the behaviour more than other competing behaviours. As each of these components interact, interventions must target one or more of these in order to deliver and maintain effective behaviour change" (footnote 35).

How can COM-B be applied to improving evidence use?

The COM-B model uses a relational approach which emphasises the interactions and relationships between the three elements and different stakeholder groups. This is particularly useful for diet shift evidence, due to the complexity of the evidence-to-policy/practice process. Figure 2 below demonstrates how each of these elements influence each other:

Figure 2. Elements and interactions of the COM-B Model

Source: Social Change UK (2019), p. 2

Research demonstrates that a co-creative (for example, relational) approach to evidence generation is desirable and effective for achieving desired impact; thus, COM-B was deemed useful to inform this project.

Evidence Use Stakeholders

Evidence use stakeholders include the actor groups throughout the evidence-to-policy/practice process. These include evidence generators, translators, disseminators, and end-users (for example, adopters and implementers).

One useful reference point when thinking about identifying evidence end-users is the approach taken by the WWN. There is no standard set of end-users across the WWN; each WWC has its own defined 'audience' for its outputs, and they vary in how main 'users' are defined, on:

- which potential users are prioritised (and which are not)
- how tightly these users are specified
- the relative emphasis on individuals, groups or organisations
- the emphasis on engaging early adopters/champions or a broader audience
- the distinction between the users of the Centres' outputs and services and the ultimate beneficiaries of the Centres' work
- equity issues of differential engagement with both the use and production of research (footnote 36).

The pathway between policy and practice for many - but not all - of the WWC is to a relatively homogeneous stakeholder group, such as police, teachers, early years providers, policymakers. There are other WWC which address cross-cutting issues and which have a broader range of end-users, including commercial practitioners (for example What Works Wellbeing).

The relationship between evidence and the end-user is not always direct, however. Diverse stakeholders and actor groups are involved in decision-making processes, both formal and informal, with different levels of influence over policy and practice. A comparison by Atkins et al (2017) of clinical medicine and public health captures the issue: "Public health is characterised by much more diverse and less well-defined problems than clinical medicine and has complex

pathways of action and intervention".

Figure 3. Stakeholders in Evidence-to-Policy/Practice Ecosystem

Source: Results for Development, 2018, p. 3

As stated earlier, the roles that actors serve in the evidence use process are often multiple and blurred across stages. For example, a policymaker may serve as both a translator and an adopter; a government body may be generator, translator and implementer; and the manager of a local food shop may simply be an end-user. Figure 3 illustrates these crossovers, showing how one actor group (for example, an 'embedded expert') may have multiple roles in using evidence for policy (for example, 'producer' and 'policymaker'). This figure is specific to the policymaking process, but the concepts may be applied to the use of diet shift evidence in both policy and practice. Figure 4 is an adapted version of this graphic that does just that: it applies the same conclusions about blurred actor roles to diet shift evidence stakeholders.

For the purposes of this project, the term evidence end-users is used to refer to the combined implementation and adoption actor groups: policymakers and practitioners who have the capacity to adopt and/or implement evidence into final policy and/or practice. This approach is often used in the literature, although it has been criticised as an oversimplification that contributes to the 'knowledge/practitioner' gap (footnote 37). The decision to combine the groups has been taken to manage the scope of the project and effectively prioritise research questions, but with recognition that these groups are not necessarily homogeneous.

Aim 2: Application of general evidence use literature to diet shift

The Diet shift Evidence Ecosystem

An evidence "ecosystem" is a term used by WWN to describe the particular evidence and evidence use system around a specific area of focus (such as wellbeing, youth futures, or education) (footnote 38). For diet shift, the evidence use system crosses multiple literature bodies which range from food systems to various different 'change' literatures (for example, behaviour

change, systems change, social environmental systems change) (footnote 39).

Diet Shift Evidence Use

It is not clear how transferable insights on evidence use from different stakeholder-specific groups are to diet shift stakeholders. Because each group has differing evidence and adoption needs, there may be contradictory or diverse principles or practices on evidence use, because they come from different traditions and may define evidence use differently. A synthesis of the findings on different stakeholder groups is beyond the scope of this review; however, some reflections can be made. Comparisons of implementation science and policy implementation research, for example, reveal there are overlaps and differences. Research in both fields deals with the challenges of translating intentions into desired changes (footnote 40). In some cases, the implementation object may be the same in both fields, such as a guideline based on public health policies that prescribes the use of certain methods in healthcare (footnote 41). But there are also clear disciplinary differences: while policy implementation research is founded in social science, implementation science has adopted many principles from the natural sciences (for example, evidence-based medicine and evidence-based practice movements). Nilsen et al. (2013) describe these contrasts:

"Implementation science research has established a number of characteristics of healthcare practitioners that are associated with greater research use and/or increased implementation of evidence-based practices. It is difficult to draw analogous conclusions about policy implementation due to the complexity of organizational processes involved in the policy process. Policy may be implemented by multiple actors at multiple levels; some control may be exerted from policy formation to the street level, but the lines of hierarchy may be unclear if the organizations that collaborate in the implementation endeavour are accountable to different policy makers. (footnote 42)"

As stated above, policymakers and practitioners tend to be treated as a single group in much of the literature (footnote 43). On its own, the practitioner category is dominated by the public sector (for example, health providers, education providers) where there is a natural alignment between government (public policy) objectives and public sector organisations/service delivery. In the food sector, alignment is more complex and there is potential for dis-alignment between public sector objectives (for example, make people healthy) and private sector objectives (for example, sell food products). As detailed below, the private sector may be, at times, a 'policymaker' in its own right.

No specific literature on evidence use in food policy and practice could be identified, although there are pockets of work on the types of diet shift evidence that exist. It is important to note, however, that discussions and activities on data gaps related to food systems generally focus on evidence for food system problems. A mapping exercise of the UK food system identified several challenges around evidence availability on the activities and outcomes of the system (footnote 44). A recent review of evidence in food systems by the OECD identified significant gaps (footnote 45) and noted that evidence gaps may be especially pronounced in this field because the characteristics of food systems are:

- broad, encompassing food security, nutrition, environmental effects among others; AND
- diverse, making it difficult to extrapolate findings from one context to another (footnote 46).

Even larger gaps exist on the effectiveness of solutions or policymaking arrangements (footnote 47). For example, one review by SAPEA (2020) identified "a significant gap in knowledge regarding the effectiveness of policy interventions where a rich body of systematic evaluations of proposed interventions are often not available in sufficient numbers. (footnote 48)" Another recent review similarly found that evidence on policy levers was rarely accompanied by information on evaluations or effectiveness, with no details on the process of policymaking (footnote 49).

These reviews highlight how evidence gaps can exist on:

- problems: what is the problem, how bad is it, who is impacted by it (i.e. what is a healthy sustainable diet, what metrics, who eats what, implications of changing diets for producers and consumers)
- solutions (what to do): actions/interventions (i.e. policy and practice measures) which can be taken in response to the problems (how can we shift people towards producing and consuming healthy sustainable foods?)
- implementation of Solutions (how to do it): how to design and ensure effective implementation of an intervention (footnote 50).

While the study of evidence in relation to food appears to focus predominantly on evidence availability, rather than evidence usage, there are some exceptions. One is the critical study of the role of science in food (safety) policy, for example in the case of BSE (footnote 51). Another is the identified friction around food systems evidence described in the OECD's 'Making Better Policies for Food Systems Report' (2021), which discusses barriers to an effective policy response due to disagreements over facts, diverging interests and values (footnote 52). For example, food system actors often have different interests, beliefs and ideas about what a 'better' diet should be and how to get there (footnote 53). The book 'What Works Now' (2019) uses the example of obesity policy evidence tensions between government-commissioned evidence and commercial practitioner evidence to illustrate the challenges inherent in the relationship between evidence, policy and practice (footnote 54). Despite these examples, food-related literature does not explicitly address how these findings impact on evidence use in policy and practice. Finally there are papers which highlight how policies, even if they are evidence-informed, may not result in effective implemented action. One analysis by Theis and White (2021) demonstrates how obesity evidence was not effectively translated and implemented within UK government strategies (footnote 55).

Identifying Diet Shift Evidence End-Users

Identifying one end-user group for diet shift evidence is not possible due to the complex nature of food systems. The stakeholder groups for diet shift and food systems are broad and vary across discipline, sector, geographical scale and role in the food value chain (footnote 56). Additionally, diet shift (within the context of this project) aims to achieve multiple outcomes (for example, health, environmental), which also cross disciplines and sectors. Finally, there are multiple food systems activities that could be considered relevant to diet shift evidence, including activities across and within different sectors. For example, food supply and food consumption are both relevant to diet, and public, private and third sector actors all create and deliver policy and practice that influences consumption behaviour (footnote 57).

Figure 4 illustrates the complex and messy nature of the roles diet shift stakeholders may have in the evidence use process. The graphic is adapted from Figure 3 and based on the authors' expertise in food systems. The remainder of this section describes the participant stakeholder groups that have been identified as relevant for this project.

Figure 4. Stakeholder Groups in the Diet Shift Evidence Ecosystem

Source: Authors; *Note: illustrative only, not representative of all groups (see Table 4)

Food Actor Groups and Stakeholders

The literature on food systems identifies a range of activities and stakeholders, with no agreed or universal list (footnote 58). More specifically to diet shift, literature defining food environments (where diet choices take place), details a range of relevant settings and influential actors, again with no agreed list. Herforth and Ahmed's (2015) framework on nutrition and physical activity decisions defines the environmental settings as consisting of: homes; schools; workplaces; recreational facilities; food service and retail establishments and other community settings; and sectors of influence being: government; public health and healthcare systems; agriculture; marketing and media; community design and safety; foundations and funders; and industry (food, beverage, physical activity and entertainment). Other frameworks are more granular, listing settings including: food banks; markets (farmers; street); meal kit deliverers; cafeterias; vending machines and concession stands; checkout stands at non-food retailers; and specifying actors including store managers, owners, suppliers, distributors, wholesalers, and sales representatives (footnote 59).

Based on this literature, and drawing on the authors' own knowledge of food systems, Table 1 presents a list of food actor groups relevant to diet shift. Following the scope of this project specified by its commissioners, Table 1 does not include:

- the home as a sub-domain of the food environment, as evidence use by the public/citizens is outside of the scope of the 'Optimising evidence for diet shift' project.
- activities and actors in the food system prior to retail/catering (including agriculture, trade, distribution, processing and manufacturing)

Table 1: Relevant Diet-Change Actors

Diet Change Actor Group	Sub-group	Actors
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		_ ,, , , , , , , , , , , , , , , , , ,
Policymakers (Public Policy)	National	Policymakers (Elected Officials; Civil Servants) working on: • Health/Safety/Standards • Environment • Trade • Agriculture • Education • Industry • Welfare
Policymakers (Public Policy)	Local (Local Government Departments; Service Commissioners; Local Food Partnerships formally linked in to local government)	Policymakers (Elected Officials; Civil Servants) working on: Public Health Environment Planning Business/Economic Education Welfare
Professional Practitioners (Public Sector)	Health Professionals	GPs Nutritionists/Dieticians Early years Care including health visitors Professional Bodies: British Medical Association British Dietetics Association (one blue dot) Institute of Health Visiting Royal Society Public Health
Professional Practitioners (Public Sector)	Public Sector Food Procurement (schools, hospitals, prisons, public sector-owned recreational facilities, government estate) Professionals	Procurement Managers Catering staff Professional Bodies: Food for life (for example, may conduct audits)
Professional Practitioners (Public Sector)	Education - on diet - Practitioners (early years care including Nurseries; Children's Centres)	Teachers Nursery staff Professional Bodies: OFSTED Nursery equivalent
Professional Practitioners (Public Sector)	Third Sector (Food Charities, Community Groups, Local Food Partnerships)	Charity/community project/Local Food Partnership managers Charity/community delivery staff (incl. volunteers) Food banks Community provision/cooking schemes
Commercial Practitioners (Private Sector Food Businesses)	Retailers (Incl. chain stores; independent stores; online retail; markets (incl. street markets and farmers markets); short supply chain initiatives incl. box schemes; community supported agriculture schemes); vending and concessions; checkouts at non-food retailers). • Caterers (incl. contract caterers; restaurants; cafes; meal delivery companies) • Restaurants • Marketing and Media companies (incl. media organisations; advertising companies; sponsors (incl. of media; sports activities). Food Industry Bodies (Selected Examples) • British Retail Consortium • Association of Convenience Stores • Food & Drink Federation • UK Hospitality • Sustainable Restaurant Association • Nationwide Caterers Association • Lists of other bodies Health and Safety Executive, The Food and Beverage Training Company.	Same as previous column.

Source: Authors informed by Hasnain et al (2020); Parsons et al (2018); Parsons (2020); National Academies

Aim 3: Definition of project scope, assumptions and boundaries

Within the context of this project, 'diet shift' is understood as the broad goal of shifting consumption behaviour toward healthy and sustainable diets, in line with the Sustainable Development Goals and recent goals of the UN Food Systems Summit 2021.

The project employs the following assumptions about healthy and sustainable diets:

- 1. 'Diet' is one aspect of a large, complex food system that is multifaceted, complex and crosses disciplinary, geographical and sector boundaries;
- 2. 'Sustainable' in this case refers to environmental sustainability (also including animal welfare), and includes climate change;
- 3. 'Healthy' is a general descriptive term that encompasses nutritional health and variety, food safety and quality standards recommended/set out by the UK government and the NHS;
- 4. Food system actors (including both individuals and actor groups) have agency, or the ability to affect change, within the food system a) Change can be both direct (a causal result of action) and/or indirect (a slow transition created by multiple actions and events interacting over space and time) b) The change impact, or level of influence, that an action has is inherently related to the autonomy (decision-making capacity and relative power) of the actor
- 5. Behaviour change is only one type of change and 'consumption' behaviour is only one type of food system behaviour.
- 6. Certain aspects of the food system, including some relevant food actor groups, are considered as largely beyond the scope of this project. Most notably:
- a. Food accessibility and security, including the triple burden of obesity, malnutrition and undernourishment, long-term food poverty and affordability
- b. Cultural and social components of food, including individual dietary preferences, food identity, and varying capacities for food access and preparation (for example, skills/knowledge, access to transportation, availability of food, access to equipment for food preparation, etc.)
- c. Stages and actors the food value chain that occur broadly before consumption, including agricultural inputs, production, manufacturing, processing, transportation, testing (for example, quality assurance, health and safety)
- d. Evidence at the household- and/or individual-level for food systems
- e. Global scale structural and systemic barriers and enablers (for example, broad political cultural and attitudes; varying international standards [for evidence and food], monopolisation, concentration of power, big data trends, financialisation, fetishisation of food and food products, etc.)

These wider considerations impact consumption behaviours and the shift toward healthy sustainable diets more broadly.

Aim 4: Rapid review of literature: barriers and enablers to evidence use

The rapid review of evidence use literature was closely linked to the scoping review; indeed many of the same sources were utilised for both. The research team drew on their own knowledge and experiences at the research-policy interface to collate relevant sources and literature, informed by additional source lists provided by the FSA and elite interview participants. Research on evidence use across the relevant literature bodies was evaluated, analysed and synthesised and described in the Optimising evidence use for diet shift project: Rapid review on (healthy and sustainable diets) evidence use in policy and practice. These sources were then cross-checked with reference lists and database and grey literature searches (SCOPUS, Google, academic libraries)

to make sure all key evidence for the topic was covered. Due to practical constraints, limited scope and gaps in available evidence, the findings (presented below the results section) were generalised to evidence use as a whole then later applied to diet shift evidence use in particular.

This review was conducted based on the best available evidence which could be identified in the context of a rapid literature review. The findings were interpreted and applied to diet shift using the conceptual framework outlined in the results and drawing on the research team's knowledge and experience working at the policy-research interface. The conclusions were underpinned by a set of assumptions discussed above, and limited by the practical scope and context of the project, as well as some gaps in evidence. The following outstanding questions were identified, based on literature gaps identified through this review:

- 1. What is the evidence use process for food policymakers and practitioners?
- 2. How do food systems commercial practitioners generate, access and use evidence?
- 3. How do food systems third sector practitioners generate, access and use evidence?

Primary research methods

The gaps identified through the rapid evidence review were addressed through primary qualitative research, which involved interviews, co-creative discussions, workshops, one-to-one follow-ups and feedback sessions with 30 food policymakers and practitioners (see Table 1). The qualitative research investigated, in the context of healthy sustainable diets:

- 1. What is current practice for evidence use in diet shift policy and practice?
- 2. What are the barriers to evidence use in diet shift policy and practice are experienced by users?
- 3. How can diet shift evidence translation be improved to encourage adoption and implementation into policy and practice?
- 4. What are the most effective evidence use practices to enable diet shift for different stakeholder groups?

The primary research had four main phases (described in more detail below): recruitment and planning; interviews; workshops and one-to-ones; and feedback sessions. There was a strong emphasis on co-creation throughout the whole research process.

Recruitment and planning

The authors designed a framework to identify a range of potential participants who work as either food policymakers in national or local government, or decision-making practitioners in a food retail, small and medium enterprise (SME), nonprofit, third sector or nongovernmental (NGO) organisation. This involved working with participants at different scales to provide a range of different perspectives.

For the purposes of the primary research phase, participants were selected from a range of diet shift end-user groups. An 'end user' was understood by the authors to mean an individual or organisation professionally involved, either directly or indirectly, in the provisioning of food and, as such, are in a position to influence what people eat. End-users were categorised into the following groups:

- National and local POLICYMAKERS (health/ safety/ standards, environment, trade, agriculture, industry, public health, planning, business/ economic, education);
- Public sector/ PROFESSIONAL PRACTITIONERS (health professionals, public sector food procurement, education-on-diet practitioners, third sector practitioners); and
- COMMERCIAL PRACTITIONERS on the consumption end (retailers, caterers, restaurants) (footnote 60)

Participants were recruited from the research team's networks throughout the food system. During the recruitment process, researchers paid particular attention to diversity of organisational type and expertise to ensure appropriate spread / representation between the different groups.

Elite interviews

Participants were invited to take part in the elite interviews by email. The initial email provided an overview of the project and included details such as the project's aims and goals, the time commitment for the participant and an assurance of anonymity. Four individuals from DEFRA and two international food campaign/ policy organisations agreed to take part.. All elite interviews were recorded via Zoom (securely stored on the University of York cloud system) and transcribed. The data was analysed and synthesised using thematic analysis to develop the eight principles presented through the Guiding Principles document. The 'Elite Interview Design Guide', including the recruitment methods and interview questions, are provided in Appendix D.

Retailer discussions

A unique contribution of this study was to seek input from retailers at different scales. One workshop was conducted with smaller local food retailers, but the authors' were also keen to seek the input of large supermarket retailers and their food policy teams. Due to prior knowledge of competition law, the authors were also conscious that it would be difficult to bring these large retailers together to discuss some of these issues. Therefore, the team decided to approach a large UK convenience retailer along with a large UK supermarket retailer (larger store format) to carry out discussions on evidence use in diet shift policy and practice including barriers and enablers. The five resulting discussions were recorded and transcribed. The data was synthesised and analysed using thematic analysis to develop the Guiding Principles. The discussion design was modelled off the 'Elite Interview Design Guide' provided in Appendix D.

Workshops

The research team conducted a total of two workshops with separate events for different audiences (including public and private sectors). The purpose of these workshops was to understand inductively the needs of the different audiences to inform a set of Guiding Principles for translating evidence to influence adoption into practice, but specifically:

- who is responsible for making decisions / implementing changes in their area of work (i.e. who do we need to communicate evidence to/ influence?)
- how they make decisions/ what informs these decisions (What do they currently consider?
 Do they consider any evidence at the moment? If yes, what evidence? How is this
 communicated to them? If not, why not?) (including the role of intermediary organisations
 such as professional bodies)
- have they recently made any changes to encourage healthy sustainable diets? What changes have they made? Why did they make these changes?
- barriers to and enablers for translation and adoption of evidence for healthy, sustainable diets
- needs for understanding, translating and adopting evidence for healthy, sustainable diets (for example, end-user needs for form, format, design, presentation and type of evidence on a particular intervention in order to be most likely to implement it)

Data from the workshops was analysed and synthesised with the rapid evidence review to develop the Guiding Principles. Then, key findings were shared and revised with a representative sample of participants through one-to-one feedback sessions.

The first workshop was a virtual event held over Zoom and included four participants working in the sectors of local government, a campaigning organisation and a local food hub. The second

workshop was an in-person event which included four food business owners and decision-makers of a social enterprise start-up.. The second workshop was highly collaborative in structure, with a brief slide presentation provided at the start and the majority of the time spent in discussion of the three main research questions.

To help participants prepare for the workshops participants were also sent a pre-workshop task which asked them to think about an example of a decision or change that occurred in their place of work, ideally related to healthy sustainable diets (who made the decision, what information sources did they use, why was the decision made etc.). This supported more considered responses during the workshops. The Workshop Design Overview, including the questions and proposed agenda, is provided in Appendix E.

Participant interviews

Several recruited participants were unable to make the dates/ times of the workshops so interviews were offered instead, allowing the research team to gather data from a greater diversity and number of participants. A total of 11 interviews were conducted with participants from a regional public health network, a local food hub, third sector and community organisations, food banks, trade associations and an academic/ dietician. For data consistency, the interview script was closely modelled after the Workshop Design Guide (provided in Appendix E) and is included in Appendix F.

Feedback interview sessions

To gain further co-creative input from participants, a series of feedback sessions on the eight Guiding Principles was organised with both workshop and interview participants. These were designed to ascertain the strengths and areas for development in the Guiding Principles. This process provided further insight and ideas for future development of this work and also reinforced the practical usefulness of the Guiding Principles format and structure.

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