National Good Food Nation Plan: Initial Monitoring Framework

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Scottish Government
Riaghaltas na h-Alba

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Executive Summary

The National Good Food Nation Plan: Initial Monitoring Framework presents the initial monitoring framework for assessing progress towards the six strategic Outcomes outlined in Scotland's first National Good Food Nation Plan, laid before the Scottish Parliament in December 2025. This document establishes a baseline for evaluating Scotland's food system and sets out 51 high-level indicators used to monitor progress towards the six ambitious Outcomes established in the National Good Food Nation Plan.

Purpose and Context

The Good Food Nation (Scotland) Act 2022 mandates the development of a national Plan to guide food policy in Scotland. The Plan envisions a food system that supports health, sustainability, economic prosperity, community empowerment, and global responsibility. This publication supplements Part 3 of the Plan by setting out the evidence base behind our selected indicators and setting these within a wider policy context.

Monitoring Framework

The indicators are drawn from existing secondary data sources and are designed to:

- Provide a high-level assessment of Scotland's food system as of 2025.
- Serve as a baseline or reference point for future monitoring and policy evaluation.

The initial framework acknowledges several data gaps and limitations with data sources in areas such as food environments, animal welfare and food culture. It also highlights the ongoing need to consider new indicators and improve data collection, including through collaboration with research institutions and the Scottish Food Commission.

Key Outcomes and Indicators

Key messages from each indicator included in this framework under each Outcome are shown below.

Outcome 1 - A Better Food Environment

- Following a period of relative stability from 2015 to 2021, food prices have become a major driver of overall inflation since 2022.

- Food insecurity reported by individuals increased significantly in 2023, but returned to previously recorded levels in 2024. Adults in single parent households were the most likely to experience food insecurity.

- The overall uptake rate of school meals (free and paid for) across all school types was up in 2023-2024, marking a return to pre-pandemic levels. Uptake of school meals is highest among pupils with universal entitlement to free meals compared to where free meal provision is means-tested.

- The overall drop off in the proportion of mothers that continue breastfeeding from birth to 6-8 week review point has been declining, falling by 10.5 percentage points between 2016/17 (35.8%) and 2024/25 (25.3%).

- Consumer trust in Food Standards Scotland (FSS) has remained high and broadly stable. FSS plays a critical role in ensuring businesses comply with the legal standards that protect the safety and authenticity of our food.

- All food businesses have a legal requirement to ensure the food they place on the market is safe. The percentage of businesses achieving a 'Pass' rating in the Food Hygiene Information Scheme (FHIS) has remained high, at over 90% since 2015-2016.

- The number of food samples tested for food safety, standards and authenticity in Scotland have been declining, reaching a low in 2020/21 during the Covid-19 pandemic. Since 2020/21, sampling numbers have gradually increased.

- From Spring 2026, there will be new survey data available which will indicate how many people in Scotland are changing what they eat, motivated by health and/or sustainability reasons.

Outcome 2 - A Sustainable Food System

- Around a third of emissions from our food system were linked to agricultural activity. Total agriculture emissions have been in a long-term decline. In 2023, GHG emissions were at their lowest levels since the baseline period (1990).

- The agricultural sector is dependent on inputs of Nitrogen (N), from both organic and inorganic sources. From 2000, the overall application rates of nitrogen fertilisers have decreased, with some fluctuation.

- In 2021, the per capita food waste was estimated to be 189 kg per person per year. This represents a 2% increase since 2013.

- Climate change is associated with a range of impacts across food processing, distribution, retailing, consumption and the disposal of food waste. The Scottish National Adaptation Plan sets out a range of actions being undertaken to build Scotland's resilience to climate change – including the resilience of our food system.

- The activities in Scotland's food system and supply chain will continue to have an influence on biodiversity - particularly in relation to agricultural production and use of marine resources. There are a range of other drivers of biodiversity loss including climate change, pollution and the impact of invasive species.

- Air pollutants associated with primary food production, such as ammonia, PM10 and PM2.5 are at lower or at similar levels to those recorded in 2005. However, Volatile Compounds (VOCs) have increased significantly, with Scotch whisky maturation being a large contributor.

- The total area of land under organic land management has increased in recent years from a record low in 2018. However, total area remains lower compared to pre 2014-levels.

- Healthy soils and sustainable management of existing soil resources enable Scotland's food system to produce high-quality food and drink products. Monitoring of soil health in a changing climate is a priority for the Scottish Government.

- Animal welfare standards are an important food concern for Scottish consumers. Three-quarters of Scottish consumers reported being highly or somewhat concerned about animal welfare. Going forward, data will capture how often consumers check for information on animal welfare when purchasing food.

- More than three-quarters of laying hens in Scotland are either free-range or organic in 2025. This has increased from just over half of laying hens in 2014.

- The number of livestock animals inspected by local authorities has increased in recent years and is more in line with numbers recorded before the Covid-19 pandemic.

- Scotland is recognised as being officially TB free with consistently low and stable prevalence of bovine tuberculosis (TB) in Scottish cattle herds.

- The sustainability status of stocks in Scottish waters has increased through time.

- Atlantic Salmon production has grown from very low levels to be a high value food product that is the UK's biggest single food export. The total production of Atlantic salmon during 2024 was 192,000 tonnes, an increase of 41,051 tonnes (27%) on the 2023 total.

Outcome 3 - A Healthy Population

- Mean fruit and vegetable consumption by adults in Scotland remains well below the Scottish Dietary Goal of 5 portions per day.

- Mean fruit and vegetable consumption among children in 2023 remained at the higher end of the range recorded since 2008, but remains short of the Scottish Dietary Goal.

- In 2024, the vast majority of adults in Scotland did not meet dietary goals for fibre (of 30g per day) and only a fifth met the goal for free sugar consumption (maximum of 5% energy from free sugars). Most adults do meet the goal to eat no more than an average of 70g of red and red-processed meat per day.

- The proportion of adults with a healthy weight has remained relatively stable over time from 2012 to 2024. Although the proportion of adults that are overweight has decreased slightly over this period, the proportion that are obese (including morbidly obese) has increased.

- The difference in the proportions of adults with a healthy weight between the least and most deprived quintiles of the population has fluctuated over time.

- More than six in ten children were in the healthy weight range as measured by BMI in 2024. This proportion has been in the range 64% to 72% since 1998.

- In 2024, 59% of children in the most deprived communities in Scotland have a healthy weight, compared to more than 74% in the least deprived communities.

- Prevalence of cardiovascular disease (CVD) in adults has remained broadly stable. In 2024, there was a significant reduction in the prevalence gap between adults in the most and least deprived areas.

- Prevalence of doctor diagnosed diabetes in adults has remained broadly stable, however rates are higher for adults in more deprived areas.

- Child oral health has improved over recent decades. In 2024, more than 7 in 10 P1 children examined showed no obvious decay experience. Inequalities between the least and most deprived areas remain.

- An improved food system is expected to contribute positively to mental health outcomes for Scotland's population. However, a suitable indicator to assess and monitor this has not been identified at this stage, with further work required to develop indicators.

Outcome 4 - A Strong food and drink sector

- Following the Covid-19 pandemic, real economic output from the sector (as measured by Real GVA) contracted sharply in 2023. Although 2024 showed some recovery, recent data indicates the sector is contracting again in 2025.

- Recent data suggests a lower proportion of new businesses registered in 2022 in the food and drink sector continued to trade after one year compared to previous years; but the longer term picture is less clear.

- Food and drink businesses are more 'innovation-active' than businesses generally, but their innovation activity declined in 2020-22.

- After record high values in 2022-23, average farm income in 2023-24 was the lowest estimated since 2019-20 (after adjusting for inflation).

- Median pay in the food and drink sector has increased at a similar rate to the average across all sectors in recent years. However, overall pay levels in the sector remain below the all-sector median.

- The number of Modern Apprenticeship starts and 'achievements' in the food and drink sector has increased over time from 2021-22 to 2024-25.

- The Gender Pay Gap for Median Gross Hourly earnings (excluding overtime) in the Food Manufacturing sector has narrowed over time, but remains consistently higher that the Gender Pay Gap across all industries and services.

- The UK's overall balance of international trade and domestic production of food remains broadly stable. The UK continues to source food from domestic production and trade at around an overall 65:35 ratio.

- The area of land in Scotland that is cultivated for fruit and vegetable production has increased by around one third (+33.4%) in the past 10 years, but represents only 0.5% of total agricultural land.

- After accounting for annual variations, Scotland produces more than it consumes across a range of agricultural commodities. Scotland is a net exporter of fish, cereals (barley and oats), potatoes, beef, dairy and eggs. Scotland is a net importer of pork, fruits and vegetables.

- Over the long-term global food production has continued to grow and keep up with population growth.

Outcome 5 - A Thriving Food Culture

- There are wide-ranging benefits for people associated with growing their own food in allotments and other community growing sites. Data on allotment availability and waiting lists are held at a local authority level.

- In 2024, more than 3 in 10 adults (who had a garden or allotment) had grown fruit and vegetables to consume in the home. This increases in households with children.

- Half of local authorities have a Food for Life Served Here (FFLSH) certification for some or all of their school meals services.

- Since the opening of the Food for Thought Fund, the number of learners reached ech year has decreased over time.

- Over half of households report always or often intentionally buying seasonal fruit and vegetables in 2024, whilst over a third report always or often buying locally produced food.

- A thriving 'food culture' in Scotland is expected to support overall health and wellbeing of the Scottish population. However, a suitable indicator to assess and monitor this has not been identified at this stage, with further work required to develop indicators.

Outcome 6 - Global Impact

- Food and drink products recognised under Geographical Indication (GI) schemes has increased from 6 in 1996, to 16 currently (this includes Native Shetland Wool). There have been no new food products designated under GI schemes since 2020.

- Scotland's food and drink international exports have been relatively stable over time as seen in both current and real terms.

- 15% of visitors to Scotland were motivated to visit due to Scotland's food and drink.

- Scotland's food sector makes many positive contributions to global food system transformation. However, a suitable indicator to assess and monitor this has not been identified at this stage, with further work required to develop indicators.

Future Reporting and Development

The Scottish Government will update the indicator data at least twice during the lifespan of the first Plan, aligning with statutory progress reports. A revised indicator framework will be developed alongside any future revisions to the Plan, incorporating new data sources and seeking to address current evidence gaps.

1. Introduction

Policy Context

The Scottish Government published a new food and drink policy in 2014 - 'Becoming a Good Food Nation'.[1] This set out a vision for Scotland to be "a Good Food Nation, where people from every walk of life take pride and pleasure in, and benefit from, the food they produce, buy, cook, serve, and eat each day".

To realise this ambition, the Scottish Ministers introduced framework legislation in the form of the Good Food Nation (Scotland) Act 2022 ("the Act"). Under the Act, the Scottish Ministers are required to produce a national Good Food Nation Plan ("the Plan") which sets out the Government's main outcomes in relation to food-related issues and how it intends to achieve them.

At the heart of the national Good Food Nation Plan are the six overarching Good Food Nation Outcomes. The Outcomes do not describe the current situation in Scotland; instead, they are a description of the Good Food Nation we are aiming to build. The Outcomes are:

- **Outcome 1:** The food environment in Scotland enables people to eat well. Everyone benefits from reliable and dignified access to safe, nutritious, affordable, enjoyable, sustainable and age-appropriate food.

- **Outcome 2:** Scotland's food system is sustainable and contributes to a flourishing natural environment on our land and in our waters. It supports our net zero and climate adaptation ambitions and plays an important role in protecting and improving animal health and welfare and in restoring and regenerating biodiversity.

- **Outcome 3:** Scotland's food environment and wider food system enables and promotes a physically and mentally healthy population. This leads to the prevention of, and a reduction in, diet-related conditions.

- **Outcome 4:** Our food and drink sector is prosperous, diverse, innovative, and vital to national and local economic and social wellbeing. It is key to making Scotland food secure and food resilient, and creates and sustains jobs and businesses underpinned by fair work standards throughout food supply chains.

- **Outcome 5:** People and communities are empowered to participate in, and shape, their food system. Scotland has a thriving food culture with a population who are educated about good and sustainable food.

- **Outcome 6:** Decisions we make in Scotland contribute positively to local and global food systems transformation. Scotland actively engages in learning and exchanging knowledge and best practice internationally.

[1] Scottish Government. (2014, 18 June). Recipe for Success: Scotland's national food and drink policy, becoming a Good Food Nation. Recipe for Success: Scotland's national food and drink policy, becoming a Good Food Nation - gov.scot

The Act sets out a requirement that the Plan must include indicators or other measures by which progress towards achieving the Good Food Nation Outcomes set out in the Plan can be assessed.

The first Good Food Nation Plan was laid before the Scottish Parliament in December 2025. Part 3 of the Plan sets out the indicators which have been selected to assess progress towards achieving the Plan's Outcomes.

Purpose of this document

This document provides the evidence underpinning the initial indicator framework for monitoring progress towards the six strategic Outcomes set out in the first National Good Food Nation Plan and supplements the information provided in Part 3 of the First Good Food Nation Plan, laid before the Scottish Parliament in December 2025.[2]

All data contained in this document was up to date as of 28 November 2025. This was a practical cut off required for the timely publication of this document.

2. Monitoring and Reporting

Interpreting the Indicator Framework

This report sets out the final list of initial indicators for the first National Good Food Nation Plan, as well as additional supporting evidence which - taken together - forms a high-level assessment of Scotland's food system in 2025.

In doing so, this report therefore establishes a 'baseline', or a common reference point, across a suite of relevant data indicators that will serve as a future analytical framework to monitor how Scotland's food system is evolving in the longer-term across many different and interconnected characteristics. It will ultimately be used by policymakers - and the Scottish Food Commission - as a tool to assess whether the Good Food Nation Plan is bringing about the positive change required to move Scotland's food system closer to one that aligns with the six ambitious Outcomes set out in the National Plan.

This initial framework consists of 51 high-level indicators that relate to each of the six national outcomes which are outlined in the final Plan drawn from mainly existing secondary data sets. The six Outcomes contained within the national Plan have been structured under 19 sub-outcomes for the purposes of this framework, although it should be noted that the sub-outcomes do not have legal meaning within the Good Food Nation Plan and simply function as a way to structure the indicators set out in the framework and, under some sub-outcomes, we have not identified a suitable data indicator. This report presents the latest data for each indicator and provides a 'headline' assessment which notes whether the indicator has moved in a positive, negative or neutral direction in recent years.[3] This report also provides a link to each data source, sets out further relevant supporting evidence and explanatory information and any limitations to interpreting these

[2] Scottish Government. (2025, December). National Good Food Nation Plan. https://www.gov.scot/isbn/9781806432615

[3] Note for some indicators it is not clear if movement in a particular direction is positive or negative; and thus requires further interpretation of supporting evidence.

indicators. Further detailed data breakdowns for each indicator are published in supporting Excel documents.[4]

While we have related indicators to a single Outcome for practical purposes, we understand that our food system is complex in nature, and we recognise that many indicators could be related or grouped under multiple Outcomes. For example, reductions in diet-related diseases (indicators 3C.1 and 3C.2) and improvements in the Scottish diet towards realising the Scottish Dietary Goals (indicators 3A.2 and 3A.3) are explicitly included as indicators under Outcome 3. However, should these indicators move in a positive direction, these indicators could also contribute to realising ambitions under Outcome 4 through improving the health of the workforce in the food and drink sector for example, and Outcome 5 through fostering a more positive food culture that places more value on the consumption of healthy foods.

In reading this report it is also important to recognise that the national Good Food Nation Plan is assessed at a necessarily high-level. The indicators identified are not exhaustive and far more information and data on Scotland's food system is held outwith this document and embedded in other related strategies and plans which indirectly relate to the subject of food. Over time, this body of evidence - and the indicators that are drawn from it - will continue to evolve and shape future food policy in Scotland.

There are also several areas drawn out in this report which - whilst recognised as an important part of reaching our Good Food Nation ambitions - are difficult to measure using existing data. These areas include, but are not limited to: Scotland's 'food environment(s)', climate adaptation within our food system, Scotland's soil health, measures of animal welfare, metrics that link diet and food with mental health outcomes, equality and diversity metrics of the workforce in the food and drink sector, community growing activities, Scotland's food culture and Scotland's contribution to global food system change. There are also areas where proxy indicators have been used in this framework, but where more relevant data could be made available in the future that better aligns to the Good Food Nation Outcomes.

Addressing these evidence gaps, and improving the existing data indicators, will be a priority for future Good Food Nation plans. We will continue to work through collaboration with research institutions and other stakeholders in drawing upon the latest evidence on the Scottish food system.[5] There will also be a role for the Scottish Food Commission in helping to provide strategic direction and scrutiny of efforts to improve the monitoring framework.

The food system and food policy also cuts across many Scottish Government policy areas and existing Scottish Government strategies, plans and programmes. We have ensured - as far as practicable - alignment with approaches across a number of areas. The Plan sets out links to relevant documents and legislation in different policy areas in part 4 of the Plan, including: Just Transition, Community Wealth Building, Human Rights, Planning, Biodiversity, Environment, Fair Work, Food Safety, standards and Public Health Nutrition,

[4] Scottish Government. (2025, December). National Good Food Nation Plan: Initial Monitoring Framework supporting documents. https://www.gov.scot/isbn/9781806434435/documents

[5] Scottish Government. (2025, 4 August). Environment, Natural Resources and Agriculture (ENRA) research strategy 2027-2032: consultation. Environment, Natural Resources and Agriculture (ENRA) research strategy 2027-2032: consultation - gov.scot

International Trade, Getting it Right for Every Child, the Population Health Framework, Land Reform, the National Marine Plan and the Vision for Agriculture.

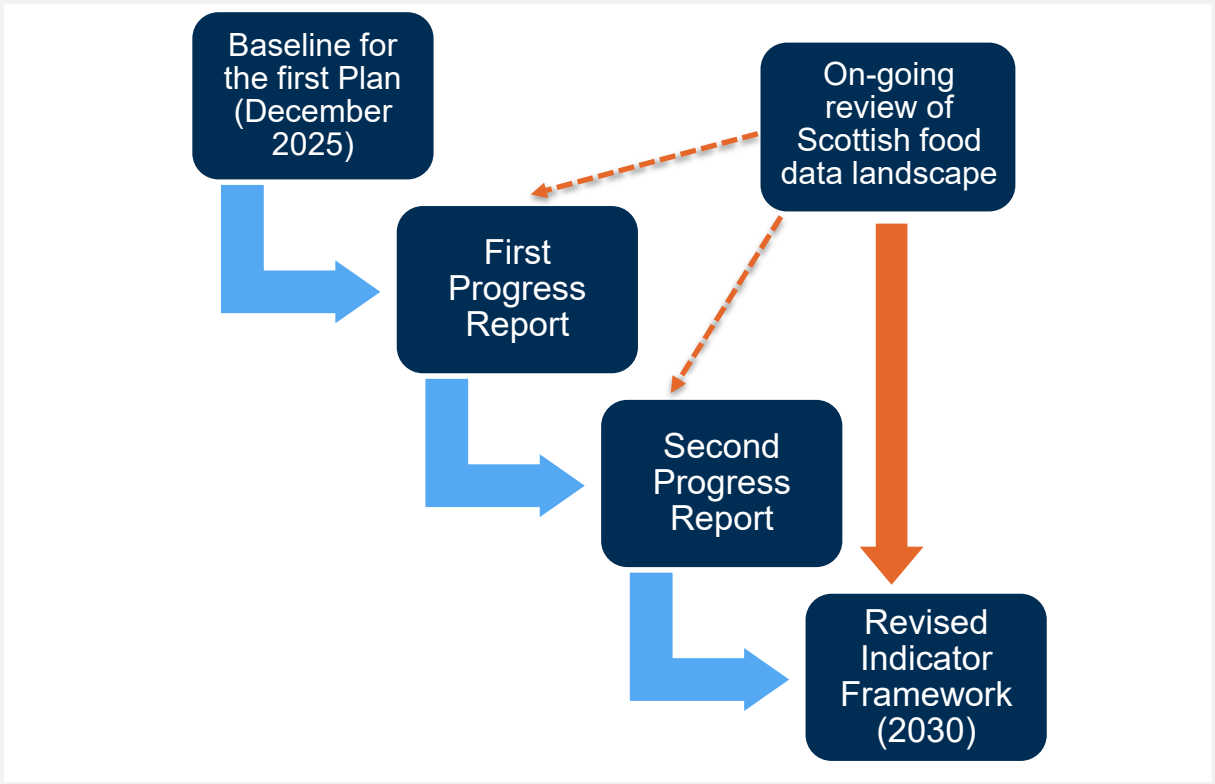
Finally, we have been clear that the initial indicator framework developed for the first plan is just a starting point and as time passes, this framework will be continuously reviewed to improve upon the way we measure progress against the national Good Food Nation Outcomes. This will also need to reflect future reviews of the Plan, for example, to align with new targets.

Future Reporting Cycles

This first national Plan sets a 'baseline' for assessing future progress towards the six Outcomes. Being able to assess on a regular basis how Scotland's food system is performing is an essential element in our efforts to become a Good Food Nation.

Figure 1 sets out when we expect to report on progress through updating the data used in this publication and determining which indicators have shown improvements or deteriorations. It is our intention to review the Scottish food data landscape on an on-going basis after the publication of the first plan, taking into account developments across different parts of the food system.

Figure 1: Development of the Future Indicator Framework



We intend to formally update Good Food Nation indicator data (where new data is available) against the baseline in this document at least twice within the period the first plan is formally in place - aligning with the formal progress report process set out in the Good Food Nation Act. As set out in the Plan, before the end of 2030 the Scottish Government is also required to decide whether or not to revise the first plan - having regard to any recommendations made by the Scottish Food Commission - and thereafter publish a revised plan. Alongside that revised plan, we will also seek to publish a revised indicator framework which will formally incorporate any changes to the indicators to reflect

availability of new data or any significant changes to the Plan (such as the introduction of new targets).

If significant new sources of data emerge before 2030 these could be included in the progress report as ‘interim indicators’. This recognises the legal position that we cannot formally change the indicators or measures used to assess progress of the Plan before it is formally revised.

Development of New Indicators

When assessing the inclusion of data indicators in the Plan, we needed to be satisfied that data met the following criteria:

- Relevance: The indicator should relate to key elements of the Good Food Nation Outcomes
- Representativeness: The indicator should be as representative as possible of the key characteristics of the Outcomes set out in the monitoring framework
- Data availability: Data for the indicator is readily available and accessible for use by a wide range of stakeholders
- Sensitivity: The indicator should be sensitive enough to detect changes over time, particularly in relation to the lifespan of the Good Food Nation Plan
- Understanding: The indicator should be easily understandable by a wide range of stakeholders including non-experts, to ensure effective communication
- Practicality: The indicator should be cost-effective to use and have low resource requirements for data collection and analysis

When considering any new data indicators in the future, it is important that each proposed new indicator meets these criteria. There have been two substantive changes to the indicators set out in the proposed Draft Plan laid before parliament in June 2025.

The first change was to ‘Indicator 3B.1 - Mean BMI of adults’. This has been replaced with the ‘Proportion of Adult Population with a healthy weight’. This was to ensure improved alignment with the indicators used in the Population Health Framework as set out in the Scottish Health Observatory Dashboard - and aligns with the target to increase the proportion of adults with a healthy weight set out in Annex C of the Plan.

The second change was to add a further indicator under Outcome 1 in relation to the drop off in breastfeeding. This reflects the fact that there is a target or ‘stretch aim’ in Annex C of the Good Food Nation Plan in relation to drop off rates in breastfeeding.

Data for Indicators in Local Authority and Health Board Plans

Under section 10 of the Good Food Nation (Scotland) Act 2022, all local authorities and territorial health boards will be required to publish a Good Food Nation Plan within 12 months of the day the relevant section comes into force. These plans must also set out indicators or other measures by which progress in achieving the outcomes may be assessed at a local authority or health board level. Relevant authorities have flexibility to define their own outcomes and select their own indicators.

Scottish Government is also aware that the Living Good Food Nation Lab[6] intends to publish further accessible indicator data at local authority and health board level in due course which relevant authorities may wish to refer to when considering the indicators within their own plans.

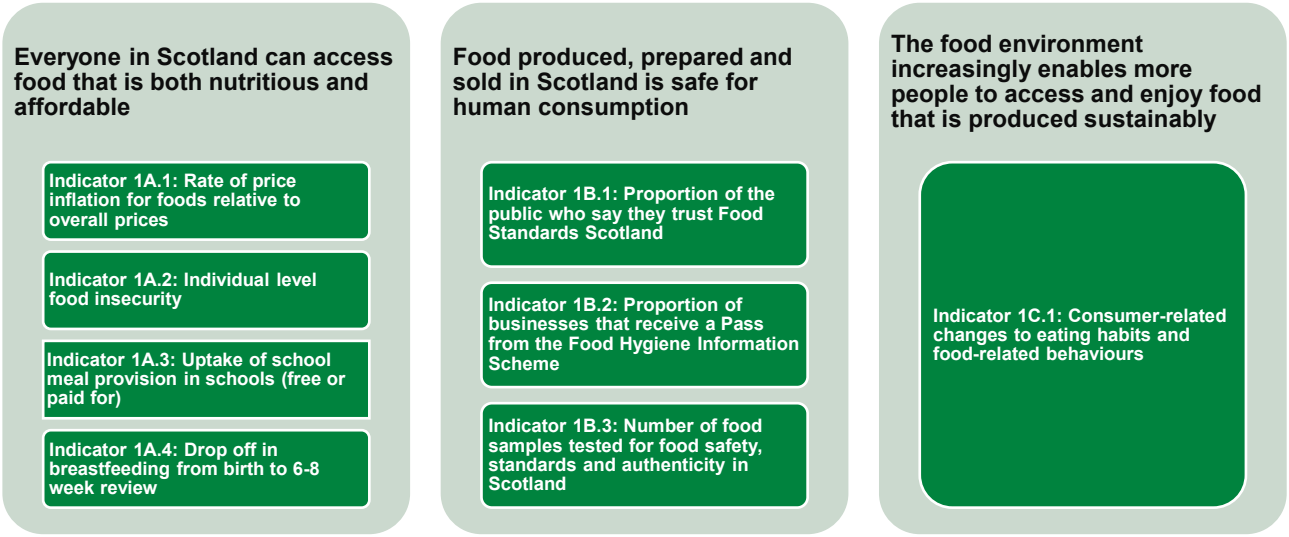
3. Outcome 1: A better food environment

Outcome 1: The food environment in Scotland enables people to eat well. Everyone benefits from reliable and dignified access to safe, nutritious, affordable, enjoyable, sustainable and age-appropriate food.

Summary of Outcome 1 Indicators

Outcome 1 indicators are structured around three sub-outcomes. The first sub-outcome focusses on indicators of food affordability, as well as access and nutrition. These indicators are drawn from official inflation data for food, estimates of the prevalence of household food insecurity in Scotland, estimates of the uptake of meals provided in schools (both free and paid for) and breastfeeding drop off rates. The second sub-outcome focusses on the safety of foods available in Scotland - drawing upon measures of perceived safety of food in Scotland (as measured by trust in the regulator), and regulatory activities that monitor food safety (the proportion of premises that pass food hygiene inspections and the number of food samples tested by local authorities for food hygiene/authenticity reasons). The final sub-outcome relates to 'sustainable' food actions and creating food environments conducive to good health. We acknowledge there are data gaps around understanding 'food environments' as well as age and culturally appropriate food under this outcome.

Figure 2: Summary of Outcome 1 Indicators



Sub-outcome 1A: Everyone in Scotland can access food that is both nutritious and affordable

As stated in the Plan, a key aim is to shift the dial and create a food system in Scotland that enables and promotes a healthy population. The cost and relative price of different

[6] Living Good Food Nation Lab, University of Edinburgh Business School. Living Good Food Nation Lab

foods is an important driver of consumer behaviour with respect to food choices.[7] Access to affordable food is also essential to maintaining a reasonable standard of living and reducing food insecurity in our communities.

The cost of food is one important element of the overall cost of living for households, which in turn is one of the three key drivers of child poverty in our society (alongside income from employment and income from social security and benefits in kind).[8] Whilst it is recognised that there is considerable overlap between tackling child poverty and the national Good Food Nation Plan outcomes, we have not duplicated on-going monitoring work set out in Child Poverty progress reports within the indicator framework for the Plan.[9] Local authorities and Health Boards also publish data at a local level within respective Local Child Poverty Action Reports.[10]

Food price inflation disproportionately impacts low-income households who spend a greater proportion of their income on food and essentials. The average UK household spends around 11.3% of their expenditure on household food and non-alcoholic drink. This increases to 14.3% for the lowest fifth of households by equivalised income.[11] Food is the fifth highest expenditure item for the average household, after 'housing, fuel and power', 'transport', 'other expenditure items' and 'recreation and culture'.

There have also been concerns that remote rural communities are particularly affected by higher food prices in comparison with average prices or prices in urban areas. This may be because of higher transportation costs or even the possibility that retailers may have a degree of spatial market power. There is some limited evidence that consumers in rural areas do pay more for their food basket than they would pay at average prices.[12]

Whilst the market price for different foods are influenced by a range of factors, from global market dynamics and weather patterns, to significant supply chain shocks such as Brexit, the COVID-19 pandemic, and the war in Ukraine, ultimately, a food system that delivers higher prices for 'healthier foods' will impede progress towards meeting the Good Food Nation outcomes.

By categorising foods using the Eatwell Guide[13] categories, independent analysis of UK food price data suggests that more healthy foods in the UK can cost more than twice as much as less healthy foods, on a £ per calorie basis.[14,15] The connection between price

[7] R, Griffith and M, O'Connell and K, Smith. (2013). Food expenditure and nutritional quality over the Great Recession. London: IFS. Food expenditure and nutritional quality over the Great Recession | Institute for Fiscal Studies

[8] Scottish Government, Child poverty system map. Child poverty system map - gov.scot

[9] Scottish Government, Child poverty analysis collection. Child poverty analysis - gov.scot

[10] Improvement Service, Local Child Poverty Action Reports. Local Child Poverty Action Reports | Improvement Service

[11] Office for National Statistics (ONS). (2025, 10 September). Family spending in the UK: April 2023 to March 2024. Statistical bulletin. Family spending in the UK - Office for National Statistics

[12] Revoredo-Giha, C. and Russo, C. (2023). Food Expensiveness in Scotland's Remote Areas: An Analysis of Household Food Purchases. Rural Sociology, 88, 32-70. Food Expensiveness in Scotland's Remote Areas: An Analysis of Household Food Purchases

[13] NHS, The Eatwell Guide. The Eatwell Guide - NHS

[14] The Food Foundation (2025). The Broken Plate 2025: The State of the Nation's Food System

[15] Hoenink, J.C., Garrott, K., Jones, N. R.V., Conklin, A. I., Monsivais, P., and Adams, J. (2024). Changes in UK price disparities between healthy and less healthy foods over 10 years: An updated analysis with insights in the context of inflationary increases in the cost-of-living from 2021. Appetite, 197. Changes in UK price

promotions and the current over-consumption of unhealthy discretionary foods that are high in fat, salt and sugar in the Scottish diet is also recognised.[16] As set out in the Plan, the Scottish Government intends to legislate to restrict the promotion of food and drink that is high in fat, sugar or salt where they are sold to the public.[17]

Indicators for sub-outcome 1A are based on a high-level assessment of the affordability of food, firstly through a measure of food prices relative to general prices as captured by the Consumer Price Index (CPIH), and secondly, through monitoring the proportion of households in Scotland that experience food insecurity as reported in the Scottish Health Survey. We also capture within this sub-outcome the uptake of free school meals within Scottish schools, as captured in the School Meal Uptake Statistics. Finally, an indicator has also been added to the framework to understand whether or not babies and young children are getting access to the healthy nutritious food that meets their needs, which aligns with 'age-appropriate food' within this Outcome and the stretch aim re-iterated in the Good Food Nation Plan that breastfeeding drop off rates at 6-8 weeks are reduced by 10% by 2025.

Indicator 1A.1: Rate of price inflation for foods relative to overall prices

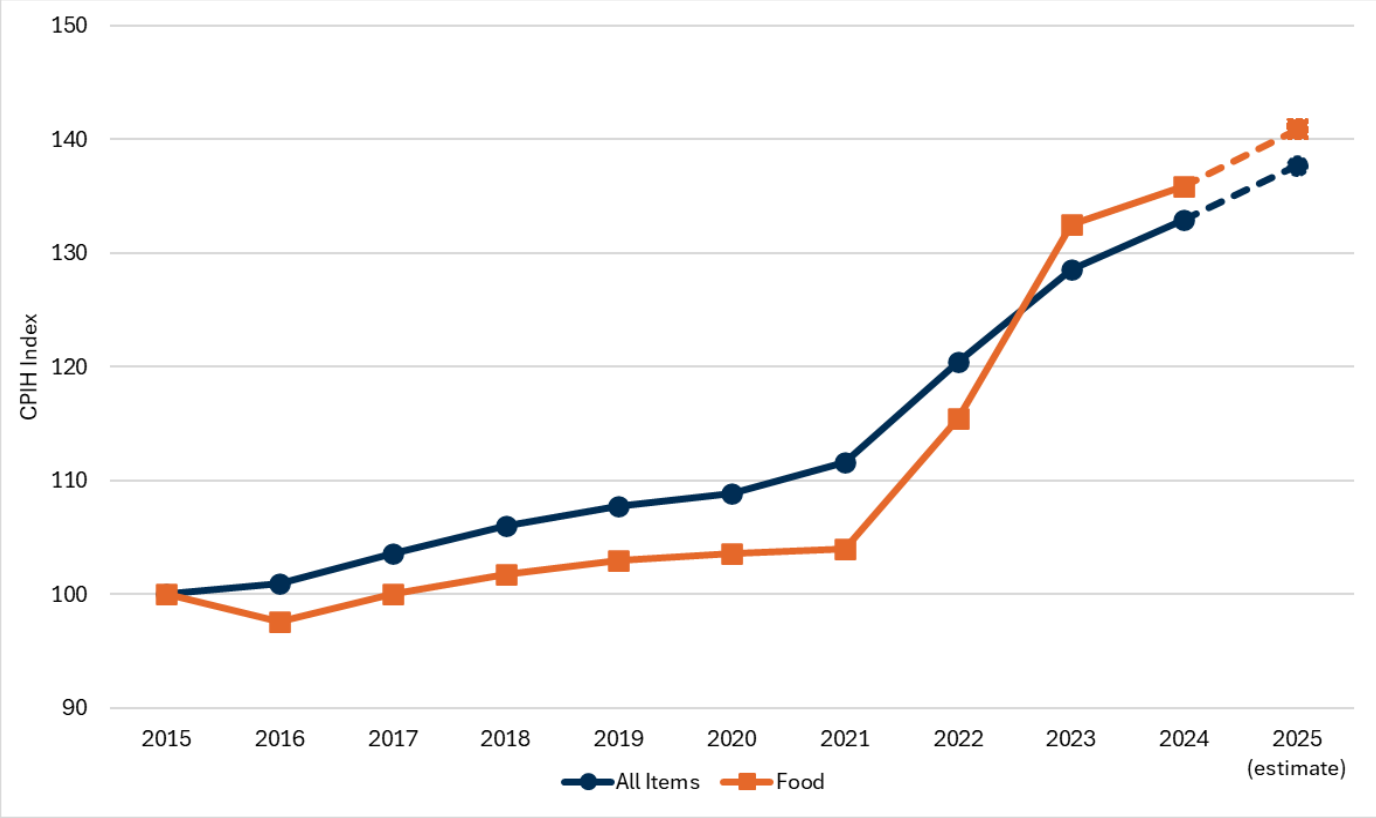
Headline 1A.1: Following a period of relative stability from 2015 to 2021, food prices have become a major driver of overall inflation since 2022.

disparities between healthy and less healthy foods over 10 years: An updated analysis with insights in the context of inflationary increases in the cost-of-living from 2021

[16] Scottish Government (2022). Reducing health harms of foods high in fat, sugar or salt: economic modelling – final report. Reducing health harms of foods high in fat, sugar or salt: economic modelling – final report - gov.scot

[17] Scottish Government. (2025, 17 June). Restricting promotion of food and drink high in fat, sugar or salt: consultation analysis – SG response. Restricting promotion of food and drink high in fat, sugar or salt: consultation analysis - SG response - gov.scot

Figure 3: Indicator 1A.1 Rate of price inflation for foods relative to overall prices



Source: Office for National Statistics, Consumer Price Index (CPIH)[18]

Baseline 1A.1: It is estimated that in 2025, when compared to 2015, food prices will have increased (+40.9%) by 3.2 percentage points more than overall consumer prices (+37.7%).

Tracking how food prices change relative to overall consumer prices provides insight into how quickly food costs are rising compared with general inflation.

This indicator is sourced from the Consumer Price Index (including owner occupier housing costs) data produced by the Office for National statistics. The indicator shows that between 2015 (the base year for the index) and 2025, overall food prices had risen by 40.9% according to the CPIH measure of inflation.[19] This compares to the overall CPIH, which increased by 37.7% over the same period. This means that food prices increased by 3.2 percentage points more than overall consumer prices over this period.

For most of this period (2015-2022), the CPIH index for food was *lower* than the overall CPIH index. This changed prior to 2023, as outlined in Figure 3, and coincided with the cost-of-living crisis that was, in part, triggered by Russia's illegal invasion of Ukraine in February 2022.[20] This led to food prices rising rapidly, peaking at an annual inflation rate of 19.2% in March 2023. As shown in Figure 3, food prices jumped from being 7.6

[18] Note that CPIH index rates use 2015 as the base year (2015 = 100)
[19] 2025 data is partial, and based on the average index from January to October 2025 and therefore subject to change. In 2025, food prices contributed 8.6% of the CPIH basket.
[20] Dyson, B., Harris, J., Parry, S. and Choudhury, S. (2023) Impacts of the Ukraine–Russia conflict on the global food supply chain and building future resilience. EuroChoices, 22(2), pp. 24–31. University of Southampton. Impacts of the Ukraine–Russia Conflict on the Global Food Supply Chain and Building Future Resilience

percentage points lower than the overall CPIH price index to 3.9 percentage points above the overall CPIH price index in 2023.

The difference between the CPIH index for food and the overall index fell slightly from 3.9 percentage points in 2023 to 3 percentage points in 2024. For 2025, the difference is estimated to grow to 3.2 percentage points based on the first 10 months of data for 2025.

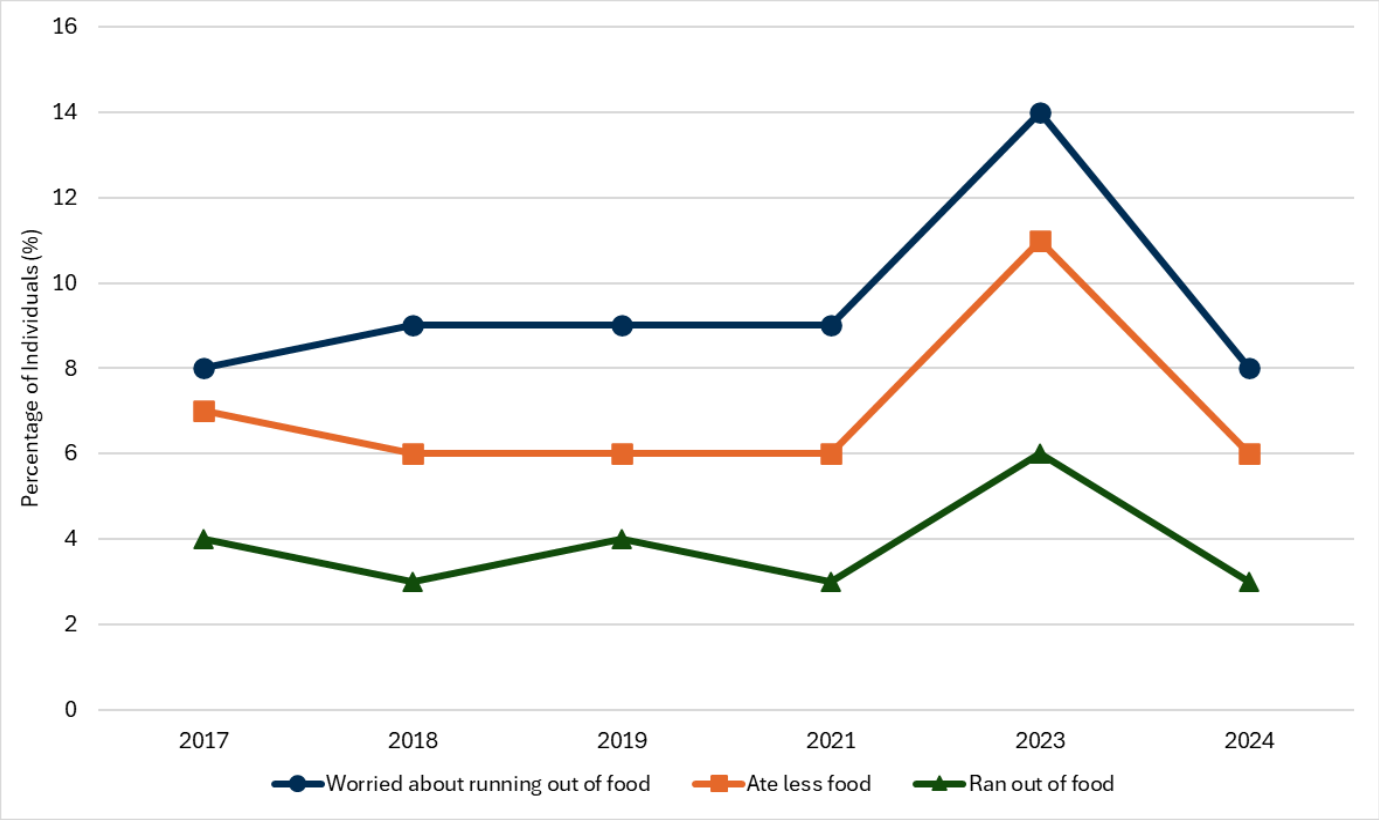
The Office for National Statistics (ONS) intend to transition the source of CPI food price data from traditional in-store field collection to data obtained from 'grocery scanner data'.[21] Scanner data will have several benefits compared with current sources, including improved product coverage, accounting for price variations within a given month, improved geographic coverage and inclusion of more discount types (in-store loyalty cards). ONS will not revise previous consumer price statistics when grocery scanner data is introduced, however once this data is confirmed, it will change our indicator going-forward. We will reflect any changes in future monitoring of this indicator.

[21] Office for National Statistics (ONS). Transformation of UK consumer price statistics, groceries scanner data analysis, April 2025. Transformation of UK consumer price statistics, groceries scanner data analysis

Indicator 1A.2: Individual level food insecurity

Headline 1A.2: Food insecurity reported by individuals increased significantly in 2023, but returned to previously recorded levels in 2024. Adults in single parent households were the most likely to experience food insecurity.

Figure 4: Indicator 1A.2 Individual level food insecurity



Source: Scottish Government, Scottish Health Survey 2024[22]

Baseline 1A.2: In 2024, 8% of adults were worried about running out of food, 6% of adults ate less food than they should have and 3% of adults ran out of food in the last 12 months. The baseline for indicator 1A.2 will be set when 2025 data is available.

Ensuring people can afford the food they need to stay healthy and happy is a cornerstone of the right to food and the outcomes of the Good Food Nation Plan. The Scottish Government defines food insecurity as the lack of access to enough or appropriate food due to a lack of resources. This includes a range of experiences, from worrying about affording food to skipping meals or compromising on quality and quantity due to financial pressures. This indicator, sourced from the Scottish Health survey, explores whether adults reported any food insecurity during the previous 12 months.

In 2024, 8% of individuals reported being worried about running out of food due to a lack of money or other resources in the last 12 months, 6% of individuals ate less food and 3% of individuals ran out of food. These figures were down from the series highs recorded in 2023 (14%, 11% and 6% respectively) and a return to the ranges previously recorded between 2017 and 2021. Food insecurity was highest among those aged 16-44, with 10%

[22] Note that data for 2020 have not been included, as data collection was affected by the COVID-19 pandemic

reporting they were worried about running out of food, 7% reporting they ate less and 5% reporting that they ran out of food, although these were the lowest recorded levels for this age group for those worried about running out of food and those who ate less. There was no significant variation by gender.

In terms of household composition in 2023/2024[23], food insecurity was highest among single parents, single adults and large families. In single parent households, over a third (36%) of adults were worried about running out of food, 27% ate less and 15% ran out of food. This compares to 21%, 18% and 13% respectively in single adults households and 19%, 15% and 7% respectively in large family households.

An alternative measure of food insecurity is sourced from the Family Resources Survey. For the period 2021-2024, this data showed that 16% of people lived in households which had marginal, low or very low food security.[24]

Some individuals that experience food insecurity seek assistance from food banks and other forms of food aid. The Scottish Government believe a Scotland without the need for food banks is possible - but getting there will take time, collective action and the right powers. Scotland was the first nation in the UK to publish a Cash-First Plan, grounded in human rights, that is taking forward nine actions between 2023 and 2026 to improve the response to crisis, using a cash-first approach so that fewer people need to turn to food parcels.[25] Stakeholders such as Trussell and the Independent Food Aid Network agree with this approach. Scotland has also published an Infant Food Insecurity Toolkit[26] that helps guide organisations to provide support appropriate to the needs of families with infants who have money worries, taking a cash first approach.

There are no official estimates of the scale and scope of food bank provision in Scotland, although data on both were collected by Urban Roots for the Scottish Government in 2019-20.[27] Independent research supported by the Scottish Government found that there were over 630 food support organisations operating in Scotland in 2023, operating through 1,008 outlets.[28] Trussell is the biggest food bank network in the UK, and operated from 143 locations in Scotland in 2024-25. The total number of food parcels distributed by food banks in the Trussell network in 2024-25 was 239,503. Although this represents a fall of 10% since 2023-24, the number of parcels was 3% higher than in 2019-20.[29]

Estimates of Food Insecurity are available at Health Board and Local Authority level.

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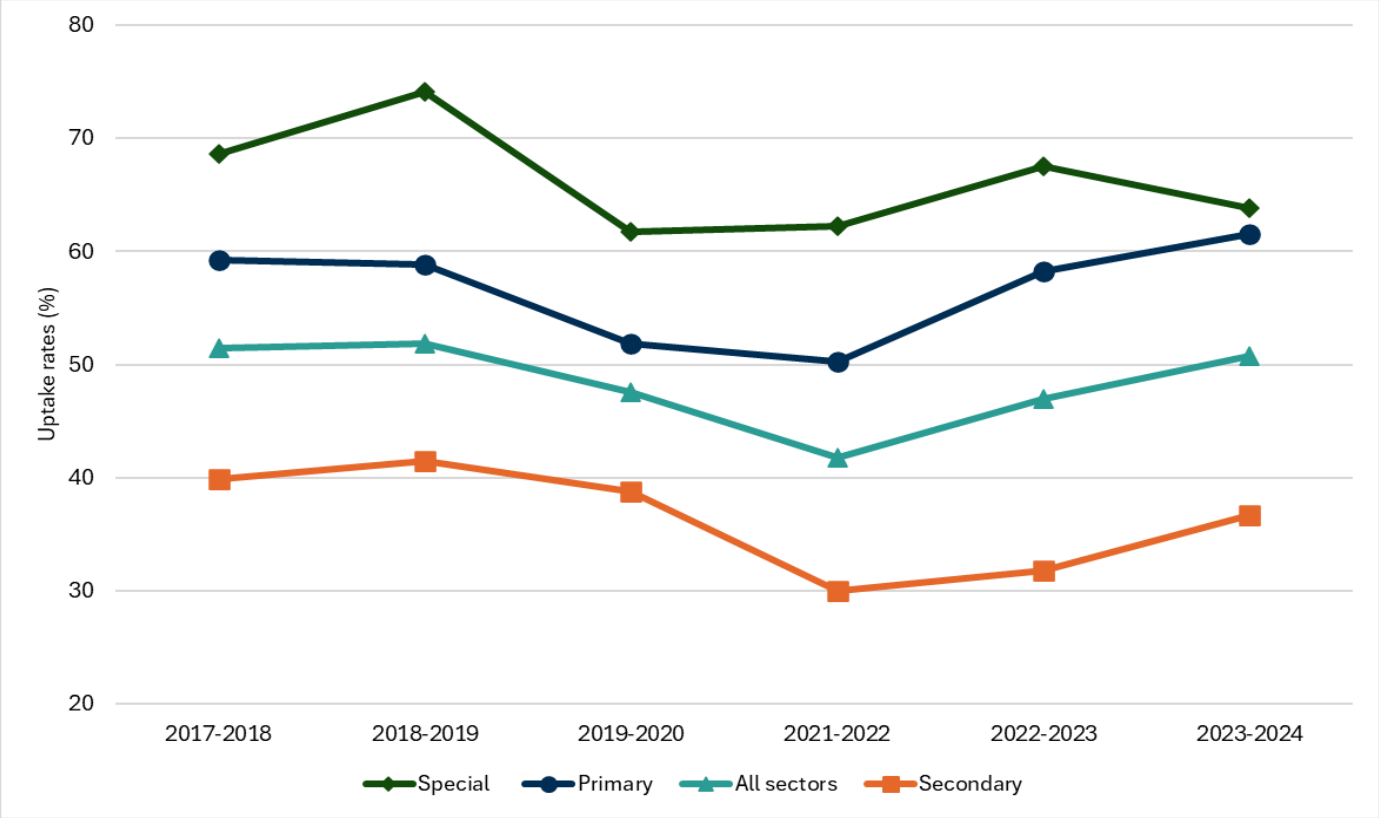
[23] Breakdown reported over two years
[24] Scottish Government. (2025, 27 March). Poverty and Income Inequality in Scotland 2021-24. An Accredited Official Statistics Publication for Scotland. Poverty and Income Inequality in Scotland 2021-24
[25] Scottish Government. (2023, 5 June). Cash-First – towards ending the need for food banks in Scotland: plan. Introduction - Cash-First - towards ending the need for food banks in Scotland: plan - gov.scot
[26] Scottish Government. (2024, 9 February). Infant food insecurity – responding and preventing: guide. Key Messages - Infant food insecurity - responding and preventing: guide - gov.scot
[27] Scottish Government. (2020, 18 June). Mapping Organisations Responding to Food Insecurity in Scotland. Executive summary - Mapping Organisations Responding to Food Insecurity in Scotland - gov.scot
[28] Watts, D, Slater, R. and McKenzie, J (2025) 'The distribution and Functions of Food Support Organisations in Scotland and their Implications for Policy', Scottish Affairs vol 34, Issue 1 The Distribution and Functions of Food Support Organisations in Scotland and their Implications for Policy | Scottish Affairs
[29] Trussell. (2025, 21 May). Emergency food parcel distribution in Scotland. Emergency food parcel distribution in Scotland

Indicator 1A.3: Uptake of school meal provision in schools (free or paid for)

Headline 1A.3: The overall uptake rate of school meals (free and paid for) was up in 2023-2024, marking a return to pre-pandemic levels. Uptake of school meals is highest among pupils with universal entitlement to free meals compared to where free meal provision is means-tested.

Figure 5: Indicator 1A.3 Uptake of school meal provision in schools (free or paid for)



Source: Scottish Government, School meal uptake statistics, 2023-24[30]

Baseline 1A.3: The latest data reflects school meal uptake in 2023-24 - which was 50.8% across all schools. A baseline will be set when 2024-25 data is published.

Food provided in schools can make a valuable contribution to improving the nutritional quality of diets and promoting consistent messages about healthy eating. In Scotland, universal free school meals are available during school term-time for over 230,000 children in Primary 1 to 5 and special schools, as well as eligible pupils in Primary 6 to Secondary 6.[31]

Following public consultation, The Nutritional Requirements for Food and Drink in Schools (Scotland) Regulations 2020 were introduced. [32,33] The Regulations are based on scientific evidence and dietary advice designed to ensure children and young people are provided with food, drink and meals that contain an appropriate amount of energy and key nutrients

[30] Due to the COVID-19 pandemic, meal uptake estimates are not available for 2020-21
[31] Scottish Government. Free School Meals. Check who can get free school meals. Free school meals - mygov.scot
[32] Scottish Government. (2019, 13 June). Food and drink in schools: consultation analysis report. Overview of Responses to the Consultation - Food and drink in schools: consultation analysis report - gov.scot
[33] The Nutritional Requirements for Food and Drink in Schools (Scotland) Regulations 2020. No. 153. The Nutritional Requirements for Food and Drink in Schools (Scotland) Regulations 2020

to support healthy growth and development. The Regulations are supported by Healthy Eating in Schools Guidance.[34]

There is also evidence that, where children and young people eat outside school, the food eaten is less healthy than what is eaten in school. Anecdotal evidence from families and schools consistently suggests that, over time, children and young people who eat in school become more willing to eat foods they would previously have refused.[35]

The uptake rate of all school meals (free and paid for) represents the average proportion of pupils in attendance at school that take a school meal over the financial year. The overall uptake rate for all school meals (free and paid for) across all school types was 50.8% in 2023-24, meaning an average of 50.8% of pupils attending school took a meal each school day over the course of the financial year. The uptake rate for all meals was up from 47.0% in 2022-23 and marks a return to pre-pandemic levels. The largest increase over the year was in secondary schools (31.8% to 36.7%), with a smaller increase in primary schools (58.2% to 61.5%). Breakdowns by local authority are available in the supplementary statistics.[36]

The Scottish Government's expansion to 1,140 funded hours of Early Learning and Childcare (ELC) also introduced a universal entitlement to a free meal for all 3 and 4 year old children and eligible 2 year old children as part of their ELC day. This can be delivered as a breakfast, lunch or dinner and should be consistent with 'Setting the Table'[37] nutritional standards and practical guidance for early years providers in Scotland. This approach ensures that children aged 0-5 years in childcare settings across Scotland are offered meals, snacks and drinks that meet their nutritional requirements and make a positive difference to their health and wellbeing. Baseline data on uptake are not currently available.

In addition to the ELC free meal the Scottish Government introduced the Scottish Milk and Healthy Snack Scheme (SMHSS) in 2021.[38] SMHSS is a universal preschool policy which provides funding for a daily portion of fruit/vegetable and a serving of milk or non-dairy alternative each day a child attends their regulated childcare setting for two hours or more, which has registered to participate in the Scheme. SMHSS is administered on behalf of Scottish Ministers by LAs who provide upfront payments to participating childcare settings. SMHSS is the only Scheme in the UK offering children a healthy snack of fruit or vegetables and a non-dairy alternative, in addition to milk. The Scheme promotes positive health outcomes for our youngest children through improved nutrition, embedding healthy eating habits from an early age. Data on the operation of the Scheme is collected by Local Authorities and the Care Inspectorate. Local Authorities provide evidence via 6 monthly reporting in both August and again in April on the number of registered settings and children as part of monitoring in line with the Milk and Healthy Snack Scheme (Scotland) Regulations 2021. The Care Inspectorate have included questions on the Scheme in their

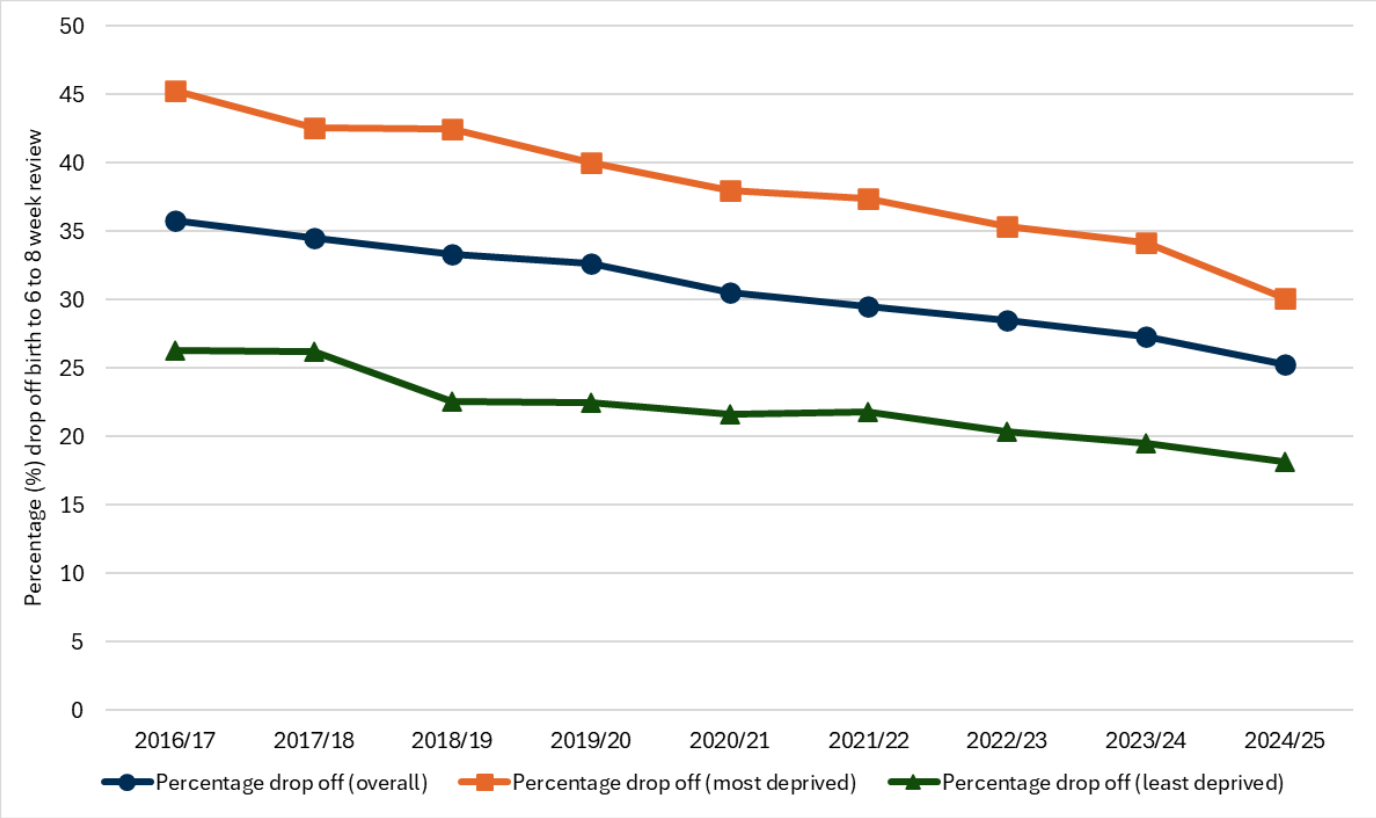
[34] Scottish Government. (2021, 10 February). Healthy eating is schools: guidance 2020. Healthy eating in schools: guidance 2020 - gov.scot
[35] Scottish Government. (2024, 20 December). Free school meals: equality impact assessment. Background - Free school meals: equality impact assessment - gov.scot
[36] Scottish Government (2025, 9 September). School meal uptake 2023-24 supplementary statistics. Table 10. Supporting documents - School meal uptake: 2023-24 - gov.scot
[37] Scottish Government. (2024, 8 October). Setting the Table Guidance: Nutritional Standards and Practical Guidance for Early Learning and Childcare Providers in Scotland. Setting the Table Guidance - gov.scot
[38] Scottish Government. Maternal and child health. Milk and Healthy Snack Scheme. Milk and Healthy Snack Scheme - Maternal and child health - gov.scot

annual survey with childcare providers which also provides additional data of views on the Scheme from providers.

Indicator 1A.4: Drop off in breastfeeding from birth to 6-8 week review

Headline 1A.4: The overall drop off in the proportion of mothers that continue breastfeeding from birth to 6-8 week review point has been declining, falling by 10.5 percentage points between 2016/17 (35.8%) and 2024/25 (25.3%).

Figure 6: Indicator 1A.4 Drop off in breastfeeding from birth to 6-8 week review



Source: Public Health Scotland, Infant feeding statistics

Baseline 1A.4: In 2024/2025, the percentage drop off in breastfeeding from birth to 6-8 weeks was 25.3%. This is the lowest recorded drop off rate. Higher drop off rates are observed in the most deprived quintile.

Breastfeeding provides the best nutrition for babies and young children. It supports children's health in the short and longer term, including through reduced risk of infections, and also benefits mothers' health, including through reducing the risk of breast and ovarian cancer. The World Health Organisation (WHO) recommends that all 'infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health'.[39] Current guidance recommends that babies receive just breast milk for the first 6 months of life, then, after introduction of solid foods, should continue to breastfeed up to at least their second birthday.

[39] World Health Organization (WHO). (2023, 9 August). Exclusive breastfeeding for optimal growth, development and health of infants. E-Library of Evidence for Nutrition Actions. Exclusive breastfeeding for optimal growth, development and health of infants

The Scottish Government's vision for breastfeeding and infant feeding was set out in a Framework[40] which outlines six strategic goals. The Framework re-iterates a "stretch aim" to reduce the drop off[41] in breastfeeding at the 6-8 week review by 10% by 2025, which was initially set out in the 2018 Diet and Healthy Weight Plan. This stretch aim will be refreshed to 2030 in the coming months.

Tracking infant feeding at key points — including the 6-8 week review — enables detection of where and when drop off in breastfeeding occurs, allowing targeted support to reduce inequalities and improve duration of breastfeeding. The reason this is an important stretch aim is because while initiation of breastfeeding may be relatively high, many mothers stop or substantially change how they feed by the 6-8 week point — supporting continuation out to that stage is critical to realising the health, developmental and equity benefits associated with longer-duration breastfeeding.

In 2024/25, of babies reviewed at 6-8 weeks, 34.3% were exclusively breastfed, 17% mixed breast and formula fed and 48.7% were exclusively formula fed.

In 2024/2025, the drop off rate in breastfeeding from birth to 6-8 week review was 25.3%. The drop off rate has been decreasing over time since 2016/2017 and this is the lowest the drop off rate has been in the time-series. The rate has fallen by more than 10 percentage points since 2016/17.

Increases in breastfeeding over the past 10 years have been greatest among those groups with historically lower rates, such as younger women and those living in more deprived areas. This means inequalities in breastfeeding have reduced over time. Further data on infant feeding - including data available at health board and local authority level - is published by Public Health Scotland.[42]

To improve access to healthy foods and milk, Best Start Foods provides pregnant women and families with children under the age of three who receive certain benefits with a minimum of £5.40 a week via a pre-paid card to buy these items. The payment doubles from birth until a child turns one to support breastfeeding mothers or help with the costs of providing first infant formula milk.[43]

[40] Scottish Government. (2025, June). Scotland's Breastfeeding and Infant Feeding Strategic Framework (2025-2030). Breastfeeding and Infant Feeding Strategic Framework and Delivery Plan

[41] The breastfeeding drop-off rate at 6-8 weeks refers to the proportion of breastfeeding mothers who stop breastfeeding between their first review (at birth) and at the 6–8 week review.

[42] Public Health Scotland. (2024, 12 November). Infant feeding statistics. Financial year 2023 to 2024. Infant feeding statistics - Financial year 2023 to 2024 - Infant feeding statistics - Publications - Public Health Scotland

[43] Scottish Government, Best Start Grant and Best Start Foods Best Start Grant and Best Start Foods - mygov.scot

Sub-outcome 1B: Food produced, prepared and sold in Scotland is safe for human consumption

As set out in the Good Food Nation Plan, the importance of an excellent food safety system in Scotland is critical in keeping the Scottish population safe when eating out, preparing food in the home or buying pre-packaged foods. Good hygiene practices also help to reduce demand on critical services within other health and social care settings. Published estimates suggest that around one-in-four people in the UK suffers an episode of infectious gastrointestinal disease each year and foodborne disease is estimated to cost the UK £10.4 billion annually (2022).[44] Foodborne pathogen surveillance in Scotland is conducted by Public Health Scotland, however this data has not been incorporated into the indicator framework (see below).

Food Standards Scotland (FSS) was established in 2015 as the new public sector food body for Scotland, to protect the health and wellbeing of consumers in relation to food. In relation to food safety this includes identifying and investigating risks to the food chain (food crime) and monitoring the regulatory approach to food law enforcement in Scotland. As reflected in the Food Standards Scotland 2021 - 2026 strategy, three of the five outcomes are that 'Food is Safe and Authentic', 'Responsible Food Businesses are enabled to thrive' and 'FSS is trusted and influential'.[45] The indicators under this sub-outcome reflect these broad outcomes that align with the Good Food Nation Plan.[46]

On a practical level, Food Safety Officers and Environmental Health Officer roles within local authorities are vital in the inspection and enforcement of food hygiene standards across food production premises in Scotland and play a key role in preventing bad practice and ensuring compliance.

Indicators for sub-outcome 1B are based firstly on measures of consumer trust in the food they consume as captured by measures of public trust in Food Standards Scotland. Indicators are also based on measures of food safety enforcement, through the proportion of food businesses that receive a pass under the Food Hygiene Information Scheme and the number of food samples tested for food safety, standards and authenticity in Scotland.

[44] Food Standards (FSA). Food.gov.uk. (2024, 7 March). Foodborne Disease Policy Overview. Foodborne Disease Policy Overview | Food Standards Agency

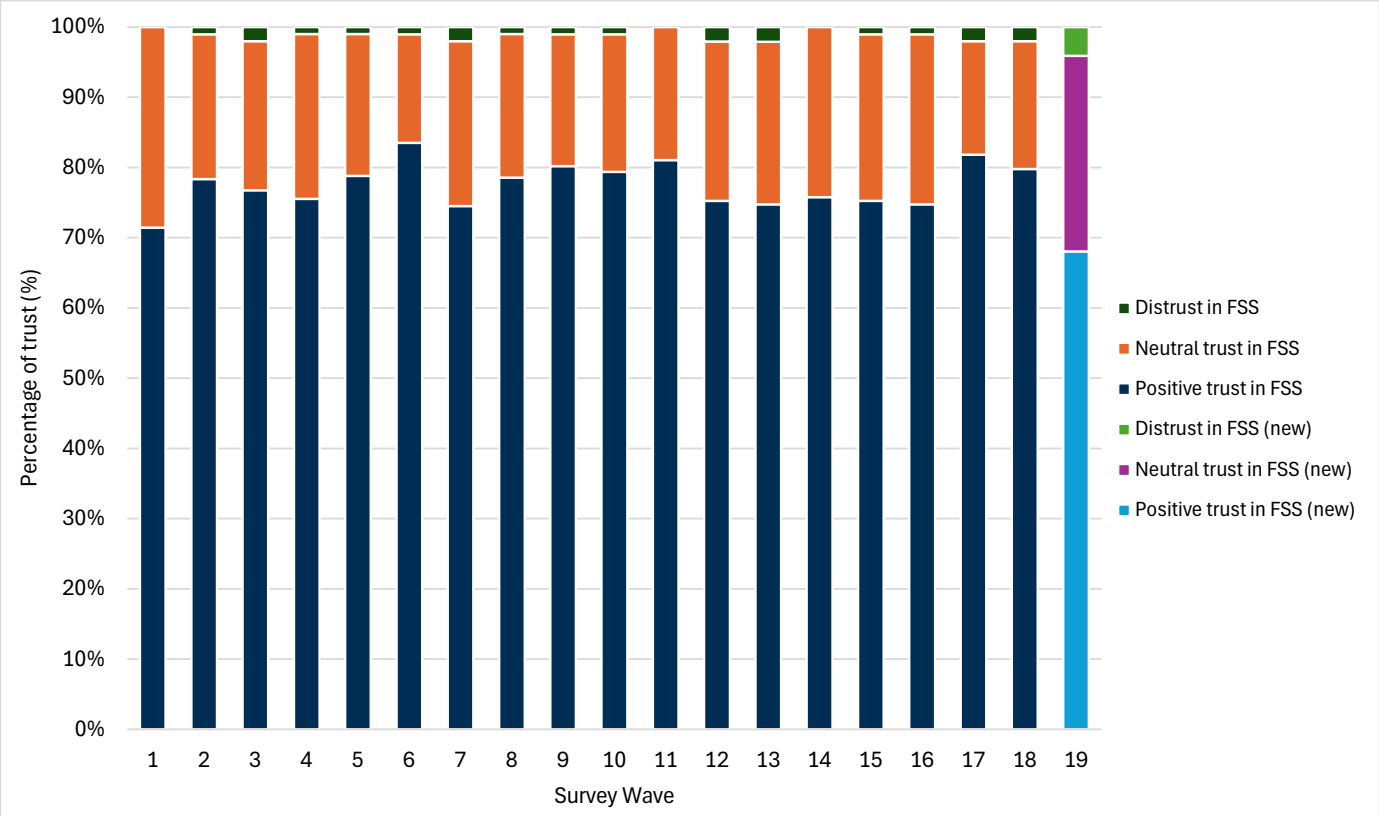
[45] Food Standards Scotland (FSS). (2021, May). Healthy, Safe, Sustainable: Driving Scotland's Food Future. Food Standards Scotland Strategy for 2021-2026. Healthy, Safe, Sustainable: Driving Scotland's Food Future

[46] Note the other two outcomes 'Consumers have healthier diets' and 'consumers and empowered to make positive choices about food' are captured in Outcomes 3 and 5.

Indicator 1B.1: Proportion of the public who say they trust Food Standards Scotland

Headline 1B.1: Consumer trust in Food Standards Scotland (FSS) has remained high and broadly stable. FSS plays a critical role in ensuring businesses comply with the legal standards that protect the safety and authenticity of our food.

Figure 7: Indictor 1B.1 Proportion of the public who say they trust Food Standards Scotland



Source: Food Standards Scotland, Food in Scotland Consumer Tracker Survey

Baseline 1B.1: The latest data for indicator 1B.1 shows that the proportion of respondents with positive trust in FSS was 66%, as recorded in December 2024 (wave 19) of the Food in Scotland Consumer Tracker Survey. The baseline will be set for indicator 1B.1 when 2025 data is available.

Building trust in our system of food regulation in Scotland maintains public confidence and safeguards demand for Scotland's food and drink products; protecting our economy and enabling consumers to make informed choices about the food they eat.

Indicator 1B.1 is sourced from the Food in Scotland Consumer Tracker Survey by Food Standards Scotland. In the most recent publication, wave 19, which was conducted in December 2024 and published in May 2025, questions were worded differently and therefore the data is not directly comparable to previous waves. In Figure 7, we can see that 66% of the public report positive trust in FSS, whilst only 4% report distrust.

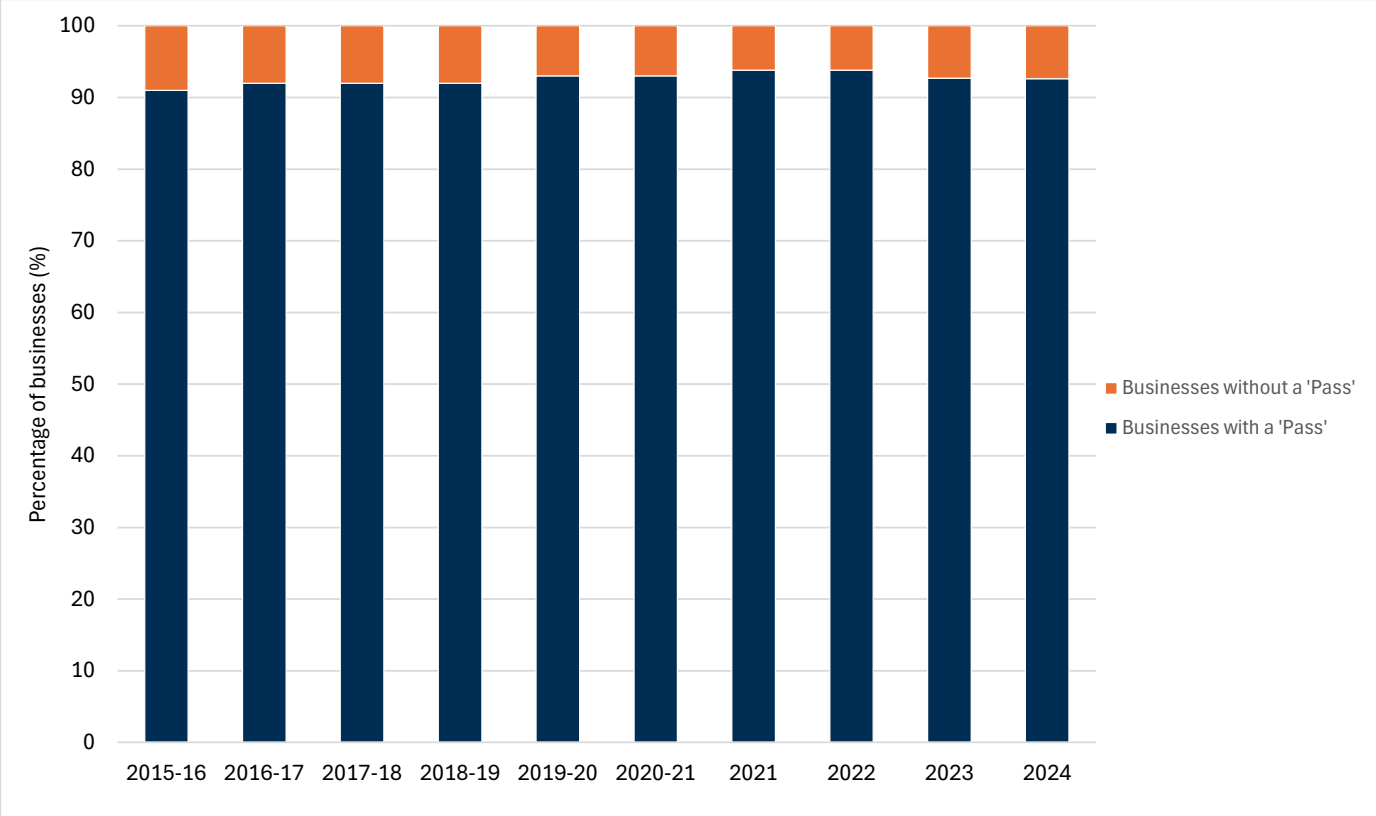
Some external studies indicate that food is among the most trusted sectors. The 2025 Edelman Trust Barometer conducted across 28 countries reported that food was among the top 5 trusted sectors, with 73% of respondents trusting businesses in the food and

beverage sector.[47] Similarly, in the UK, Red Tractor reported that despite the challenges of recent years, such as the cost-of-living crisis and international disruptions, trust in UK food has reached its highest level in three years. In 2024, 75% of UK adults trust food produced in the UK, outpacing trust in NHS care and tap water.[48]

Indicator 1B.2: Proportion of businesses that receive a Pass from the Food Hygiene Information Scheme

Headline 1B.2: All food businesses have a legal requirement to ensure the food they place on the market is safe. The percentage of businesses achieving a 'Pass' rating in the Food Hygiene Information Scheme (FHIS) has remained high, at over 90% since 2015-2016.

Figure 8: Indicator 1B.2 Proportion of businesses that receive a Pass from the Food Hygiene Information Scheme



Source: Food Standards Agency and Food Standards Scotland, Our Food 2024 and Food Standards Scotland, Annual Report and Accounts [49]

Baseline 1B.2: The percentage of Scottish food businesses with a FHIS 'Pass' in 2024 was 92.6%. A baseline for indicator 1B.2 will be set when 2025 data is available.

[47] Edelman. (2025). 2025 Edelman Trust Barometer. Trust and the Crisis of Grievance. Global Report. 2025 Edelman Trust Barometer | Edelman

[48] Red Tractor. British Shoppers Reclaim Trust in UK Food. Trust in Food index 2024 - Red Tractor

[49] Prior to Our Food 2021, the percentage of passes for FHIS listed businesses was sourced from FSS Annual Report and Accounts, which reported on the financial year rather than the annual year. Due to this, 2020-21 the financial year and 2021 the annual year are included.

All food businesses have a legal requirement to ensure the food they place on the market is safe. Compliance with regulatory standards ensures that hazards have been controlled and that good hygiene practice has been followed at all stages in the production process. Local authorities are responsible for enforcing compliance with food law for the vast majority of food businesses.[50]

The FHIS operates in Scotland and covers more than 54,000 food outlets across all 32 Scottish Local Authorities. Following an inspection by an Authorised Officer from the relevant Local Authority, food businesses are given a rating of either a 'Pass' or 'Improvement Required'. Food businesses with a 'Pass' rating means that they have met the legal requirements for food hygiene, whilst businesses with an 'Improvement Required' rating didn't meet this legal requirement upon inspection and need to make improvements. Businesses can also be rated as 'Exempt' meaning the business has been inspected by a Local Authority Food Officer and met the pass criteria but does not meet the criteria to be part of the scheme. Exempt businesses are usually considered low risk to people's health in terms of food safety, for example, newsagents or chemists. New businesses or businesses under new ownership will not have a food hygiene rating and are labelled under 'Awaiting Inspection'.

As shown in Figure 8, as of December 2024, 92.6% of businesses were rated as a 'Pass' on the FHIS. Although the proportion of businesses receiving a 'Pass' from the FHIS has remained over 90%, it has fallen from a high of 93.8% in 2021 and 2022.

All published food hygiene ratings under FHIS are based on the latest inspection of the food business carried out by Local Authority Officers. The frequency at which food businesses are inspected is based on their risk rating, which is defined by the Food Law Rating System (FLRS). Enforcing food hygiene relies on Local Authorities having sufficient capacity to carry out official control activity, such as inspections and audits, at the frequency required. At present, Local Authority resources remain under pressure with significant staffing vacancies across the country and officers struggling to address inspection backlogs.

It is important to note that of the 92.6% of food businesses with a 'Pass' rating, many of these will have been given during historic inspections, and the next programmed inspection(s) under the FLRS frequency have possibly been missed due to the issues facing Local Authority resources. This means that whilst the rate of businesses with a 'Pass' is high, it is not necessarily an accurate and up-to-date picture of the out of home food hygiene environment.

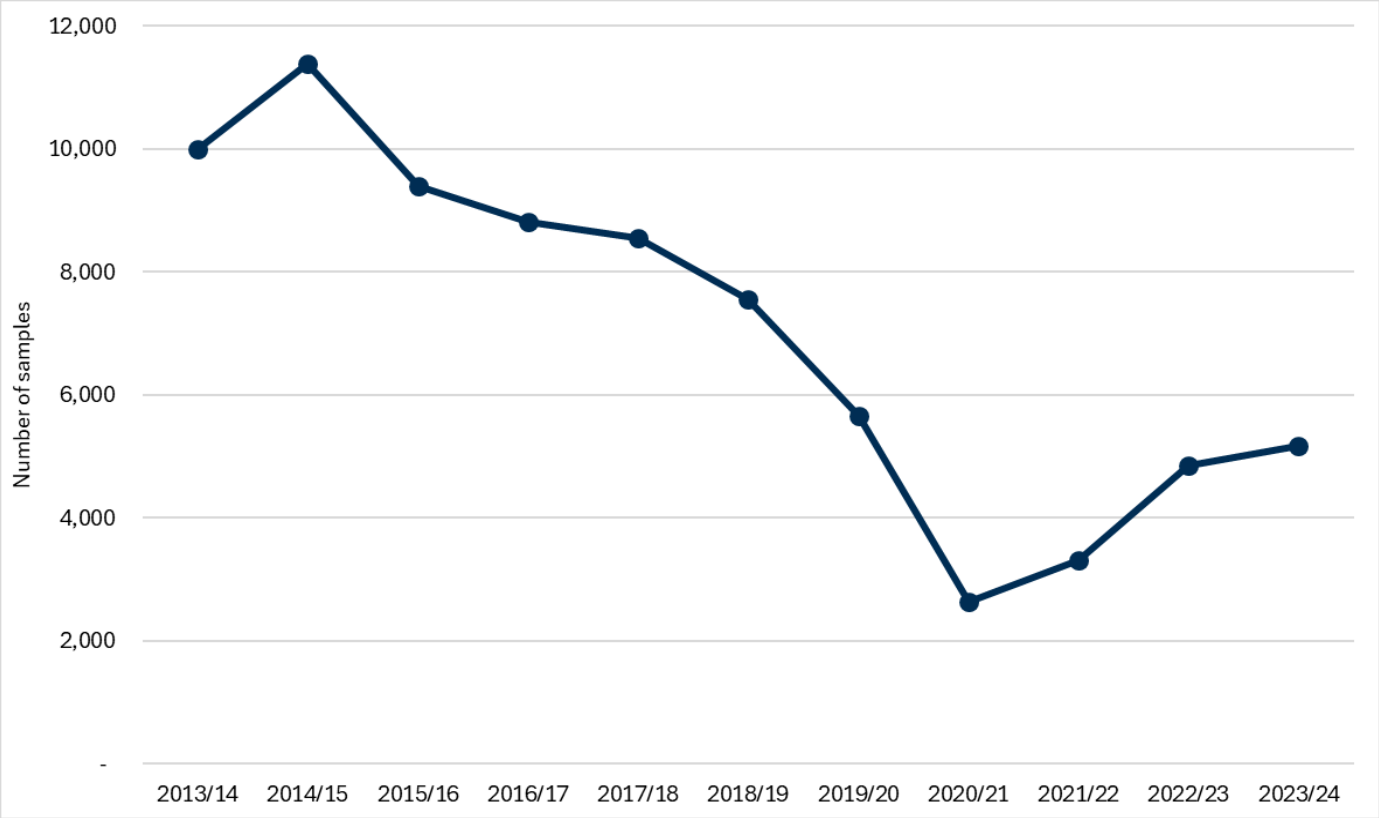
The FHIS runs side by side with the Eat Safe Award, which recognises the businesses that go over and above the legal minimum food hygiene standards. Over, 1,000 businesses are signed up under the scheme and information is publicly available (including local authority location).[51]

[50] Meat establishments and animal feed establishments are regulated directly by FSS for example.
[51] Food Standards Scotland (FSS). Eat Safe Awards. Eat Safe Awards consumer information | Food Standards Scotland

Indicator 1B.3: Number of food samples tested for food safety, standards and authenticity in Scotland

Headline 1B.3: The number of food samples tested for food safety, standards and authenticity in Scotland have been declining, reaching a low in 2020/21 during the Covid-19 pandemic. Since 2020/21, sampling numbers have gradually increased.

Figure 9: Indicator 1B.3 Number of food samples tested for food safety, standards and authenticity in Scotland



Source: Scottish Food Sampling Database[52]

Baseline 1B.3: The latest data for indicator 1B.3 shows that the number of samples reported by local authorities in 2024-25 was 4,402 (provisional figure).

Food sampling is undertaken in Scotland as part of FSS's National Food Surveillance programme and by Local Authorities as part of the inspections they carry out to ensure food businesses are compliant with regulations. This sampling plays a key role in providing assurance over the food that is produced and sold in Scotland. Food samples are tested for a range of food safety, standards and authenticity parameters at Public Analyst Scientific Services laboratories which are designated by FSS as Official Laboratories (PA OLs).

Since 2015/16, there has been a significant reduction in Local Authority sampling activity, which caused the overall number of samples tested to fall from 9,399 samples to a low

[52] This data covers samples for FSS's national surveillance program and those taken by Local Authorities during inspections of food businesses. Testing for food safety and standards covers microbiological examination, (hygiene) and chemical analysis (including contaminants, residues and additives)

of 2,637 samples during the COVID-19 pandemic in 2020/21 - a decrease of almost 72%. Since 2020/21, sampling has gradually increased, however, numbers remain lower than pre-pandemic levels.

FSS is monitoring this issue as insufficient sampling hampers the ability of authorities to detect risks which can pose a threat to public health and consumer confidence. Reduced food sampling also adversely impacts on the ability of PA OLs to maintain routine food safety and standards testing and respond effectively to any major incidents.

Another source of data connected to food hygiene is available from Public Health Scotland (PHS) which provides information on laboratory reports of Gastrointestinal and Zoonotic (GIZ) pathogens in Scotland. Data presented in their reports include general trends for the main GIZ pathogens as well as seasonality, demographics, and incidence rates by NHS health board of residence.[53] Most samples are taken for clinical or public health reasons rather than for general surveillance purposes. Therefore, data arising from this surveillance represents only a proportion of the true underlying infection burden in the community and may be biased towards certain groups who are more likely to be tested such as the very young and the old, or those who have travelled. Therefore, we did not consider this as an appropriate indicator for the national Plan. Nevertheless, this data continues to provide useful information on the trends of infection rates over time, showing that foodborne disease rates in Scotland have remained stable but not decreased over time.

Sub-outcome 1C: The food environment increasingly enables more people to access and enjoy food that is produced sustainably

The food environment can be understood as the foods available to people in their surroundings as they go about their everyday lives and the nutritional quality, safety, price, convenience, labelling, and promotion of these foods.[54]

Our food environment has the potential to change and support our population's health and promote more sustainably produced foods. The concept of the 'food environment' therefore recognises that shifting diets at a population level requires system change, rather than overly relying on policy approaches that focus on influencing individual behaviour alone. Evidence from England suggests that the focus on individual responsibility within diet policy is likely to have contributed to the lack of improvement in levels of healthy weight or related health inequalities over the past 30 years.[55] This aligns with what we see in Scotland, where levels of poor diet and excess weight continue to remain high (see Outcome 3).

Improving the food environment requires a broad range of policy actions and SG have committed to outlining these in the forthcoming Diet and Healthy weight implementation plan.

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[53] Public Health Scotland (PHS). (2024, 1 October). Gastrointestinal and Zoonoses. Biennial Report 2022-2023. Gastrointestinal and Zoonoses - Biennial Report 2022-2023 - Gastrointestinal and Zoonoses - Publications - Public Health Scotland

[54] Public Health Scotland (PHS). (2025, 5 August). Food environment. Overview - Food environment - Food and physical activity - Improving Scotland's health - Population health - Public Health Scotland

[55] Theis, D.R.Z. and White, M. (2021). Is Obesity Policy in England Fit for Purpose? Analysis of Government Strategies and Policies 1992-2020. The Milbank Quarterly, 99, 126-170. Is Obesity Policy Fit for Purpose?

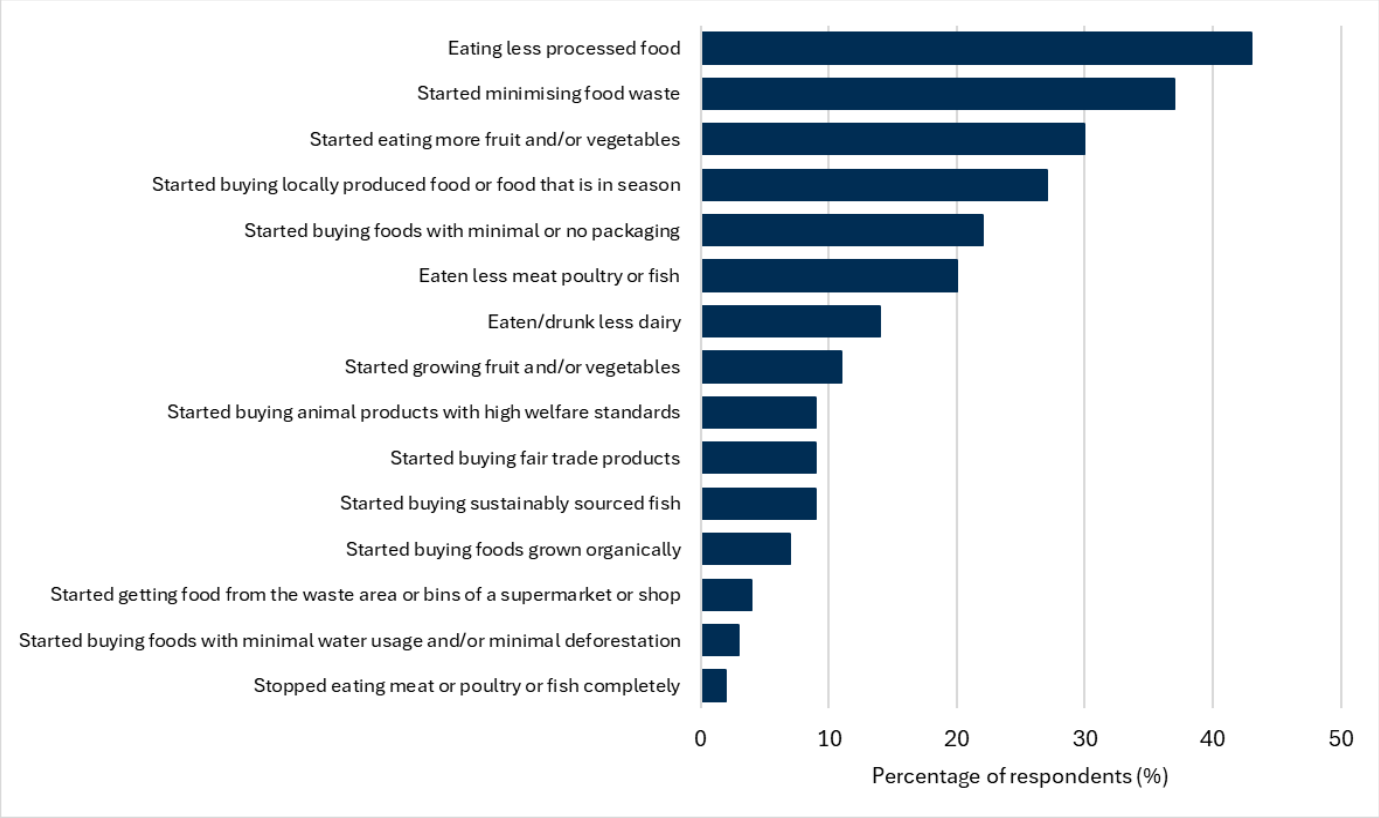
It is highly likely that new indicators to assess how Scotland's food environment is changing will emerge over time - particularly indicators linked to new policy initiatives. However, for the first plan, we have used existing data collected as part of FSA and FSS Food and You 2 survey on consumer-related changes to eating habits and food related behaviours.

The rationale for this indicator is that it captures a number of behaviours which - if we were to see improvements in our food environment - we could hypothesise would increase. For example, eating less processed foods, eating more fruit and vegetables and choosing products with less plastic packaging. It also includes a number of behaviours related to more sustainable food choices (buying in season or locally produced food for example).

Indicator 1C.1: Consumer-related changes to eating habits and food-related behaviours

Headline 1C.1: From Spring 2026, there will be new survey data available which will indicate how many people in Scotland are changing what they eat, motivated by health and/or sustainability reasons.

Figure 10: Indicator 1C.1 Consumer-related changed to eating habits and food-related behaviours



Source: Food Standards Agency and Food Standards Scotland, Food and You 2 Survey

Baseline 1C.1: New data on food related behaviours will be published in early 2026 – when this is available this will set a baseline for this indicator going forward.

The FSA has been running the Food and You 2 survey in England, Wales and Northern Ireland since 2020. In Wave 8, FSS collaborated with the FSA to enable, for the first time, a sample of consumers in Scotland to be included in the survey.[56]

The survey questions within Food and You 2 wave 8 looked to explore any changes that respondents have made in the last 12 months to their eating habits or food-related behaviours. Note that responses 'Other' (3%), 'None of these' (6%) and 'Don't know' (12%) have been excluded above as they do not provide any detail on specific actions taken. In 2023-2024, the top changes consumers made to their eating habits and food-related behaviours were to eat less processed foods, minimise food waste, eat more fruit and/or vegetables, buy local produced or in season food and to buy food with minimal or no packaging

From wave 11, two new questions will be asked - with similar options as set out in Figure 10:

- Thinking about the food that you eat, which, if any, of the following changes have you made in the last 12 months for **health reasons**?

- Thinking about the food that you eat, which, if any, of the following changes have you made in the last 12 months for **sustainability reasons**?

We will continue to monitor questions within these surveys that cover consumer related change in eating habits and food-related behaviours.

[56] The Food in Scotland Consumer Tracker survey did previously include a similar question around changes in consumer eating habits and food related behaviors in wave 12 in 2021 to wave 16 in 2023.

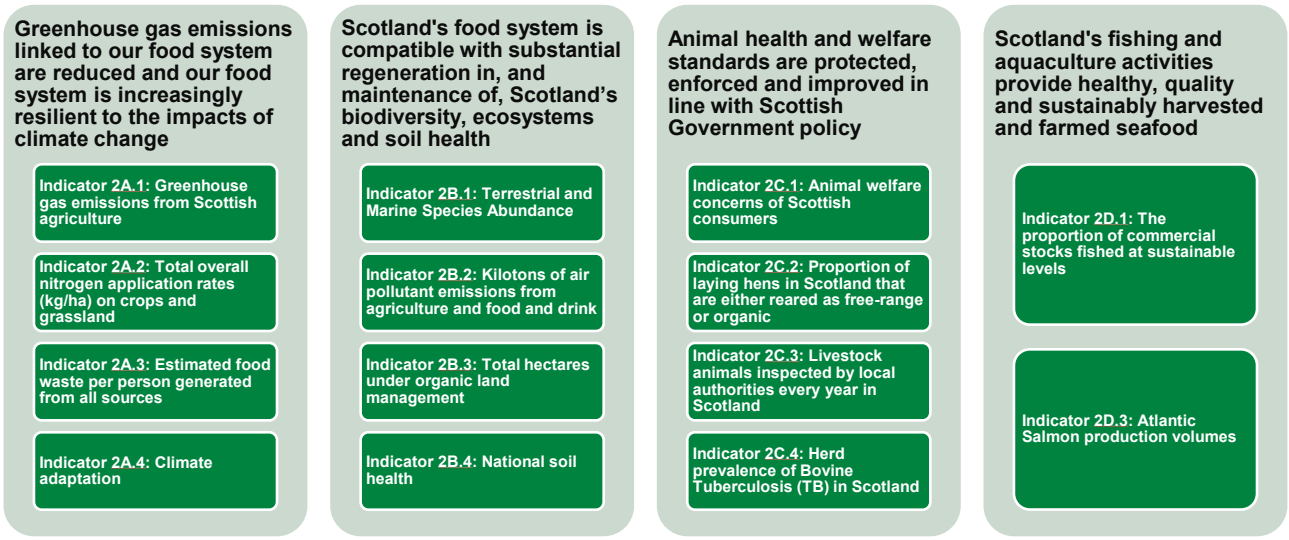
4. Outcome 2: A sustainable food system

Outcome 2: Scotland's food system is sustainable and contributes to a flourishing natural environment on our land and in our waters. It supports our net zero and climate adaptation ambitions and plays an important role in protecting and improving animal health and welfare and in restoring and regenerating biodiversity.

Summary of Outcome 2 Indicators

Outcome 2 of the Good Food Nation Plan reflects that there is a need to adjust how food is produced, processed, distributed, and disposed of (food waste) in Scotland to contribute towards addressing the twin challenges of climate change and biodiversity loss. The impacts of climate change also pose an increasing risk to agricultural production, distribution networks and food safety in Scotland's food and drink industry.

Figure 11: Summary of Outcome 2 Indicators



Sub-Outcome 2A: Greenhouse gas emissions linked to our food system are reduced and our food system is increasingly resilient to the impacts of climate change

Activities at each stage of Scotland's food system contribute to greenhouse gas emissions (GHG emissions). Emissions activities in the food system include (but are not limited to); the production of synthetic fertilisers, energy use during processing, packaging, and cold storage; and the disposal of food and food packaging waste. The most comprehensive analysis of GHG emissions associated with food consumed in the UK, conducted by the Waste and Resources Action Programme (WRAP), found that 31% of food system emissions were linked to agricultural activities.[57,58] The second largest source of emissions

[57] To note WRAP's definition of agricultural activity includes embodied emissions from fertilizer production and embodied emissions from imported feed production. These are not included in the GHG inventory.
[58] WRAP. (2025, 21 January). Tracking UK Food system Greenhouse Gas emissions: 2015-2022. Tracking UK Food system Greenhouse Gas emissions: 2015-2022 | WRAP - The Waste and Resources Action Programme

were linked to imported food (although these estimates were subject to significant uncertainty).[59] It should be noted that WRAP applies a consumption-based accounting approach to their food system emissions estimates rather than a production-based approach. This means that emissions within this framework do not need to occur within the UK. The Scottish Government supports work being undertaken in the Food Data Transparency Partnership (FDTP) program, which aims to enhance the quality and accessibility of environmental data across the food system in the UK to enable informed decision-making and drive measurable reductions in emissions.[60]

Research funded by the Scottish Government found that there is significant uncertainty currently around the magnitude of emissions associated with food consumed in Scotland.[61] Notwithstanding this uncertainty, GHG emissions associated with food consumption have declined over the past 30 years due to several factors, including reductions in consumption of red meat and de-carbonisation of electricity. The research also found that red and processed meat (including processed pork and other processed meat) is consistently the largest food group contributing to consumption-based emissions.

There is no regularly updated estimate of the total GHG emissions from the food system in Scotland. As a proxy indicator of the contribution of our food system to GHG emissions, for the purposes of monitoring the Good Food Nation Plan, Scottish agriculture greenhouse gas emissions are used as a proxy indicator for total food system emissions under this sub-outcome. This recognises the fact that agricultural emissions make up the largest proportion of Scottish GHG emissions linked to food.[62]

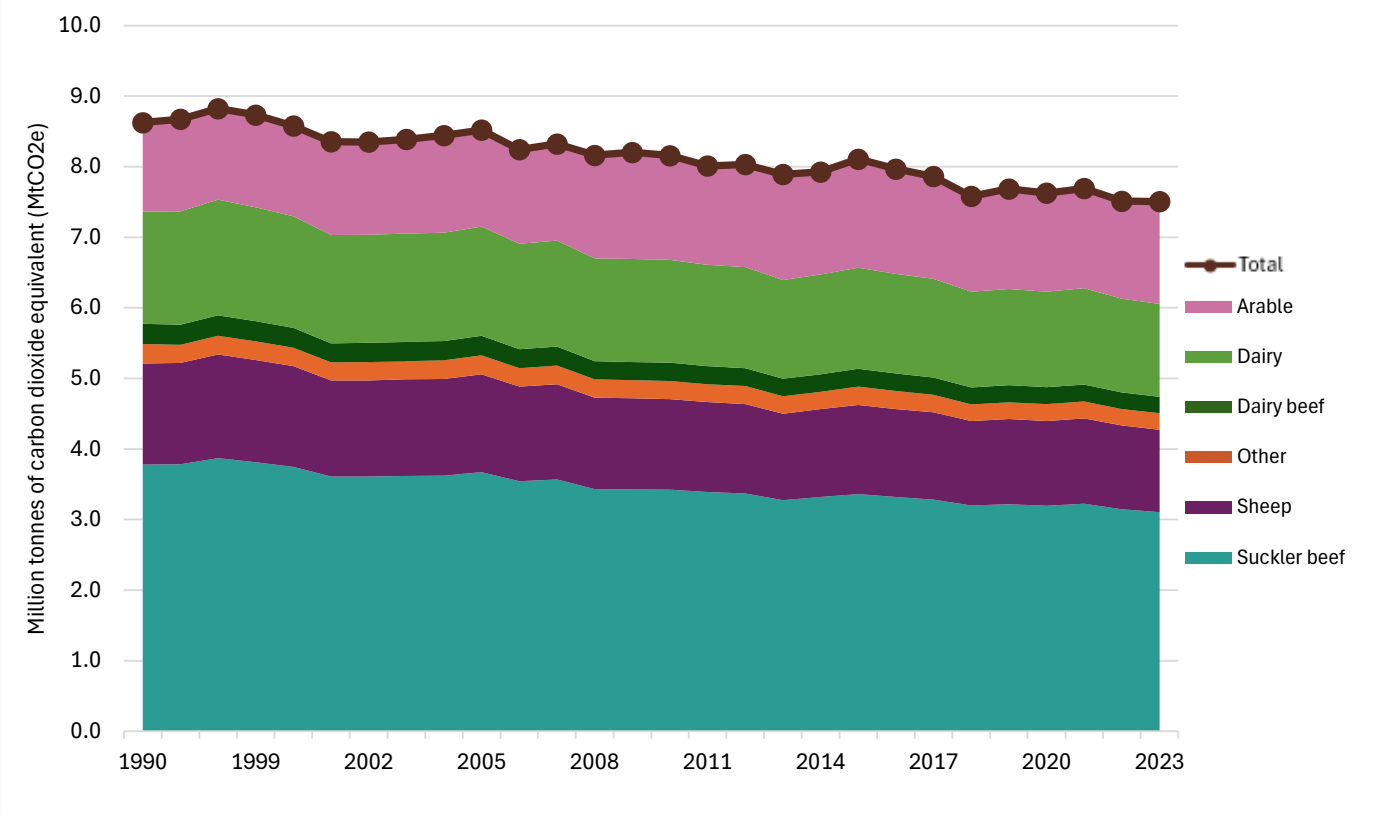
Indicators for sub-outcome 2A also include a measure of nitrogen application on Scottish crop and grassland, recognizing that nitrous oxide emissions linked to food production can have wider harmful effects on our environment and human health. This sub-outcome also includes indicators relating to food waste generated in Scotland and recognises the need to adjust food production systems to account for our changing climate through climate adaptation measures, although we do not identify a quantitative data indicator for this in the Plan.

[59] WRAP estimates emissions from imported food by applying fixed life-cycle emission factors (including land-use change where relevant) to UK import volumes, attributing the resulting overseas production emissions to the UK's overall food-consumption footprint.
[60] UK Government. GOV.UK. Food Data Transparency Partnership. Food Data Transparency Partnership - GOV.UK
[61] Jaacks et al. (2024, February). Understanding the climate impact of food consumed in Scotland. University of Edinburgh. Understanding the climate impact of food consumed in Scotland
[62] Extrapolating from the WRAP analysis of the UK food system, agricultural activity made up around a third of food system emissions. The second largest category was net food imports. Smaller contributions came from transport, food manufacturing, packaging and refrigeration.

Indicator 2A.1: Greenhouse gas emissions from Scottish agriculture

Headline 2A.1: Around a third of emissions from our food system were linked to agricultural activity. Total agriculture emissions have been in a long-term decline. In 2023, GHG emissions were at their lowest levels since the baseline period (1990).

Figure 12: Indicator 2A.1 Greenhouse gas emissions from Scottish agriculture



Source: Scottish Government, Scottish agriculture greenhouse gas emissions and nitrogen use: 2023-24

Baseline 2A.1: The latest data for indicator 2A.1 shows that total emissions from agriculture in 2023 were 7.5 million tonnes of carbon dioxide equivalent (MtCO2e). This is a decrease of 2% (0.2 MtCO2e) compared with 2021. A baseline for indicator 2A.1 will be set when 2025 data is available.

Greenhouse gas emissions from Scottish agriculture have fallen steadily to around 7.5 million tonnes of carbon dioxide equivalent (MtCO2e) in 2023[63], a 13% reduction since 1990, marking the lowest level on record. This decline has been driven largely by reductions in livestock numbers - cattle down roughly 20% and sheep by a third - resulting in lower emissions from enteric fermentation and manure management.

The suckler beef subsector is the largest contributor to total agriculture emissions. In 2023 suckler beef emissions contributed 41% of total agriculture emissions. Suckler beef emissions fell by 0.7 $MtCO_2e$ (18%) between 1990 and 2023.

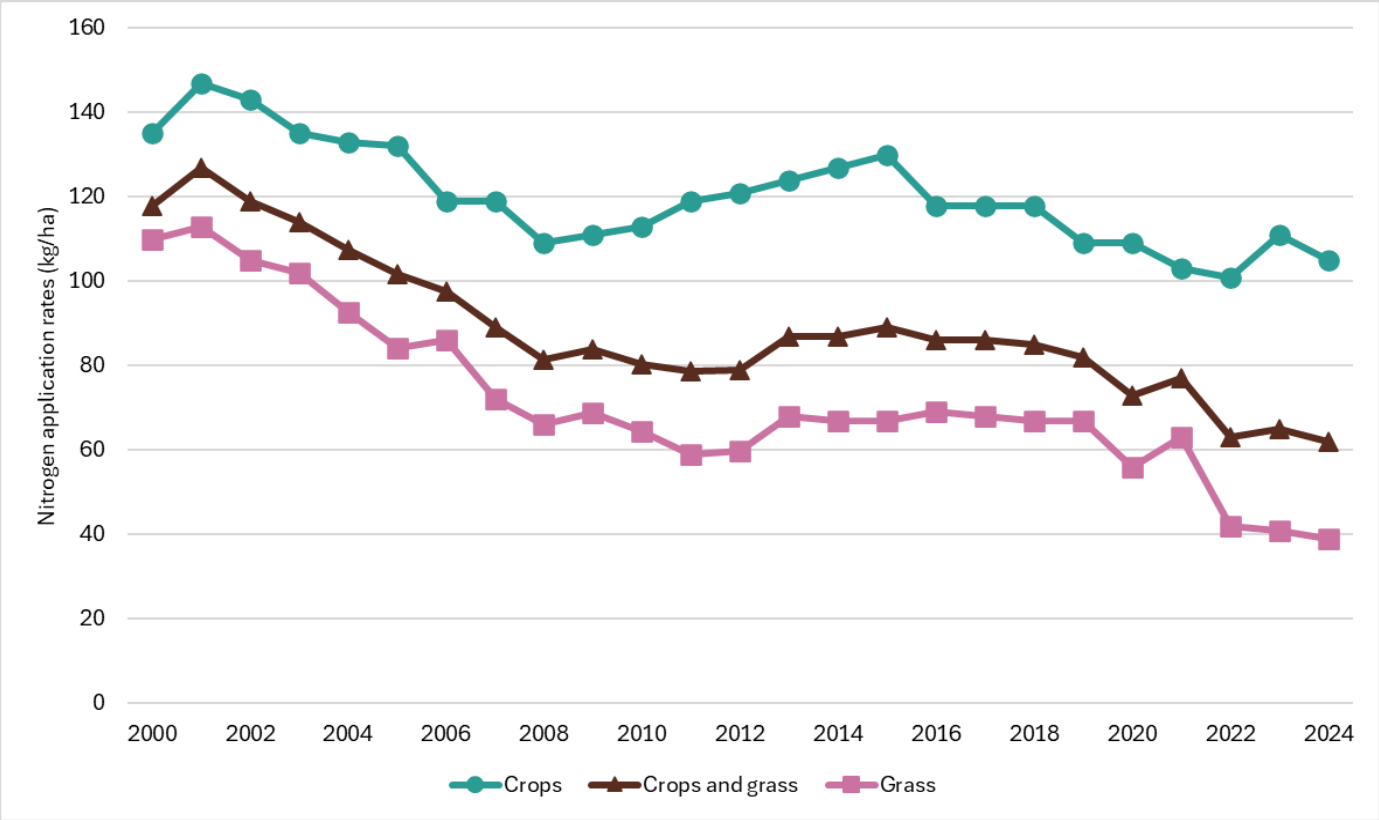
[63] Note total Scottish net emissions were 39.6 MtCO2e in 2023, which means agriculture represented around 19% of total net emissions.

Total GHG emissions are allocated to agricultural subsectors[64] using a methodology developed by SRUC.[65]

Indicator 2A.2: Total overall nitrogen application rates (kg/ha) on crops and grassland

Headline 2A.2: The agricultural sector is dependent on inputs of Nitrogen (N), from both organic and inorganic sources. From 2000, the overall application rates of nitrogen fertilisers have decreased, with some fluctuation.

Figure 13: Indicator 2A.2 Total overall nitrogen application rates (kg/ha) on crops and grassland



Source: [Department for Environment, Food and Rural Affairs, British survey of fertiliser practice]

Baseline 2A.2: Overall nitrogen application rates (kilograms per hectare, or kg/ha) on crops and grassland in 2024 was 62 kg/ha. A baseline for indicator 2A.2 will be set when 2025 data is available.

Nitrogen is an essential nutrient for plant growth. Nitrogen supplied by fertiliser, soil and other sources are consumed in harvested crops and animal products produced in our food system. However, excess nitrogen can also be lost to the wider environment and can be a

[64] Note that The subsector emissions estimates are based on fixed 2018 proportions applied across all years. This approach does not reflect annual changes in the underlying data. Subsector estimates should be considered as indicative, not definitive.
[65] Scottish Government. (2021, 20 December). Greenhouse gas emissions - agricultural: disaggregating headline figures. Greenhouse gas emissions - agricultural: disaggregating headline figures - gov.scot

potent greenhouse gas in the form of nitrous oxide. Losses of nitrogen to the wider environment can have harmful effects on, for example, climate change, biodiversity, air quality and water quality.

The agricultural sector is dependent on inputs of nitrogen, from both organic and inorganic sources. The inefficient use of these inputs creates nitrogen wastage. The Draft Climate Change Plan 2026-2040[66] recognises that whilst fertilisers are important for maintaining our agricultural productivity, there are many opportunities to improve their efficiency and reduce how much fertiliser is used whilst continuing to produce high-quality food.

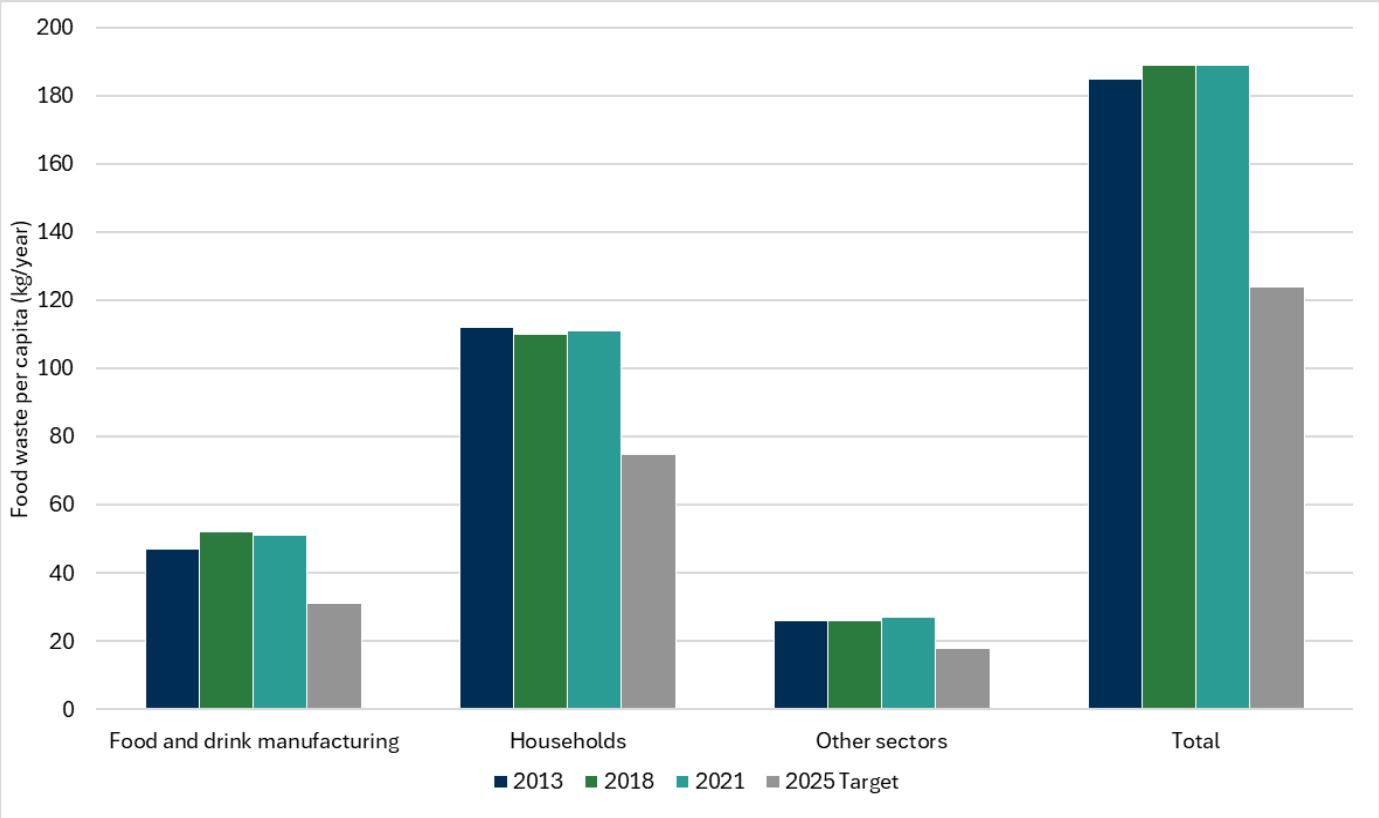
For the Good Food Nation Plan, we use total application rates of nitrogen fertilisers on crops and grassland (kg/ha) in Scotland as an indicator. Alternative measures of nitrogen use include the 'nitrogen balance' and 'nitrogen use efficiency' (NUE). A recent report commissioned by the Scottish Government concluded that developing an NUE target for agriculture through the Scottish Nitrogen Balance Sheet (SNBS)[67] is not currently the most appropriate option for Scotland.[68] More broadly, the SNBS provides an important framework for assessing nitrogen flows across sectors and identifying opportunities to improve nitrogen use and reduce losses to the environment.

[66] Scottish Government. (2025, November). Scotland's Draft Climate Change Plan: 2026 – 2040. Annex 2 Sectoral Annexes. Scotland's Draft Climate Change Plan: 2026–2040 - Annex 2 Sectoral Annexes
[67] Scottish Government. Climate change. Nitrogen Balance Sheet. Nitrogen Balance Sheet - Climate change - gov.scot
[68] Peters, E. et al.(2024, March). Target setting for nitrogen use efficiency in Scotland. Ricardo PLC. Target setting for nitrogen use efficiency in Scotland

Indicator 2A.3: Estimated food waste generated per person from all sources

Headline 2A.3: In 2021, the per capita food waste was estimated to be 189 kg per person per year. This represents a 2% increase since 2013.

Figure 14: Indicator 2A.3 Estimated food wasted generated per person from all sources



Source: Zero Waste Scotland, 2021 Scottish Food Waste Estimate (2024)

Baseline 2A.3: The baseline for indicator 2A.3 is an estimated 189 kg of food waste generated per person per year (2021). The methodology applied to arrive at this estimate is complex due to a variety of factors and will continue to be reviewed.

The Scottish Government has committed to embedding food loss and waste considerations across relevant policies and strategies, including the Good Food Nation Plan. Food waste is a global problem, with an estimated 1.05 billion tonnes of food waste generated by households, food service and retail sectors in 2022 - a global average of around 132 kg of waste generated per person, per year.[69]

As set out in the Circular Economy and Waste Route map to 2030, in partnership with Zero Waste Scotland, the Scottish Government will continue driving research into food waste reduction action and behaviour change.[70] Strengthening data and evidence will significantly help to address the challenges and opportunities for food waste reduction across Scotland, and specifically within households.

[69] United Nations (UN) Environment Programme.(2024, 27 March). Food Waste Index Report 2024. Food Waste Index Report 2024 | UNEP - UN Environment Programme

[70] Scottish Government. (2024, 18 December). Scotland's circular economy and waste route map to 2030. Ministerial foreword - Scotland's circular economy and waste route map to 2030 - gov.scot

For the Good Food Nation Plan, estimates produced by Zero Waste Scotland in 2024 (for the year 2021) are used to provide a baseline position for food waste generated across Scotland's food system.[71] The methodology applied to arrive at this estimate is complex due to a variety of factors and consideration will be given to update methodologies to align with reporting requirements of UN Sustainable Development Goal 12.3 for 2030. The timeline for an update to this measure is therefore noted to be uncertain.

In addition to reducing food waste at various stages of the supply chain and in homes, it is also important to recognise the value of diverting food waste from landfill and using by-products from manufacturing processes - both have potential uses in renewable energy production or as an organic fertiliser which can be fed back into food production. Action should also be prioritised higher up the waste hierarchy and focus on food waste prevention measures before recycling or sending it to disposal.

In 2025, Zero Waste Scotland published a report on the types and volumes of food and drink wasted in Scottish households for the period 2021/22. The report noted 73% of wasted food was edible and it was commonly wasted due to not being used in time - fresh vegetables and salads, especially potatoes, were the most wasted food in households that year. Wasted food and drink in households cost Scottish householders £1.3 billion that year, which roughly equates to £240 per person or £480 per household.[72] The 2021 Scottish Food Waste Estimated suggested household food waste that year generated approximately 2.3 million tonnes of CO_2 equivalent.

As set out in the Scotland's Circular Economy and Waste Route Map to 2030, actions to reduce food waste in Scotland have not yielded results partly as a consequence of changed consumer behaviour since COVID-19. The latest Scottish food waste data estimate for 2021 suggests that over 1 million tonnes of food were wasted in Scotland during 2021, accounting for around 6% of Scotland's total carbon footprint that year. It also suggests that the scale of the problem has increased in Scotland over the past decade.

Scotland is not alone in facing this challenge. Globally, no country has successfully demonstrated how to reduce food waste at a sufficient scale; a comparable increase in food waste has been seen across the UK during the same period between 2018 and 2021.[73]

Indicator 2A.4: Climate adaptation

Headline 2A.4: Climate change is associated with a range of impacts across food processing, distribution, retailing, consumption and the disposal of food waste. The Scottish National Adaptation Plan sets out a range of actions being undertaken to build Scotland's resilience to climate change - including the resilience of our food system.

As well as recognising the importance of reducing greenhouse gas emissions from Scotland's food system, Outcome 2 also recognises that the food system must also adapt to climate change. Climate change means that Scotland will be wetter in winters, drier in

[71] Zero Waste Scotland. (2024, January). 2021 Scottish Food Waste Estimate. Scotland Food Waste Estimate
[72] Zero Waste Scotland. (2025, September). Household Food Waste in Scotland 2021/22. Household Food Waste in Scotland 2021/22
[73] WRAP. The Courtauld Commitment 2030 Milestone Report 2023. The Courtauld Commitment 2030 Milestone Report 2023 | WRAP - The Waste and Resources Action Programme

summers, sea level rise will continue, and our weather will become more variable and unpredictable.

Research commissioned by the FSA found that there were four climate drivers which would have an impact across the food system: temperature changes (+ and -), precipitation changes (+ and -), extreme weather events and sea-level rises/surges.[74] There could be a range of impacts across food processing, distribution, retailing, consumption and disposal of food waste.

The Scottish National Adaptation Plan sets out a range of actions being undertaken to build Scotland's resilience to climate change - including the resilience of our food system.[75] One of the five Outcome of SNAP is that 'economies and industries are adapting and realising opportunities in Scotland's Just Transition'. Industries include farming, fishing, aquaculture and other businesses within the food supply chain.

As climate adaptation is a multi-faceted issue, for the purposes of the indicator framework, we have not identified a data indicator that would be practicable to monitor the overall resilience of Scotland's food system to climate change risks.

Sub-Outcome 2B: Scotland's food system is compatible with substantial regeneration in, and maintenance of, Scotland's biodiversity, ecosystems and soil health

As set out in the Biodiversity Strategy, globally biodiversity is declining faster than at any other time in human history.[76] Agriculture and primary food production on the land and in our seas is a key pressure on biodiversity.

Around 70% of Scotland is solely or partially managed for agriculture and rapid changes to agricultural practice in the past have been linked to declines in wildlife. Scotland's seas are highly dynamic, supporting a diverse range of habitats and species. If managed sustainably, Scotland's seas can continue to provide a range of ecosystem services, including food (through fishing and aquaculture).

Under this sub-outcome, biodiversity is captured through the marine and terrestrial species indicator, which comprises three separate metrics: marine species abundance, terrestrial species abundance and terrestrial occupancy. These reflect changes in the abundance and distribution of a wide range of seabirds and land and freshwater species of plants, insects, birds and other animals.

Air pollution from activities in the food and drink sector and agriculture can also cause harm to the environment generally, in particular to sensitive habitats and the wildlife depending on these. Major air pollutants from food and drink and agricultural activity form another indicator under this Outcome. Finally, indicators are also used that capture the amount of land under organic cultivation in Scotland - as a proxy for a type of farming

[74] Hasnain, S. (2024). Impact of climate change on the UK food system. FSA Research and Evidence. Impact of Climate Change on the UK Food System | Published in FSA Research and Evidence
[75] Scottish Government. (2024, 25 September). Climate change: Scottish National Adaptation Plan 2024-2029. Ministerial Foreword - Climate change: Scottish National Adaptation Plan 2024-2029 - gov.scot
[76] Scottish Government. (2024, 27 November). Scottish Biodiversity Strategy to 2025. Scottish Biodiversity Strategy to 2045 - gov.scot

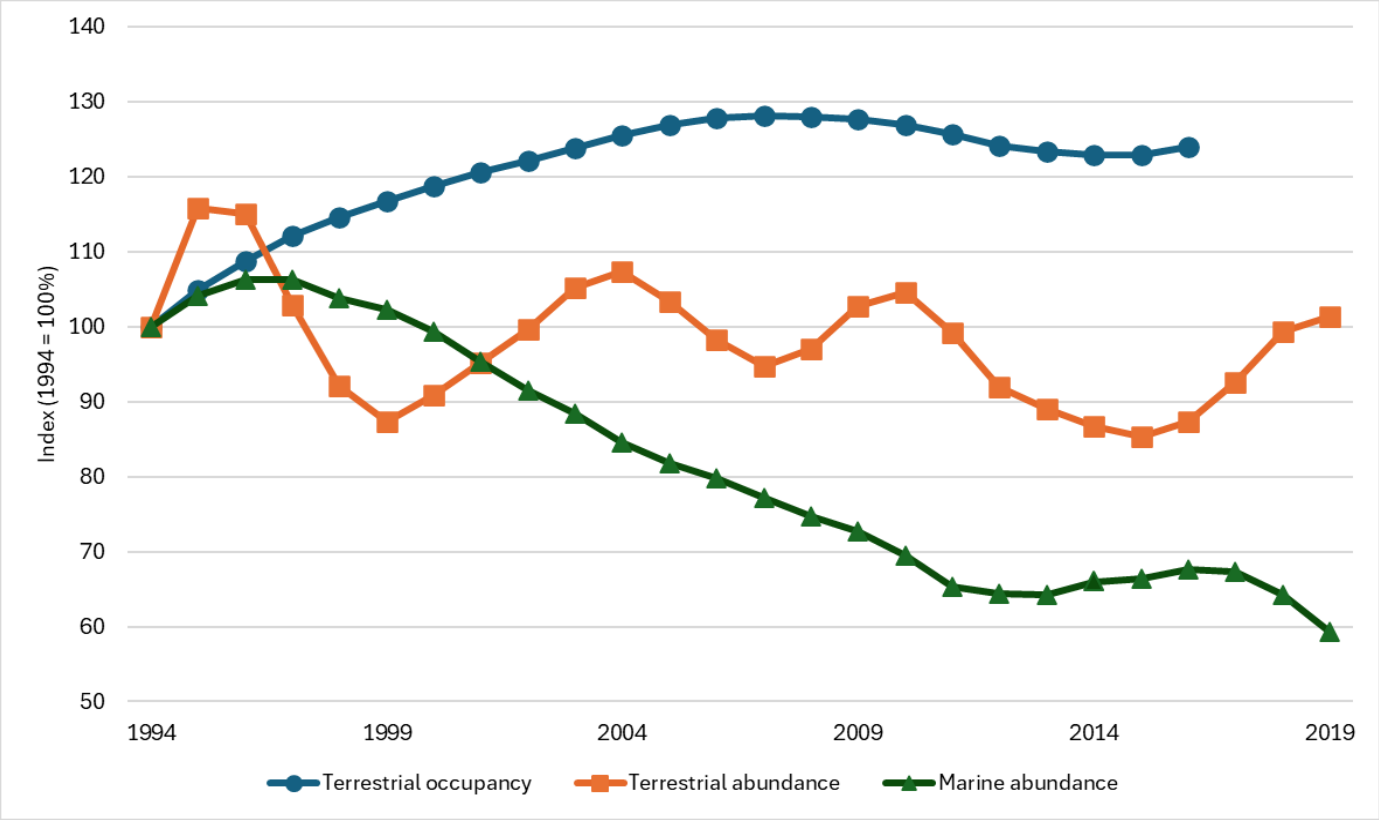
which has positive outcomes for ecosystems. We also note the possibility of including future indicators on soil health.

Finally, it is recognised that overuse or incorrect use of pesticides can contribute to biodiversity loss. The 2025 UK Pesticides National Action Plan[77] sets out the ambitions of the four governments across the UK for managing pesticide use and minimising risk. It introduces a domestic reduction target for pesticides in the UK, to reduce the potential harm caused by pesticides to the environment by at least 10% by 2030. The actions in the UK Pesticides National Action Plan set out how we will deliver against this aim, while supporting food production.

Indicator 2B.1: Terrestrial and Marine Species Abundance

Headline 2B.1: The activities in Scotland's food system and supply chain will continue to have an influence on biodiversity - particularly in relation to agricultural production and use of marine resources. There are a range of other drivers of biodiversity loss including climate change, pollution and the impact of invasive species.

Figure 15: Indicator 2B.1 Terrestrial and Marine Species Abundance



Source: [Official Statistics - Marine and Terrestrial Species Indicators: Experimental Statistic | NatureScot]()[78]

Baseline 2B.1: The latest data for indicator 2B.1 shows the Marine Abundance Index was 59.4 in 2019, and a Terrestrial Abundance Index of 101.3 in 2019. A baseline for indicator 2B.1 will be set when 2025 data is available.

[77] UK Government. GOV.UK. (2025, 21 March). UK Pesticides National Action Plan 2025. UK Pesticides National Action Plan 2025 - GOV.UK

[78] Note that the underlying data for this indicator is collected by non-governmental bodies

The Marine and Terrestrial Species Indicator (MTTS) is a composite indicator of many species. Therefore, changes in average abundance and occupancy of terrestrial species and in abundance of marine species will be driven by a complex set of drivers acting on species' populations and the environments they live in. Whilst future developments in Scotland's food system and supply chain will have an influence on this indicator (particularly in relation to agricultural production and use of marine resources), there are a range of other factors which affect this indicator going forward which are not directly linked to the food system, for example: climate change, pollution from a range of industrial sources and the impact of invasive species.

The Marine and Terrestrial Species Indicator reveals a sustained decline in marine abundance since the baseline year (1994). It shows an increase in terrestrial occupancy, reflecting changes in species' distribution, which may, in part, be due to the northward colonisation of southerly species due to climate change. Terrestrial abundance has fluctuated over this period but the overall trends is relatively flat.

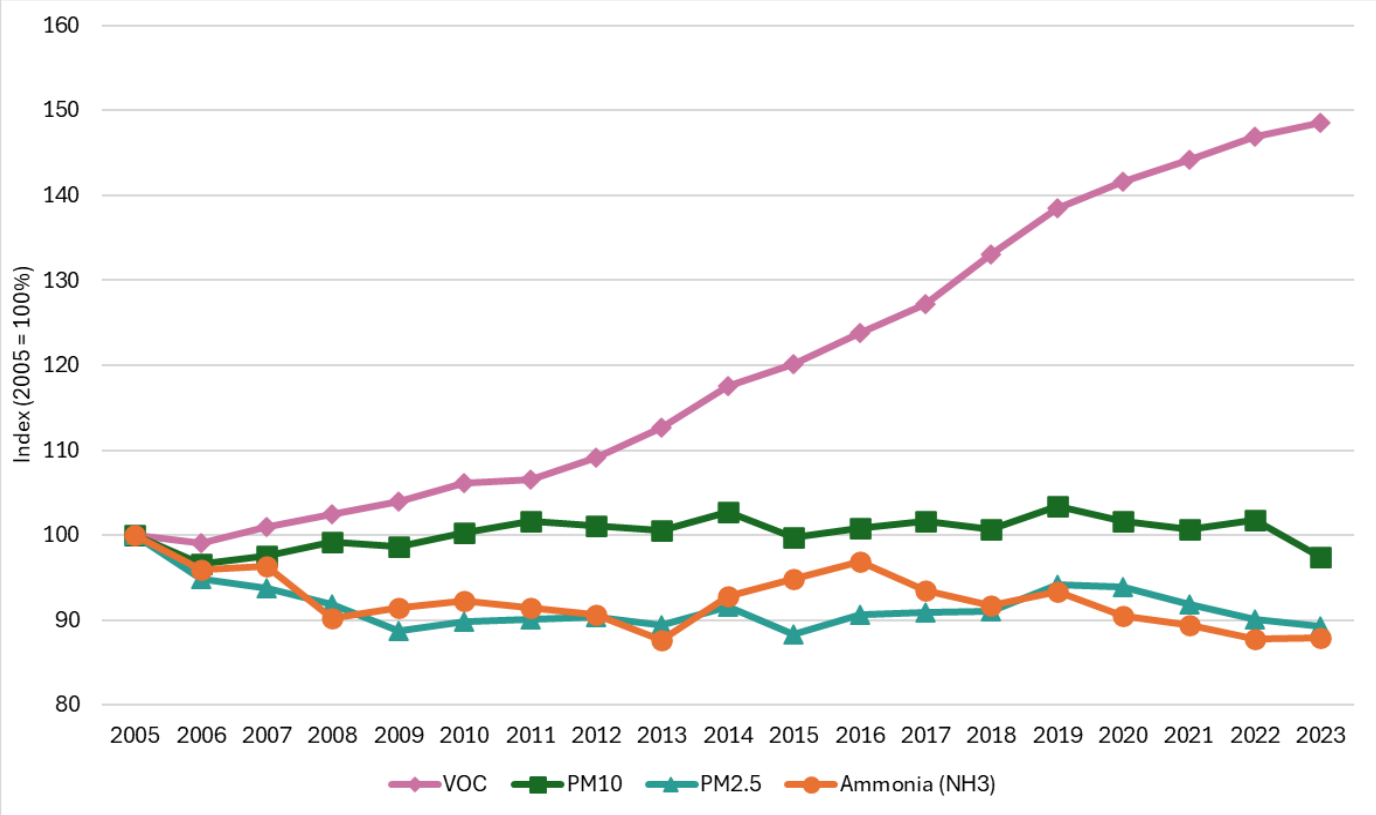
Specific data collected by NatureScot on Scottish Terrestrial Breeding birds on farmland (which is a component part of the MTTS) could be more strongly linked to impacts of agricultural production.[79] The farmland bird indicator includes 27 species of bird and overall has shown there has been a long-term increase (from 1993 to 2023) of 7% among the species trends (long-term trend: 15 increased, 9 decreased, 3 stable). Species in pastoral farmland have improved most over the long-term, with no long-term trend in the three other types of farmland - pastoral, wet and wooded.

[79] NatureScot. Official Statistics - Scottish Terrestrial Breeding Birds 1994 – 2023. Official Statistics - Scottish Terrestrial Breeding Birds 1994 – 2023 | NatureScot

Indicator 2B.2: Kilotons of air pollutant emissions from agriculture and food and drink

Headline 2B.2: Air pollutants associated with primary food production, such as ammonia, PM10 and PM2.5 are at lower or at similar levels to those recorded in 2005. However, Volatile Organic Compounds (VOCs) have increased significantly, with Scotch whisky maturation being a large contributor.

Figure 16: Indicator 2B.2 Kilotons of air pollutant emissions from agriculture and food and drink



Source: National Atmospheric Emission Inventory[80] [81]

Baseline 2B.2: Since 2005, total pollutants from agriculture and food and drink for ammonia (NH3), PM10 and PM2.5 have fallen to 12.1%, 2.6% and 10.8% in 2023 respectively. VOC however has increased by 48.6% since 2005, with 77% of the total VOC recorded from agriculture and food and drink coming from Scotch whisky maturation.

A range of pollutant gases, and especially nitrogen compounds, are emitted to the atmosphere from agricultural activities (food production).

The source, the Air Pollutant Inventory for Scotland notes that there are 4 pollutants (of 11 air pollutants monitored in total) which are emitted by the agricultural sector in Scotland in

[80] The definition of 'agriculture' and 'food and drink' air pollutants come from Nomenclature for Reporting (NFR) codes. Agriculture is a sector category whilst food and drink is considered a subsector category. However, the food and drink subcategories do not fall within agriculture but are defined elsewhere. The food and drink sub-sector category includes Scotch whisky maturation.

[81] The total air pollutant index is created using 2005 as the base (2005=100)

significant quantities: Nitrogen Oxides (NO), Non-methane volatile organic compound (NMVOCs) and particular matter PM_{10} and $PM_{2.5}$.[82]

Volatile Organic Compounds (VOCs) are also an air pollutant that is heavily linked to the production of distilled spirits in the food and drink sector. Further information can be found on the NAEI website, which includes an overview of the health impacts of these pollutants. Different pollutants will potentially have different health and environmental impacts. For instance, a recent review of the human health and environmental impacts of non-methane volatile organic compound emissions from malt whisky maturation facilities prepared for Scottish Government found impacts were minor but that further investigation and research is necessary to fully understand, assess and mitigate against those impacts.[83]

Agricultural emissions related to air quality are dominated by ammonia (NH_3) and agriculture accounts for over 90% of total ammonia emissions in Scotland.[84] Unlike emissions of the other main air pollutants, which have declined significantly over the last 30 years, ammonia levels from all sources have decreased by only around 13% since 2005.

[82] Nitrogen oxides emissions arise primarily from combustion sources. Non-Methane Volatile Organic Compounds are emitted to air from various sources across many sectors and are emitted primarily as combustion by-products. PM10 and PM2.5 is a measure of the size distribution of the particles emitted to air and represents the material with an aerodynamic diameter less than 10 and less than 2.5 micrometres respectively

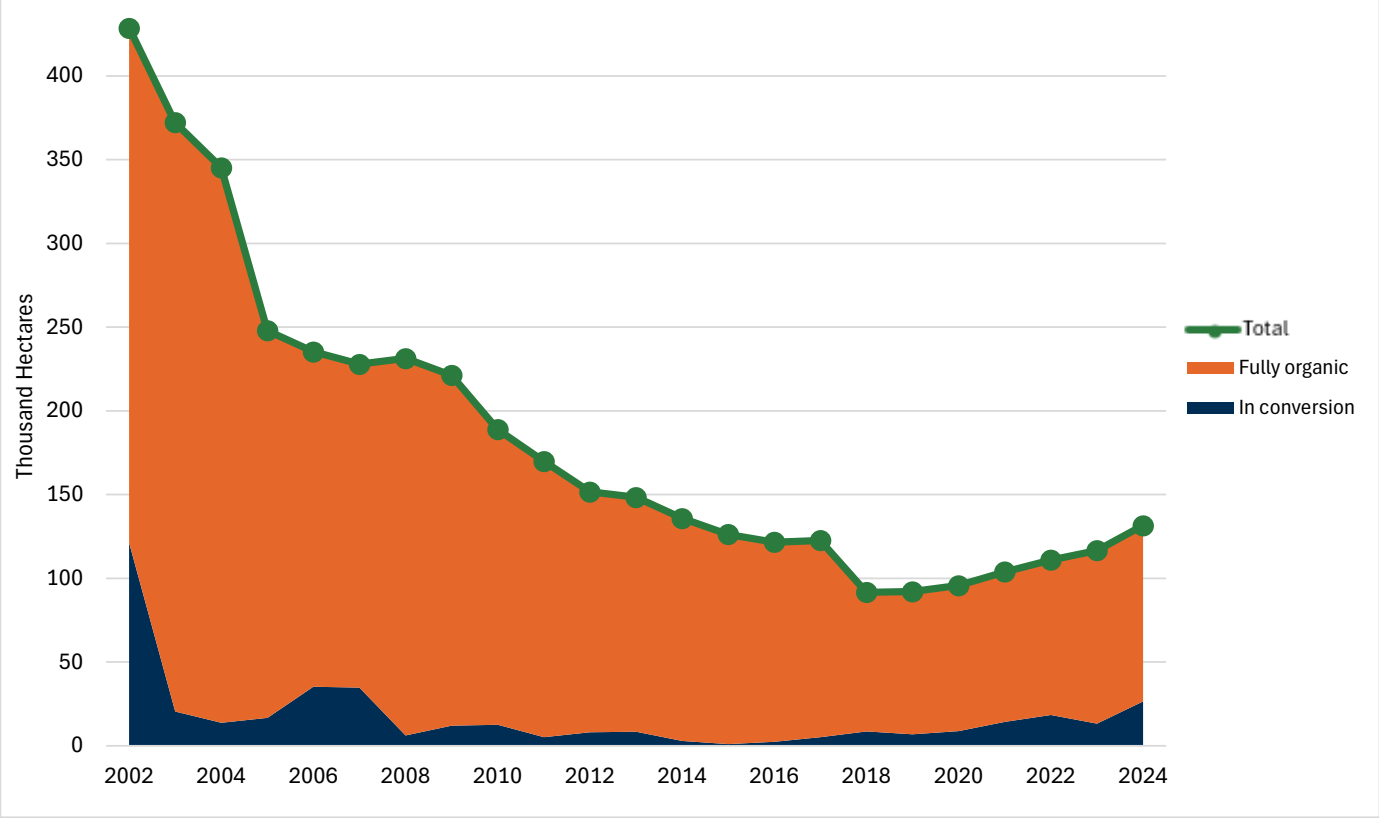
[83] Scottish Government. (2023, 16 August). Non-methane volatile organic compound emissions from malt whisky maturation: final report. 7 Conclusions and recommendations. Non-methane volatile organic compound emissions from malt whisky maturation: final report - gov.scot

[84] Scottish Government. (2021, 15 July). Cleaner Air for Scotland 2 - Towards a Better Place for Everyone - gov.scot. Cleaner Air for Scotland 2 - Towards a Better Place for Everyone - gov.scot

Indicator 2B.3: Total hectares under organic land management

Headline 2B.3: The total area of land under organic land management has increased in recent years from a record low in 2018. However, total area remains lower compared to pre 2014-levels.

Figure 17: Indicator 2B.3 Total hectares under organic land management



Source: Organic Farming in Scotland: 2024 - gov.scot

Baseline 2B.3: The latest data for indicator 2B.3 reports that the fully organic land area was 105.0 thousand hectares in 2024 and total hectares including in-conversion was 131.5. A baseline for indicator 2B.3 will be set when 2025 data is available.

Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.[85]

Research assessed in a ClimateXChange literature review[86] found that:

- Organic farming practices offer benefits to biodiversity, greenhouse gas emissions, soil carbon, and how organic farming practices might help farmers adapt to a changing climate in Scotland over the next two decades to 2045.

[85] IFOAM Organics International. Definition of Organic Agriculture. Definition of Organic Agriculture | IFOAM
[86] Topp, K. et al. (2023, August). Organic farming, net zero targets and the impact of a changing climate – an evidence review. SRUC, SAC Consulting. Organic farming, net zero targets and the impact of a changing climate – an evidence review

- The inclusion of specific measures such as leys and cover crops, organic bulky materials and crop residue management in organic systems tends to increase the soil carbon.
- Organic systems are typically more diverse than conventional systems.

The Good Food Nation Plan affirms the commitment to increase organically managed land, as such the area of land under organic management is an indicator for the Plan.

The latest data shows that the total land area that was under full organic cultivation or in-conversion was 131.5 thousand hectares in 2024. Whilst this represents a 44% increase since 2018, over the long-run the total organic land area remains lower than it has been historically in Scotland. Permanent pasture - including rough grazing land - remains the dominant land use type (82% of the organic land area), with less than 5% dedicated to cereals. Around 2% of cattle, sheep and poultry were farmed organically.

Whilst the land area under organic cultivation has increased since 2018, the number of organic operators registered in Scotland has fallen (down 6.9% since 2018).

Indicator 2B.4: National soil health

Headline 2B.4: Healthy soils and sustainable management of existing soil resources enable Scotland's food system to produce high-quality food and drink products. Monitoring of soil health in a changing climate is a priority for the Scottish Government.

While Scotland has a significant knowledge base on soils, there is no single indicator that could be applied to all soils, climatic conditions or land uses and therefore be used as a quantitative data indicator for the Good Food Nation Plan.[87]

Scotland has a considerable amount of good quality soil data due, in part, to a long history of soil mapping, characterisation and quantification of soil properties supported primarily from public money. However, for most purposes, these soil maps can be considered as representing a near-steady state as soils develop slowly over a long time.[88] There is currently no systematic nationwide monitoring scheme for soils in Scotland.

There are many risks threatening Scottish soils across different soil types and land covers. However, unlike air and water, there is no single overarching soil policy providing security and governance for Scottish soils.

The Strategic Research Programme - the 'Healthy Soils' project (2022 to 2027) will deliver evidence to maintain soil health and support the protection of soil from loss and degradation.[89] The research, funded under the Scottish Government's Environment Natural Resources and Agriculture Strategic Research Programme and led by the James Hutton Institute, is focusing on identifying new ways of managing soils under threat from changes in climate, land use and land management. Work underway includes the design and testing of indicators and metrics to support the monitoring of Scotland's soil health.

[87] Neilson, R. et al. (2021, September). Monitoring soil health in Scotland by land use category – a scoping study. James Hutton Institute. Monitoring soil health in Scotland by land use category – a scoping study
[88] Neilson, R. et al.(2020, September). Measuring the vulnerability of Scottish soils to a changing climate. James Hutton Institute. Measuring the vulnerability of Scottish soils to a changing climate
[89] Scottish Environment, Food and Agriculture Research Institutes (SEFARI). Healthy soils for a green recovery. Healthy soils for a green recovery | SEFARI

Once completed, this work should support and inform the development of mitigation and adaptation interventions.

Sub-Outcome 2C: Animal health and welfare standards are protected, enforced and improved in line with Scottish Government policy.

Improving and protecting animal health and welfare is an essential part of sustainable food production. Animal health legislation is in place to ensure the protection of both human and animal health, whilst protecting them from the threat of diseases which impact productivity, our ability to trade and our reputation for high-quality food internationally.

There is limited data available to assess animal welfare holistically at a national level - although there is some data available for specific practices relevant to some species. The Animal Protection Index was developed by World Animal Protection and is a methodology that attempts to rank 50 countries according to the robustness of their animal welfare policy and legislation.[90] The index gives each country an overall score based on a seven-point lettered and colour-coded scale, where A represents the highest results and G identifies countries with the most room for improvement. The UK has ranked highly (B) under this index (note that no country met the criteria to be awarded an A under this index); recognising high standards relative to a range of other countries. A Scotland specific ranking was not available.

As set out in the Good Food Nation Plan, the Scottish Animal Welfare Commission (SAWC) has been tasked to explore the feasibility of developing further indicators of animal welfare for farmed animals. This is intended to provide a more robust basis for developing indicators to support future Good Food Nation plans. Lack of meaningful quantitative indicators is a common challenge across many countries. For example, we are cognisant of on-going work within the European Commission to work towards developing meaningful animal welfare indicators.[91]

Animal Health and Welfare Plans have now been introduced as a requirement for some farms from 2025 as a prerequisite to qualify for Basic Payments. There have also been proposals in a recent Defra consultation to look at the feasibility of introducing a mandatory five-tier labelling system for pork, chicken, and eggs, indicating whether products fall below, meet, or exceed UK baseline animal welfare standards.[92] Both of these developments could lead to more meaningful indicators in future.

Improvements in animal welfare will also be driven by food businesses in our supply chain. There are positive indicators from the independent Business Benchmark on Farm Animal Welfare (BBFAW) which monitors 150 global food firms on their farm animal welfare policies, practices and performance within the supply chain.[93] Their 2024 report suggests that companies are continuing to focus on farm animal welfare management and disclosure and are beginning to respond to the new expectations on farm animal welfare. It was also noted in this analysis that UK-based firms consistently rank highest of all other regions globally.

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[90] World Animal Protection. Animal Protection Index. World Animal Protection | Animal Protection Index
[91] European Commission. Animal welfare policy indicators. Food Safety. Food, Farming, Fisheries. Animal welfare policy indicators - Food Safety - European Commission
[92] Defra (2024). Consultation on fairer food labelling. Consultation on fairer food labelling
[93] Business Benchmark on Farm Animal Welfare. (2025, 27 March). The Business Benchmark on Farm Animal Welfare 2024 Report. The Business Benchmark on Farm Animal Welfare 2024

Animal disease outbreaks are a significant threat to Scotland's food system, as well as to human health, rural communities, animal keepers and to the wider economy. There is broad consensus among experts that factors such as climate change, antimicrobial resistance and changing trading patterns are likely to increase the rates of endemic diseases, and the frequency and variety of exotic disease outbreaks. As such, there are numerous potential threats to livestock health in Scotland.[94]

The initial indicators set out in the Plan focus on animal health and welfare issues within a domestic food production context. Food that is imported from other countries may have been produced with lower animal health and welfare standards. An FSA report found that data availability on current global practices for animal welfare in imported food standards is generally lacking.[95]

The initial indicators for this sub-outcome draw upon a range of data sources that relate to specific animal health and welfare issues: the importance of animal welfare as a food concern to Scottish consumers; the proportion of laying hens in Scotland that are either free-range or organic;[96] the number of livestock animals inspected each year and the prevalence of Bovine TB in Scotland.

[94] The Centre of Expertise on Animal Disease Outbreaks (EPIC) Scotland provide high-quality advice and analysis on the epidemiology of animal diseases in Scotland and works to strengthen st across the country more generally. Centre of Expertise on Animal Disease Outbreaks | EPIC Scotland

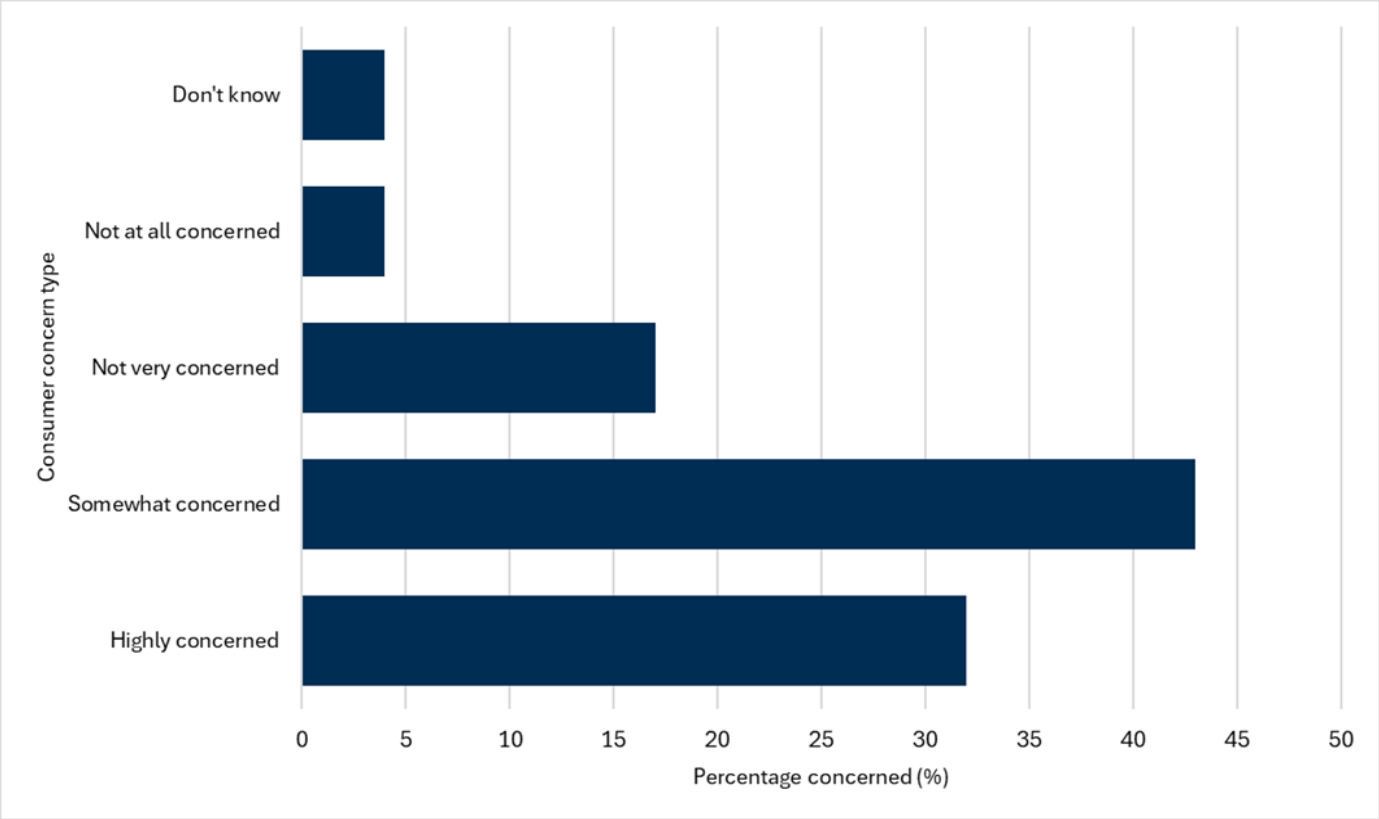
[95] Food Standards Agency (FSA). Food.gov.uk. (2024, 29 April). Data related to imported food production standards: Executive Summary. Data related to imported food production standards: Executive summary | Food Standards Agency

[96] Scottish Government have consulted on phasing out cages for laying hence and gamebirds to improve welfare as a specific new measure. Scottish Government. (2024, 2 April). Poultry welfare – laying hens: consultation. Poultry welfare – laying hens: consultation - gov.scot

Indicator 2C.1: Animal welfare concerns of Scottish consumers

Headline 2C.1: Animal welfare standards are an important food concern for Scottish consumers. Three-quarters of Scottish consumers reported being highly or somewhat concerned about animal welfare. Going forward, data will capture how often consumers check for information on animal welfare when purchasing food.

Figure 18: Indicator 2C.1 Animal welfare concerns of Scottish consumers



Source: Food Standards Agency and Food Standards Scotland, Food and You 2 Survey: Scotland (Wave 8)

Baseline 2C.1: The latest data for indicator 2C.1 from 2023-2024 suggests that 75% of Scottish consumers were reportedly concerned about animal welfare. The question on level of concern about animal welfare is changing in future waves. From wave 11, a question on whether consumers check for information about animal welfare will be asked. A baseline for indicator 2C.1 will be set when this data is available in Spring 2026.

A report commissioned by the Food Standards' Agency noted that animal welfare standards within a given national context are driven by various factors including culture, public recognition of animal sentience, and perceived importance of animal welfare. Therefore, an indicator for the Good Food Nation Plan against this sub-outcome was to track attitudes of Scottish consumers to animal welfare issues. Whilst it is clear that Scottish consumers reportedly are concerned about animal welfare, it should be recognised that there is a 'value-action gap' and that consumer food choices in practice may not align with their stated intentions.[97] This finding was also supported by research by

[97] Cornish, A., Jamieson, J., Raubenheimer, D., and McGreevy, P. (2019). Applying the Behavioural Change Wheel to Encourage Higher Welfare Food Choices. Animals : an open access journal from MDPI, 9(8), 524. Applying the Behavioural Change Wheel to Encourage Higher Welfare Food Choices - PMC

the RSPCA, which found a gap between consumers stated attitudes and their real actions in purchasing decisions.[98]

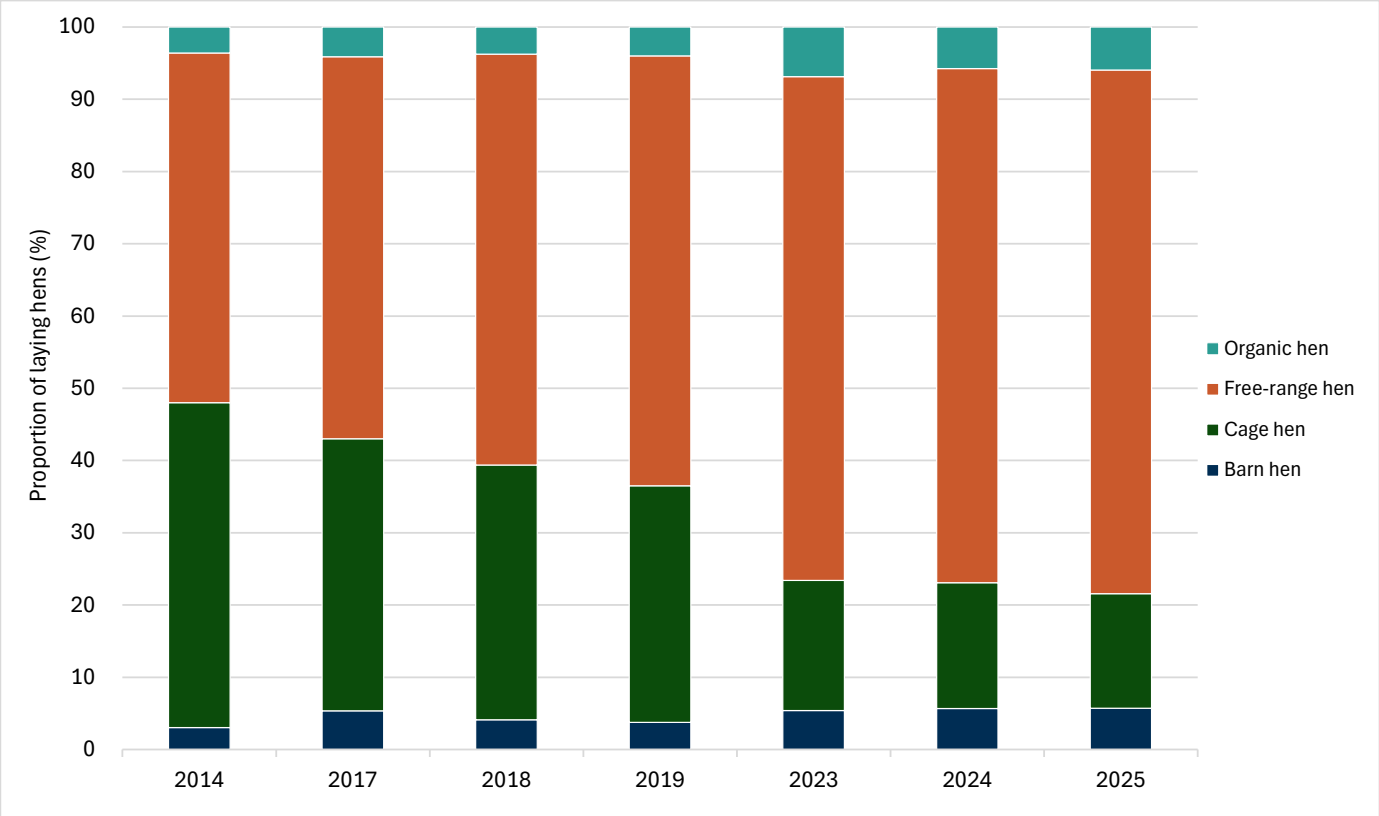
Animal welfare standards are an important food concern for Scottish consumers and it may motivate consumers to buy higher welfare products as a result. Three-quarters (75%) of Scottish consumers reported being highly (32%) or somewhat (43%) concerned about animal welfare.

From wave 11, a question on whether consumers check for information about animal welfare when purchasing food will be asked instead of a question on levels of 'concern' in food production process.

Indicator 2C.2: Proportion of laying hens in Scotland that are either reared as free-range or organic

Headline 2C.2: More than three-quarters of laying hens in Scotland are either free-range or organic in 2025. This has increased from just over half of laying hens in 2014.

Figure 19: Indicator 2C.2 Proportion of laying hens in Scotland that are either reared as free-range or organic



Source: Scottish Government Avian Registration Hub

Baseline 2C.2: The baseline for indicator 2C.2 is that the proportion of laying hens reared as free-range or organic was 78% in April 2025.

[98] RSPCA.Kindness Index Report 2025. Kindness Index 2025 Full Report

The Scottish Government has consulted on phasing out the use of cages for laying hens and gamebirds[99] and will report on the findings in due course. It is recognised that this is a specific animal welfare policy goal and aligns within intentions set out by the EU to phase out caged hens. In 2016 the major supermarkets also pledged that they would stop selling shell eggs from hens kept in enriched cages by 2025 and some have already done so.

As set out above, we have not put forward other specific indicators for other species at this time due to lack of available data. Previous research has looked at possibility of looking at other issues including castration and tail docking in lambs.[100]

More than three quarters (78%) of laying hens in Scotland are either free-range or organic in 2025. This has increased from just over half (52%) of laying hens in 2014. Within this, 48% were free-range hens whilst 4% were organic hens in 2014. Although organic hens has increased to 6% in 2025, it is free-range hens that has increased significantly to 72%.

Compassion in World Farming have monitored the implementation of cage-free egg commitments of many food companies (including in the UK).[101] It identifies which companies are 'Leading' the industry (already 100% cage-free), which are 'In Progress' (on track to reach 100% by 2025), which are 'At Risk' (of missing the 2025 deadline), and which are 'Laggards' (have a commitment but not reporting). As of 2024, just over half of UK companies reporting were classed as 'leaders' - which compared favourably compared to comparator nations (France, Italy, Spain and Poland).

[99] Scottish Government. (2024). Consultation on a proposal to phase out the use of cages in Scotland's laying hen sector. Consultation on a proposal to phase out the use of cages in Scotland's laying hen sector - Scottish Government consultations - Citizen Space

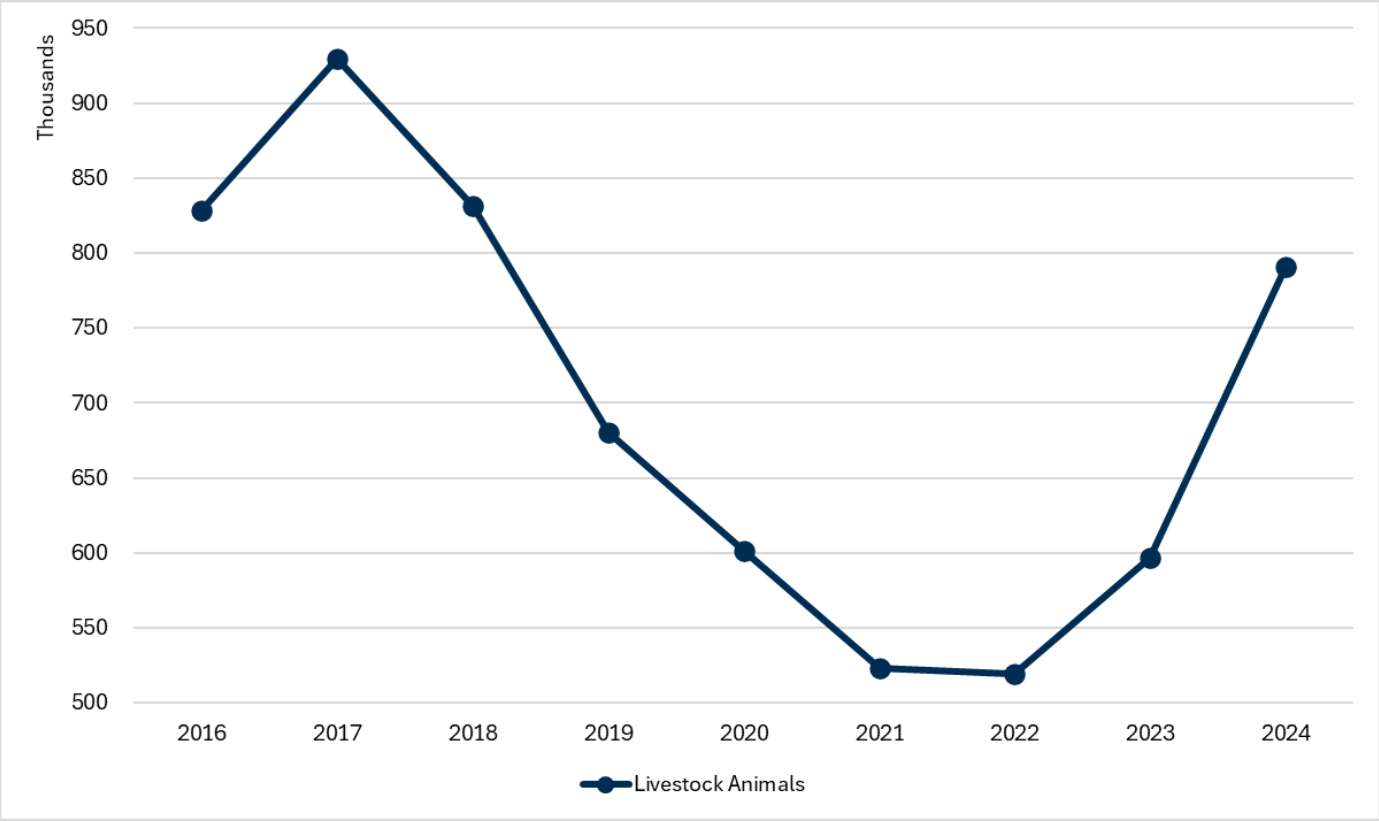
[100] Scottish Environment, Food and Agriculture Research Institutes (SEFARI). Monitoring castration and tail docking of lambs. Monitoring castration and tail docking of lambs | SEFARI

[101] EggTrack. EggTrack. Better welfare for egg laying hens. EggTrack - Better welfare for egg laying hens

Indicator 2C.3: Livestock animals inspected by local authorities every year in Scotland

Headline 2C.3: The number of livestock animals inspected by local authorities has increased in recent years and is more in line with numbers recorded before the Covid-19 pandemic.

Figure 20: Indicator 2C.3 Livestock animals inspected by local authorities every year in Scotland



Source: Scottish Government, Animal Health Act 1981: Expenditure and Prosecutions - 2024

Baseline 2C.3: The latest data for indicator 2C.3 reports that 790,634 livestock animals were inspected or assessed in markets and other premises or holdings by local authorities in 2024. A baseline for indicator 2C.3 will be set when 2025 data is available.

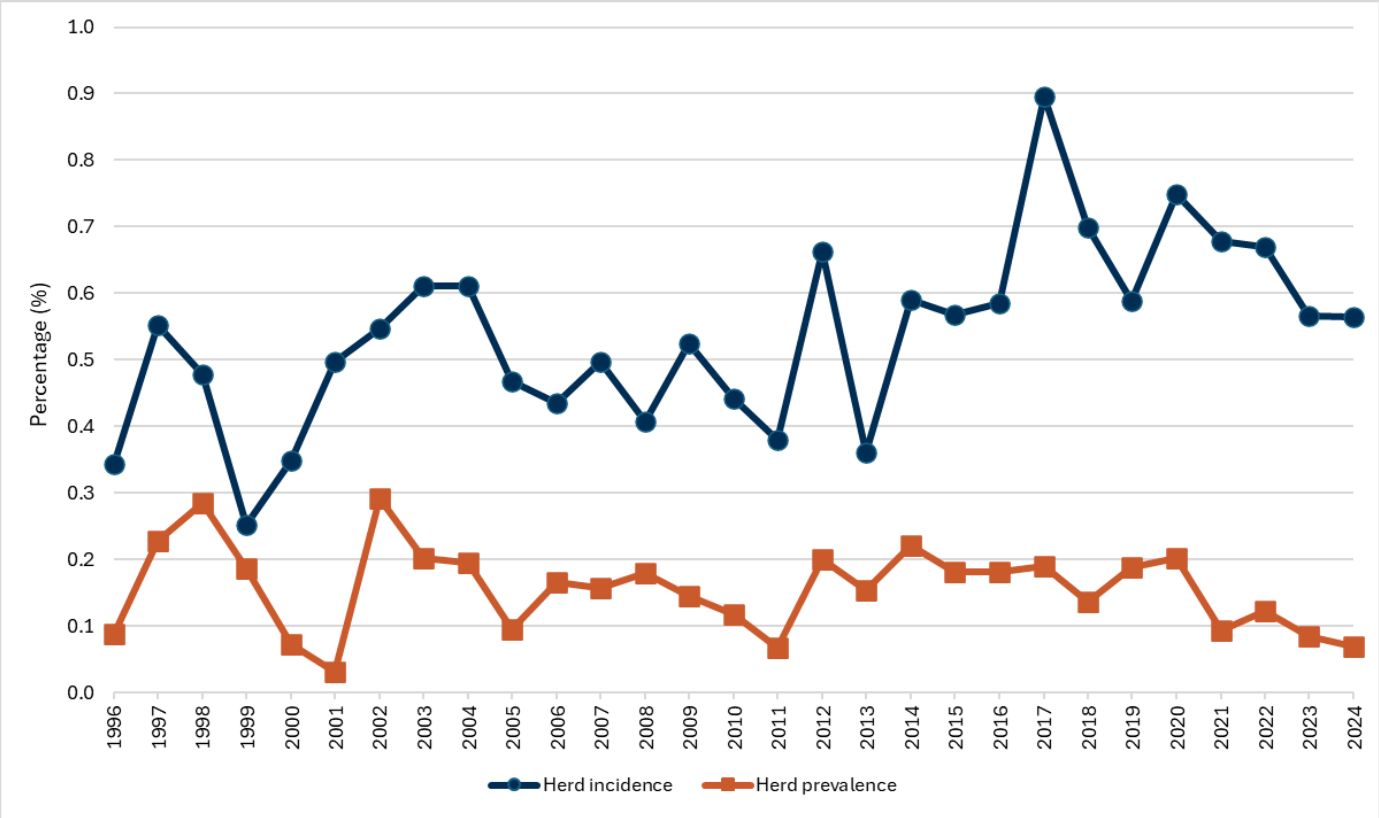
The Good Food Nation Plan sets out that protecting existing animal welfare standards is as important as making improvements. Standards can only be managed through a system of enforcement. The enforcement options available to deal with breaches of animal health, biosecurity, and welfare regulations are varied with options ranging from: advice and guidance, warning letters or statutory notices, regulatory actions, and prosecution.

Returns made under section 80 of the Animal Health Act 1981 includes a record of the total number of animals that were inspected or assessed in markets and other premises or holdings related to enforcement activity each year. This includes animals inspected for fitness, identification or health at markets and does not require that an examination takes place. It should be noted that the annual return is compiled from information supplied to the Scottish Government and while every effort is made to ensure its accuracy, this cannot be guaranteed.

Indicator 2C.4: Herd prevalence of Bovine Tuberculosis (TB) in Scotland

Headline 2C.4: Scotland is recognised as being officially TB free with consistently low and stable prevalence of bovine tuberculosis (TB) in Scottish cattle herds.

Figure 21: Indicator 2C.4 Herd prevalence of Bovine Tuberculosis (TB) in Scotland



Source: Department for Environment, Food and Rural Affairs, Bovine Tuberculosis statistics

Baseline 2C.4: The latest data on herd prevalence of TB in Scottish Cattle herds was 0.1% in 2024. A baseline for indicator 2C.4 will be set when 2025 data is available.

Bovine tuberculosis (TB) is a devastating disease of cattle and a major challenge facing large parts of the UK cattle farming industry.[102] Scotland was recognised as being officially TB free (OTF) by the European Commission in September 2009. Maintaining OTF status is crucial to the continuing success of the Scottish cattle industry and remains a key animal health risk. It is a zoonotic disease, though transmission to humans is mainly avoided through the pasteurisation of milk and the risk in Scotland of this being passed to humans is very low.

To date, it is estimated that the exempt herds policy has saved Scottish Government and stakeholders over £10 million and over 16,000 herd tests. This has saved immense amounts of time and costs for both farmers and APHA.

OTF status provided significant economic benefits for the Scottish cattle industry when the UK was a member of the European Union, because once OTF status was achieved, EU rules allowed the implementation of a risk based herd testing surveillance policy, rather than having to test all herds four yearly. Research commissioned at Glasgow University

[102] Scottish Government. (2025, 23 October). Bovine TB. Bovine TB - gov.scot

informed a new risk based herd testing policy in 2011.[103] All Scottish herds are now assessed for risk each year by the Animal and Plant Health Agency.

It is important that Scottish Government carefully manage TB cases and act swiftly to stamp out disease where it arises. Losing OTF status would impact on Scotland's international reputation as having healthy cattle which are free from infection, and could affect trade. It would also result in a loss of the targeted risk-based TB test approach, an increase in the frequency of routine test at significant impact industry, APHA veterinary and laboratory resource, and cost to Scottish Government.

As part of Scottish Government's efforts to maintain OTF status, the government promote responsible buying and encourage keeper's to look at the general health and health history of the herds they are purchasing from. As well as this, consistent messaging is shared around improving general biosecurity on premises, which has a knock on effect in protecting against other diseases.

[103] National Records of Scotland. (2011, June). Risk-based Surveillance for Tuberculosis in Cattle (bTB). Risk-based Surveillance for Tuberculosis in Cattle

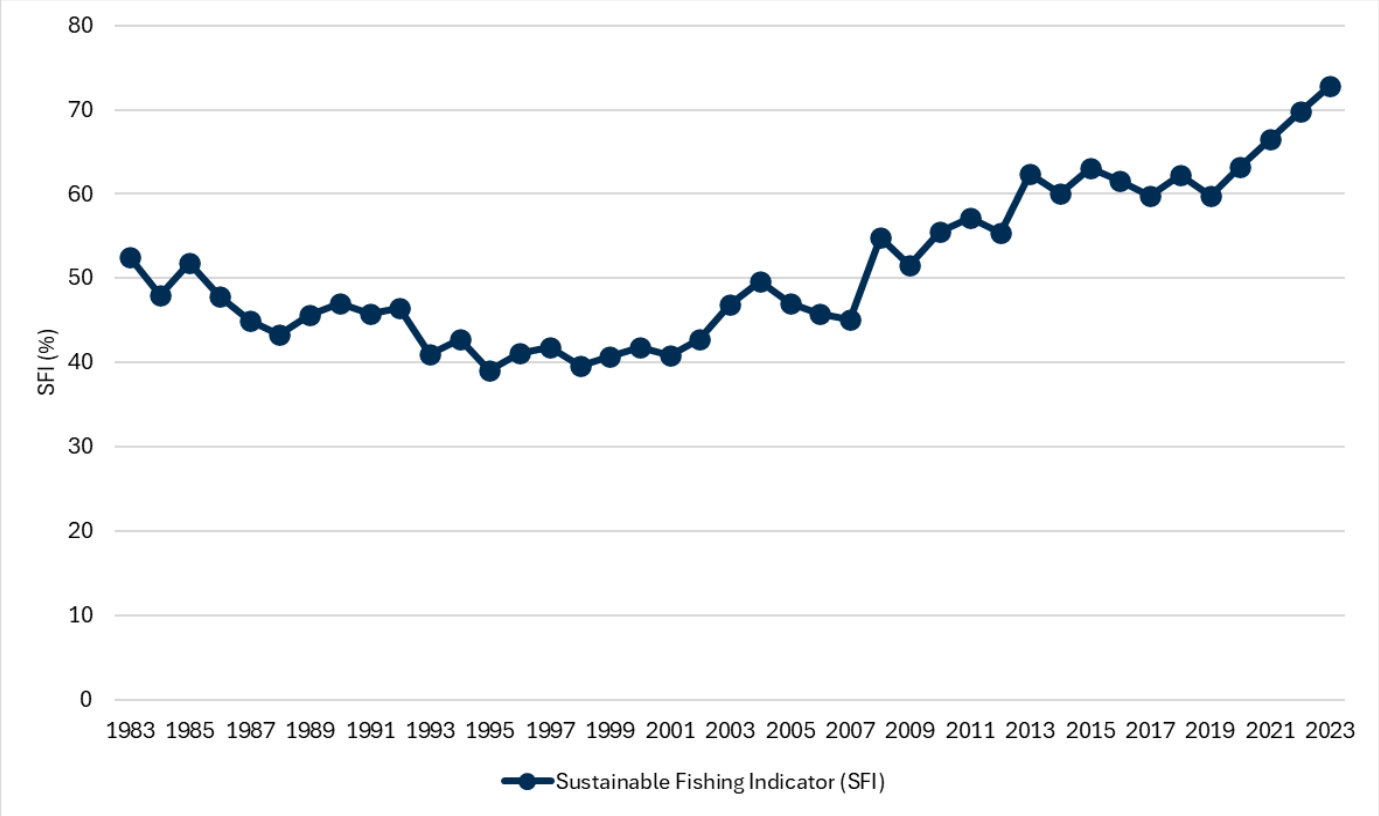
Sub-Outcome 2D: Scotland's fishing and aquaculture activities provide healthy, quality and sustainably harvested and farmed seafood.

Scotland's world-renowned seafood sector, from catching and production to consumption, is an important pillar of the blue economy. The indicators in this sub-outcome are sourced from two data sources relating to the sustainability of commercial fishing and sustainable Salmon production (Scotland's single biggest food export).

Indicator 2D.1: The proportion of commercial stocks fished at sustainable levels

Headline 2D.1: The sustainability status of stocks in Scottish waters has increased through time.

Figure 22: Indicator 2D.1 The proportion of commercial stocks fished at sustainable levels



Source: [The Scottish Sustainable Fishing Indicator (SFI)]

Baseline 2D.1: The sustainability status of stocks in Scottish waters has increased through time to a high of 73% in 2023. A baseline for indicator 2D.1 will be set when 2025 data for the Scottish Sustainable Fishing Indicator is available.

There is a strong suite of measures in place to manage sea fisheries and safeguard fish stocks, such as the Scottish Sustainable Fishing Indicator (SFI). The SFI was originally developed under the remit of the Scottish National Performance Framework.[104] The aim of the Scottish Sustainable Fishing Indicator is to provide a single measure per year to

[104] Scottish Government. National Performance Framework. National Performance Framework - gov.scot

indicate the assessed confidence that the relevant commercial fish and shellfish stocks in Scottish waters are being fished sustainably.

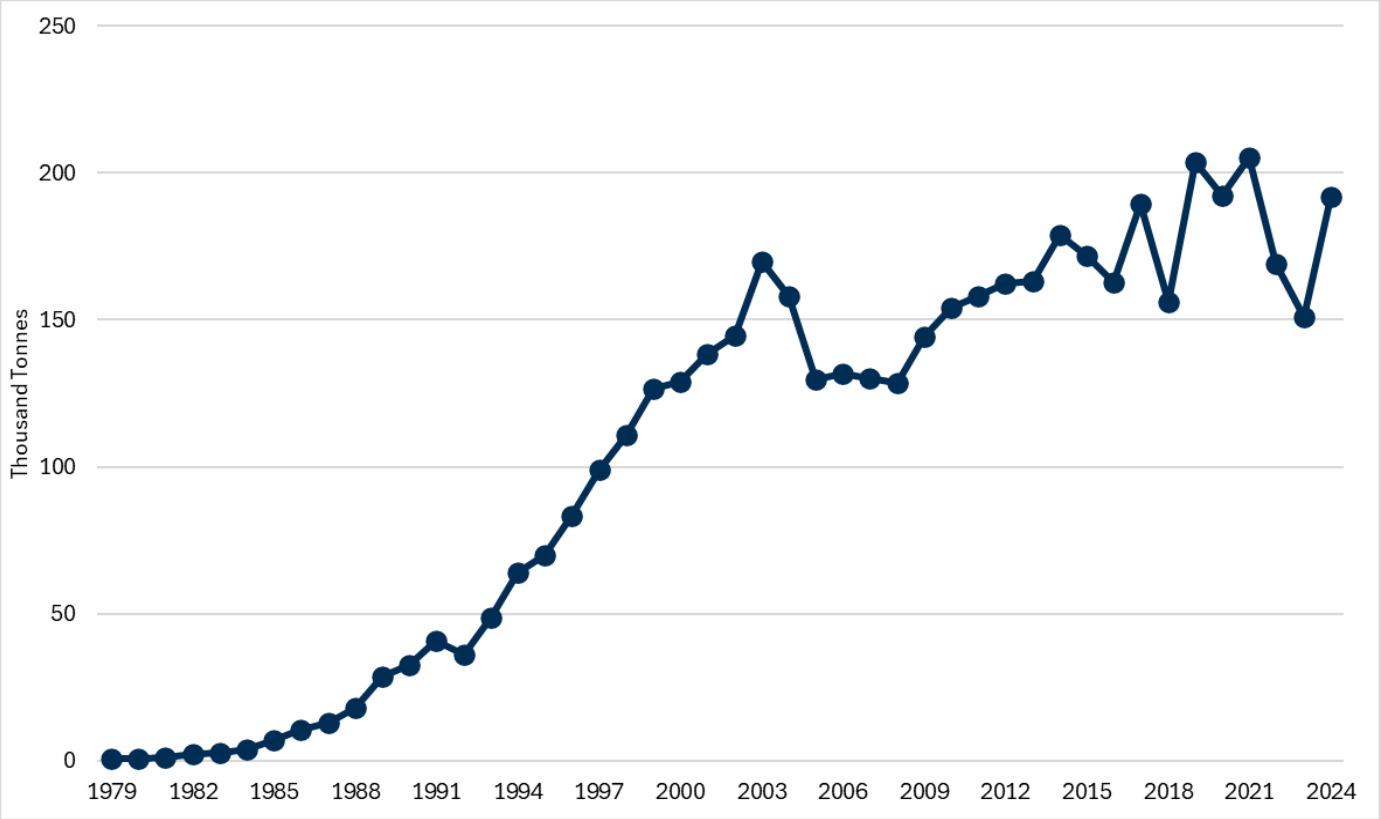
The SFI illustrates that the sustainability status of stocks in Scottish waters has increased through time to 73% in 2023. Data are currently included in the SFI estimation from 1983 to 2023 and cover 38 stocks, although not all stocks have assessment estimates in some of the earlier years. The lowest estimate of SFI of 39% occurred in 1995, while the highest estimate of 73% occurred in the most recent year (2023). Following a shallow decline during the early years of the time series, the overall trend in SFI has been positive since 1995.

The positive trends are reflective of improved fisheries management and more responsible fishing practices and is particularly notable during a period when warming in Scottish waters might be expected to be reducing the health of stocks.

Indicator 2D.2: Atlantic Salmon production volumes

Headline 2D.2: Atlantic Salmon production has grown from very low levels to be a high value food product that is the UK's biggest single food export. The total production of Atlantic salmon during 2024 was 192,000 tonnes, an increase of 41,051 tonnes (27%) on the 2023 total.

Figure 23: Indicator 2D.2: Atlantic Salmon production volumes



Source: Scottish Government, Scottish fish farm production surveys

Baseline 2D.2: The total production of Atlantic salmon during 2024 was 192,000 tonnes, an increase of 41,051 tonnes (27%) on the 2023 total. A baseline for indicator 2D.2 will be set when 2025 data is available. Total production for 2025 is estimated to be 195,182 tonnes, this value is a sector estimate based on stocks currently being on-grown.

Atlantic Salmon is a high value food product produced from Scotland's aquaculture sector and is the UK's biggest single food export, worth £844 million in 2024.[105] The Scottish Fish Farm Production Survey collects information from companies actively involved in Atlantic salmon production and represents the entire sector operating in Scotland. The total production indicator captures the volume of Salmon ultimately made available to consumers and available for export.

Economic growth of marine industries - including Salmon production - must happen in a context of suitable environmental protection and monitoring of environmental risks associated with aquacultural production. A range of data sets are made available through the Scotland's Aquaculture website[106], which brings together various information in one

[105] UK Government. GOV.UK. (2014). UK trade in goods statistics. HM Revenue and Customs. UK overseas trade in goods statistics. UK trade in goods statistics - GOV.UK
[106] Scotland's aquaculture. Data Search | Scotland's Aquaculture

easily accessible location and helps provide a joined-up view of aquaculture in Scotland. The data covers a variety of environmental issues including fish farm emission reports, antimicrobial use and anti-sea lice therapeutants use, and data on sea lice[107] and fish escapes.

Scotland has a robust legislative and regulatory framework[108] in place which provides the right balance between developing the fish farming sector and protecting the environment on which the sector depends. All farms must meet strict guidelines to ensure that the environmental effects are assessed and managed safely.

The Scottish Government's Vision for Sustainable Aquaculture[109] sets out our long-term aspirations for the aquaculture sectors in Scotland and the supply chains which support them.

[107] Scottish Environment Protection Agency (SEPA) has developed a Sea Lice Risk Assessment Framework to mitigate impacts. Sea lice framework FAQs | Scottish Environment Protection Agency (SEPA)
[108] Scottish Government. Aquaculture. Fish farm consents. Fish farm consents - Aquaculture - gov.scot
[109] Scottish Government. (2023, 21 July). Vision for sustainable aquaculture. Vision for sustainable aquaculture - gov.scot

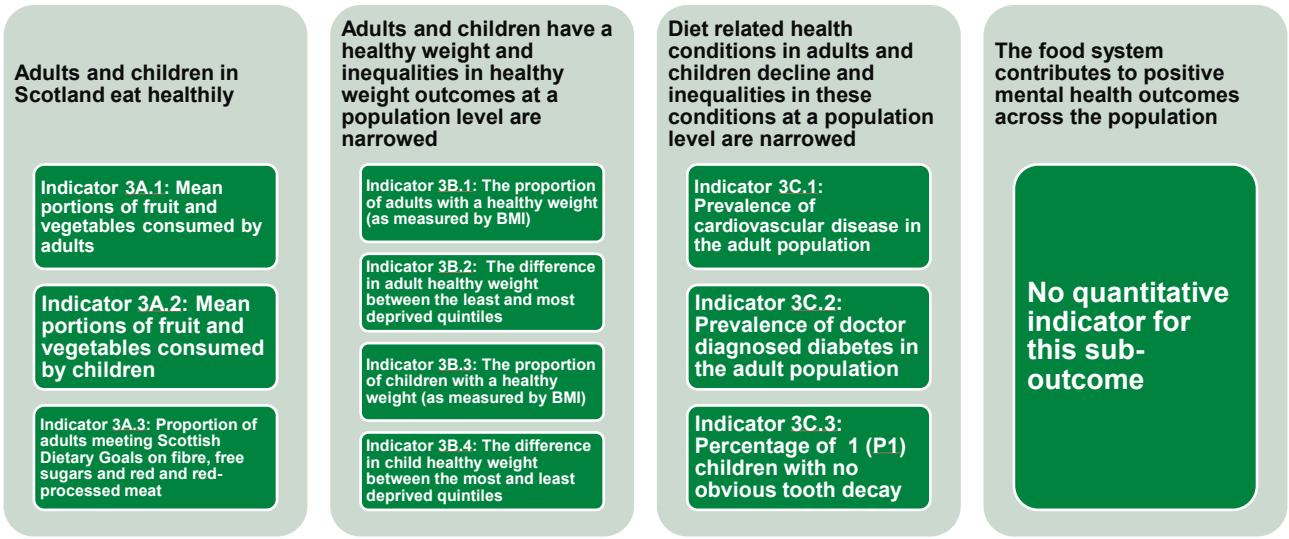
5. Outcome 3: A healthy population

Outcome 3: Scotland's food environment and wider food system enables a physically and mentally healthy population. This leads to the prevention of, and a reduction in, diet-related conditions.

Summary of Outcome 3 Indicators

Meeting the ambition set out in Outcome 3 of the Good Food Nation Plan requires that progress is made towards achieving the Scottish Dietary Goals (SDGs) at a population level. When compared to the SDGs, the Scottish diet remains stubbornly unhealthy, and as a nation, we are far from meeting our dietary goals. Poor diet is a leading risk factor for ill health and has been linked to a range of poor health outcomes.[110]

Figure 24: Summary of Outcome 3 Indicators



Sub-Outcome 3A: Adults and children in Scotland eat healthily

The Scottish Dietary Goals (SDGs) describe, in nutritional terms, the diet that will improve and support the health of the Scottish population. They are set at the Scottish population level. They indicate the direction of travel, and assist policy development to reduce the burden of living with obesity and diet-related disease in Scotland.

The current suite of dietary goals capture nine food groups/nutrients, including fruit and vegetable intake, total saturated fat intake, salt intake and intake of fibre.[111] A review of the goals is in progress and due to complete in 2026. Monitoring of progress towards achieving the SDGs is a key function of Food Standards Scotland (FSS) and more comprehensive data on dietary intake among adults and children is published by FSS.

Since they were set in 1996, there has been little or no progress towards achieving the goals: the Scottish diet is too high in calories, fats, sugar and salt and too low in fruits,

[110] Food Standards Scotland. (2020, 21 October). The Scottish Diet: It needs to change 2020 update. The Scottish Diet - It needs to change 2020 update | Food Standards Scotland

[111] Scottish Government. (2016, 18 March). Scottish dietary goals: March 2016 - gov.scot. Scottish dietary goals: March 2016 - gov.scot

vegetables, oil rich fish and fibre. FSS are currently undertaking a review of the Scottish Dietary Goals to ensure that they reflect current scientific evidence on diets and align with the policy landscape in Scotland.

For the purposes of this Good Food Nation indicator framework, we have selected four key SDGs: to increase intake of fruit and vegetables (adults and children) to five portions, to increase intake of fibre, to reduce the intake of free sugars and to limit intake of red and red-processed meat. It should be noted that this selection of these goals does not reflect a prioritisation of these goals over other SDGs and reflects the proportionality of tracking all SDGs as indicators for the Good Food Nation Plan. We will continue to draw upon on-going monitoring of the Scottish diet by FSS and reflect any progress made against each SDG in future reviews of the Good Food Nation plan.

It should be noted that between 2001 and 2018, dietary intake among the Scottish population was estimated based on secondary analysis of food purchase data. From 2021, a new methodology using Intake24[112], was implemented in the Scottish Health Survey (SHeS) to collect detailed dietary intake data. Intake data will now be captured in the SHeS every 3 years. Due to this change in methodology, care should be taken when assessing longer term trends in dietary intake for adults.

With the exception of fruit and vegetable consumption[113], comprehensive information on the diet of Scottish children is limited and not routinely collected and has not been included as an indicator. Prior to 2024, the only comprehensive surveys designed to investigate this topic were being carried out in 2006 and 2010. A cross-sectional representative survey of children and young people aged 2 to 15 years living in Scotland was conducted in 2024, called Dietary Intake in Scotland's Children (DISH).[114] The study found that most children and young people achieved the Scottish Dietary Goals for total fat, trans fat, total carbohydrate and red and red-processed meat. However, less than 1 in 5 met the Goals for energy density, saturated fat, fibre, free sugars and oily fish. Intake data will now be captured in the SHeS using Intake24 every 3 years from 2027 alongside adult data collection.

The Scottish Government is developing a new two-year implementation plan of preventative action to improve the food environment and support improvements to diet and healthy weight. This aligns with the Population Health Framework which identifies improving healthy weight as a key initial evidence-based priority.

The Scottish Government continues to invest in work to help people access healthier food options, including: the Reformulation For Health Programme[115], which helps Scottish food manufacturers develop healthier produce (and this is captured in the new Intake24 data shown above); the Healthy Living Programme[116] which promotes and sells healthier

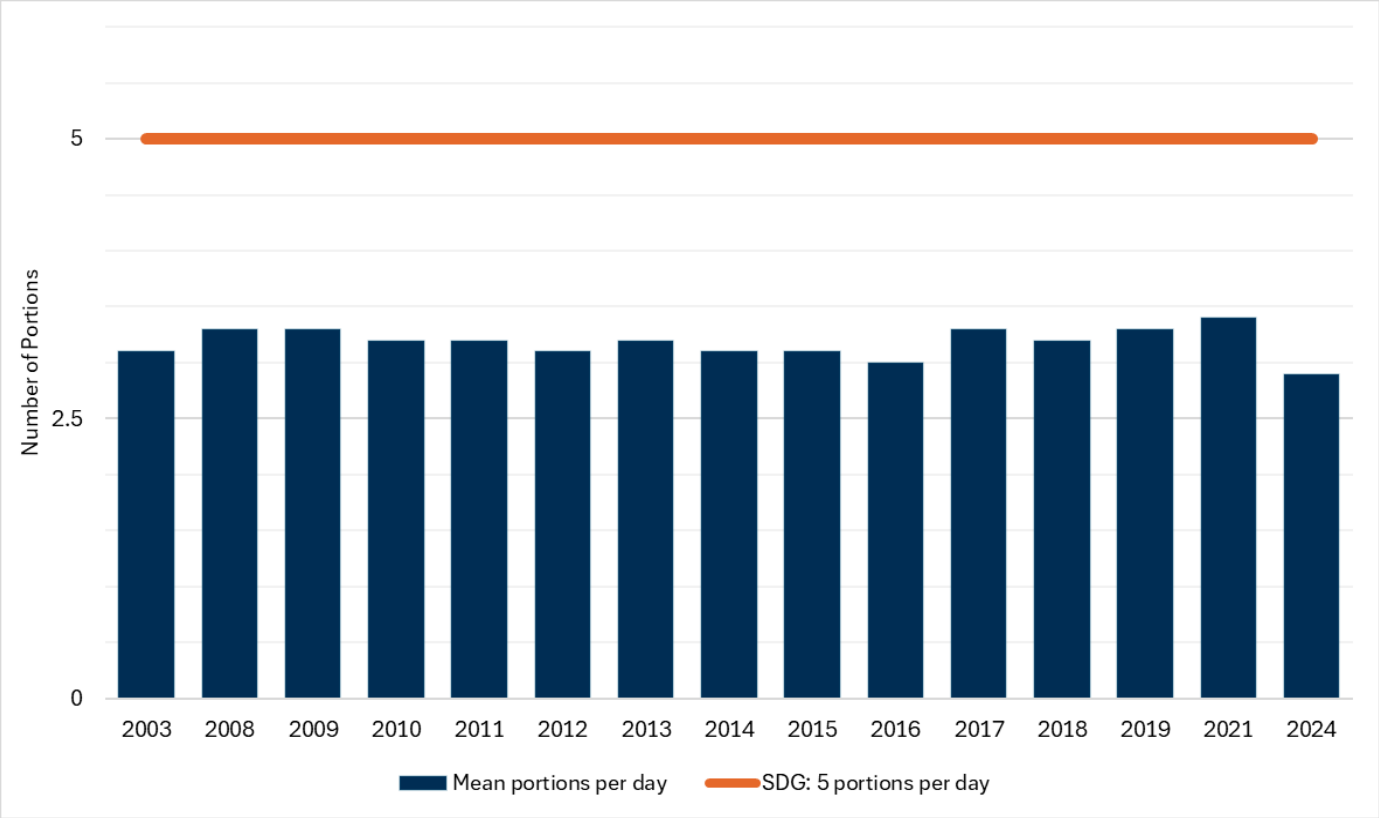
[112] Intake24. Welcome to Intake24. Intake24 | Home
[113] No dietary data was collected for children in SHeS 2024 due to a separate Intake24 survey being undertaken with children on behalf of Food Standards Scotland in 2023/2024. Information on child fruit and vegetable consumption will be included in the 2025 Scottish Health survey.
[114] Food Standards Scotland. (2025, 27 January). Dietary Intake in Scotland's CHildren (DISH) research report. Dietary Intake in Scotland's CHildren (DISH) research report | Food Standards Scotland
[115] The Food and Drink Federation. Reformulation for Health. Reformulation for Health | The Food and Drink Federation
[116] Scottish Grocers Federation. The SGF Healthy Living Programme. Healthy Living Programme | Scottish Grocers Federation

produce in lower income areas; and Community Food Networks[117] which help marginalized groups access healthier food options. They are also working with Food Standards Scotland and Public Health Scotland to develop actions to support people to eat well when eating out of home and have just completed a pilot of our new Eating Out Eating Well Framework[118], designed to help outlets provide healthier food choices.

Indicator 3A.1: Mean portions of fruit and vegetables consumed by adults

Headline 3A.1: Mean fruit and vegetable consumption by adults in Scotland remains well below the Scottish Dietary Goal of 5 portions per day.

Figure 25: Indicator 3A.1 Mean portions of fruit and vegetables consumed by adults



Source: Scottish Government, Scottish Health Survey 2024

Baseline 3A.1: The latest data for indicator 3A.1 shows that 2.9 portions of fruit and vegetables are consumed on average by adults per day in 2024, the lowest mean recorded. This will be the baseline for indicator 3A.1 as this data is collected every 3 years.

On average, adults consumed 2.9 portions of fruit and vegetables per day, which is significantly lower than that recorded in 2021 (3.4 portions) and the lowest average recorded. The mean portions of fruit and vegetables for men (2.9 potions) and women (2.8 portions) were not significantly different.

Fruit and vegetable consumption (mean number of portions per day) was lowest for those aged 16-24 and 25-34 (2.7 portions), and highest for those aged 35-44 (3.2 portions) in

[117] Community Food and Health (Scotland). Community Food and Health (Scotland). Community Food and Health (Scotland)
[118] Public Health Scotland. Eating Out, Eating Well. Eating Out, Eating Well

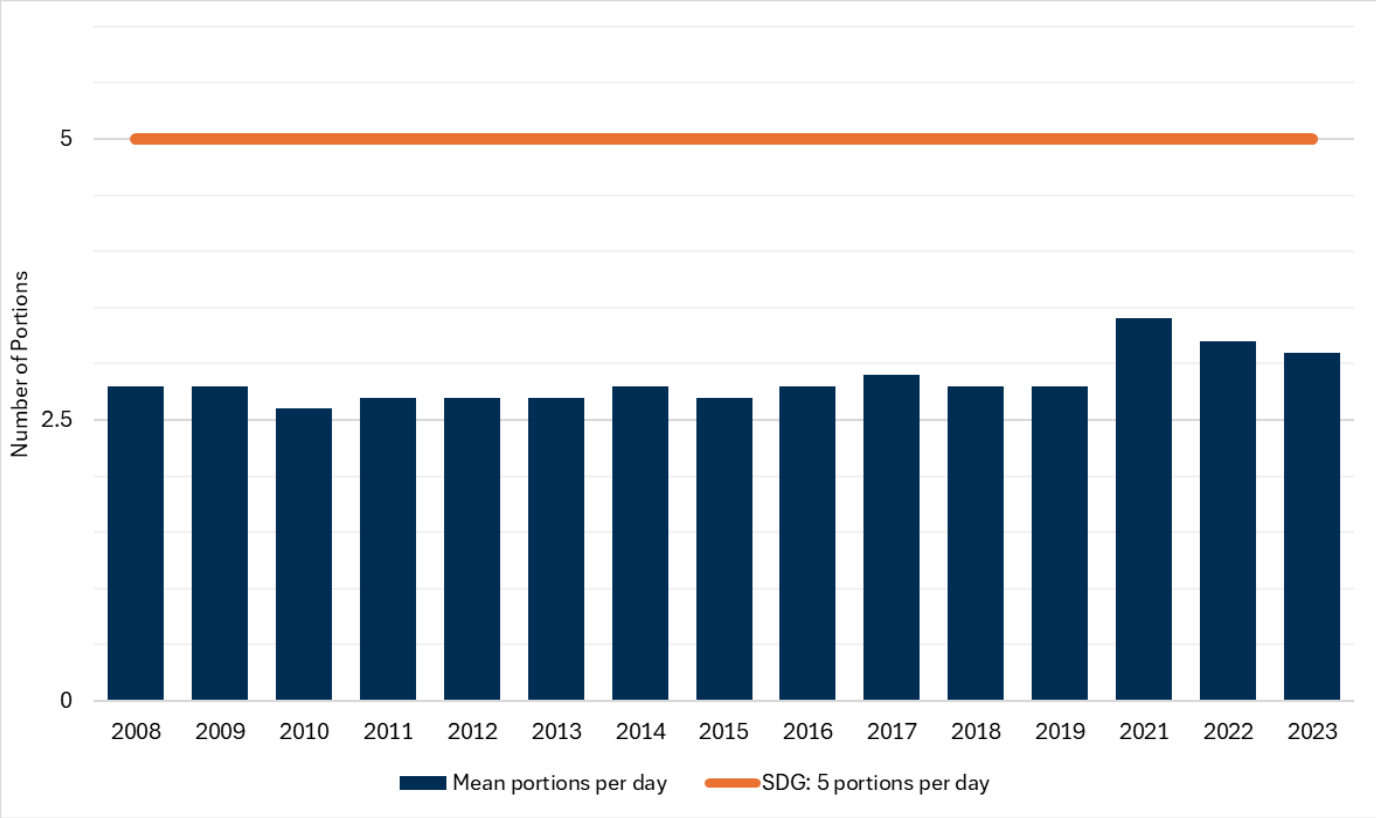
2024. This is consistent with the proportion of adults who consumed five or more portions of fruit and vegetables per day, with the highest among those aged 35-44 (16%) and lowest among those aged 25-34 (7%).

In 2024, just over one-in-five adults (11%-12% of men and 10% of women) consumed the recommended five or more portions of fruit and vegetables per day, a significantly lower proportion than the range recorded between 2003 and 2021 (20%-24%). This figure had previously remained fairly stable since 2003.

Indicator 3A.2: Mean portions of fruit and vegetables consumed by children

Headline 3A.2: Mean fruit and vegetable consumption among children in 2023 remained at the higher end of the range recorded since 2008, but remains short of the Scottish Dietary Goal.

Figure 26: Indicator 3A.2 Mean portions of fruit and vegetables consumed by children



Source: Scottish Health Survey 2023

Baseline 3A.2: The latest data for indicator 3A.2 shows that 3.1 portions of fruit and vegetables are consumed on average by children per day (2023, Scottish Health Survey data). A baseline for indicator 3A.2 will be set when 2025 data is available.

Between 2008 and 2019, mean fruit and vegetable consumption among children aged 2-15 was in the range 2.6-2.9 portions per day. Since 2021, this has been in range of 3.1-3.4 portions per day (3.1 portions in 2023).

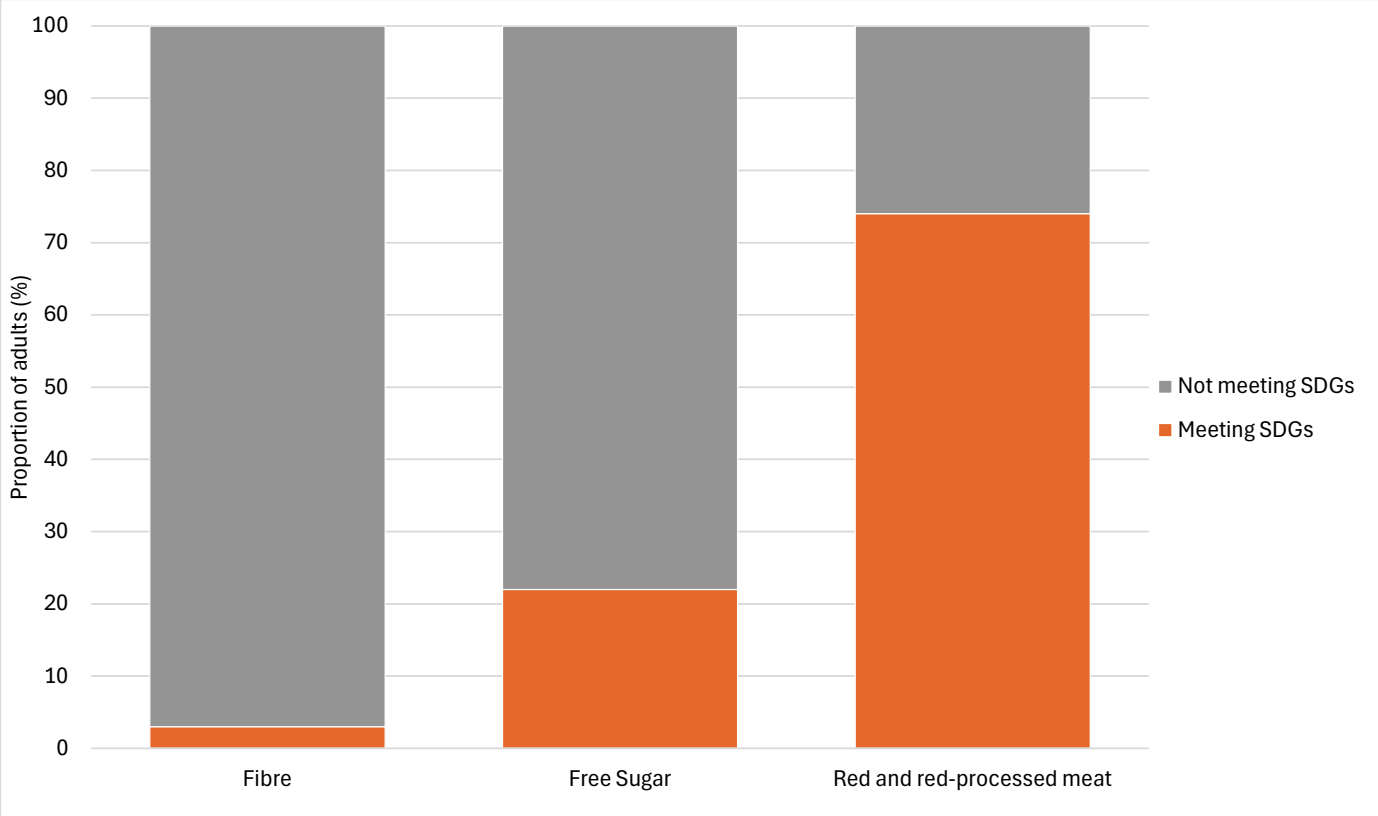
Mean consumption of fruits and vegetables was also higher in 2023 among younger children between the ages of 2-7 (3.4 portions) compared with those aged 8-15 (2.8 portions).

No dietary data was collected for children in 2024 due to a separate Intake24 survey being undertaken with children on behalf of Food Standards Scotland in 2023/2024. Information on child fruit and vegetable consumption will be included in the 2025 survey.

Indicator 3A.3: Proportion of adults meeting Scottish Dietary Goals on fibre, free sugars and red and red-processed meat.

Headline 3A.3: In 2024, the vast majority of adults in Scotland did not meet dietary goals for fibre (of 30g per day) and only a fifth met the goal for free sugar consumption (maximum of 5% energy from free sugars). Most adults do meet the goal to eat no more than an average of 70g of red and red-processed meat per day**.**

Figure 27: Indicator 3A.3 Proportion of adults meeting Scottish Dietary Goals on fibre, free sugars and red and red-processed meat



Source: Scottish Government, Scottish Health Survey 2024

Baseline 3A.3: The latest data for indicator 3A.3 shows that in 2024:
3% of adults met the SDG for fibre intake;
22% of adults met the SDG for free sugar intake and;
74% of adults met the SDG for red and red-processed meat intake
This will be the baseline for indicator 3A.3 as this data is collected every 3 years.

Actions relating to the improvement of fibre and free sugars in the Scottish diet are covered in previous sections in this chapter.

With respect to red and red-processed meat consumption the Scottish Government notes that the Climate Change Committee (CCC) has recommended a 20% shift away from all meat and dairy in Scotland by 2035. Currently 26% of the adult population in Scotland

consumes in excess of the existing Scottish Dietary Goal for red and red-processed meat, increasing the risk of Type 2 Diabetes and colorectal cancer.[119]

Current advice from Food Standards Scotland (FSS) is that, rather than encouraging an 'across the board' reductions in meat consumption, efforts should focus on encouraging people who exceed the existing Dietary Goal to be in line with it.

Many population sub-groups in Scotland are already at risk of low micronutrient intakes including calcium, iodine, vitamin B12, selenium and zinc so any reductions require nutritionally sufficient replacements.

Of the three Scottish Dietary Goals assessed in this indicator, the one which most of the population meet is the goal on red and red-processed meat consumption.

Nearly three-quarters (74%) of adults (both consumers and non-consumers) consumed no more than 70g of red and red-processed meat per day, thereby meeting the SDG. A further 13% consumed over 70g/day but no more than 90g/day, while 13% consumed more than 90g/day. Men were less likely than women to meet the 70g or lower consumption level per day (63%) and more likely to exceed 90g/day (21%), compared with 84% and 6% of women respectively. Variations by age were not significant.

The SDGs recommend that free sugars account for no more than 5% of total dietary energy. Just over a fifth (22%) of adults met the SDG, with no significant variation between men and women. There were however differences in free sugar consumption by age, with adherence to the Scottish Dietary Goal lowest among adults aged 25-34 (17%) and highest among those aged 65-74 (29%).

The SDGs recommend that adults consume 30g of fibre per day. In 2024, only 3% of adults met this goal. The average adult fibre intake was 15g per day. Similar proportions met the goal and similar amounts per day were consumed for males and females and across the age groups.

[119] Food Standards Scotland (2024) Modelling the impact of reductions in meat and dairy consumption on nutrient intakes and disease risk | Food Standards Scotland

Sub-outcome 3B: Adults and children have a healthy weight and inequalities in healthy weight outcomes at a population level are narrowed

Meeting the ambition set out in Outcome 3 of the Good Food Nation Plan requires that more adults and children in Scotland live with a healthy weight and that improvements are made in narrowing disparities between the most and least deprived communities.

Obesity occurs when energy intake from food and drink is greater than the body's energy requirements over a long period of time. The causes of obesity are complex and multifactorial (see the foresight obesity map[120] for an exploration of the factors that contribute to obesity). It is recognised in the Good Food Nation Plan that improvements to our food environment will be an important factor in supporting a shift towards more adults and children living with a healthy weight (see sub-outcome 1C). It is recognised that other factors are important in realising this ambition, such as increasing levels of physical activity among adults and children.

For the purposes of measuring healthy weight across the population, the Good Food Nation Plan will use Body Mass Index (BMI) as measured through the Scottish Health Survey as the basis of indicators.

BMI is a proxy estimate of total body fat and is a widely accepted measure that allows for differences in weight due to height. It is defined as weight (kg)/square of height (m^2). This has been used as a measure of excess weight in the Scottish Health Survey since its inception in 1995. For adults a normal or healthy weight BMI score would be between 18.5 and 25 kg/m^2, a score of between 25 and 0 would be classified as overweight, and a score of over 30 is considered to indicate obesity. The full BMI classifications are set out in the Table 1 below. Although the BMI calculation method is the same, there are no fixed BMI cut-off points defining overweight and obesity in children. Instead, overweight and obesity are defined using several other methods including age and sex specific BMI cut-off points or BMI percentile cut-offs based on reference populations.

Table 1: World Health Organisation (WHO) classification of BMI

BMI (kg/m^2)	**Description**
Less than 18.5	Underweight
18.5 to less than 25	Normal
25 to less than 30	Overweight, excluding obesity
30 to less than 40	Obesity, excluding morbid obesity
40+	Morbid obesity

BMI is known to have some limitations and does not, for example, distinguish between mass due to body fat and mass due to muscular physique. The BMI ranges are also slightly different for people from South Asian, Chinese, African-Caribbean and black African backgrounds. People from these backgrounds may be at higher risk of health problems at a lower BMI than people from other ethnicities. Notwithstanding these limitations, BMI remains a robust and well understood indicator of healthy weight at a population level, hence its inclusion as an indicator for the Good Food Nation Plan.

[120] UK Government. GOV.UK. (2007). Reducing obesity: obesity system map. Reducing obesity: obesity system map - GOV.UK

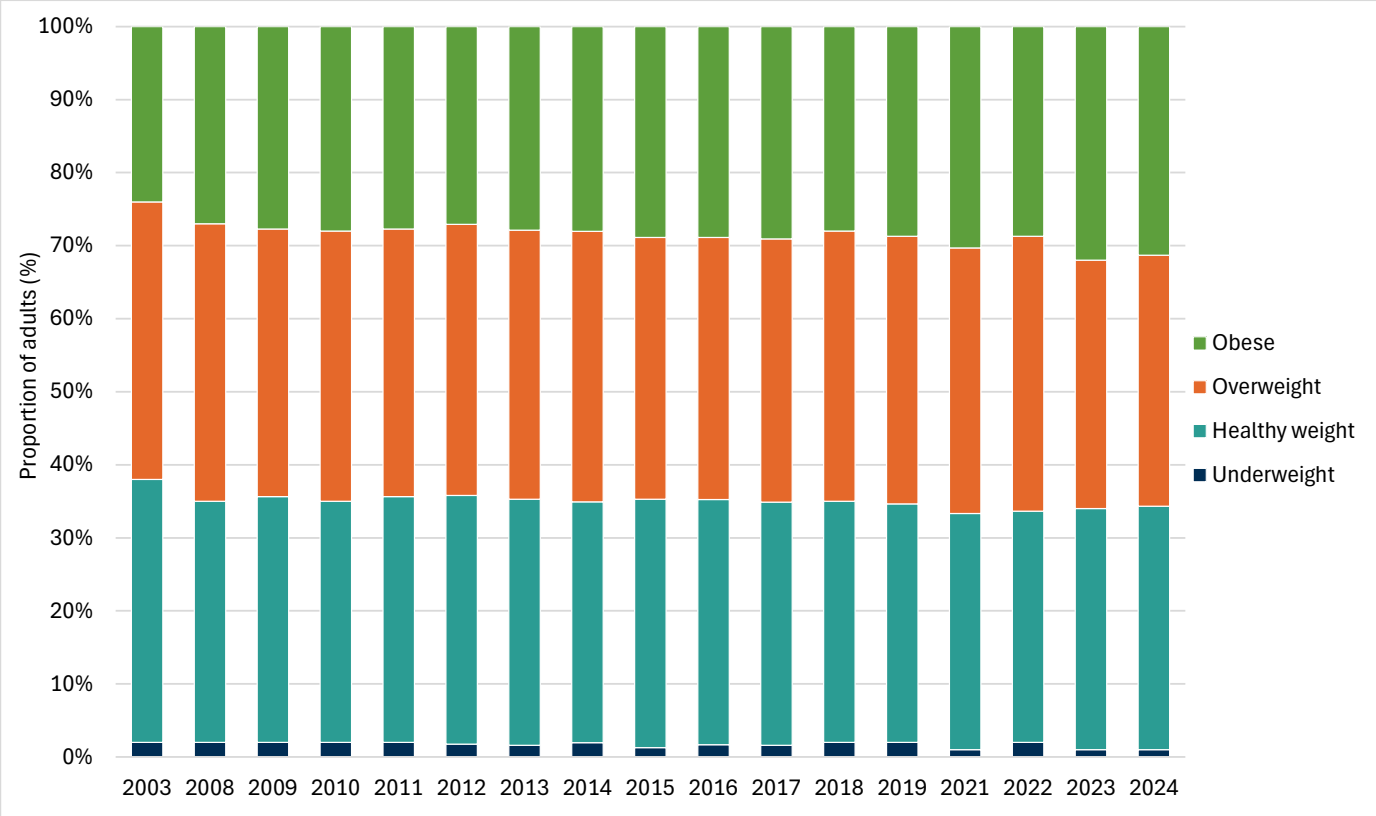
The 2018 Diet and Healthy Weight Delivery Plan[121] set out the main areas of focus for improving levels of healthy weight. The plan set out the ambitious aim to halve childhood obesity by 2030 and significantly reduce diet-related health inequalities. We know that there are weight-related health inequalities in Scotland's population, and that these are exacerbated by poor diets and diet inequalities.

Particular sub-groups may have particular needs in relation to achieving and/or maintaining a healthy weight. There is a specific reference to malnutrition in the Good Food Nation Plan. Actions on malnutrition will be set out in our upcoming Diet and Healthy Weight implementation plan, due to publish in 2026.

Indicator 3B.1: The proportion of adults with a healthy weight (as measured by BMI)

Headline 3B.1: The proportion of adults with a healthy weight has remained relatively stable over time from 2012 to 2024. Although the proportion of adults that are overweight has decreased slightly over this period, the proportion that are living with obesity (including morbid obesity) has increased.

Figure 28: Indicator 3B.1 The proportion of adults with a healthy weight (as measured by BMI)



Source: Scottish Government, Scottish Health Survey 2024

Baseline 3B.1: The latest data for indicator 3B.1 shows that 33% of adults had a healthy weight in 2024. A baseline for indicator 3B.1 will be set when 2025 data is available.

[121] Scottish Government. (2018, 2 July). A healthier future: Scotland's diet and healthy weight delivery plan. A healthier future: Scotland's diet and healthy weight delivery plan - gov.scot

As set out in section 2 of this report, we have amended indicator 3B.1 to track the proportion of adults in the Scottish population living with a 'healthy weight', as measured by BMI in the Scottish Health Survey.

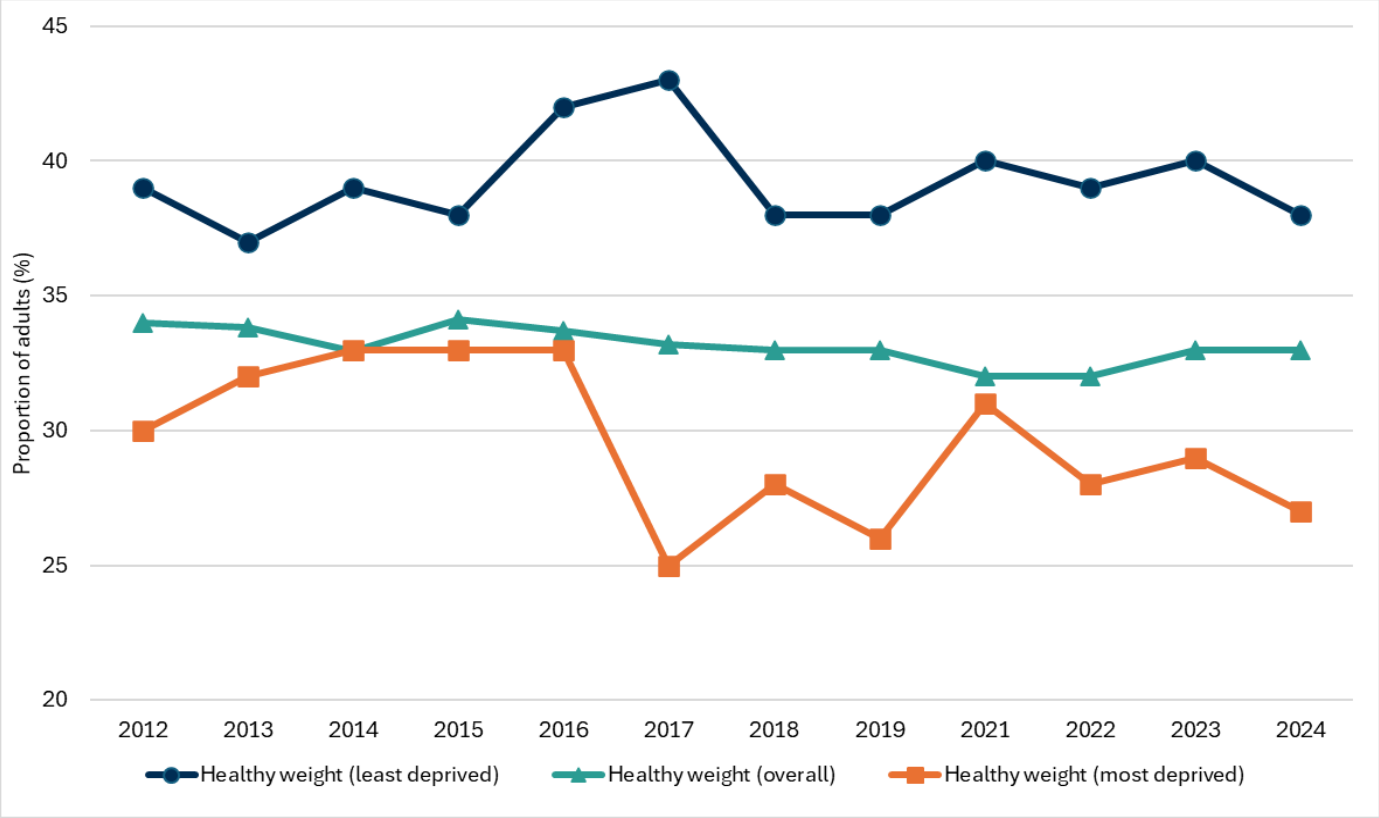
In 2024, a third of adults (33%) were within a healthy weight ranged based on their BMI. Women (35%) were more likely than men (30%) to be in the healthy weight range, and were also less likely to be overweight (28%) than men (41%), but women were more likely to be obese, including morbidly obese (35%) than men (27%). Nearly a third of all adults (31%) were living with obesity.

In terms of the mean BMI for adults, it reached its highest level (28.1 kg/m2), with a higher mean BMI recorded among females compared with males.

Indicator 3B.2: The difference in the proportion of adults with a healthy weight (as measured by BMI) in the most and least deprived quintile of the population

Headline 3B.2: The difference in the proportions of adults with a healthy weight between the least and most deprived quintiles of the population has fluctuated over time.

Figure 29: Indicator 3B.2 The difference in the proportion of adults with a healthy weight (as measured by BMI) in the most and least deprived quintile of the population



Source: Scottish Government, Scottish Health Survey 2024

Baseline 3B.2: The latest data for indicator 3B.2 indicates that the difference the proportion of adults in healthy weight categories for the least and most deprived quintiles was 11% in 2024. A baseline for indicator 3B.2 will be set when 2025 data is available.

As set out in section 2 of this report, we have amended indicator 3B.2 to track the proportion of adults in the Scottish population living with a 'healthy weight', as measured by BMI in the Scottish Health Survey.

In 2024, the proportion of adults within the healthy weight range was 38% in the least deprived quintile[122] and 27% in the most deprived quintile, meaning there is a healthy weight gap of 11% between the least and most deprived quintiles.

In 2012, the gap in the proportion of adults within the healthy weight range was around 9%, rising to 11% in 2024. This pattern has fluctuated - peaking at 18% in 2017 - but the overall trend suggests growing disparity. The widening gap is largely driven by differences in obesity prevalence. In 2024, 36% of adults in the most deprived areas were living with obesity compared with 24% in the least deprived, whereas the proportion of adults who were overweight (but not obese) showed little difference between groups.

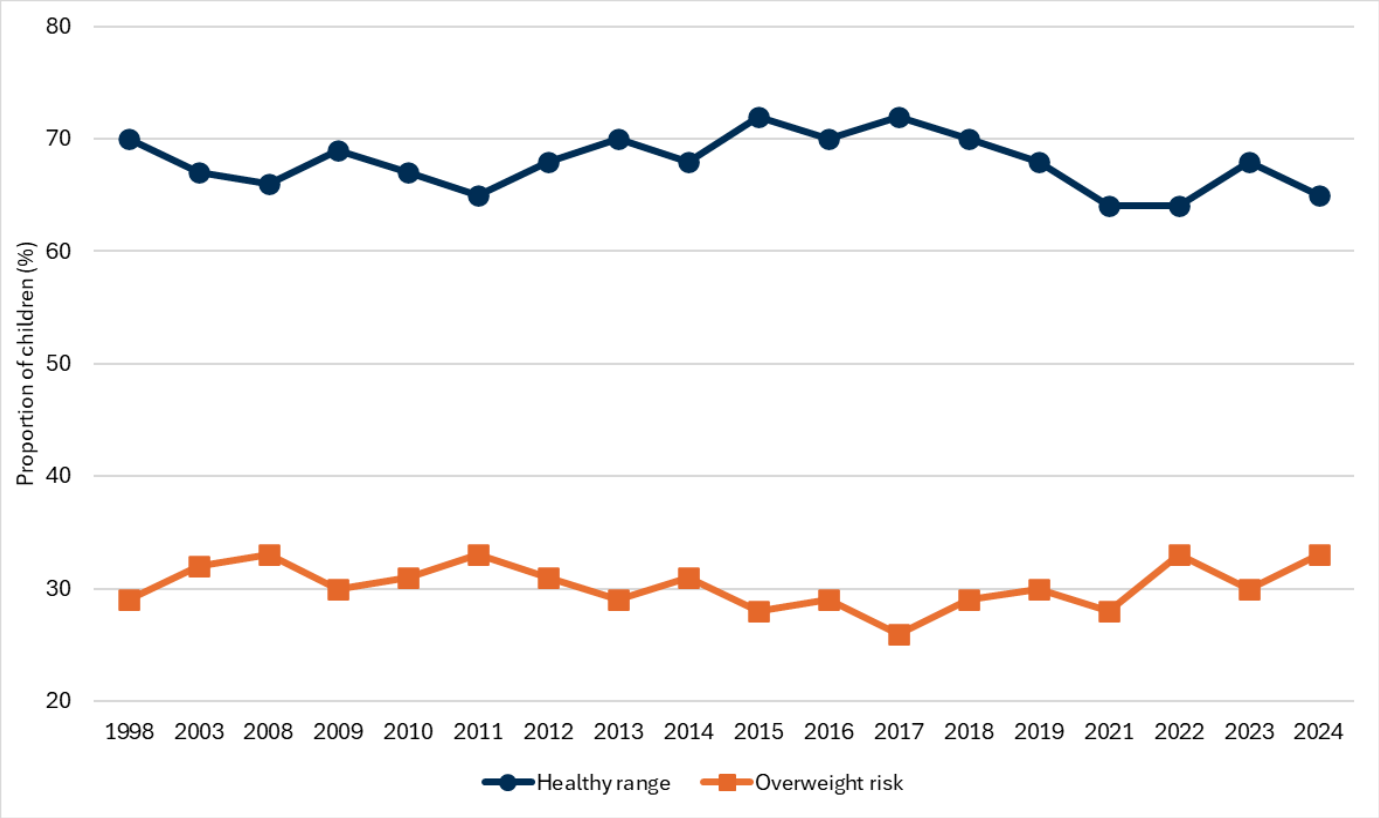
Disparity between the least and most deprived quintiles is also reflected in the mean BMIs recorded, with 27.1 kg/m2 the average in the least deprived quintile and 28.9 kg/m2 the average in the most deprived quintile.

[122] Based on Scottish Index of Multiple Deprivation (SIMD) areas

Indicator 3B.3: The proportion of children with a healthy weight (as measured by BMI)

Headline 3B.3: More than six in ten children were in the healthy weight range as measured by BMI in 2024. This proportion has been in the range 64% to 72% since 1998.

Figure 30: Indicator 3B.3 The proportion of children with a healthy weight (as measured by BMI)



Source: Scottish Government, Scottish Health Survey 2024

Baseline 3B.3: The latest data for indicator 3B.3 shows that the proportion of children with a healthy weight was 65% in 2024. A baseline for indicator 3B.3 will be set when 2025 data is available.

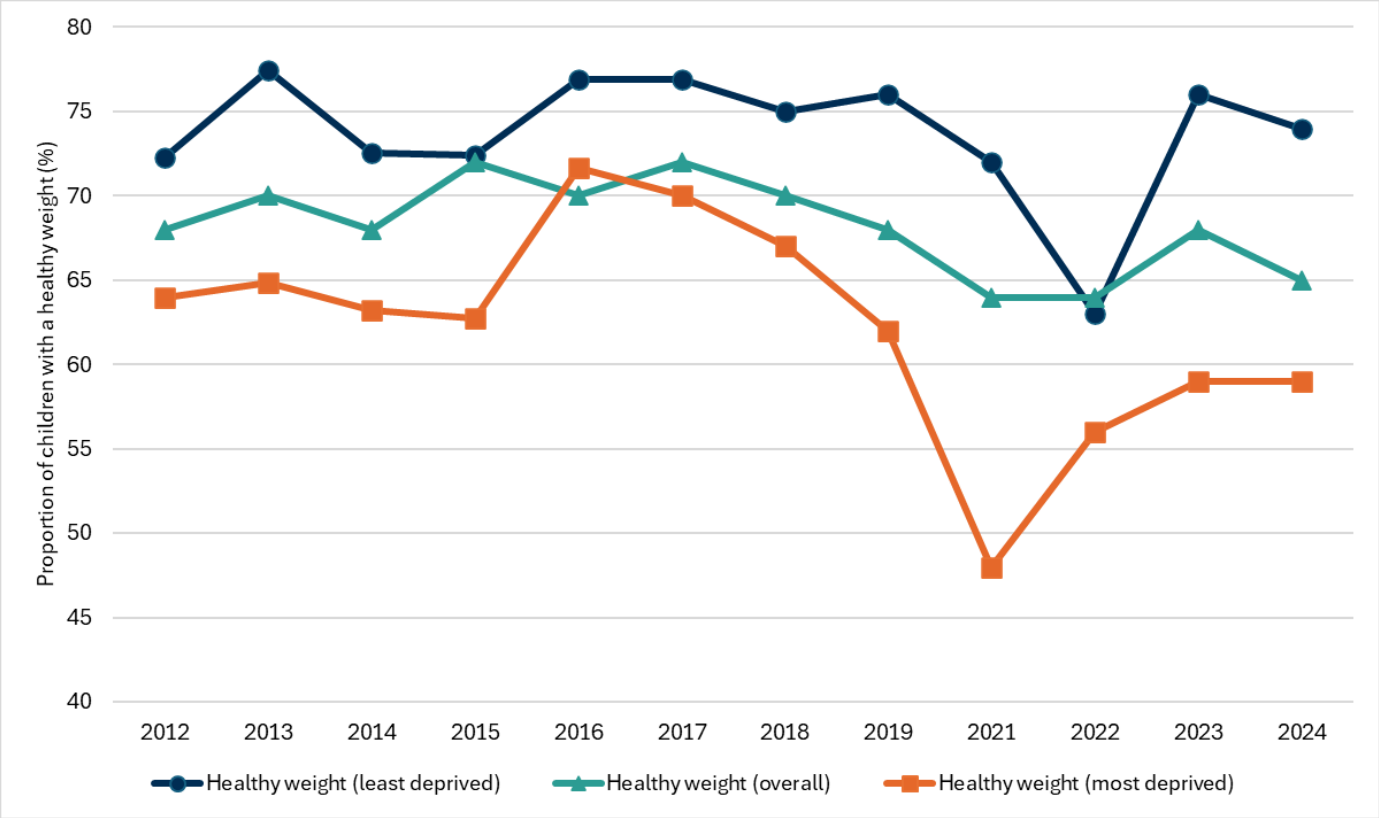
In 2024, almost two-thirds (65%) of children were within a healthy weight range based on their BMI. Although this is down from 68% in 2023, the proportion of children within the height weight range has been between 64% and 72% since 1998. There was not a significant difference between males and females in 2025 (64% and 66% respectively).

In 2024, 33% of children were at risk of being overweight (15% of children were at risk of being overweight and a further 18% were at risk of living with obesity). This marks a return to the series peak, previously recorded in 2022, although the proportion has fluctuated between 26% -33% since 1998. Differences by age and sex were not significant.

Indicator 3B.4: The difference in the proportion of children with a healthy weight (as measured by BMI) in the most and least deprived quintile of the population.

Headline 3B.4: In 2024, 59% of children in the most deprived communities in Scotland have a healthy weight, compared to 74% in the least deprived communities.

Figure 31: Indicator 3B.4 The difference in the proportion of children with a healthy weight (as measured by BMI) in the most and least deprived quintile of the population



Source: Scottish Government, Scottish Health Survey 2024

Baseline 3B.4: The latest data for indicator 3B.4 shows the difference in healthy weight categories for the least and most deprived quintiles of children was 15% in 2024. A baseline for indicator 3B.2 will be set when 2025 data is available.

The proportion of children in the most deprived areas of Scotland within the healthy weight range has been consistently lower than the proportion of children within the healthy weight range in the least deprived areas of Scotland, as measured by quintiles. Whilst at times the gap has been statistically insignificant (2016) and there is annual variation, the gap has tended to widen over time. In 2024, the gap was 15 percentage points (74% and 59% in the least and most deprived areas, respectively), this compares with a gap of 8 percentage points in 2012 (72% and 64% in the least and most deprived areas, respectively).

Sub-outcome 3C: Diet related health conditions in adults and children decline and inequalities in these conditions at a population level are narrowed

Shifting more people in Scotland to a healthy diet is understood to be an important driver - alongside other lifestyle changes, such as increased physical exercise - in reducing the risk and prevalence of diet-related health conditions in the long-term, as referenced in Outcome 3 of the Good Food Nation Plan. “Diet-related conditions” refers to health conditions that are influenced or caused by an individual’s dietary behaviours. The risk of these conditions can be increased due to poor diets, for example, inadequate or excessive consumption of certain nutrients. Common diet-related conditions include: type 2 diabetes, cardiovascular diseases, hypertension, certain types of cancer, nutrient deficiencies, and digestive disorders.

In the long-term, improvements to the Scottish diet should have a meaningful impact on key indicators of diet-related conditions in the population. For the purposes of the indicator framework, we have focused on three indicators. Two indicators cover diet-related health conditions within the adult population and one indicator is used for children’s health outcomes (dental health).

For the adult population, the first indicator considers the prevalence of any cardiovascular condition (except diabetes and high-blood pressure) in the adult population. The second indicator captures the prevalence of diagnosed diabetes in the adult population. Both are measured annually in the Scottish Health Survey.[123]

High free sugar intake among children is a key factor driving tooth decay. As tooth decay can be linked to over consumption of free sugar, we use this as an indicator of diet-related disease in children. The data is sourced from the National Dental Inspection Programme (NDIP).[124]

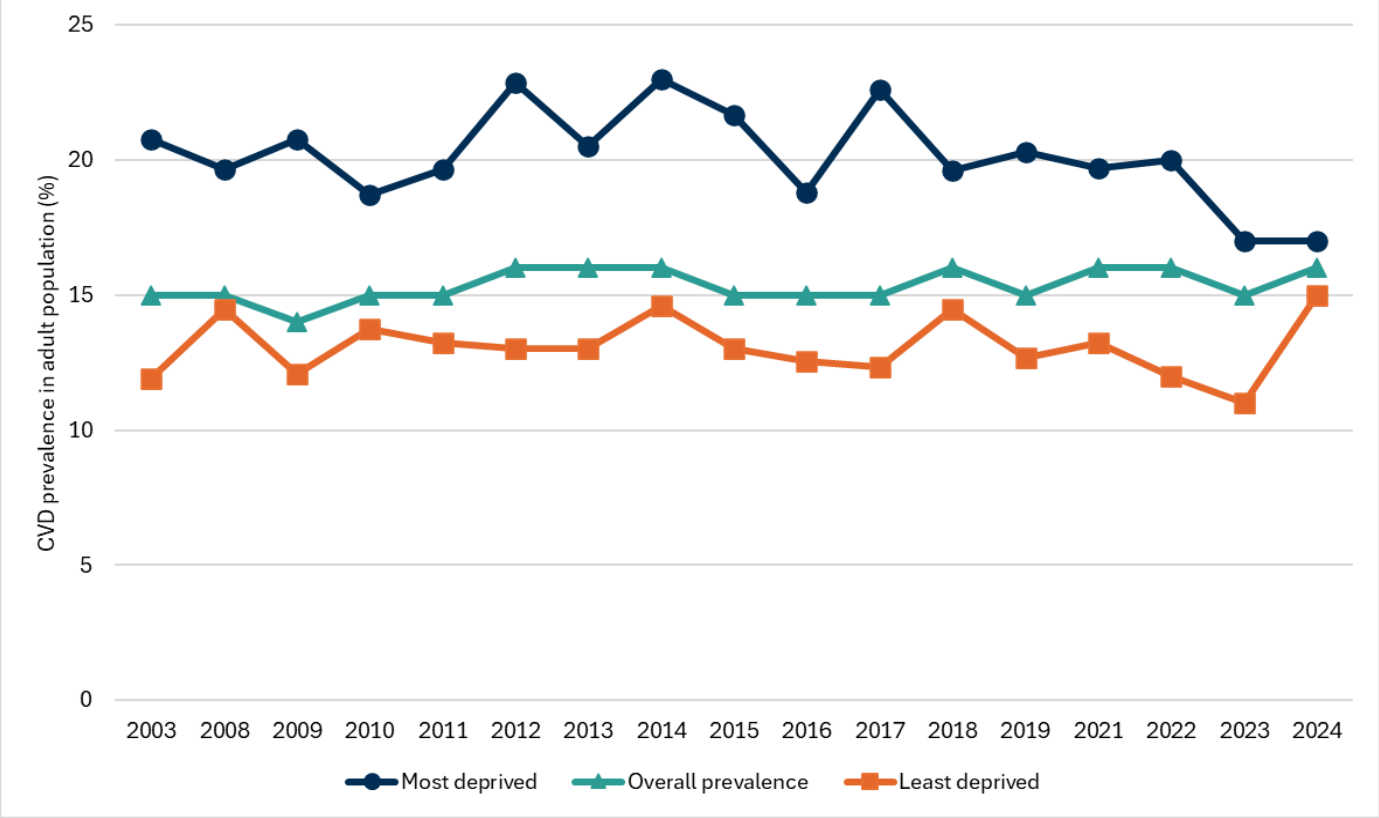
[123] Note growing uptake of weight loss therapeutics may independently influence glucose control, diagnosis rates, and population risk profiles for Type II diabetes.

[124] Public Health Scotland. (2025, 21 October). National dental inspection programme. National dental inspection programme 2025 - National dental inspection programme - Publications - Public Health Scotland

Indicator 3C.1: Prevalence of CVD in the adult population

Headline 3C.1: Prevalence of cardiovascular disease (CVD) in adults has remained broadly stable. In 2024, there was a significant reduction in the prevalence gap between adults in the most and least deprived areas.

Figure 32: Indicator 3C.1 Prevalence of CVD in the adult population



Source: Scottish Government, Scottish Health Survey 2024

Baseline 3C.1: The latest data for indicator 3C.1 indicates that CVD prevalence in the adult population was 16% in 2024. A baseline for indicator 3C.1 will be set when 2025 data is available.

In 2024, the prevalence of CVD[125] in the adult population was 16%. The prevalence has remained relatively stable over time, fluctuating between 14%-16%. There was no significant difference between men and women (17% and 14% respectively). However, the prevalence of CVD among adults increases with age, from 4% among those aged 16-24 to 42% among those aged 75 and over.

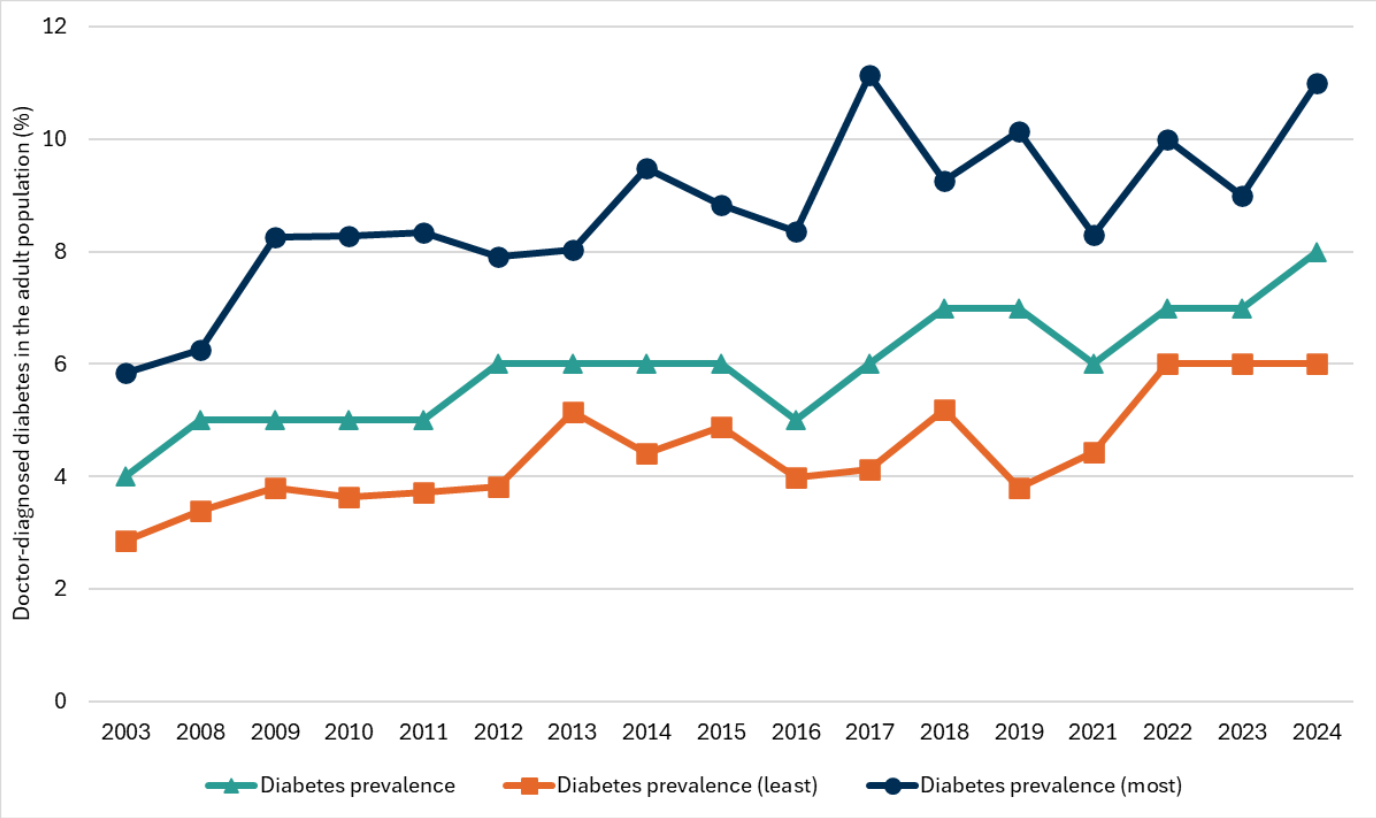
The prevalence of CVD in the least deprived quintile was 15% in 2024. This compares to 17% in the most deprived areas. Although the overall prevalence has remained stable over time, the prevalence gap between the most and least deprived quintiles (2%) has reduced to its lowest level.

[125] Cardiovascular disease (CVD) is a general term for conditions that affect the heart and blood vessels. Its main components are ischaemic heart disease (IHD) and stroke, both of which are well-established clinical priorities for the Scottish Government.

Indicator 3C.2: Prevalence of doctor-diagnosed diabetes in the adult population

Headline 3C.2: Prevalence of doctor-diagnosed diabetes in adults has remained broadly stable, however rates are higher for adults in more deprived areas.

Figure 33: Indicator 3C.2 Prevalence of doctor-diagnosed diabetes in the adult population



Source: Scottish Government, Scottish Health Survey 2024

Baseline 3C.2: The latest data for indicator 3C.2 indicates that doctor-diagnosed diabetes prevalence in the adult population was 8% in 2024. The difference in diabetes prevalence between the most and least deprived areas was 5 percentage points. A baseline for indicator 3C.2 will be set when 2025 data is available.

Diabetes, the most prevalent metabolic disorder, is a growing health challenge for Scotland. The majority of those registered as diabetic in Scotland have Type 2 diabetes, which can be influenced by demographic factors such as an ageing population and lifestyle factors such as diet, low levels of physical activity and obesity. Type 2 diabetes can have a serious impact on people's lives - such as cardiovascular disease, sight loss and amputation - and puts a significant amount of pressure on our health service.

In 2024, the prevalence of self-reported doctor-diagnosed diabetes was 8% - it is the highest prevalence level recorded.[126] The prevalence level for women was 6% and 9% for

[126] Not all those living with diabetes have been diagnosed. It is estimated that around 10% of cases of type 2 diabetes remain undiagnosed. Scottish Government. (2021, 25 February). Diabetes care – Diabetes improvement plan: commitments – 2021 to 2026. Diabetes care - Diabetes improvement plan: commitments - 2021 to 2026 - gov.scot

men. Type II diabetes remained the most frequently diagnosed type of diabetes among all adults (7% in 2024 for Type II versus 1% for Type I).

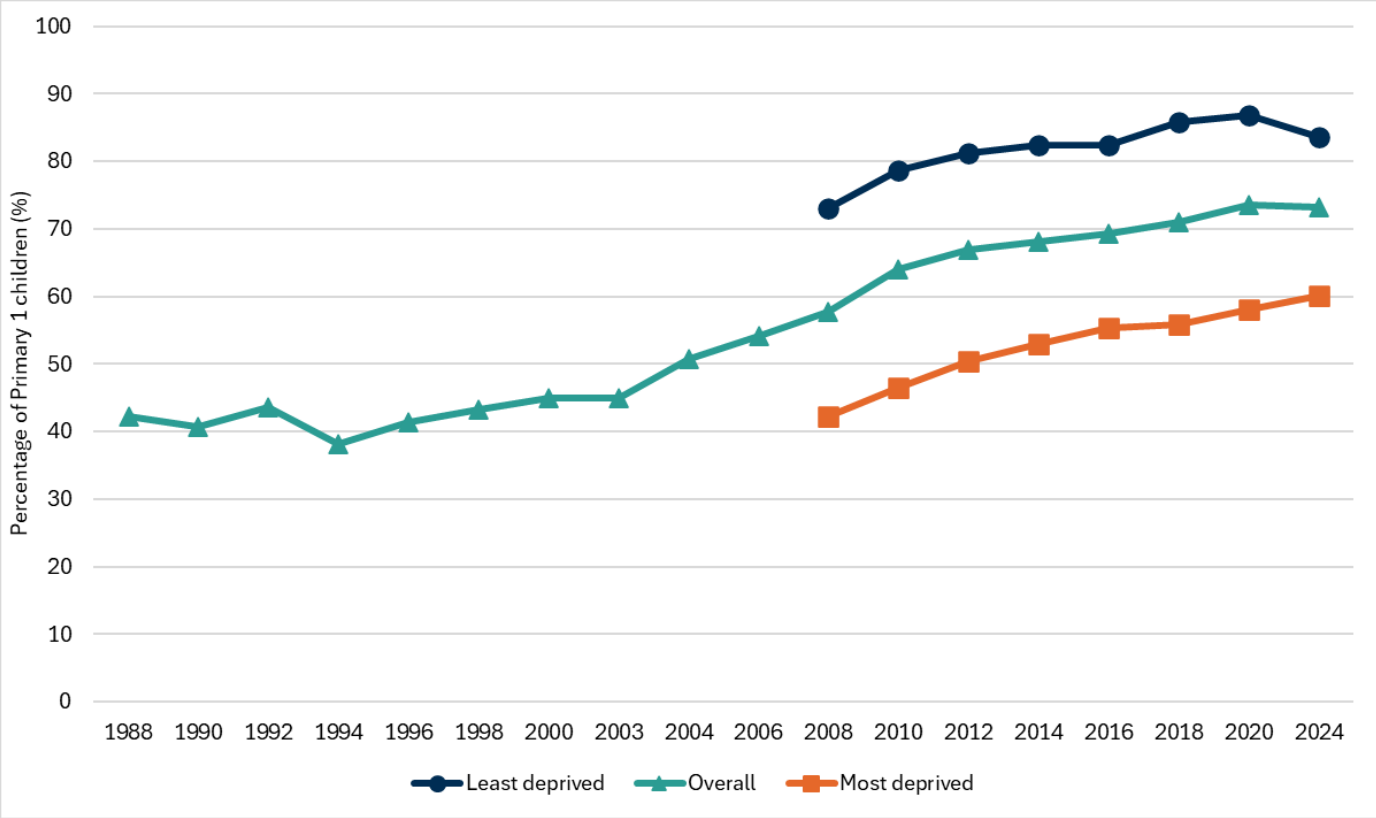
Similarly to the prevalence of CVD, the prevalence of type II diabetes and doctor-diagnosed diabetes increased with age, increasing from 0%-2% for those aged 16-44 to 18% and 20% respectively for adults aged 75 and over.

The prevalence of doctor-diagnosed diabetes in the least deprived quintile was 6% in 2024, compared to 11% in the most deprived quintile.

Indicator 3C.3: Percentage of Primary 1 (P1) children with no obvious tooth decay

Headline 3C.3: Child oral health has improved over recent decades. In 2024, more than 7 in 10 P1 children examined showed no obvious decay experience. Inequalities between the least and most deprived areas remain.

Figure 34: Indicator 3C.3 Percentage of Primary 1 (P1) children with no obvious tooth decay



Source: Public Health Scotland, National Dental Inspection Programme (NDIP)

Baseline 3C.3: The latest data for indicator 3C.3 is set at 73.2% which is the proportion of Primary 1 children with no obvious tooth decay recorded in 2024 and the difference in prevalence between the most and least deprived areas is 23.5 percentage points.

All Primary 1 and Primary 7 pupils are offered a Basic Inspection each year. In addition, a Detailed Inspection is conducted on a representative sample, alternating each year between P1 and P7 pupils. This indicator focuses on the Detailed Inspection of Primary 1 pupils. The Detailed Inspection involves a comprehensive assessment of the mouth using a light, a mirror and ball-ended probe. It involves recording the status of each surface of

each tooth in accordance with international dental epidemiological conventions, and measures obvious decay into dentine when seen under school (rather than dental surgery) conditions. Data is available back to 2002/03 and is published by Public Health Scotland.[127] Prior to this, data was collected through a series of annual surveys of key age groups of Scottish children. Data is collected at a Health Board and local authority level.

In the 2024 survey, 73.2% of P1 children examined had no obvious decay experience in their primary teeth, meaning 26.8% had obvious decay experience. Among those with decay experience, the average number of affected teeth was 3.66, with regional variations ranging from 2.63 to 4.09. The number of affected teeth per child varied from one to all 20 teeth.

Sub-outcome 3D: The food system contributes to positive mental health outcomes across the population

Headline 3D: An improved food system is expected to contribute positively to mental health outcomes for Scotland's population. However, a suitable indicator to assess and monitor this has not been identified at this stage, with further work required to develop indicators.

Outcome 3 of the Good Food Nation emphasises that an improved food environment and food system will bring about improvements not just in the physical health of the population, but also mental health outcomes. Whilst it is recognised that the causes of mental illness are many and varied, and are present independent of nutrition and diet, the relationship between diet and nutrition and mental health has gained recent research interest.

For example, epidemiological research has observed that adherence to healthy or Mediterranean dietary patterns is associated with a reduced risk of depression[128]. The nature of this relationship is complex. There is clear potential for reverse causality between diet and mental health, as it could be the case that sub-optimal food choices could be linked with a pre-existing mental state. For example, consumption of "comfort foods" in times of low mood, or changes in appetite from stress.

Similarly, it has been shown that sharing meals with others can provide psychological and social benefits, helping to reduce feelings of isolation and improve overall mental well-being. The results from independent research[129] suggest that communal eating increases social bonding and feelings of wellbeing, and enhances one's sense of contentedness and embedding within a community.

For the purposes of the Good Food Nation indicator framework, we have not identified a suitable indicator that could be used to monitor how improvements in the food system

[127] Public Health Scotland. (2024). National Dental Inspection Programme (NDIP) 2024. National Dental Inspection Programme (NDIP) 2024

[128] Lassale, C., Batty, G.D., Baghdadli, A. et al. (2019). Healthy dietary indices and risk of depressive outcomes: a systematic review and meta-analysis of observational studies. Mol Psychiatry **24**, 965–986. Healthy dietary indices and risk of depressive outcomes: a systematic review and meta-analysis of observational studies | Molecular Psychiatry

[129] Dunbar, R.I.M. (2017). Breaking Bread: the Functions of Social Eating. Adaptive Human Behavior and Physiology **3**, 198–211. Breaking Bread: the Functions of Social Eating | Adaptive Human Behavior and Physiology

might translate directly to improved mental health outcomes. Overall mental wellbeing of adults, at a population level is monitored through the Scottish Health Survey through WEMWBS[130] scores.[131] Loneliness for adults is also measured, as well as prevalence of self-reported eating behaviours and feelings related to food that could be indicative of a possible eating disorder**.** Many factors can have an impact on mental health and wellbeing including social, cultural, political, environmental and economic factors such as living and working conditions and social support.

[130] Warwick-Edinburgh Mental Well-being Scale

[131] Scottish Government. (2025, 21 October). The Scottish Health Survey 2024 – volume 1: main report. 1. Mental Health and Wellbeing - The Scottish Health Survey 2024 - volume 1: main report - gov.scot

6. Outcome 4: A strong food and drink sector

Outcome 4: Our food and drink sector is prosperous, diverse, innovative, and vital to national and local economic and social well-being. It is key to making Scotland food secure and food resilient, and creates and sustains jobs and businesses underpinned by fair work standards throughout food supply chains.

Summary of Outcome 4 Indicators

The food and drink sector consists of agricultural businesses, fishing and aquaculture businesses and food and drink manufacturing businesses. The sector is a major contributor to Scotland's economy - with an annual turnover of £18.9 billion and a GVA of £7.0 billion in 2023. The sector also consists of 17,345 businesses (of which around 80% are agricultural businesses) - approximately 10% of all registered business in Scotland.

The indicators for this sub-outcome are drawn from a range of economic statistics compiled by Scottish Government in the Industry Statistics database which measures the economic output of a range of sectors (note that exports of food and drink products is covered in Outcome 6). Innovation within the sector is also captured though the UK Innovation Survey. Finally, as agricultural businesses make up most of the sector (in terms of number of businesses), the economic performance of farming businesses is also captured under this outcome.[132]

Figure 35: Summary of Outcome 4 Indicators

[132] Further data on employment in aquaculture sector can be found in the Scottish Shellfish Farm Production Survey 2024 - gov.scot and the Scottish Fish Farm Production Survey 2024 - gov.scot

Sub-outcome 4A: Scotland's food and drink businesses (including farming businesses) are prosperous, diverse and innovative

Scotland's food and drink businesses[133] have faced a challenging economic climate in recent years. A series of economic shocks — notably Brexit-related trade barriers, pandemic-related supply chain disruptions, and the surge in energy and input costs following Russia's invasion of Ukraine — have not only constrained business resilience but also contributed to the wider Cost of Living Crisis, which in turn has suppressed domestic demand for premium food and drink products. Consequently, there has been a marked deterioration in some of the headline indicators under this sub-outcome as a result.

The sector has faced rising production costs (such as energy, raw materials, and packaging costs) which have put pressure on profit margins.[134] Headline inflation has also been consistently above the Bank of England's target since mid-2021, impacting on consumer confidence and spending and business investment. The Bank of England's latest monetary report[135] highlights that both international factors - such as higher global agricultural prices[136] - and domestic factors are driving inflation. Domestic factors include higher wage growth (linked to higher proportions of the workforce being paid the National Living Wage) and the UK Government's increase to Employer National Insurance Contributions in autumn last year which has added additional financial burden on businesses[137] and, in part, has been passed onto consumers in higher prices. Scottish Government analysis of the impact of this change showed that the Food and Accommodation sector would see a disproportionate rise in total costs as a result of this measure, with total costs rising by 1.7% on average (£15,500 per business).[138]

Recent data suggest a decline in UK food retail sales volume, with retail sales of food across the UK, in volume terms down 2.0% in October 2025 compared to the same month last year and 9.9% below 2019 levels.[139] Rising food prices in recent years have reduced purchasing volumes even as total spending has increased, suggesting households may be changing their behaviour when it comes to food purchases. Many Scottish food industries have also seen lower volumes of exports to the EU - including a 68% fall in fruit and vegetable exports and 34% fall in meat exports in 2024, compared to 2020.[140] This is reflected in the additional complexity associated with exports to the EU since Brexit. In March 2022, approximately 17% of businesses in the food and beverage sector reported

[133] Definition of the Food and Drink sector is defined by Standard Industrial Classification (SIC) 2007 codes.
[134] Office for National Statistics (ONS). (2022, 4 April) Recent challenges faced by food and drink businesses and their impact on prices. Recent challenges faced by food and drink businesses and their impact on prices - Office for National Statistics
[135] Bank of England. (2025, 6 November). Monetary Policy Report November 2025. Bank of England Monetary Policy Report November 2025
[136] The Bank of England note that Inflation among four components – butter, beef and veal, chocolate and coffee – which make up only 10% of the food CPI basket, is currently contributing nearly 2 percentage points to overall food inflation.
[137] Bank of England. (2025, 7 August). Monetary Policy Report August 2025. Monetary Policy Report - August 2025 | Bank of England
[138] Scottish Government. (2024, December). Scottish Economic Bulletin. Scottish Economic Bulletin
[139] Office for National Statistics (ONS). (2025, 21 November). Retail sales, Great Britain: October 2025. Statistical bulletin. Retail sales, Great Britain - Office for National Statistics
[140] HM Revenue and Customs. Regional trade statistics. Statistical datasets.

changes to supply chains due to the end of the EU transition period, compared with 7% across all sectors.[141]

Whilst the sector has faced challenges in recent years and is likely to continue to experience headwinds, there are more positive developments which could ease pressures. For example, the UK and EU agreed in a Common Understanding Document[142] to work towards a Sanitary and Phytosanitary Veterinary Agreement. If agreed this could result in the vast majority of movements of animals, animal products, plants, and plant products between Great Britain and the European Union being undertaken without many of the certificates or controls that are currently required post-Brexit.

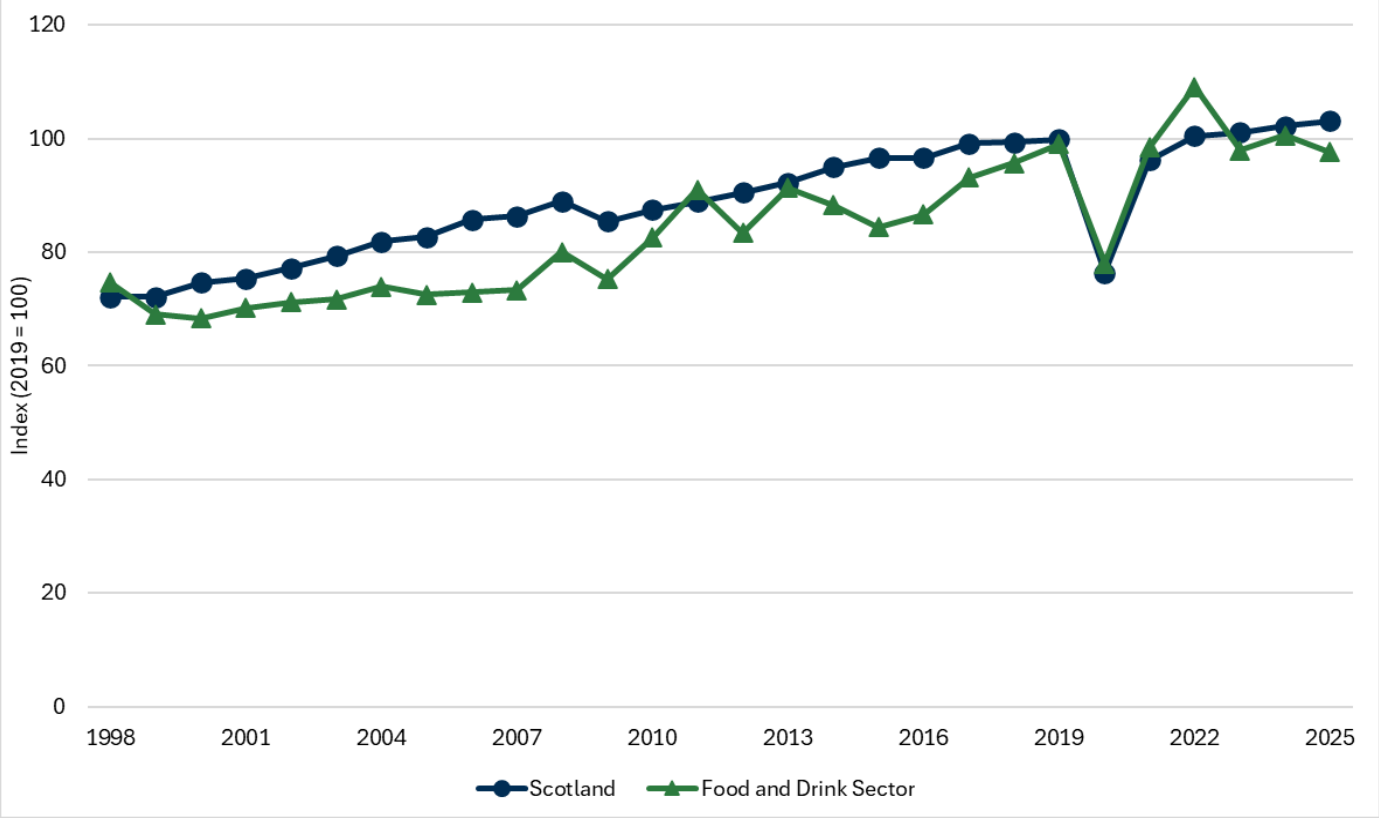
[141] Office for National Statistics (ONS). (2022, 4 April) Recent challenges faced by food and drink businesses and their impact on prices. Recent challenges faced by food and drink businesses and their impact on prices - Office for National Statistics

[142] UK Government. GOV.UK. (2025, 19 May). A renewed agenda for European Union – United Kingdom cooperation. Common Understanding. UK/EU Summit - Common Understanding

Indicator 4A.1: Real Gross Value Added (GVA) of the food and drink Sector

Headline 4A.1: Following the Covid-19 pandemic, real economic output from the food and drink sector (as measured by Real GVA) contracted sharply in 2023. Although 2024 showed some recovery, recent data indicates the sector is contracting again in 2025.

Figure 36: Indicator 4A.1 Real GVA of the food and drink sector[143]



Source: Scottish Government, Industry Statistics Database

Baseline 4A.1: The latest GDP data (Q2 2025) shows that output in the food and drink sector decreased by 2.9% compared with the same quarter in the previous year (Q2 2024). This compared to overall GDP growth of 0.9% over the same period. A baseline for indicator 4A.1 will be set when all 2025 data is available.

Change in real gross domestic product (real GDP) is the main indicator of economic growth in Scotland, and Gross Value Added (GVA) at constant prices is therefore a key indicator of real economic growth in the food and drink sector within Scotland. In 2020, GVA in the sector fell sharply - in line with the whole economy - during the Covid-19 pandemic. After a strong re-bound in 2022, GVA in the sector has shown signs of contraction in recent years. The latest GVA data show that output in the food and drink sector decreased by 1.7% in the most recent quarter (Q2 2025), compared with output across the economy estimated to have grown by 0.2%.

As at Q2 2025, the food and drink sector was 2.4% smaller than it was in 2019. Declines were seen in the Manufacturing sector overall (-1.4%), and in Wholesale and retail trade sector (-5.9%). Generally, economic growth has been driven in Scotland by the Services sector.

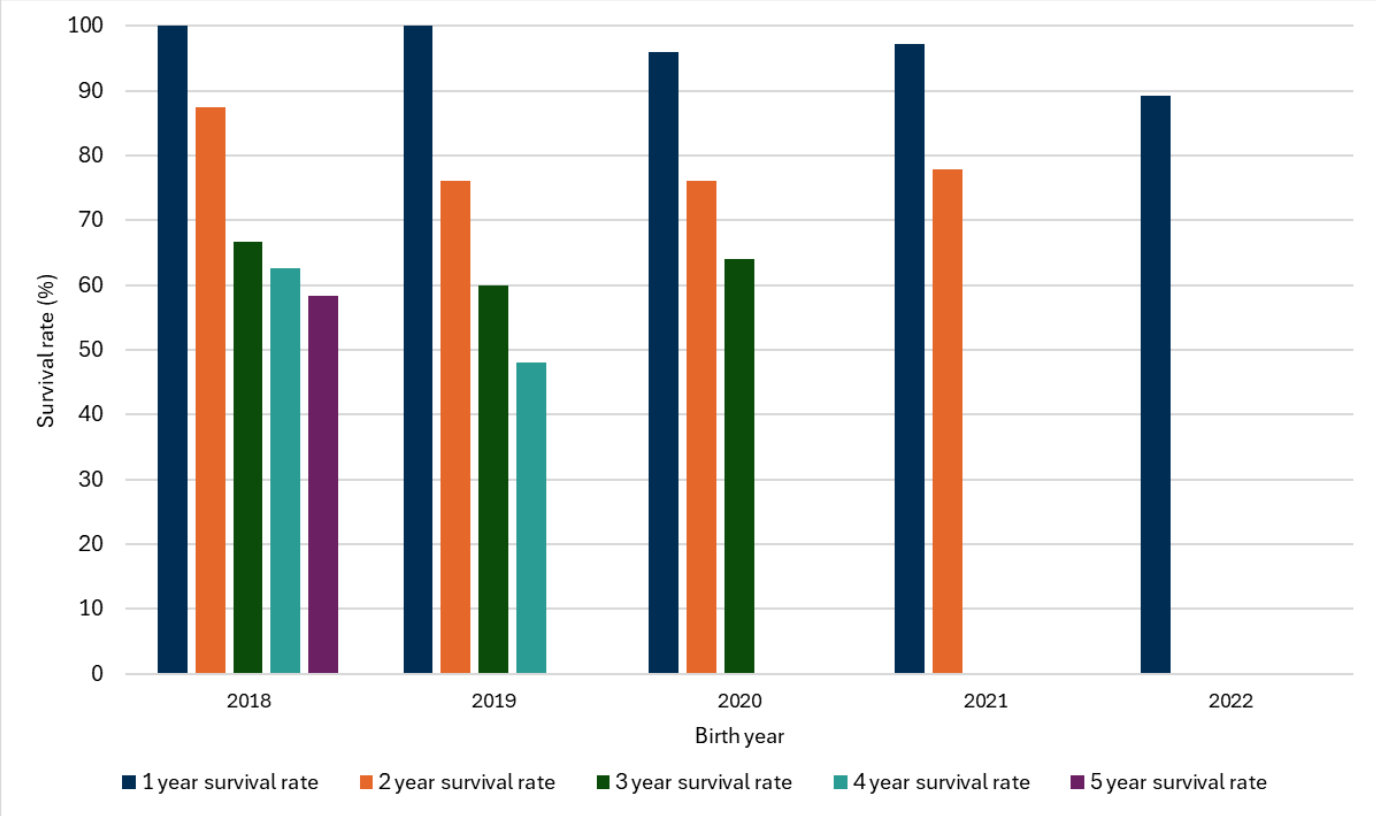
[143] Data shows GVA index for the food and drink sector (GDP for Scotland) as at Q2 each year, in line with latest available data for 2025 as at 28th November.

Total turnover - a measure not adjusted for inflation - in the sector has increased from £14.7 million in 2020 to £18.9 million in 2023. The Scotland Food and Drink Industry Strategy set an ambition to grow turnover in the sector to £20 million by 2028.[144] The Scotland Food and Drink Partnership brings together industry, government and key agencies to support Scotland's food and drink sector by coordinating strategy, helping businesses open up new markets, improving supply-chain resilience and championing sustainable growth.

Indicator 4A.2: The proportion of new food and drink businesses that survive after 1-5 years

Headline 4A.2: Recent data suggests a lower proportion of new businesses registered in 2022 in the food and drink sector continued to trade after one year compared to previous years; but the longer term picture is less clear.

Figure 37: Indicator 4A.2 The proportion of new food and drink businesses that survive after 1-5 years



Source: Scottish Government, Industry Statistics Database

Baseline 4A.2: In the latest estimates for indicator 4A.2, 89.3% of businesses births in 2022 survived after 1 year, whilst the 5 year survival rate for business births in 2018 was 58.3%. A baseline for indicator 4A.2 will be set when 2025 data is available.

[144] Scotland Food and Drink Partnership. Our Industry Strategy. Our Industry Strategy | Scotland Food and Drink

New business registrations (births) in the food and drink sector[145] can be viewed as providing a useful snapshot of resilience of the sector.[146] The data is based on businesses registered for VAT/PAYE. The survival rate(s) is calculated based on the number of new businesses registrations and the percentage of those that have survived into the current year. For example, for businesses that were registered in 2018, by the following year (2019) 100% remained active, but this falls to 58.3% in 2023.

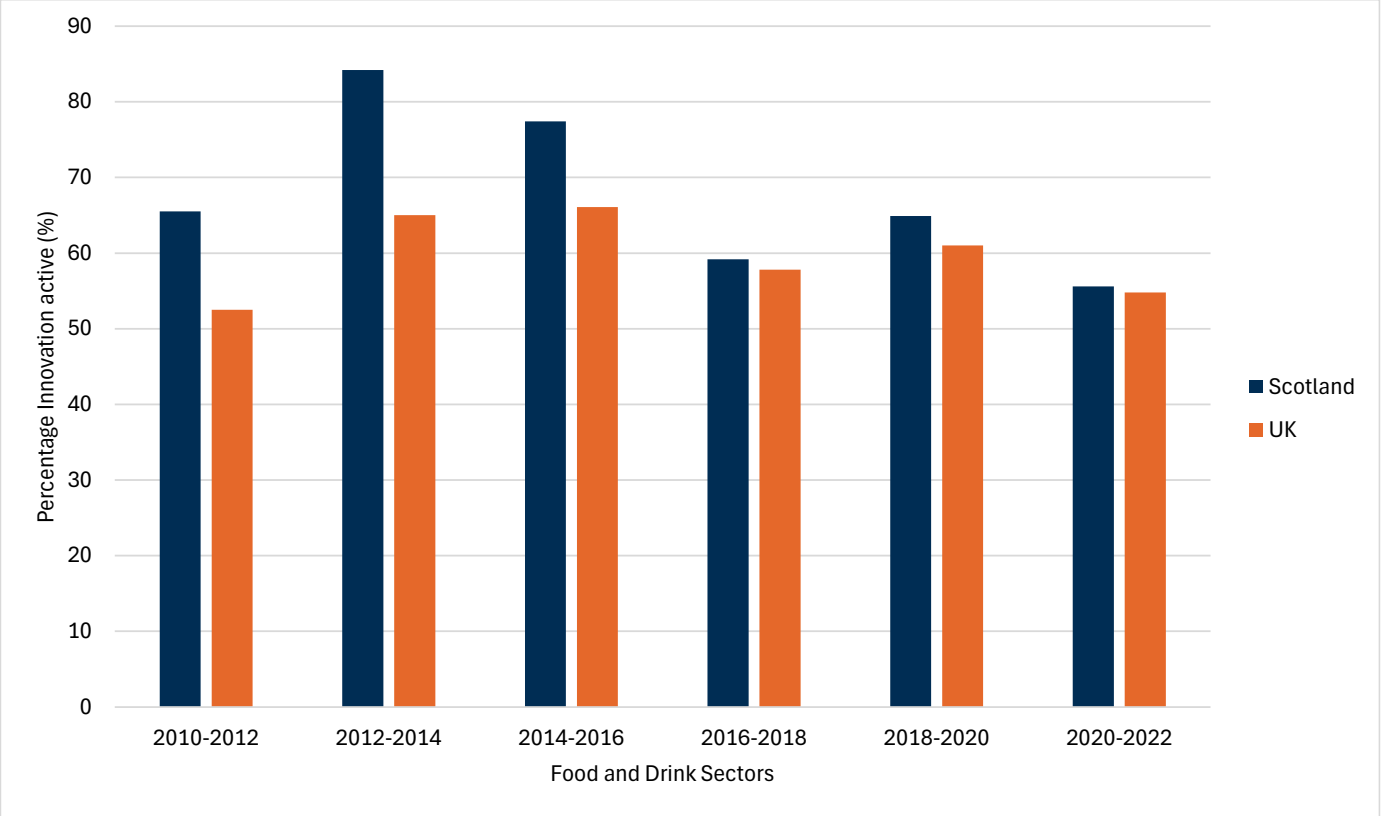
An alternative measure of business resilience in the food and drink sector can be sourced from Insolvency Statistics.[147] The number of company insolvencies in the food and drink manufacturing, agriculture and fishing industries in Scotland stood at around 11 per year between 2015 and 2020. This has increased to an average of 29 between 2021 and 2024.

[145] Note this measure only includes food and drink manufacturing businesses (SIC 10 and SIC 11)
[146] Note a business may survive without expanding, innovating, or contributing significantly to economic output, missing key aspects of sustainability like profitability or job creation.
[147] UK Government. GOV.UK (2019). Company insolvency statistics releases. Company insolvency statistics releases - GOV.UK

Indicator 4A.3: The percentage of businesses in the food and drink sector that are innovation active

Headline 4A.3: Food and drink businesses are more 'innovation-active' than businesses generally, but their innovation activity declined in 2020-22.

Figure 38: Indicator 4A.3 The percentage of businesses in the food and drink sector that are innovation active



Source: Scottish Government, UK Innovation Survey 2023

Baseline 4A.3: The latest data available for indicator 4A.3 finds that 55.6% of businesses were innovation active within the food and drink sector in Scotland in 2020-22. A baseline for indicator 4A.3 will be set when 2022-24 data is available.

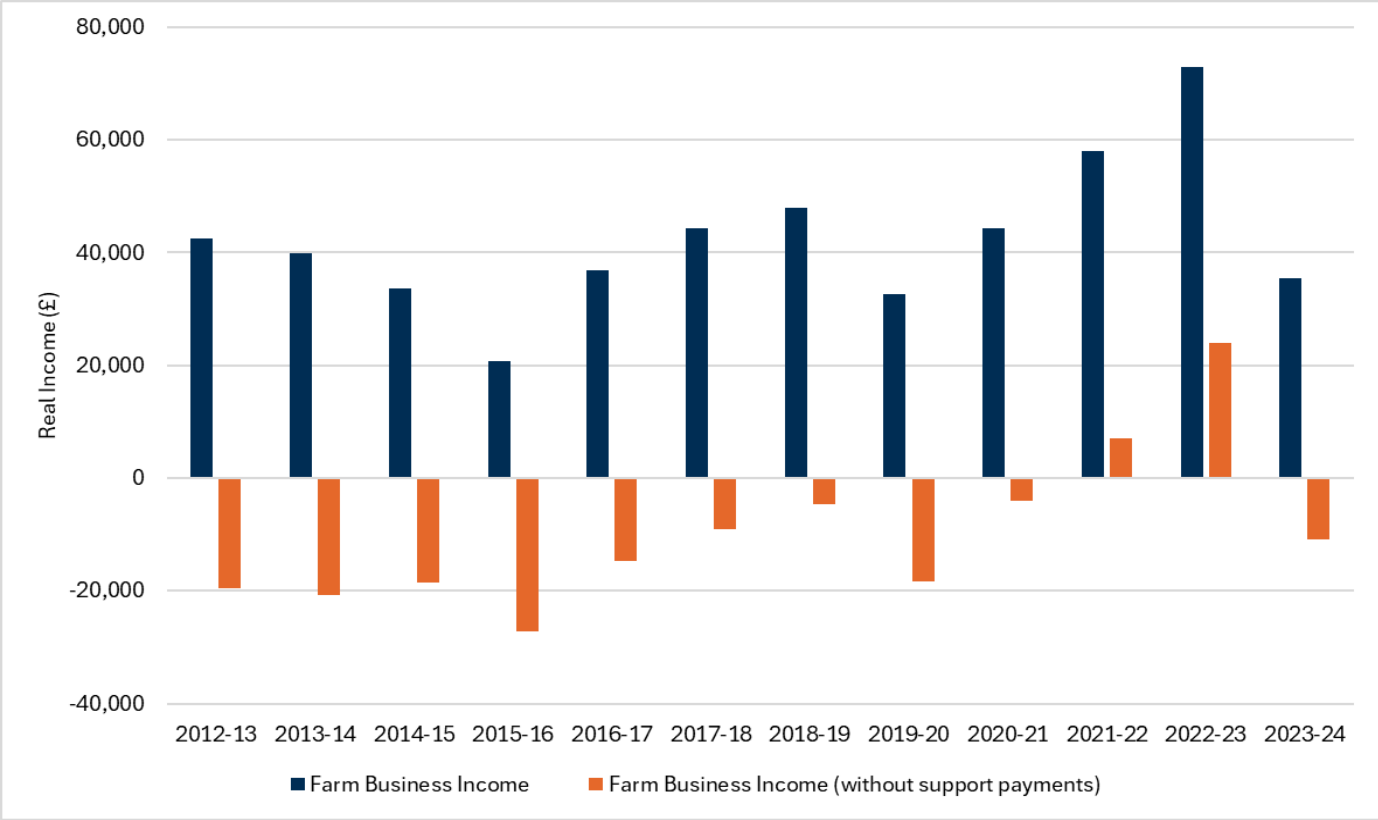
Innovation active businesses, defined in the UK Innovation Survey, are those that are engaged in any of the following activities: the introduction of a new or improved product (goods or services); business processes used to produce or supply all goods or services that the business has introduced, regardless of their origin (these innovations may be new to business or new to the market); and/or innovation projects not yet complete or abandoned.

Food and drink businesses (excludes agriculture and fishing) were found to be more 'innovation-active' than businesses generally, but their innovation activity declined in 2020-22. Innovation rates declined for most sectors in 2020-22, primarily due to COVID-19 challenges and rising energy costs. A higher proportion of businesses in the sector reported being innovation active in 2012-2014 and 2016-2018, with higher rates compared to the sector across the UK as a whole.

Indicator 4A.4: Average Farm Business Income (with and without subsidy)

Headline 4A.4: After record high values in 2022-23, average farm income in 2023-24 was the lowest estimated since 2019-20 (after adjusting for inflation).

Figure 39: Indicator 4A.4 Average Farm Business Income (with and without subsidy)



Source: Scottish Government, Scottish Farm Business Income

Baseline 4A.4: The latest data for indicator 4A.4 reports that average farm income in 2023-24 was around £35,500, whilst average farm income without support was -£11,000. A baseline for indicator 4A.4 will be set when 2024-25 data is available.

After record high values in 2022-23, average farm income in 2023-24 was the lowest estimated since 2019-20 (after adjusting for inflation). Over the past decade, average farm income has fluctuated between £20,800 in 2015-16, where low milk prices and fall in support payments resulted in record lowest profits, to £72,900 in 2022-23.

Average farm income varies by farm type. For example, the average income of dairy farms, cereal farms and lowland cattle and sheep farms in 2022-23 was £116,300, £38,900 and £2,600 respectively. Business performance varies within farm types as well. There are loss-making and high income farms in most farm types. In 2022-23, 27% of farms were loss-making and 13% made more than £100,000. Further information on farm profitability and the methodology used to produce these estimates is published.[148]

[148] Scottish Government. Scottish farm business income (FBI). Scottish farm business income (FBI) - gov.scot

Sub-outcome 4B. Scotland's food and drink sector creates and sustains fair and diverse employment

The food and drink sector employs around 123,000 people accounting for 4.6% of employment in Scotland. It is a significant employer in many remote and economically fragile rural and island communities. The majority of this workforce is in the agricultural sector 65,000 (53%), with 32,000 (26%) in food manufacturing, 15,000 (12%) in beverage manufacturing and 11,000 (9%) in fishing and aquaculture. The proportion of the workforce in food and drink manufacturing was high in Moray (7.8%) and Aberdeenshire (4.9%) compared to the national average (1.7%). The proportion of the workforce in agriculture and fishing and aquaculture, was highest in the Shetland Islands (9.6%), Orkney (9.3%), Angus (9.2%) and Na h-Eileanan Siar (7.6%).

Median pay in the food and drink sector has been historically below the median across all sectors of the economy, and below the median for general manufacturing. The Food and Drink Manufacturing and Primary Production workforce was also estimated to have a lower proportion of the workforce educated to Higher Education levels (SCQF[149] Level 7 and above), and a higher proportion educated to SCQF Levels 5 and 6 compared to Scotland overall[150]. There is more limited evidence and data on the characteristics of the workforce generally in the food and drink sector in terms of equality and diversity.[151] There are particular issues in some parts of the sector - particularly agriculture - where the average-age of working occupiers of farms were 45 years and over.[152]

The indicators under this sub-outcome measure the average earnings of those employed in the sector (and how this compares to the overall average earnings across all sectors), apprenticeship starts in the sector and estimates of fairness in the sector - as measured by the Gender Pay Gap. There was limited data available to monitor other aspects of employment within the sector (for example diversity).

[149] Scottish Credit and Qualifications Framework

[150] See Sectoral Skills Assessment under 4B.2

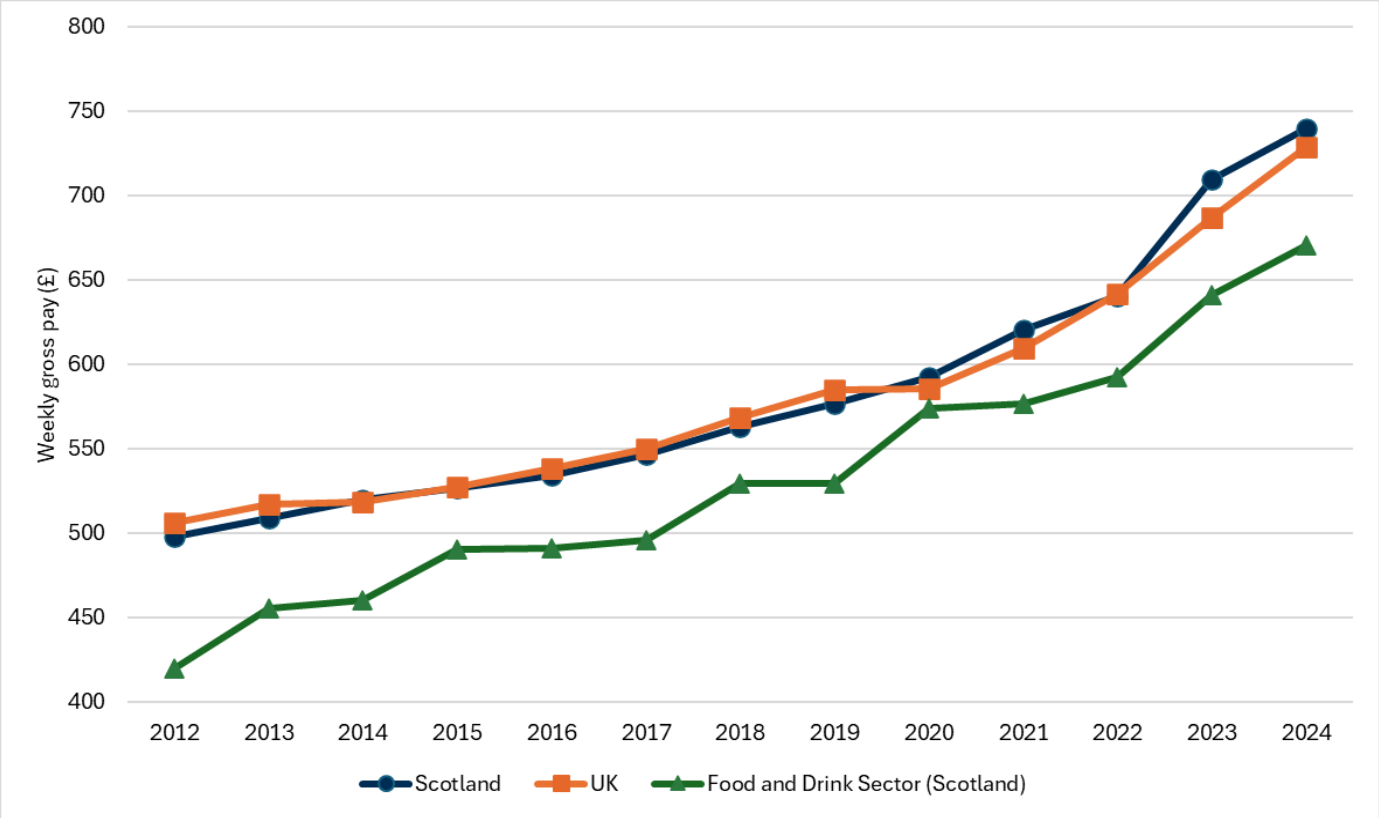
[151] A report produced by the Food and Drink Federation gives some more detail on wider DandI metrics for parts of the Food and Drink sector at a UK level. Food and Drink Federation. (2021). Food and Drink Inclusion and Diversity Report 2021.

[152] Scottish Government. (2024, 24 October). Results from the Scottish Agricultural Census: June 2024. Most working occupiers are aged 45 years and over - Results from the Scottish Agricultural Census: June 2024 - gov.scot

Indicator 4B.1: Median Earnings in the food and drink sector

Headline 4B.1: Median pay in the food and drink sector has increased at a similar rate to the average across all sectors in recent years. However, overall pay levels in the sector remain below the all-sector median.

Figure 40: Indicator 4B.1 Median earnings in the food and drink sector



Source: Scottish Government, Industry Statistics Database

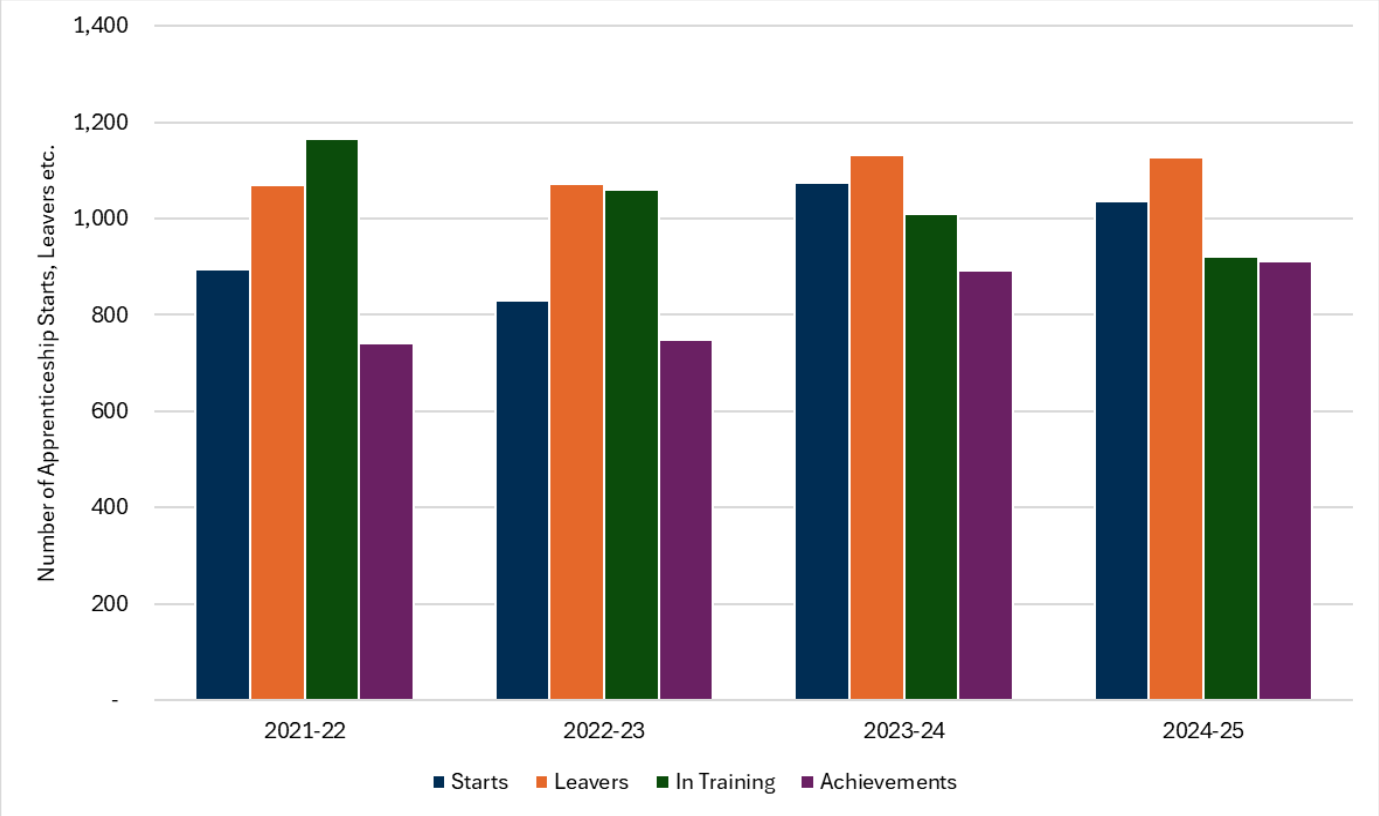
Baseline 4B.1: The latest data for indicator 4B.1 reports that median weekly gross pay in 2024 for full-time employees in the food and drink sector was £670.70 per week. This was equivalent to 91% of the median across all sectors. A baseline for indicator 4B.1 will be set when 2025 data is available.

As reported in the Annual Survey of Hours and Earnings, median pay in the food and drink sector has grown broadly in line with pay across all sectors in recent years. It is 9% lower than the median weekly pay across all sectors. The narrowing of the difference in median pay in 2020 (where pay in the food and drinks sector was 3% below the median) should be treated with caution due to short-term changes in the composition of employment and hours and pay in this period as well as reduced sample quality and therefore should be treated with caution.

Indicator 4B.2 Number of Modern Apprenticeship starts in the food and drink sector

Headline 4B.2: The number of Modern Apprenticeship starts and 'achievements' in the food and drink sector has increased over time from 2021-22 to 2024-25.

Figure 41: Indicator 4B.2 Number of Modern Apprenticeship starts in the food and drink sector



Source: Skills Development Scotland, Modern Apprenticeship Data

Baseline 4B.2: The latest data for indicator 4B.2 finds that in the food and drink sector in 2024/25 there were 1,036 Modern Apprenticeship starts made, 921 in training and an achievement rate of 80.8%. This forms the baseline for indicator 4B.2.

Modern Apprenticeships in the food and drink sector in Scotland helps support employed individuals (either new or existing) to secure industry-recognised qualifications. In 2024/25, there were 1,036 Modern Apprenticeship starts made (down 3.6% from 2023/24) in the food and drink sector and 921 Modern Apprentices in training (down 8.8% from 2023/24). For apprenticeships completed in 2024/25 in food and drink, there was an achievement rate of 80.8% (up from 78.9% in 2023/24).

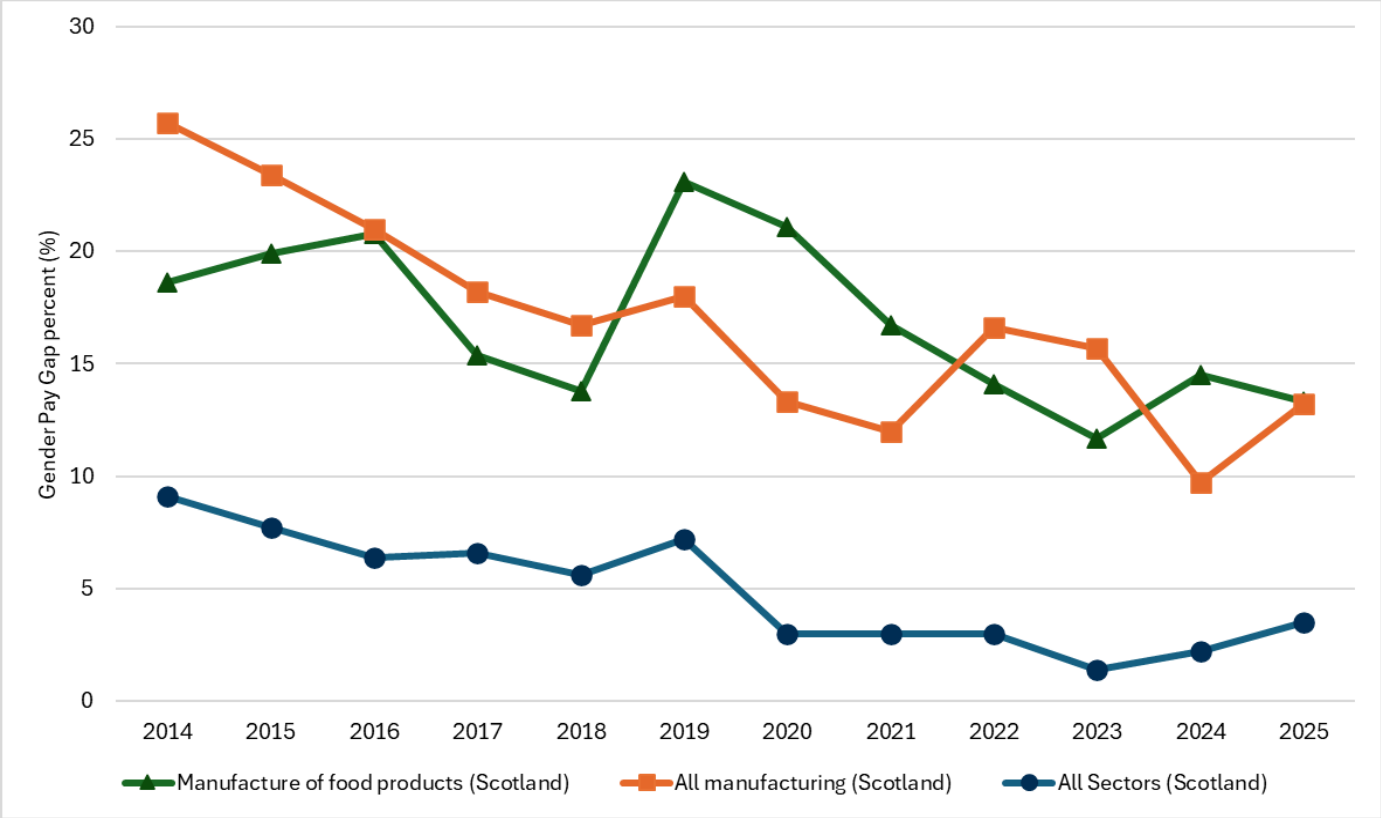
Skills Development Scotland also publish 'sectoral skills assessments' for the food and drink sector[153,154] which includes some further data on Modern Apprenticeships and other characteristics of the workforce.

[153] Skills Development Scotland. (2024, October). Sectoral Skills Assessment: Food and Drink Primary Production. Sectoral Skills Assessment Food and Drink Primary Production 2024
[154] Skills Development Scotland. (2024, October). Sectoral Skills Assessment: Food and Drink Manufacturing. Sectoral Skills Assessment Food and Drink Manufacturing 2024

Indicator 4B.3: Gender Pay Gap for full-time employees in the food manufacturing sector

Headline 4B.3: The Gender Pay Gap for Median Gross Hourly earnings (excluding overtime) in the Food Manufacturing sector has narrowed over time, but remains consistently higher than the Gender Pay Gap across all industries and services.

Figure 42: Indicator 4B.3 Gender Pay Gap for full-time employees in the food manufacturing sector



Source: Office for National Statistics, Gender pay gap

Baseline 4B.3: The Gender Pay Gap for Median Gross Hourly earnings (excluding overtime) for full-time employees in the manufacture of food products sector was 13.3% in 2025. This compared to a gender pay gap of 13.2% in all manufacturing overall and 3.5% in all industries and services in Scotland.

The Gender Pay Gap[155] in the Food Manufacturing sector has been consistently higher than for all industries and services overall in Scotland. To note, reliable data for other parts of the food and drink sector were not available.

There is limited evidence available on inclusion and diversity within employers in the food and drink sector in the UK. A recent report by the Food and Drink Federation - based on data collected from 200 companies - found the sector is marginally behind the UK economy average in key inclusion and diversity metrics, including female representation at board and executive committee level, and LGBTQ+ representation.[156] The report also found a significant number of companies did not have a coordinated inclusion and diversity

[155] The difference between average hourly earnings excluding overtime of men and women, as a proportion of men's average hourly earnings excluding overtime.
[156] Food and Drink Federation. (2021). Food and Drink Inclusion and Diversity Report 2021.

strategy; and among those that did, most focused on gender rather than other dimensions such as ethnicity, disability or sexuality

Sub-outcome 4C: Scotland's food system remains secure and resilient

Scotland’s resilience to acute food security challenges depends on maintaining a diverse and balanced supply base, avoiding single points of failure across domestic and international supply chains. The domestic food and drink sector plays a central role—producing food for consumption in Scotland and contributing to economic resilience through exports. At the same time, Scotland’s strong trade relationships are important: imports ensure year-round availability and diversity of food, including products such as citrus, and help prevent over-reliance on any single country of origin.

Assessing the resilience of Scotland’s food system is inherently complex. It reflects Scotland’s participation in the wider UK internal market for food, variations between product types, and the complexity and large number of actors involved in the supply chain - 98.7 % of registered food and drink enterprises in Scotland are small businesses (0-49 employees). It also depends on external factors including energy costs, input availability, and global transport and logistics.

The UK Food Security Report 2024[157] provides a UK-wide evidence base for understanding the drivers and current status of food security. For the national Good Food Nation Plan, we draw upon several of its high-level indicators, supplemented with Scotland-specific measures to reflect our distinct production patterns, trade profile, and resilience considerations.

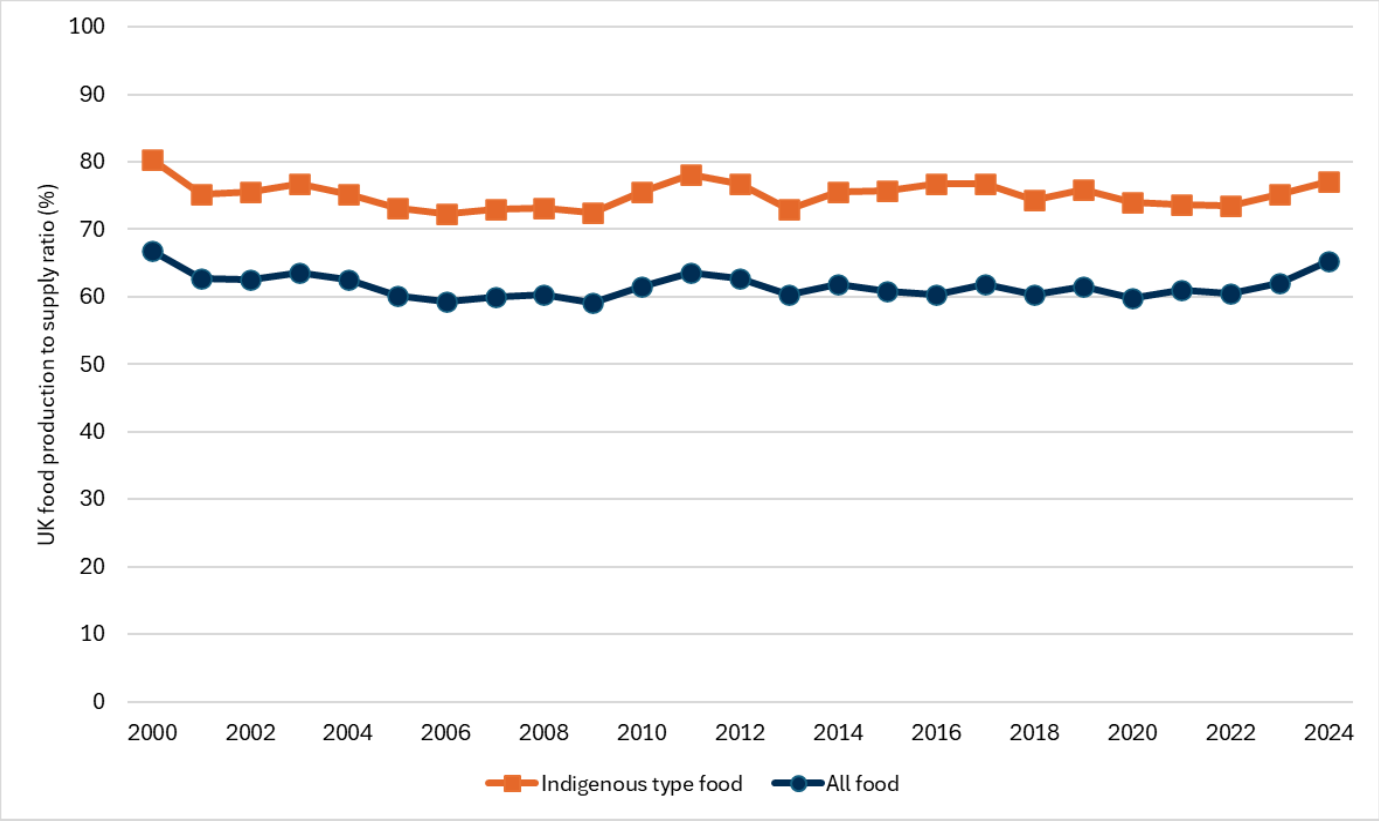
While the four indicators under this outcome focus primarily on the balance between domestic production and imports, broader dimensions are also important for understanding food system resilience. These include the stability of supply, cost and availability of critical inputs (such as energy, feed, and fertiliser), nutritional adequacy, and the robustness of logistics and infrastructure. This is list is not exhaustive but factors like these also influence Scotland’s overall ability to maintain a secure, sustainable, and resilient food system.

[157] Defra, United Kingdom Food Security Report (2024). United Kingdom Food Security Report 2024 - GOV.UK

Indicator 4C.1: UK food production to supply ratio (value based)

Headline 4C.1: The UK's overall balance of international trade and domestic production of food remains broadly stable. The UK continues to source food from domestic production and trade at around an overall 65:35 ratio.

Figure 43: Indicator 4C.1 UK food production to supply ratio (value based)



Source: Department for Environment, Food and Rural Affairs, Agriculture in the United Kingdom

Baseline 4C.1: The production-to-supply ratio was at 65% for all food and 77% for indigenous foods (meaning those that can be grown in the UK) in 2024. This is the latest data for indicator 4C.1. A baseline for indicator 4C.1 will be set when 2025 data is available.

The UK's balance of trade and domestic food production has remained broadly stable in recent years, with roughly 65% of food (by value) supplied from domestic production and 35% from trade. This ratio - calculated as the farm-gate value of all food produced in the UK divided by the value of total food available for consumption - has levelled off at around 60% in recent decades, following a decline from over 80% in the 1980s. The equivalent ratio for indigenous food types follows a similar pattern but remains consistently a few percentage points higher.

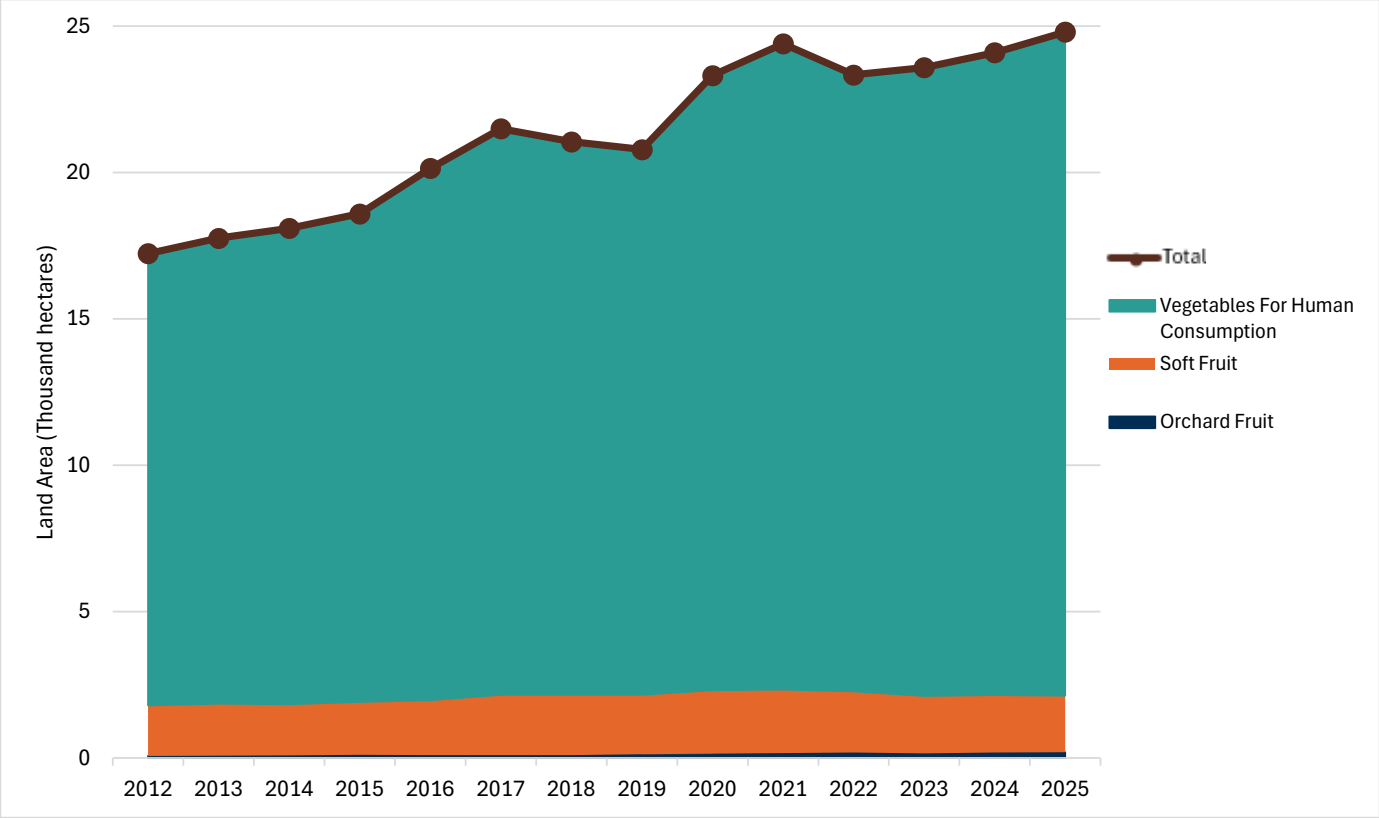
As Scotland operates within the UK's internal food market, this ratio offers a useful high-level indicator of the UK's exposure to international market volatility and the balance between home-grown and imported food. However, it should not be interpreted as a direct measure of food security. Because it is value-based, the ratio is sensitive to price movements rather than physical quantities of food. For example, if domestic food prices rise faster than import prices, the ratio may increase—even if the UK is importing a larger share of food in volume terms. Similarly, high-value but low-volume exports such as

Scottish salmon and whisky can inflate the value of domestic production, masking the relative importance of lower-value but nutritionally essential foods like cereals (wheat for breadmaking), vegetables (tomatoes and leafy greens) and pulses. It is also important to note the sectoral variation concealed by the average.

Indicator 4C.2: Total agricultural land area used to produce fruit and vegetables for human consumption

Headline 4C.2: The area of land in Scotland that is cultivated for fruit and vegetable production has increased by around one third (+33.4%) in the past 10 years, but represents only 0.5% of total agricultural land.

Figure 44: Indicator 4C.2 Total agricultural land area used to produce fruit and vegetables for human consumption



Source: Scottish Government, Scottish Agricultural Census: results

Baseline 4C.2: The latest data for indicator 4C.2 is that 24,799 hectares is the total land area used for growing soft fruits, orchard fruits and vegetables for human consumption in 2025.

Scotland (and the UK) continue to be highly dependent on imports to meet consumer demand for fruit and vegetables, which are significant sources of micronutrients for consumers. Scotland has relatively little prime agricultural land which would be suitable for growing fruit and vegetable crops. The Macaulay Land Capability for Agriculture classification system classifies only around 7% of Scotland with land in class 1-3.1[158], would be potentially suitable for fruit and vegetable production. Research funded by Scottish Government is looking at understanding the means, barriers and drivers for

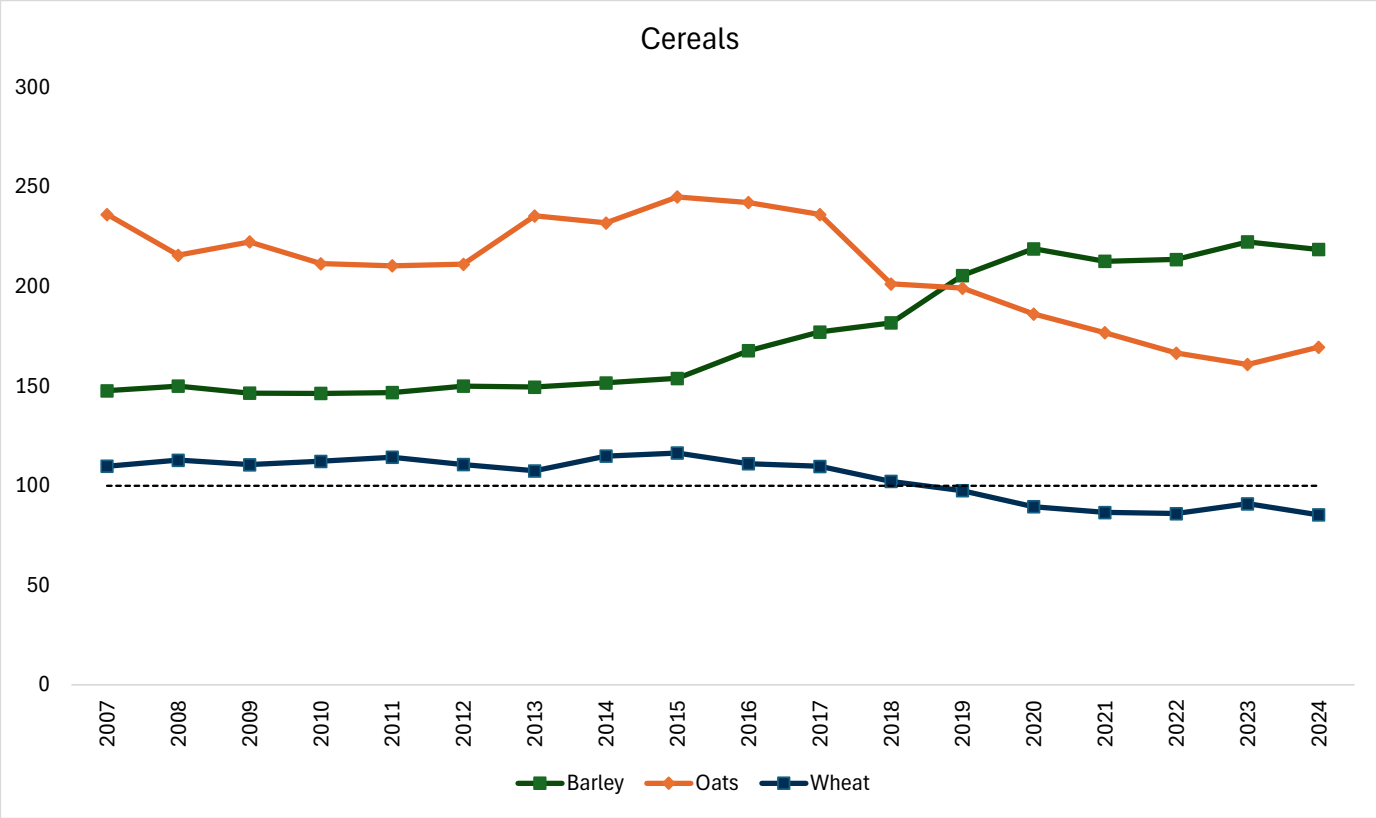
[158] Land where the climate is favourable, slopes are no greater than 7 degrees and the soils are at least 45cm deep and are imperfectly drained at worst.

increasing the production and use of Scotland's fruit and vegetables.[159] The Fruit and Vegetable Aid Scheme (FVAS)[160] also provides aid to groups of fruit and vegetable growers, recognised as Producer Organisations (POs), to encourage them to work collaboratively and increase the quality and quantity of the produce they grow.

Indicator 4C.3: Scottish production to supply ratios for key food commodities (volume based)

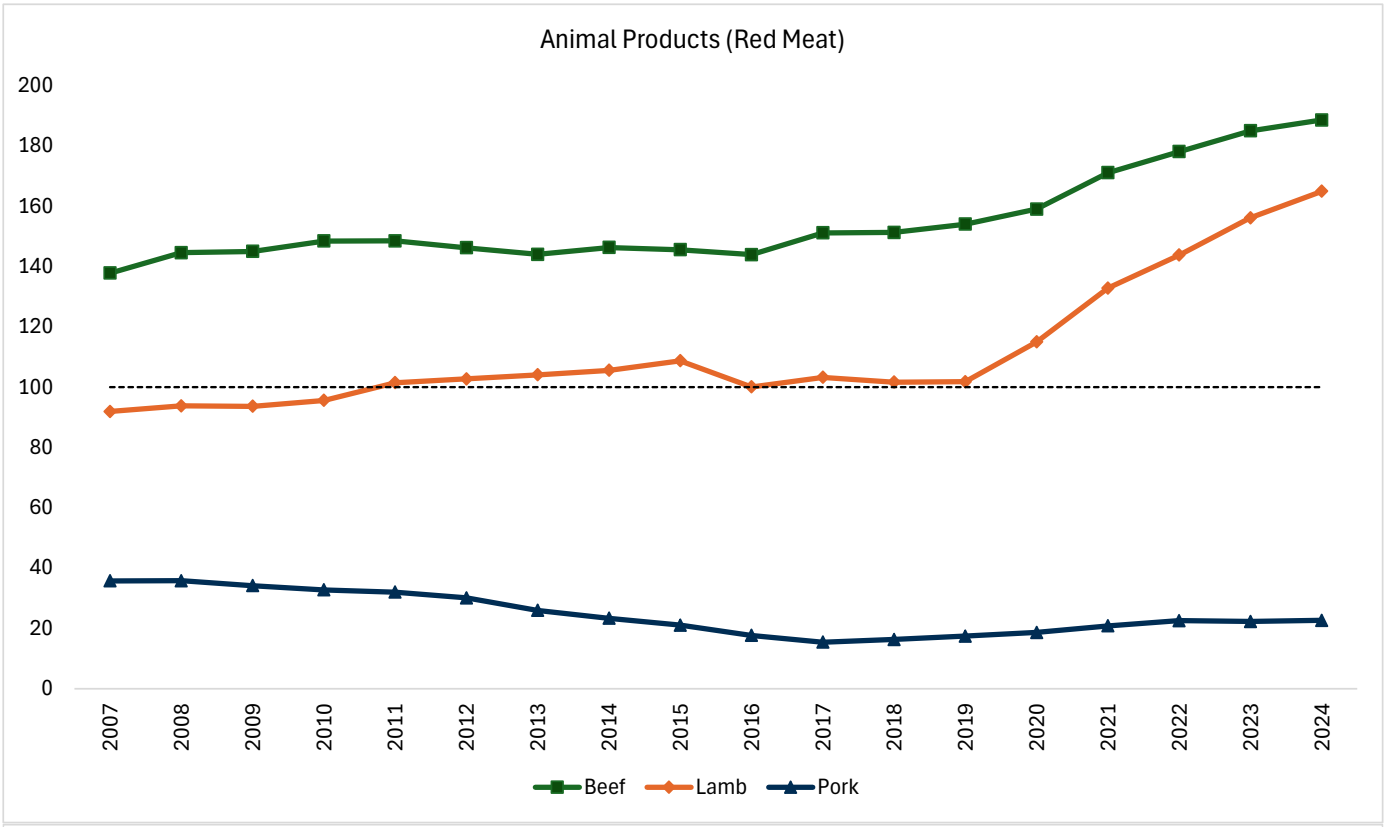
Headline 4C.3: After accounting for annual variations, Scotland produces more than it consumes across a range of agricultural commodities. Scotland is a net exporter of fish, cereals (barley and oats), potatoes, beef, dairy and eggs. Scotland is a net importer of pork, fruits and vegetables.

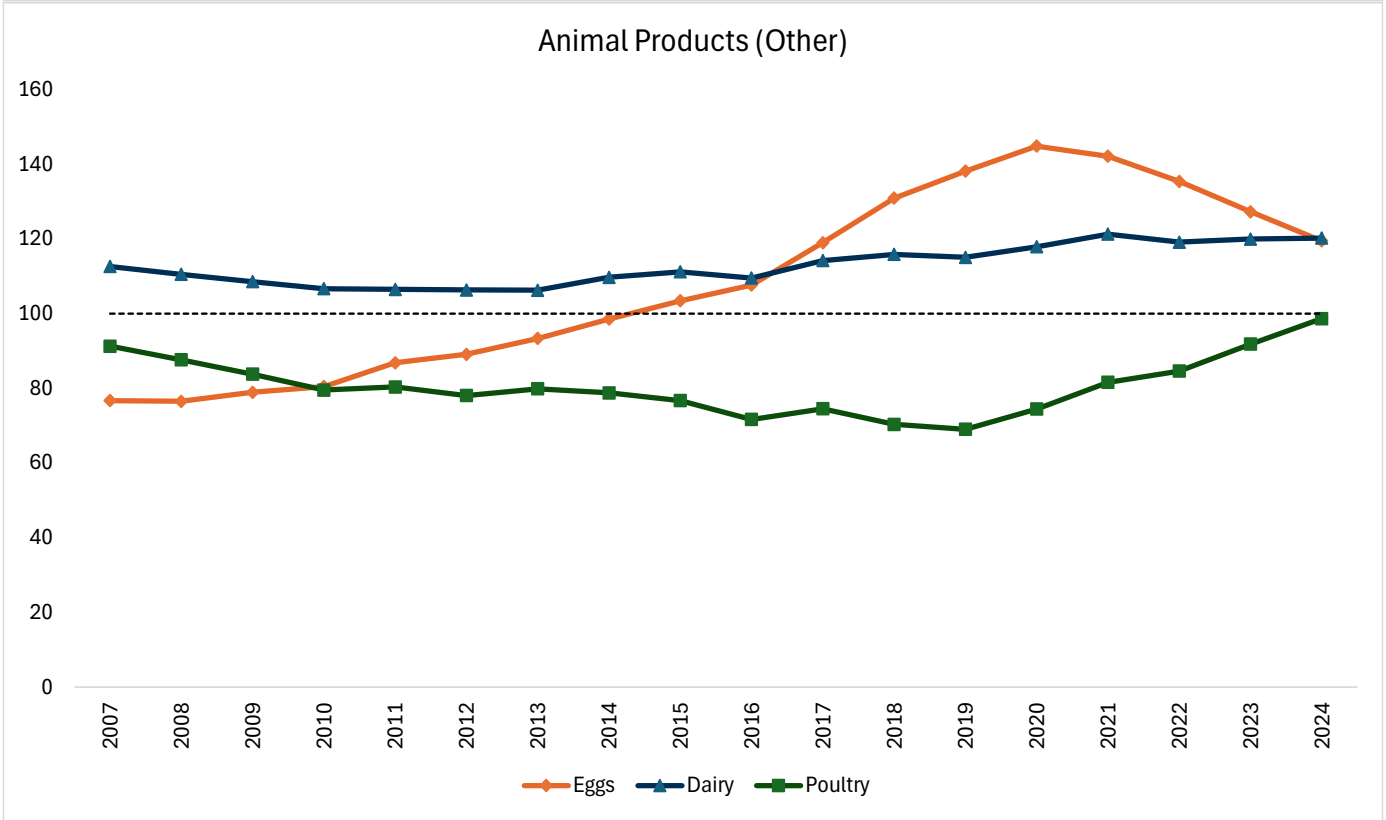
Figure 45: Indicator 4C.3 Scottish production to supply ratios for key food commodities (volume based)

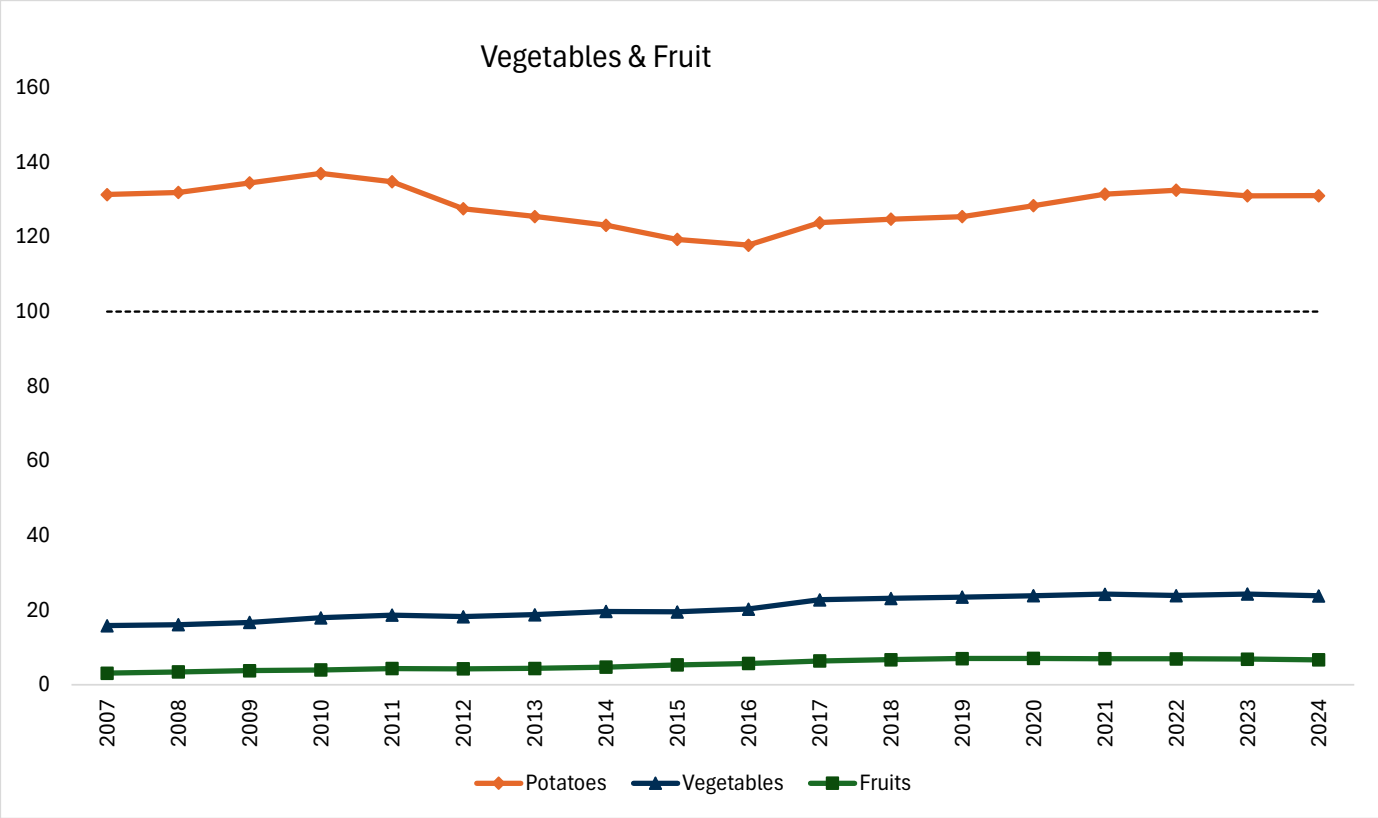


[159] Scottish Environment, Food and Agriculture Research Institutes (SEFARI). Incentivising resilient and innovative food supply chains and sustainable consumer choices. Incentivising resilient and innovative food supply chains and sustainable consumer choices | SEFARI

[160] Scottish Government. Rural and Payments and Services. Fruit and Vegetables Aid Scheme. Fruit and Vegetables Aid Scheme


Animal Products (Red Meat)
200
180
160
140
120
100
80
60
40
20
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Beef
Lamb
Pork


Animal Products (Other)
160
140
120
100
80
60
40
20
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Eggs
Dairy
Poultry



Source: Rathnayaka, S. D., Revoredo-Giha, C., and de Roos, B. (2024). Assessing Scotland's self-sufficiency of major food commodities.

Baseline 4C.3: For indicator 4C.3, average self-sufficiency ratios across each commodity has been calculated from 2003 to 2024.[161] Annual data is presented as a 5-year average - to account for any annual variability in agricultural production, for example. The 5-year average in 2024 will be a baseline for future monitoring.

Indicator 4C.1 provides a broad overview of the UK's production-to-supply ratio across all foods, based on value metrics. To complement this, and drawing on research funded through the Scottish Government's Strategic Research Programme, a new measure of Scotland's production relative to supply across key food commodities is also used as an indicator under this sub-outcome. Unlike the UK indicator, these measures are **volume-based**, offering a clearer picture of the balance between the total volume of food produced in Scotland and the volume consumed across different commodities.[162] The ratios follow the UN FAO's food balance sheet methodology[163] and combine production data from the Scottish Government's June Agricultural Survey[164] with consumption estimates from Defra's Family Food Survey.[165]

[161] Figures for 2022, 2023 and 2024 are preliminary
[162] Disaggregated UK production to supply ratios by food type for the UK are also available in the UK Food Security report.
[163] Food and Agriculture Organization of the United Nations. (2017, October). Guidelines for the compilation of Food Balance Sheets.
[164] Scottish Government. (2025, 30 October). Results from the Scottish June Agricultural Census: June 2025. Results from the Scottish Agricultural Census: June 2025 - gov.scot
[165] UK Government. GOV.UK. (2012). Family food datasets. Department for Environment, Food and Rural Affairs. Family food datasets - GOV.UK

Both domestic production and trade play vital roles in maintaining food security. Imports can mitigate the risks of local production shocks, yet excessive reliance on imports—particularly from a small number of countries—may expose the food system to external market or geopolitical vulnerabilities.

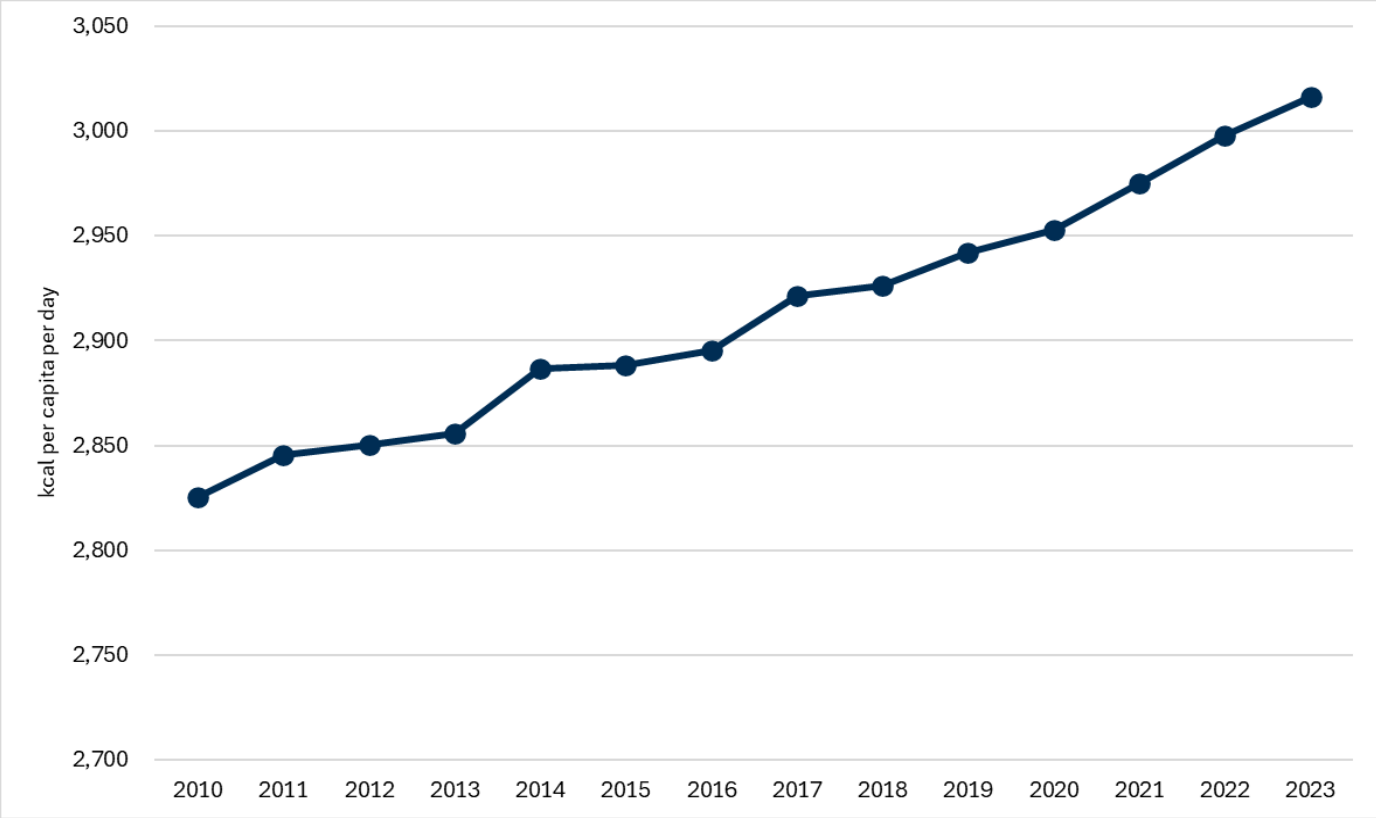
As illustrated in Figure 45, Scotland produces a surplus of barley and oats, and approximately balances wheat production with domestic demand. In contrast, consistent with findings from the UK Food Security Report, Scotland remains highly import-dependent for fruit and vegetables, though potato production meets domestic needs. For animal products, production exceeds consumption for lamb, beef, dairy and eggs, while pork remains import reliant. In the fisheries sector, production from landings and aquaculture exceeds domestic supply by roughly a factor of ten—reflecting the importance of fish and shellfish exports to Scotland's food economy.

When interpreting this indicator, it is important to recognise its limitations. The ratio measures aggregate farm-gate production against estimated food purchases and does not account for product quality, processing suitability, or end use. For example, much of Scotland's wheat is unsuitable for breadmaking due to climatic constraints and is therefore used primarily as animal feed, while higher-quality bread wheat is imported. This highlights that high production volumes do not necessarily equate to self-sufficiency in the foods most critical for household consumption.

Indicator 4C.4: Total food supply available for human consumption globally

Headline 4C.4: Over the long-term global food production has continued to grow and keep up with population growth.

Figure 46: Indicator 4C. 4 Total food supply available for human consumption globally



Source: Food and Agriculture Organization of the United Nations, Food Balances

Baseline 4C.4: Total food supply available for human consumption was 3,016 kilocalories per person per day in 2023, increasing by 74 calories from 2019. This is the latest data for indicator 4C.4. A baseline for indicator 4C.4 will be set when 2025 data is available.

Given Scotland's integration within global agri-food markets, it is important to complement national indicators of food production and trade with a measure of total global food supply available for human consumption. This indicator provides a high-level view of whether global agricultural production is keeping pace with population growth and global calorie requirements.

Monitoring global food availability helps assess systemic risks that may affect Scotland's food security indirectly through international supply chains. If global food supply tightens relative to demand—for example, due to climate shocks, conflict, or trade disruptions—partially import-dependent nations such as the UK and Scotland become more exposed to price volatility, competition for key commodities, and potential export restrictions from major producing countries.

Broadly, this indicator shows that food production has continued to grow and keep up with population growth. This means there is enough food in the world in terms of volume and dietary energy supply to meet global population needs. This is in line with the broad conclusions set out in the UK Food Security Report 2024.

7. Outcome 5: A thriving food culture

Outcome 5: People and communities are empowered to participate in, and shape, their food system. Scotland has a thriving food culture with a population who are educated about good and sustainable food.

Summary of Outcome 5 Indicators

As set out in the national Good Food Nation Plan, this Outcome captures the aspiration for the people of Scotland to be active participants in shaping Scotland's future food system. Dennis Overton, chair of the Independent Scottish Food Commission, recently described the Good Food Nation Plan as a "whole Scotland project" and an opportunity to "involve all of Scottish society coming together."[166]

Transforming Scotland's food system also means more of Scotland's people are enabled and empowered to participate in this transformation. This includes making changes in their everyday lives and making changes within their communities which help to transform our food system in line with the ambitions of the national Good Food Nation Plan, and that people feel this change is supported by government policy at all levels. This change will include more people engaging with positive behaviours through choosing to consume healthier and more sustainable foods.[167] It could also involve more active citizen participation in shaping how our food system can work better for people in Scotland (see below).

The national Good Food Nation Plan also recognises that our food system should be more than just a system that delivers calories and nutrients, a system that grows the plants and rears the animals that underpin our domestic food supply or the employment and economic activity within the supply chain. Food can also be understood as being tied to our sense of identity and belonging. It is intrinsically linked to our understanding of ourselves, the communities we inhabit, and our history, as expressed through traditions associated with preparation of national dishes or dishes associated with notable celebrations or festivals. Scotland's 'food culture' can often be framed or perceived negatively[168] - however the reality is that the food we eat, can be richly diverse, multicultural, and rooted in longstanding traditions.[169]

Food education has a role to play in forming a comprehensive understanding of the challenges associated with food production and consumption, that will enable people to engage critically with the food system.

The indicators under this outcome are less well developed compared to other Outcomes in the national Good Food Nation Plan. Where data exists, we have drawn upon this to explore certain measurable aspects - such as the data related to the number of people growing their own produce and programmes backed by Scottish Government funding

[166] Food, Farming and Countryside Commission. (2025, 15 May). Good Food Nation – time to fix food. Good Food Nation – time to fix food - Food, Farming and Countryside Commission

[167] Net Zero Nation. Eating healthy and sustainable food. Net Zero Scotland, Scottish Government. Eating healthy and sustainable food | Net Zero Nation

[168] Knight, C. (2016). Negative stereotypes of the Scottish diet: A qualitative analysis of deep-fried Mars bar references in bestselling newspapers in Scotland, 2011–14. Negative stereotypes of the Scottish diet: A qualitative analysis of deep-fried Mars bar references in bestselling newspapers in Scotland, 2011–14 - ScienceDirect

[169] Tenement Kitchen. (2024). Beyond the Tartan Tin: A report on Scotland's food heritage sector

which promote food education or more sustainable, local food to be served in particular settings - such as schools. We also include some evidence relating to sustainable food actions of households as an indicator. Capturing Scotland's 'food culture' within a quantitative measure is more challenging and there is no data indicator included for this in the Plan.

Figure 47: Summary of Outcome 5

Sub-outcome 5A: People in Scotland have greater opportunities to actively participate in their food system

In practice, active participation in shaping our food system could encompass many different activities. For example, it could include encouraging individuals to connect to primary food production through growing their own produce in gardens, allotments or community gardens - and perhaps an expansion of food production into our urban spaces in a more formal model under urban or peri-urban agriculture.[170] It could include people increasingly supporting and/or volunteering in food initiatives that promote positive wellbeing outcomes for disadvantaged individuals, such as food re-distribution initiatives, community food networks, food pantries and local food hubs which already operate across many parts of Scotland.[171]

It is worth noting that formal volunteering in Scotland has been in decline over the long-term as recorded in the Scottish Household Survey. Formal volunteer participation rates were 31% in 2010 and have fallen to 18% in 2023.[172] The two biggest challenges identified by Third Sector Organisations in recruiting new volunteers are 'fewer people coming forward to volunteer' and 'people have less time to volunteer'. This broader trend is likely

[170] Scottish Environment, Food and Agriculture Research Institutes (SEFARI). (2024, 15 February). Rapid Evidence Review: Urban and Peri-Urban Agriculture in Scotland. Rapid Evidence Review: Urban and Peri-Urban Agriculture in Scotland | SEFARI

[171] Community food and health (Scotland). (2021, 11 February). What's in a name? – Redistributing surplus food via Food hubs, food banks, social supermarkets, larders, community fridges and pantries. Does the label matter? What's in a name? – Redistributing surplus food via Food hubs, food banks, social supermarkets, larders, community fridges and pantries….. Does the label matter?

[172] Volunteer Scotland. (2025, April). The State of Scottish Volunteering. The State of Volunteering in Scotland 2025 report

to present potential headwinds in realising the ambitions of growing citizen participation in food system transformation.

There are many examples across the country of local food initiatives.[173] Other ways of participating could include participation in events that celebrate and promote local Scottish food such as local food festivals, seeing more up-take of initiatives that seek to promote cooking skills and knowledge that use healthy and local foods, and projects which seek to increase and develop local food supply chains. Others may view participation as something led from the community. Community-led food conversations, held as part of The Food Conversation across the UK for example, have helped paint a picture of what a more joined-up food system, with active participation by citizens at its heart, could look like.[174] Citizen participation is also related to the wider concept of Scotland's 'food culture' (see sub-outcome 5C).

There are also 19 regional food groups[175] operating throughout Scotland which bring together a wide variety of stakeholders interested in the local food and drink sector. They include producers, hospitality and tourism businesses, independent retailers and markets. Each group works "in its own way but they are all looking to put local food, drink and businesses on the map drive growth" through a range of activities. These groups have been coordinated by Scotland Food and Drink experts (since 2020) and receive Scottish Government support - although many of the groups have been operational for many years.

Indicator 5A.1: Availability of allotments and community growing in local areas

Headline 5A.1: There are wide-ranging benefits for people associated with growing their own food in allotments and other community growing sites. Data on allotment availability and waiting lists are held at a local authority level.

Growing your own food can have many benefits for individuals.[176] Growing food involves physical exercise and has also been associated with improved mental health outcomes[177,178]. The contribution of food growing to the personal independence and cognitive ability of older or vulnerable people has also been recognised.[179] There is also the potential for education and skill development through the activity of food growing, particularly among children. Community gardens have also been associated with

[173] Examples include the Glasgow Community Food Network, Dundee Community Food Network, Ayrshire Food Hub and Abundant Borders

[174] Food, Farming and Countryside Commission. (2025, March). Let's Talk About Food: The power of community-led food conversations. Let's Talk About Food

[175] Scotland Food and Drink. Regional Food Groups. Regional Food Groups | Scotland Food and Drink

[176] Church, A. et al. (2015). 'Growing your own': A multi-level modelling approach to understanding personal food growing trends and motivations in Europe. 'Growing your own': A multi-level modelling approach to understanding personal food growing trends and motivations in Europe - ScienceDirect

[177] Pantiru, L. (2024). The impact of gardening on well-being, mental health, and quality of life: an umbrella review and meta-analysis. Systematic reviews, 13(1), 45. The impact of gardening on well-being, mental health, and quality of life: an umbrella review and meta-analysis - PMC

[178] Gulyas, B. (2024). Quantifying the relationship between gardening and health and well-being in the UK: a survey during the covid-19 pandemic. BMC Public Health 24, 810. Quantifying the relationship between gardening and health and well-being in the UK: a survey during the covid-19 pandemic | BMC Public Health | Full Text

[179] The University of Edinburgh. (2024, 26 June). Gardening linked to staying sharp in later life, study finds. Gardening linked to staying sharp in later life, study finds | Research and innovation | The University of Edinburgh

promotion of social health benefits and social connections.[180] Substituting garden-grown produce for store-bought foods may also have an impact on lower food costs and improving access to healthy and nutritious fruit and vegetables. A study found that UK households growing their own fruits and vegetables produced approximately half of their annual vegetable supply and 20% of their fruit supply. These households consumed 70% more fruits and vegetables than the UK national average and generated 95% less food waste.[181]

Further, SCAF[182] have suggested that allotments also have a role in preserving and evolving Scottish food culture and heritage and that they play an important role in intergenerational knowledge transfer, with community growing spaces being sites for sharing traditional Scottish food practices between generations and diverse communities.

The national Good Food Nation Plan encourages people to discover and take advantage of the wide-ranging benefits which can come from growing their own food in allotments and other community growing sites. Under the Community Empowerment (Scotland) Act 2015, local authorities have several duties relating to provision of allotments.

Most local authorities have published information on allotment availability, including current provision and length of waiting lists, through the annual reports required under allotment legislation. Whilst there is a requirement for the information to be published annually, there is neither a requirement on local authorities to update Scottish Ministers on when this information is published, nor for Scottish Ministers to collate it. Therefore, at this time, the data is not held in a consistent format to allow for monitoring at a national level. However, following a review by the Scottish Parliament,[183] the Scottish Government are considering what non-legislative actions can be taken to support local authorities to improve the quality and consistency of data reported.

[180] University of Glasgow. Glasgow's Community Gardens: Sustainable Communities of Care. Adam Smith Business School.

[181] Gulya, B. and Edmondson, J. (2023). The contribution of household fruit and vegetable growing to fruit and vegetable self-sufficiency and consumption. Plants, People. Planet. 6 (1). The contribution of household fruit and vegetable growing to fruit and vegetable self-sufficiency and consumption

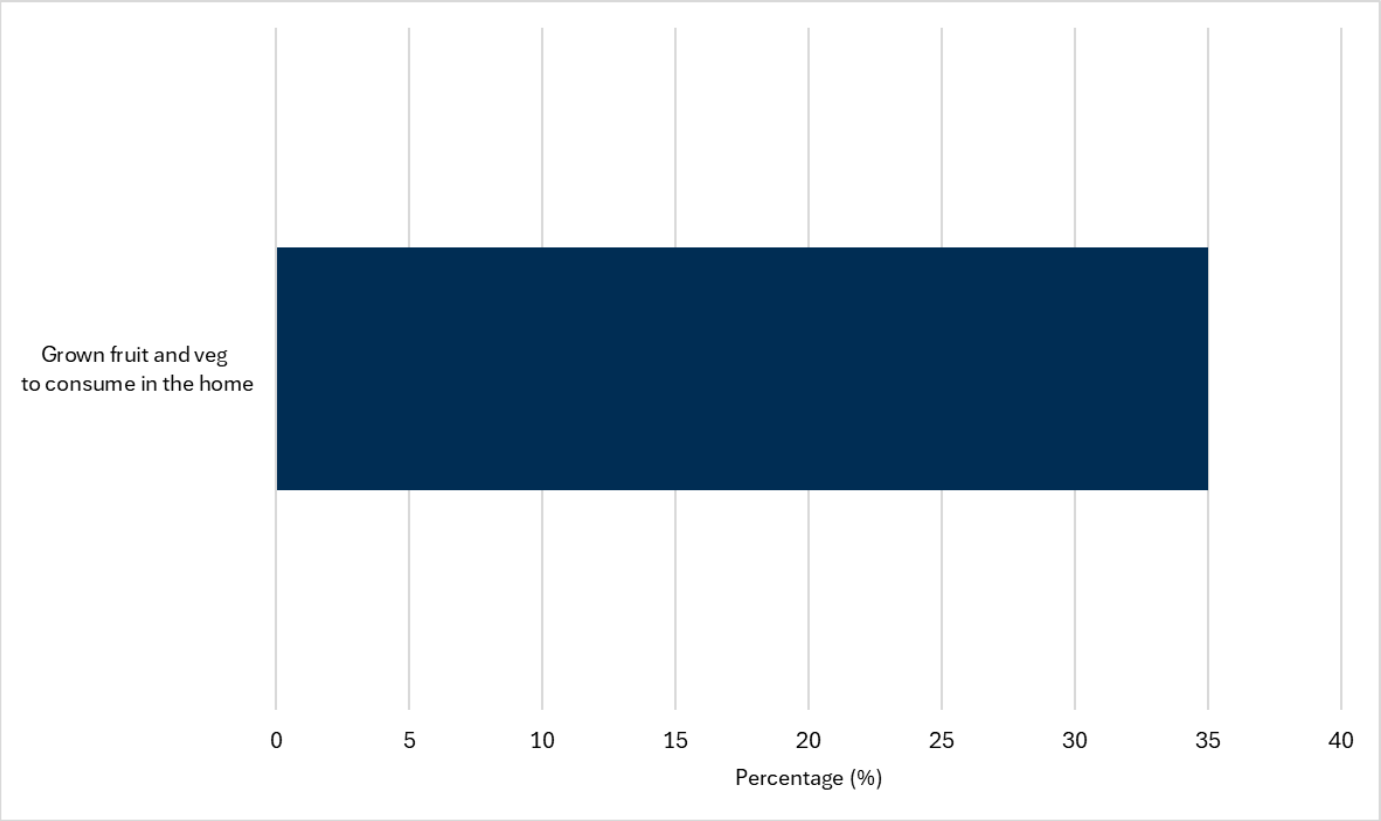
[182] Scottish Parliament. Good Food Nation Proposed National Plan. Response 974928427.

[183] Scottish Parliament. (2022, 6 October). Allotments and community growing: the impact of Part 9 of the Community Empowerment Act. Allotments and community growing: the impact of Part 9 of the Community Empowerment Act | Scottish Parliament

Indicator 5A.2: Proportion of adults that had 'grown fruit and vegetables to consume in the home' in their garden or allotment

Headline 5A.2: In 2024, more than 3 in 10 adults (who had a garden or allotment) had grown fruit and vegetables to consume in the home. This increases in households with children.

Figure 48: Indicator 5A.2 Proportion of adults that had 'grown fruit and vegetables to consume in the home' in their garden or allotment



Source: NatureScot, NatureScot Opinion Survey 2024

Baseline 5A.2: In 2024, 35% of adults had grown fruit and vegetables to consume in the home in their garden or allotment. A baseline for indicator 5A.2 will be set when 2025 data is available.

In the NatureScot Opinion Survey, respondents with a private garden or an allotment were asked if they had taken specific nature-friendly actions in these spaces over the last year. Overall, just over four-fifths (83%) of these respondents had undertaken at least one of the nature-friendly activities. Within this, households with children were more likely to have undertaken at least one of the nature-friendly activities (90%) than those without (80%).

In regard to whether they had grown fruit and vegetables to consume in the home, 35% of respondents had. Similarly, households with children were more likely to have grown fruit and vegetables (43%) than households without children (32%).

Indicator 1C.1 also contains relevant data, as it explores consumer related changes to eating habits and food-related behaviours from the Food and You 2 survey for Scotland. Within this, one of the changes quantified was in regard to starting to grow fruit and/or vegetables in the last 12 months.

Sub-outcome 5B. People in Scotland are educated about good and sustainable food and make positive food choices

The Good Food Nation Plan states that children should have frequent opportunities to participate in a variety of food-related educational experiences and activities. Indicators under this sub-outcome highlight the impact of long supported Scottish Government funded initiatives to improve education around good and sustainable food.

The Food for Thought fund, delivered through Education Scotland, for example, provides support to develop pupils' knowledge about sustainable food production by growing their own produce, cooking and trying out new recipes, and gaining an appreciation of the value of locally produced food (see note under Indicator 5B.2 setting out current situation with regards to funding). The Food for Life Scotland programme works with public sector caterers to support them to achieve the Food for Life Served Here (FFLSH) certification, a framework for serving more fresh, sustainable, and Scottish food in schools and other public sector settings, including universities and colleges, visitor attractions and care homes.

The Royal Highland Education Trust (RHET) also continue to deliver a successful and well-respected programme of farm visits, events and online engagement opportunities for school children. The programme provides a distinctive insight into the origins of food, helping to foster a sense of pride and knowledge among young people about what and how food is produced in their local areas. At this stage, data for a quantitative Indicator are not currently available. Further work, in conjunction with RHET, to develop a suitable indicator and measurements will take place.

This sub-outcome is also supported by evidence on the degree to which people in Scotland are making more sustainable food choices, as captured through food and diet questions in the Scottish Climate Survey.

Indicator 5B.1: Number of local authorities with a Food for Life Served Here certification

Headline 5B.1: Half of local authorities have a Food for Life Served Here (FFLSH) certification for some or all of their school meals services.

A Food for Life Scotland Award Holders interactive map is available on the FFLS web-page. This gives further details on the level of certification held (bronze, silver and gold), number of primary and secondary schools in each area and an estimate of daily meals served. As of November 2025 there were 16 local authorities with a bronze certification, 2 with a silver certification and 1 with a gold certification for school meals services; 1 local authority also had FFLSH for their care homes.

Source: Soil Association Scotland, Management Information of FFLSH scheme

Baseline 5B.1: The latest data for indicator 5B.1 shows that 16 of Scotland's 32 local authorities have a Food for Life Served Here certification at bronze, silver or gold in 2025.

Funded by the Scottish Government, and delivered by Soil Association Scotland, the Food for Life Scotland programme focuses on increasing fresh, sustainable and Scottish food served in schools across Scotland and across the wider public sector.

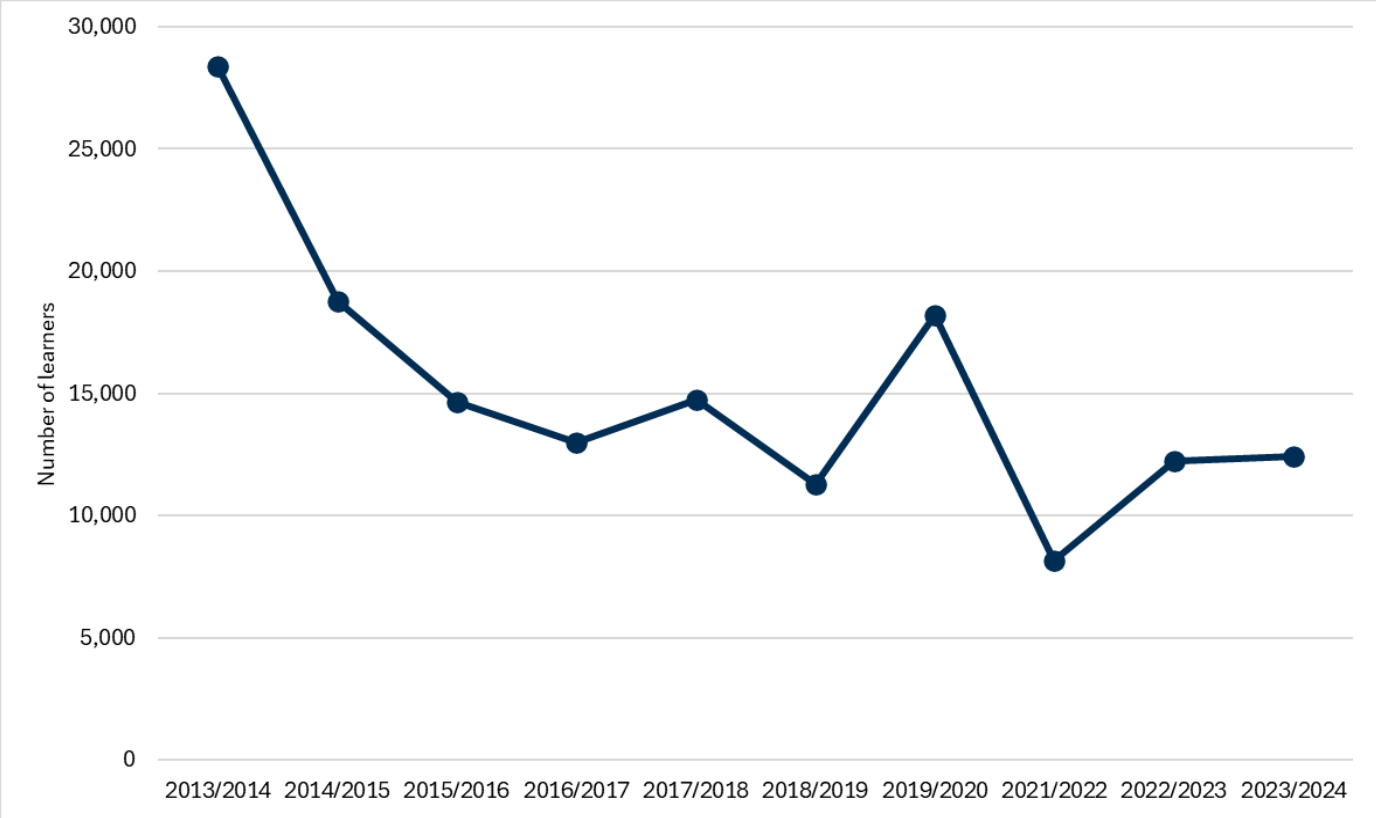
Half of local authorities have a Food for Life Served Here (FFLSH) certification for some or all of their school meals services. The remaining authorities are not included in Food for Life Scotland's (FFLS) existing central data collection, but the FFLSH certification, and support, can be taken up at any time for caterers who would like to work towards FFLSH.

Food for Life Served Here (FFLSH) is independently assessed on an annual basis and Food for Life Scotland offers free funded support to local authorities, health boards, and other public sector caterers.

Indicator 5B.2: Number of school learners reached by the Food for Thought Programme

Headline 5B.2: Since the opening of the Food for Thought Fund, the number of learners reached each year has decreased over time.

Figure 49: Indicator 5B.2 Number of school learners reached by the Food for Thought Programme



Source: Education Scotland, Food For Thought Management Information

Baseline 5B.2: The latest data for indicator 5B.2 is that in 2023/24, there were 12,425 learners reached by the Food for Thought Programme. A baseline for indicator 5B.2 will be set when data collection resumes.

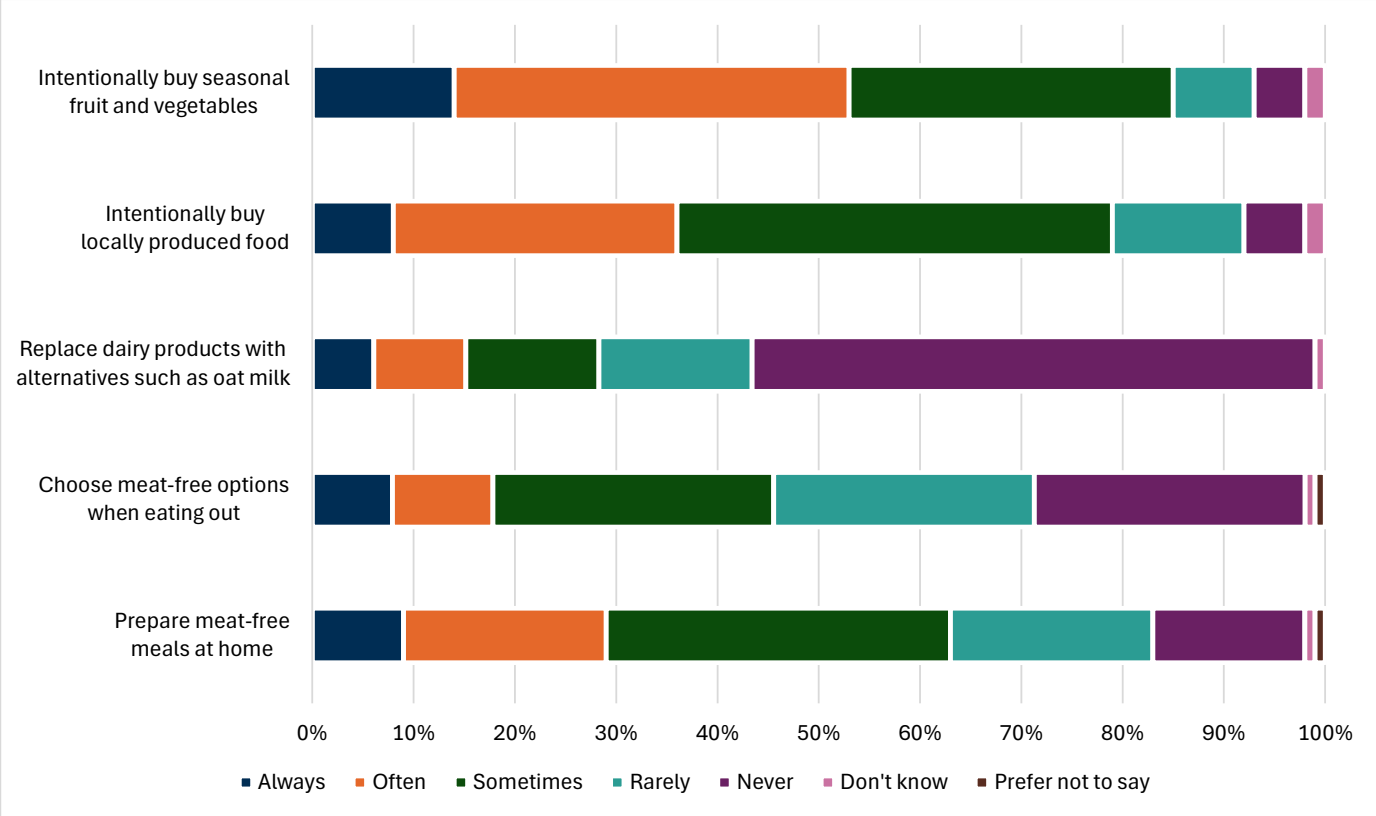
The Food for Thought Education Fund gives financial support to develop Food and Health as a context for learning.

The fund has been paused for the 2025/2026 financial year to allow an evaluation, analysing past projects for impact and best practices of the fund to date, to be undertaken. Data collection for this indicator will resume when a food education fund is reinstated.

Indicator 5B.3: Proportion of households reporting to undertake sustainable food actions

Headline 5B.3: Over half of households report always or often intentionally buying seasonal fruit and vegetables in 2024, whilst over a third report always or often buying locally produced food.

Figure 50: Indicator 5B.3 Proportion of households reporting to undertake sustainable food actions



Source: Scottish Government, Scottish Climate Survey 2024

Baseline 5B.3: In 2024, 53% of people reported that they always or often intentionally bought seasonal fruit and vegetables, and 36% of people reported that they always or often intentionally buy locally produced food. This is the baseline for indicator 5B.3.

The Scottish Climate Survey is a nationally representative survey of Scottish adults' awareness, understanding and experiences of climate change-related issues. The next data collection for the survey is planned for Autumn 2026, with the proposal to run every two years. Patterns of climate-relevant behaviours around food and diet in the survey include consumption of meat, dairy products and seasonal and locally produced food.

The key findings from the 2024 Scottish Climate Survey found that around one-in-three respondents (29%) reported always or often preparing meat-free meals at home, around one-in-seven (15%) reported always or often replacing dairy products with non-dairy alternatives and over half (53%) reported always or often intentionally buying seasonal fruit and vegetables, while 36% reported always or often intentionally buying locally produced food.

Sub-outcome 5C: Scotland has a thriving 'food culture' that supports overall health and wellbeing

Headline 5C: A thriving 'food culture' in Scotland is expected to support overall health and wellbeing of the Scottish population. However, a suitable indicator to assess and monitor this has not been identified at this stage, with further work required to develop indicators.

The term 'food culture' is used in diverse ways within policy and the academic literature pertaining to food. A previous review of Scotland's food culture suggested that a simple working definition is that 'food culture' refers to '*shared practices and meanings relating to food'.*[184] This can include a range of concepts such as how people source food, our tastes and preferences as a population (and the diversity within this), our perceptions of quality and the value we place on sustainability, health and other factors. It is also arguable that there is not a single 'food culture', but many diverse 'food cultures' in Scotland across different communities.[185]

We have not identified, at this stage, a suitable quantitative indicator that could be used to assess and monitor Scotland's food culture. Further work to develop a suitable indicator is required.

[184] Fitzpatrick, I et al. (2010). Understanding food culture in Scotland and its comparison in an international context: implications for policy development. Understanding food culture in Scotland and its comparison in an international context: implications for policy development

[185] Social Enterprise Scotland. (2020, 23 January). The power of food to drive social impact. The power of food to drive social impact - Social Enterprise Scotland

8. Outcome 6: Global impact

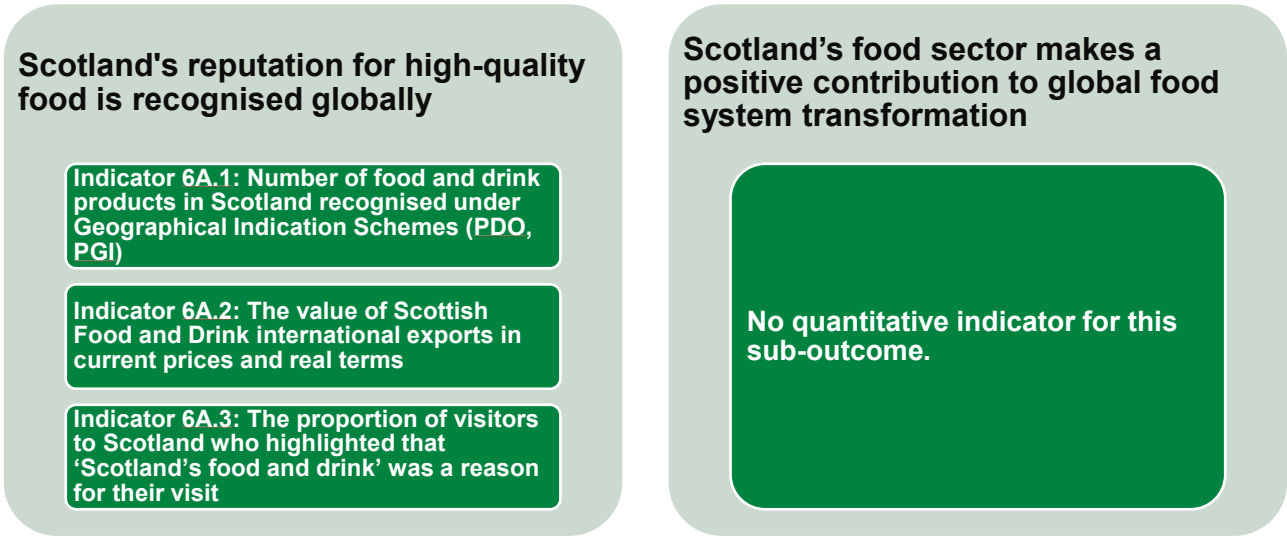
Outcome 6: Decisions we make in Scotland contribute positively to local and global food systems transformation. Scotland actively engages in learning and exchanging knowledge and best practice internationally.

Summary of Outcome 6 Indicators

The indicators included in the Good Food Nation Plan for monitoring Outcome 6 have been structured around two sub-outcomes for the purposes of the indicator framework.

Identifying appropriate data indicators that align with outcome 6 of the plan has been challenging. Indicators which measure and reflect the global reputation of Scottish food and drink products are brought together under sub-outcome 6A. This includes data on the number of food products which are recognised under EU Geographical Indication Schemes, the value of Scottish food and drink exports internationally (in real terms) and the importance of Scotland's food and drink sector as a driver of tourism and motivating visitors to choose to come to Scotland. Under sub-outcome 6B, while quantitative indicators for global food system transformation are not available, the section highlights examples of Scotland's leadership in research, innovation and sustainable practices that contribute to international progress on food system transformation.

Figure 51: Summary of Outcome 6 Indicators



Sub-outcome 6A: Scotland's reputation for high-quality food products is recognised globally

As set out in the Good Food Nation Plan, Scotland's food and drink sector has an established reputation, domestically and globally, with a recognised brand focused on quality and provenance.

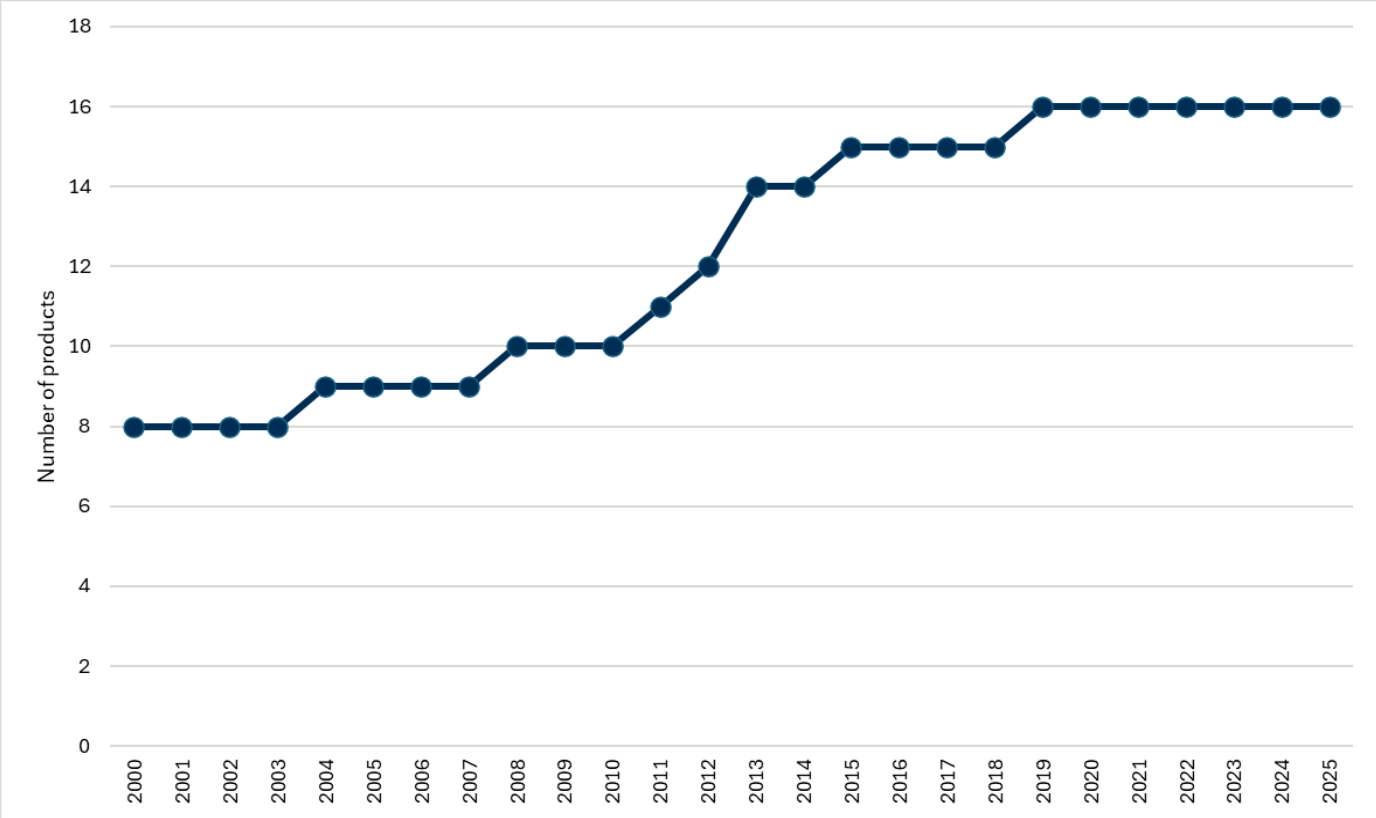
This sub-outcome captures indicators which align with the reputation of Scottish food products: the number of products that have protected status under Protected Geographical Indication (PGI) and Protected Designation of Origin (PDO) schemes; the real value of our

food and drink exports to global markets, and the importance of food and drink as a motivation for visitors to choose to come to Scotland.

Indicator 6A.1: Number of food and drink products in Scotland recognised under Geographical Indication Schemes (PDO, PGI)

Headline 6A.1: Food and drink products recognised under Geographical Indication (GI) schemes has increased from 6 in 1996, to 16 currently (this includes Native Shetland Wool). There have been no new food products designated under GI schemes since 2020.

Figure 52: Indicator 6A.1 Number of food or drink products in Scotland recognised under Geographical Indication Schemes



Source: Department for Environment, Food and Rural Affairs, Protected geographical food and drink names

Baseline 6A.1: 16 food and drink products (including Native Shetland Wool) had either a PGI or PDO designation under UK and EU geographical indication schemes which were sourced entirely (or in part) from Scotland.

Food produced in Scotland is known globally for its quality produce. A Geographical Indication is a designation for products that have a specific geographical origin and qualities inherent to that location and method of production. Protected Geographical Indication (PGI) and Protected Designation of Origin (PDO) schemes[186] help to maintain the authenticity and value of many food products. There are currently 16 food and drink products produced entirely (or partly) in Scotland with a protected food name with PGI or PDO.

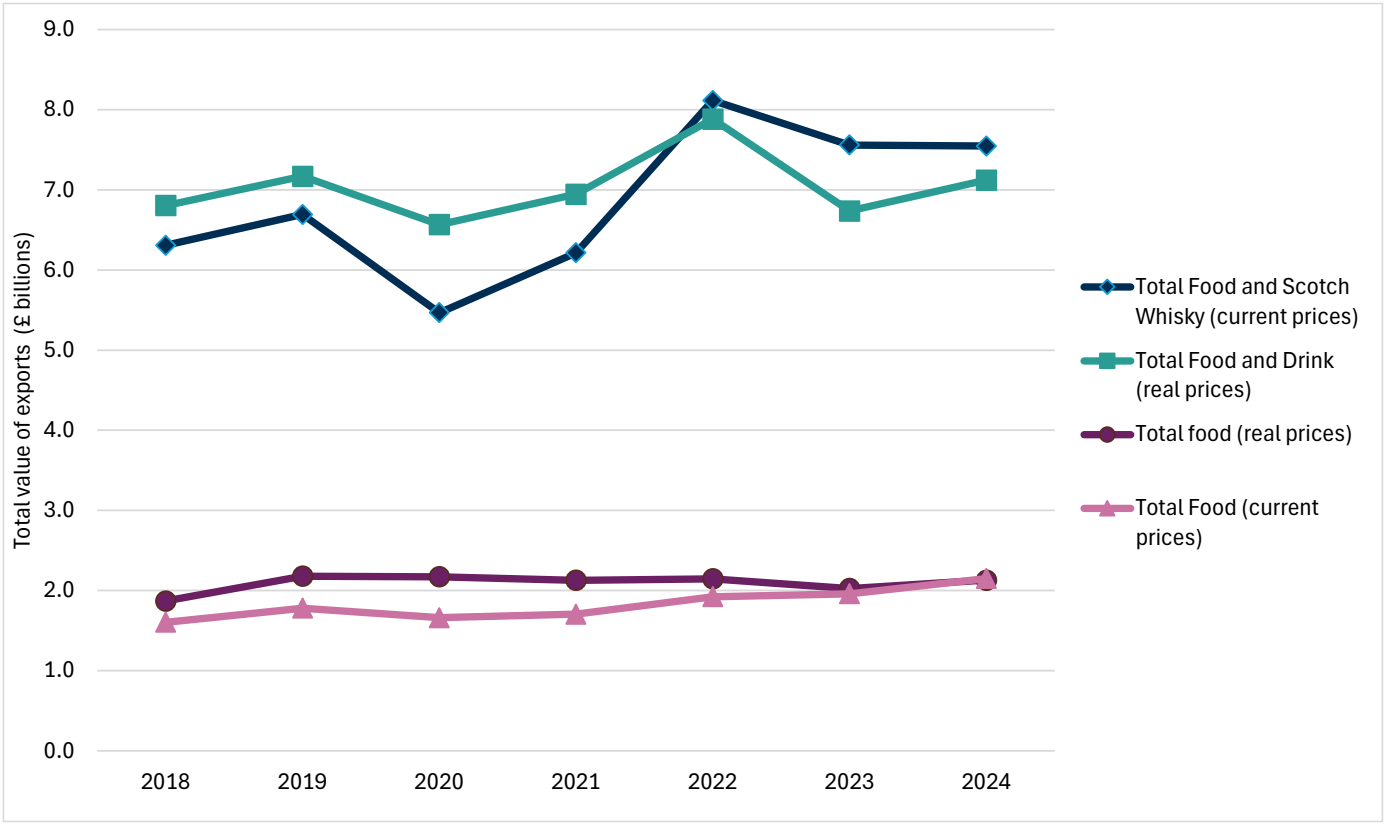
[186] UK Government. GOV.UK. (2020, 31 December). Protect a geographical food or drink name. Guidance. Protect a geographical food or drink name - GOV.UK

After 1 January 2021, the UK is outside the EU GI (Geographical Indication) system. New Scottish food producers seeking EU PDO/PGI protection (for new product names) now must apply as third country producers. This introduces extra administrative requirements. All Scottish food/drink names protected under the EU GI system by 31 December 2020 ("stock") were "grandfathered" — meaning those names still enjoy protection in the EU and in the UK under the UK's own scheme. If a UK producer (outside of Northern Ireland) wants a new GI, they must apply to the new UK scheme and if they want EU recognition, apply to the EU scheme separately, fulfilling EU requirements for third country applicants. There has been no successful applications for new Scottish products under these schemes since 2019 (Ayrshire New Potatoes).[187]

Indicator 6A.2: The value of Scottish food and drink international exports in current prices and real terms

Headline 6A.2: Scotland's food and drink international exports have been relatively stable over time as seen in both current and real terms.

Figure 53: Indicator 6A.2 The value of Scottish food and drink international exports in current prices and real terms



Source: Scottish Government, Inflation Adjusted HMRC Regional Trade Statistics for Scotland

[187] In April 2024, the UK government approved an amendment to the PGI specification, changing the designation from "Scottish Farmed Salmon" to "Scottish Salmon."

Baseline 6A.2: The latest data for this indicator is £7.12 billion of food and drink international exports in the year ending Q4 2024[188], according to inflation-adjusted HMRC Regional Trade Statistics. A baseline will be set when Q4 2025 data is available.

The international reputation of Scottish products is reflected in the disproportionate importance of Scotland's exports of food and drink products. Scotland accounts for around 30% of the UK's total food and drink exports. Whilst exports of Scotch Whisky drive a large share of this trade (72% of value in 2024), other food products play an important role. For example, Atlantic salmon produced in Scotland is not only Scotland's top food export, but the UK's top food export in terms of value.

From 2024, the Scottish Government have published trade value estimates presented in 'real terms', which refers to figures adjusted for inflation using Chained Volume Measures (CVM).[189] CVMs of export quantity have been introduced to illustrate how exports (and imports) have been changing over recent years when high price inflation has been the driving factor in changes in the value of trade. Changes in this 'real terms' trade data are a more meaningful indicator of showing true increases/decreases in the magnitude of Scottish food and drink exports.

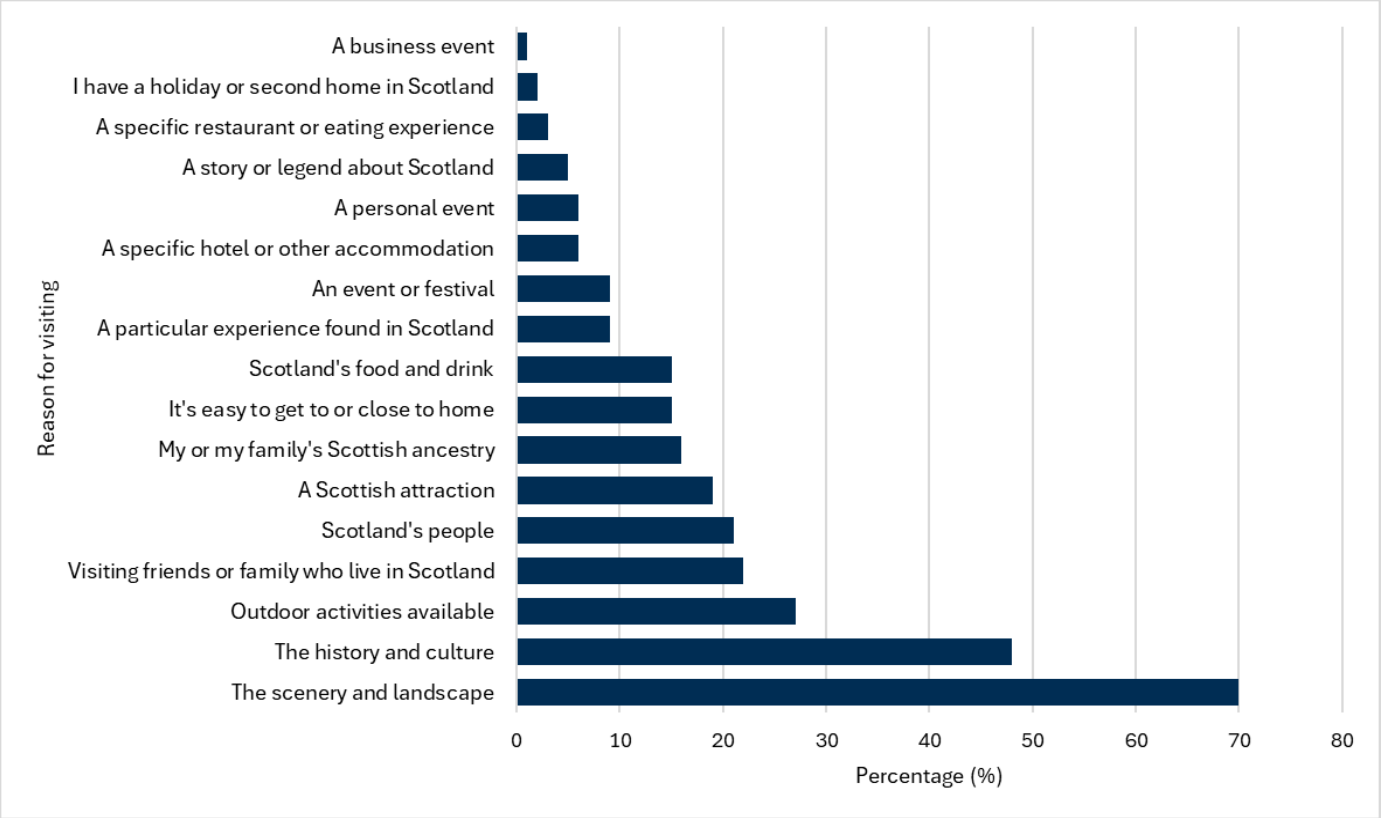
Food and drink are key exports for the Scottish economy, in current prices the total value of Scottish exports was £7.55 billion in 2024. Taking into account inflation, the value of food and drink exports increased by 4.9% in the year ending Q4 2024 when compared to the year ending Q4 2018.

[188] Partial year data covering the first two quarters of 2025 have been published. These showed in the year ending Q2 2025 data, food and drink exports were worth £7.18 billion.
[189] Scottish Government. (2024, 8 August). Inflation Adjusted HMRC Regional Trade Statistics for Scotland: Methodology. Inflation Adjusted HMRC Regional Trade Statistics for Scotland

Indicator 6A.3: The proportion of visitors to Scotland who highlighted that 'Scotland's food and drink' was a reason for their visit

Headline 6A.3: 15% of visitors to Scotland were motivated to visit due to Scotland's food and drink.

Figure 54: Indicator 6A.3 The proportion of visitors to Scotland who highlighted that 'Scotland's food and drink' was a reason for their visit



Source: Visit Scotland, Scotland Visitor Survey

Baseline 6A.3: In 2023, 15% of visitors to Scotland highlight food and drink as a reason for choosing to visit Scotland. This is the baseline for indicator 6A.3. Future updates are expected to be available every 3-4 years.

According to the latest visitor survey, 15% were motivated by Scotland's food and drink. Other drivers such as scenery and landscape (70%), history and culture (48%) and outdoor activities available (22%) were found to be more common reasons for choosing to visit Scotland. The survey includes visitors to Scotland from within the UK, as well as international visitors.

Visitors to Scotland are motivated to visit Scotland for a wide variety of reasons, including Scotland's food and drink offering.

Sub-outcome 6B. Scotland food sector makes a positive contribution to global food system transformation

Headline 6B: Scotland's food sector makes many positive contributions to global food system transformation. However, a suitable indicator to assess and monitor this has not been identified at this stage, with further work required to develop indicators.

We have not identified any quantitative data indicators for this sub-outcome. The Scottish Government continues to support research and innovation in low-carbon food solutions to enhance the resilience of our future food system to climate change and contribute positively to global food transformation. For example, the Scottish Government has:

- Supported vertical farm technology in Scotland: SRUC Vertical Farming Innovation Centre[190] – which has received funding from the Scottish Government – is an example of the kind of solution required to overcome challenges around food production and security in the future.

- Funded research into alternative crops or climate-resilient varieties of staple crops: research conducted on hemp has demonstrated that this valuable environmental crop can not only contribute to meeting climate and biodiversity targets, but can also deliver high-quality alternative protein and other health benefits.[191]

- Supported organic farming practices - such as the use of cover crops and intercropping that can support resilience of agricultural systems - in line with existing evidence.[192]

SEFARI Gateway[193], Scotland's Centre of Expertise for Knowledge Exchange and Innovation, funded by the Scottish Government - provides bespoke access to a range of research, expertise and analysis across the Scottish Government's Environment, Natural Resources and Agriculture (ENRA) Research Portfolio - including sustainable food system and supply chains. The global impact of work undertaken in Scottish institutions was recently displayed at Scotland's Global Food Security Conference (November 2025), hosted by the Cabinet Secretary for Rural Affairs, Land Reform and Islands.[194]

[190] Scotland's Rural College (SRUC). Vertical Farm – SRUC King's Buildings, Edinburgh. SRUC Major projects | Vertical Farm
[191] Scottish Environment, Food and Agriculture Research Institutes (SEFARI). Hemp: a climate resilient crop for the future of Scottish agriculture. Hemp: a climate resilient crop for the future of Scottish agriculture | SEFARI
[192] Topp, K et al. (2023, August). Organic farming, net zero targets and the impact of a changing climate – an evidence review. SRUC, SAC Consulting. Organic farming, net zero targets and the impact of a changing climate – an evidence review | ClimateXChange
[193] Scottish Environment, Food and Agriculture Research Institutes (SEFARI). About Us. About Us | SEFARI
[194] Scottish Environment, Food and Agriculture Research Institutes (SEFARI). (2025, November). Scotland's Global Food Security Conference. Food Security Conference 2025 agenda

Feedback

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Enquiries

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