



A strategy for improving waste data in Scotland

Published in October 2017





We will support people to provide and report accurate data. We will harness the best technology to deliver information on waste flows. We will ensure the processes used to collect and report on waste data are optimised and that our communication of data is clear.

A strategy for improving waste data in Scotland

This is the latest in an evolution of strategies aimed at delivering Scotland's current and future waste data needs as we move towards a more resource-focused future. Here we outline what we will achieve and how we are going to co-ordinate and deliver a plan that will support Scotland's transition to a more circular economy, where products and materials are kept in high value use for as long as possible.

We want a future where waste flows are tracked using electronic systems and where data is communicated in such a way that it can be used to clearly convey the impacts and opportunities of waste to Scotland's people, environment and economy. To deliver this, we will take a co-ordinated approach that spans the data chain, and enhance our partnership working.

The success of this strategy will depend upon supporting the people who provide, analyse and communicate waste data. It will depend upon recognising the quality and efficiency gains offered by new technologies, harnessing these benefits and ingraining a digital-by-default approach to data. It will rely upon appropriate processes being in place to allow us to collect reliable data that is responsive to need and answers relevant questions.

Governance

This strategy has been written by the Scottish Environment Protection Agency (SEPA), Zero Waste Scotland (ZWS) and the Scottish Government, in consultation with a range of stakeholders (see Appendix I). Representatives from the Scottish Government, SEPA and ZWS have formed a project board to manage the strategy, oversee the implementation of its actions and report on progress.



There are two key reasons for having a waste data strategy:

To achieve a data vision that allows high quality, timely and relevant data to be collected in ways that streamline processes and increase efficiency for everyone involved.

A vision that sees electronic systems being used for data capture and a digital approach utilised for data communication allowing the impact and value of waste to be clearly understood.

To support Scotland's transition to a circular economy by providing reliable data that underpins the direction set out in [Making Things Last](#).

Why do we need another strategy?

Previous waste data strategies have all helped increase the relevance, quality and availability of data on waste from all sources: households, commerce and industry. Currently, a range of data is published in an interactive format with accompanying narratives. This information gives us an understanding of what waste is produced in Scotland, and how and where it is managed.

This type of data is essential for strong policy and regulatory decision-making. The Scottish Government uses it to design and set appropriate policies and targets. SEPA and Zero Waste Scotland use it to monitor these policies and track progress towards targets and SEPA also uses it to assess compliance, protect and improve the environment, fulfil national, UK and EU reporting requirements, and tackle waste crime.

Waste data is also essential for identifying opportunities. It lets householders and businesses understand how much waste they produce and how their waste is managed, helping them to recognise environmental benefits and cost savings. As well as informing business decisions, waste data also helps identify investment and expansion opportunities in Scotland's waste and resources sector.

Now, as Scotland moves towards a more circular economy, we want to improve our understanding of how products and materials flow through our economy (waste flows), from the point of production to the final destination.

This latest strategy will help us to track waste flows by transforming the way we collect and report waste data. It will guide the delivery of electronic systems and more streamlined processes in order to provide the data that Scotland needs, increase efficiency, and maximise the value of waste data through improved communication.

Scotland is the first country to use a technique known as carbon assessment to reveal the environmental impact of waste as measured by kilograms of carbon dioxide equivalent.

Carbon assessment looks at the emissions created during the production and management of the material. This allows decision-makers to prioritise their efforts in reducing the environmental impact of waste more effectively than when just looking at weight alone.

Our aim

The aim of this strategy is to identify and deliver the waste data needs of Scotland, meeting current and future requirements. As part of this we want to

- collect and report waste data that is reliable and relevant and share it on a timely basis in an integrated, coherent and open format;
- explore new approaches to collect and report data, embracing digital solutions and innovative ways of working;
- further develop the use of non-weight based measures, eg carbon assessment, to increase our understanding of the economic, environmental and social impacts of waste;
- identify what waste materials we need to track and the methods required to measure and monitor the movement of waste flows.

Achieving this aim will depend on us taking a co-ordinated partnership approach, engaging with the people who provide, analyse, communicate and use waste data.

Success will also depend on adopting systems and processes that are flexible to future change. We want to ensure these are streamlined and easy to use, with clear guidance made available to data providers.

This strategy sets out five priority actions to deliver the waste data needs of Scotland.



Our actions

In consultation with stakeholders we have identified five priority actions to be taken forward over the next ten years:

- 1 We will keep the waste data needs of Scotland under review, considering gaps, overlaps, inconsistencies and future requirements to ensure we continue to capture relevant data.
- 2 We will identify opportunities to improve systems and processes, and work with stakeholders to make this happen, developing guidance and training to support users.
- 3 We will collect and manage waste data using best practice principles to build trust and ensure clarity across the data chain.
- 4 We will review and progress the tools and levers required to support and monitor Scotland's transition to a more circular economy.
- 5 We will share and publish waste data in an efficient and timely manner and in ways that make it easier to communicate the impact and value of waste.

The following pages outline the importance and intended actions of each priority.

We will continually review the waste data needs of Scotland, including data gaps, overlaps, inconsistencies and future requirements

Relevant data is key to measuring and tracking progress towards goals, and for enabling people to make sound decisions

Action 1: We will keep the waste data needs of Scotland under review, considering gaps, overlaps, inconsistencies and future requirements to ensure we continue to capture relevant data

Why is this important?

- Relevant data provides accurate answers to questions that people find important, eg how much waste is produced in Scotland and how waste and materials are moving through the economy.
- Relevant data is also key to measuring progress towards targets, such as the amount of waste sent to landfill, and it enables people to make sound business decisions.
- By avoiding data gaps, overlaps and inconsistencies, we minimise duplication of effort and reduce the risk of data errors.

What are we going to do?

We will keep reviewing the data collected by identifying and engaging with a range of active data users to establish what data they want and why. This will ensure the current and future waste data needs of Scotland are understood.

We will use this knowledge to minimise areas of overlap and duplication (where data is collected more than once) and plug data gaps (where important data is lacking). We will take our findings forward, along with recommendations for streamlining and optimising data collection, to endeavour, as far as possible, that (i) data is collected only once, for multiple uses where appropriate; (ii) data is only collected if it is used; and (iii) current and future data needs are met.

We will support the delivery of electronic systems to collect and report data where appropriate, and facilitate their use

We will review the user experience of data provision to understand barriers and improve processes, helping people to submit data to a clearly defined standard by continually enhancing guidance and training to match user needs

Action 2: We will identify opportunities to improve systems and processes, and work with stakeholders to make this happen, developing guidance and training to support users

Why is this important?

- Improving systems and delivering more streamlined processes will provide more timely data, helping to improve our ability to track waste flows, assess compliance on a more continuous basis, and tackle waste crime more effectively.
- Clear and accessible guidance and training will help data providers collect and submit data in the right format.
- Well-defined consistent language and terminology are crucial to ensuring data is collected, reported and interpreted accurately.

What are we going to do?

We will work with others to support the development and delivery of electronic systems to capture data and track the movement of non-hazardous and hazardous waste and other materials. We will work to ensure that data collection processes are reliable and future-proofed as far as possible. We want our systems and processes to improve the quality, timeliness, and accessibility of waste data and to minimise the effort required of data providers and users.

We will continue to consult with a range of waste data providers to better understand the challenges they encounter when collecting and providing data. We will use this information to design systems and processes that are easy to use. As systems and processes change, we will produce concise, plain English guidance and training for data providers, and share these in accessible formats, such as short online videos and data clinics.

We will continue to identify and share best practice data collection and management principles with stakeholders within the UK and beyond

We will clarify the roles and responsibilities of everyone involved in the data chain and manage data in a transparent manner, and protect data security and commercial sensitivity

Action 3: We will collect and manage waste data using best practice principles to build trust and ensure clarity across the data chain

Why is this important?

- Clarity of data ownership and management builds trust and helps everyone involved understand their responsibilities for providing, managing and using data.
- Adopting best practice data principles allows us to clearly communicate what we do and how we do it and helps align everyone involved in the data chain towards data excellence.
- Identifying and sharing best practice data principles will aid our partnership and cross-boundary work with countries within and beyond the UK.
- Data has the most value when it is held securely in a transparent and easily accessible format.

What are we going to do?

We will clarify the data owners and data custodians and define the responsibilities of each. We will ensure that data is held securely and that confidentiality is protected, building trust with data providers.

We will develop and embed a standard set of data management principles into our work to clearly and transparently show our approach to data. We will ensure we are championing data excellence in all we do so that the data is meaningful, robust and forward thinking. We will share our data management principles with stakeholders within the UK and beyond.

We will continue to engage with data users to manage and report waste data in a transparent manner, explaining any assumptions, limitations and estimates. We will aim to collect and manage all waste data in line with Open Data and Official Statistics guidelines.

We will keep reviewing what tools and levers are available to improve data quality and relevance

We will identify the right data sources and investigate measures to track the flow of waste and materials through the economy

Action 4: We will review and progress the tools and levers required to support and monitor Scotland's transition to a more circular economy

Why is this important?

- Identifying, developing and adopting new methods will help us understand how resources move through our economy and find new ways to capture data on the flow of materials. This will help us measure and track Scotland's progress towards a more circular economy.
- Enhancing existing policy and legislation will support the development of innovative new systems for tracking waste and the sustainable use of resources.
- Using non weight-based targets and indicators provides additional insight into the environmental, social and economic impacts of waste management.

What are we going to do?

We will seek to understand the movement of materials through the economy. We will investigate where resources are currently being reused and remanufactured and work with stakeholders to understand the type of data they currently collect and how this could be used to map waste flows.

We will explore, in partnership with others, where new data sources might be necessary and where using a suite of indicators, eg carbon as well as tonnage metrics, may allow us to better understand the economic, environmental, and social impacts of different waste streams.

We will investigate the development of waste and resource metrics that will allow us to understand and demonstrate Scotland's progress towards a more circular economy, examining the tools and levers that currently allow us to collect waste data to determine if they remain fit for purpose. We will communicate and promote legislation that has an influence on data quality and consider ways it can better facilitate the collection of waste flows data.

Scotland has an Open Data Strategy that commits to making non-personal and non-confidential data available in an electronic format with open licencing that allows reuse

We will present data clearly so that it can easily be used to communicate the impact and inherent value of waste

Action 5: We will share and publish waste data in an efficient and timely manner and in ways that make it easier to communicate the impact and value of waste

Why is this important?

- Accurate, timely and well-presented data, with explanations of what the data means, provides a strong evidence base to inform business decisions, identify opportunities and support policy-making.
- Presenting data in different ways enables a range of audiences to access and use the data.
- Publishing data in an open format enables people to use it for innovative purposes, such as linking it with other data to provide new insight into the impacts and value of waste.

What are we going to do?

We will work with data users to determine how waste data is currently accessed, interpreted, understood and used. We will use this knowledge to explore different ways to share and present waste data so that it is accessible to a range of audiences. For example, we might use visualisation software as well as infographics and commentaries to explain what the data means.

Presentation of the data and gaining feedback from data users will be achieved, in part, by developing a waste data web portal which will also act as a central hub for those seeking data and information on Scotland's waste.

We will strive to share and publish waste data in consistent and universally accessible formats, adhering to open and linked data principles, and in line with Scotland's Open Data Strategy and with Official Statistics guidelines.

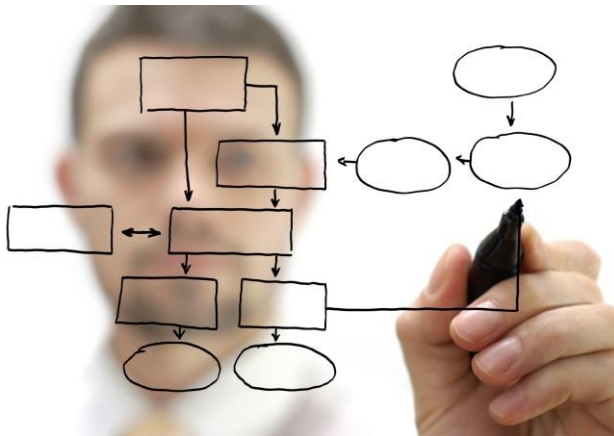


Our Approach

Two central themes embody the strategy and underpin its five priority actions. To achieve the data vision we need to focus on partnership working and on maximising efficiency through more streamlined systems and processes.

We will employ partnership working throughout the strategy

We know that people are vital when it comes to ensuring reliable data and that the strategy's actions cannot be achieved by any one organisation alone. Success will depend upon the engagement and involvement of stakeholders across the data chain. Making improvements and sharing best practice is the responsibility of everyone who contributes to or uses waste data and, as such, widespread involvement is encouraged. Presentation of the strategy online, with associated information and links, will seek to widen engagement.



We will always look to maximise efficiency by streamlining systems and processes

Improving our systems and ensuring we collect relevant data will involve change. We will always endeavour to ensure that the systems and processes adopted have a clear purpose, are flexible to future change and are easy for people to use. We will embrace electronic and digital options, working with data providers and users to minimise effort and maximise efficiency, saving time and providing better quality and more timely data.

Appendix I

We would like to thank the stakeholders who contributed to the development of the strategy (in alphabetical order):

Organisation

Belmont Trading UK Ltd
BIFFA
Chartered Institution of Wastes Management
East Ayrshire Council
EcoideaM Ltd
Falkirk Council
Jacobs UK Ltd
Moray Council
National Health Service – Ayrshire and Arran
National Health Service – National Services Scotland
Renfrewshire Council
Resource Efficient Solutions (A Fife Council company)
Ricardo Energy and Environment
Scottish Environment Protection Agency
Scottish Environmental Services Association
Scottish Government
Stirling Council
The University of Edinburgh
University of St Andrews
Valpak Scotland
Viridor
Western Isles Council
William Tracey
Zero Waste Scotland