
Improving the Performance of Waste Diversion Schemes: A Good Practice Guide to Monitoring and Evaluation

Chapter 1

Introduction to monitoring and evaluation



This chapter provides an introduction to the guidance and tells you why monitoring and evaluating your service, scheme or communications campaign is important.

WRAP helps individuals, businesses and local authorities to reduce waste and recycle more, making better use of resources and helping to tackle climate change.

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Introduction to monitoring and evaluation

1.1 What are 'monitoring' and 'evaluation'?

'Monitoring' means regularly measuring what's going on with your service, your schemes or the effect of your communication activity. 'Evaluating' means drawing conclusions from the monitoring data on how well the service or schemes are performing or the effect of the communication activity. Monitoring and evaluation are therefore two distinct activities with monitoring being impartial and factual while evaluation tends to be subjective and value laden. Someone who doesn't know the local area can do most monitoring; only someone who understands the context and local environment can do the evaluation. This means that although you can commission somebody to measure what your service or schemes are doing, ultimately you will need to evaluate what that tells you yourself.

This guide describes the best monitoring methods to use to assess different aspects of a service, scheme or communication activity.

1.2 Why are monitoring and evaluation important?

Every local authority should regularly monitor and evaluate the performance of its services / schemes, and many do so. This is simply a matter of good practice. Indeed, investment in monitoring is likely to be paid back many times over if it means that services / schemes are made more effective. It could help you to:

- measure progress against objectives and targets, so you will know in advance if you are likely to hit or miss them;
- assess expenditure and control costs;
- evaluate return on investment (RoI) to justify your existing budgets or persuade budget holders that you need more money to achieve statutory and local targets;
- identify successful systems as well as problems or performance issues, so that you can target your efforts to those neighbourhoods where improvements will make the most impact;
- measure customer satisfaction and user attitudes to establish how these are impacting on the performance of your service / scheme;
- plan service / scheme expansions and design (or redesign) your service / schemes so that they target materials that will make the most impact;
- plan targeted communications to improve performance; and
- address the issues that are **really** impacting on your service / scheme success and not those that you think are.

1.3 How will using the guide benefit me?

Many local authorities have benefited greatly from carrying out monitoring and evaluation. Their successes are highlighted throughout the document with full case studies in given in Annex 1. For example:

In Barnet, surveys and communal bin usage monitoring were carried out as part of a WRAP-funded communications campaign. This helped the local authority to understand the attitudes and behaviours of residents in flats receiving a recycling service, and allowed the council to develop an appropriate campaign aimed at this target audience to encourage increased use of the recycling services (see Annex 1 for more).



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"... investment in monitoring is likely to be paid back many times over if it means that schemes are made more effective"

In Durham, tonnage and waste composition data were used to identify how much recyclable material was being produced in different areas. As a result, areas for improvement were identified and targeted with communications to increase participation, thereby improving overall scheme performance (see Annex 1 for more information).

Using this guidance means that you don't have to reinvent the wheel and you can learn from other local authorities that have already undertaken monitoring.

1.4 Is this guide for me?

Do you have recycling and/or composting service, or a waste prevention initiative, but you don't know how well they are performing? Do you have a scheme that is performing better or worse than expected but you don't know why? Have you already received internal or external funding (e.g. from WRAP) to deliver work that needs to be monitored for impact? Are you running a waste communications campaign? If the answer is 'yes' to any of these questions, you need to read this guide.

It's been written specifically for organisations that are responsible for running waste recycling, composting, reuse and reduction services / schemes including:

- waste collection and disposal authorities, working alone or in partnership;
- waste management collection and disposal contractors;
- civic amenity site managers;
- community groups that operate recycling, composting, reuse and/or reduction schemes; and
- monitoring and evaluation specialists such as consultancies and universities.

The guide is designed to be applicable to the whole of the UK but we recognise that it may need adapting to suit local circumstances.

The nature of targets differs across England, Scotland, Wales and Northern Ireland and this affects what needs to be monitored. In Wales, for example, targets relate to municipal waste whereas in England only household waste is included.

While National Indicators are a key driver for local authorities in England, they do not apply in the same way in Wales, Scotland and Northern Ireland.

The guide is written for waste management professionals and presumes no knowledge of social research methods or statistics.

If you have expertise in these areas the guide is still relevant to you but you may find parts of it self-evident or even patronising – feel free to skip over these.

This guidance won't tell you how to improve the performance of your services / schemes, but it will help you diagnose problems so you can decide how to solve them.

WRAP offers fully funded support to local authorities in England and Northern Ireland to help improve their collection, recycling and waste prevention services. It is provided through WRAP's recycling and organics technical advisory team (ROTATE) and local communications team. If you think you can benefit from WRAP's support please contact the Local Government Services (LGS) team on 01295 819661 or email lgs@wrap.org.uk

Have you got a scheme that's underperforming? If you have, you need to read this guide. If you don't know whether you have or not, you definitely need to read this guide.

The guide is aimed at both **individual organisations** and groups of organisations working together. It is also relevant to **partnerships** of local authorities. The practicalities of monitoring will differ for partnerships, particularly where a county is acting as a co-ordinator for a group of districts and/or unitaries. In such cases the districts, boroughs and/or unitary authorities are likely to be carrying out or commissioning much of the monitoring, with the county or lead authority managing the project and bringing together the results. Specific advice for partnerships is available and is clearly shown throughout the document.

1.5 It looks a bit long – do I need to read it all?

No! Skip over the bits that don't apply to you. In fact use it like an encyclopaedia, looking up the parts that are relevant to you.

There is a comprehensive index at the back of the guide so use this to go directly to the section you need.

Go to Section 1.9 which will take you through a set of questions related to what you want to do, or find out, and will help you to identify the sections of most relevance to you.

1.6 What does the guide cover?

Monitoring and evaluation of:

- local recycling and composting collection services / schemes;
- reuse schemes, for example furniture and waste electrical and electronic equipment (WEEE) reuse or reusable bag schemes;
- waste prevention schemes including nappy schemes, unwanted mail and food waste prevention initiatives; and
- communications campaigns and outreach activities.

The guide focuses on household waste but the techniques described can be adapted for other types of municipal and non-municipal waste. The guide does not cover:

- monitoring of recycle processing or treatment operations with the one exception of monitoring contamination levels at materials recovery facilities (MRFs);
- monitoring residual waste collection and disposal; or
- all of the issues associated with monitoring cost-effectiveness and service / scheme efficiency.

WRAP-funded communications campaigns will be contractually obliged to follow all or some of the guidance provided in this document. The extent of the monitoring required will be set out in each contract with WRAP and depends on the key performance indicators chosen for the campaign. Further advice on selecting key performance indicators is available in Chapter 10 and more information should be provided by WRAP when you apply for funding.

1.7 What aspects of service / scheme performance or communications campaigns are covered?

The guide looks at how to monitor and evaluate the key dimensions of a reduction, reuse or recycling/composting service / scheme including:

“WRAP-funded communication campaigns will be contractually obliged to follow the guidance provided in this document”

- people's knowledge of the service / scheme and their behaviour with respect to it;
- people's usage of the service / scheme or participation in it;
- the extent to which the targeted materials are captured by the service / scheme;
- the tonnage diverted;
- the level of contamination; and
- success of communication activity.

1.8 How is the guide structured?

The guide begins with some background information on why you need to monitor and how it can be useful.

The importance of setting aims and objectives is outlined in Chapter 2. These are important because they help you decide what to monitor and the method(s) that you will need to use. This chapter also discusses key performance indicators (KPIs). These are essential as they are the yardsticks by which you can measure your performance against an objective, and thereby assess how successful you have been. If you want to know more about how to set aims, objectives and KPIs then chapter 2 is essential reading.

Chapter 3 gives some background detail on the preparatory work you may need to do before undertaking monitoring. In particular, it discusses the role of sampling and profiling in planning your monitoring work.

The rest of the document is structured according to the main types of monitoring that can be carried out. If you know the kind of monitoring that you want to do, you can use this section to identify where to start in the guidance. If you aren't sure what you need to do, go to Section 1.9 to help you decide.

Monitoring awareness, claimed behaviour and satisfaction

Chapter 4 deals with designing and running surveys, whether face-to-face, postal, telephone, web-based or using citizens' panels.

Monitoring service / scheme usage and participation and recognition rates

Chapter 5 looks at how to monitor usage of your services / schemes, whether kerbside, bring, household waste recycling centre (HWRC) or other collection schemes such as for bulky waste. It has an in-depth section on monitoring participation in kerbside services / schemes.

Monitoring tonnages

Chapter 6 takes a look at how to use tonnage data to monitor services / schemes.

Monitoring capture rates

Chapter 7 deals with the increasingly important area of monitoring capture rates – what proportion of each targeted material is actually being diverted away from landfill. This is important if you have a mature service / scheme that has reached a plateau. It provides guidance on when and why to conduct waste compositional analysis to determine capture rates, and the value of the information obtained.

Monitoring contamination levels

Contamination is an issue for most services / schemes, where monitoring participation alone can give a misleading picture. Chapter 8 outlines monitoring approaches for authorities with and without MRFs. It also gives some advice on how to conduct visual contamination monitoring at the kerbside.

“WRAP’s guidance allowed us to monitor our campaign as it progressed and make adjustments so that the right audiences were targeted, gaining the maximum benefit from the campaign.”

Terry Harkins, Alnwick District Council

Monitoring waste prevention initiatives

If you are working on waste prevention, Chapter 9 will provide help and advice with monitoring the impact of 'real' nappy schemes, unwanted mail, food waste prevention work and home/community composting. It also looks at monitoring reuse schemes such as reusable bags, junk swap days and reuse in the home.

Monitoring communications campaigns

Chapter 10 explains how to set aims and objectives and meaningful key performance indicators for monitoring a campaign and outlines ways in which you can monitor campaign activities.

The annexes are designed for people who want more detailed information.

Annex 1 Case studies

Examples of how other local authorities have used different monitoring methods in a variety of ways to help identify potential improvements.

Annex 2 Table of main monitoring objectives and KPIs

We give guidance on how to construct SMART (Specific, Measurable, Achievable, Realistic, Time) objectives for the three key types of objectives (input, outcome and impact) that you can set to monitor your services / schemes and the communications undertaken to promote them. The key performance indicator to use for each objective is also provided.

Annex 3 Library of survey questions

It is good practice to make use of survey questions that have already been tried and tested. This annex includes standard questions that could be used where appropriate. Importantly it includes the three questions that together make up the standard measure for 'committed recycler' status which WRAP requires all WRAP-funded services / schemes to monitor. It is used in the national campaign, Recycle Now, and is useful to all local authorities. Similarly, the annex contains the questions for a series of other WRAP metrics, e.g. for committed food waste reducers, conscientious bag users and committed home composters. These will be essential in measuring changes achieved by waste prevention campaigns on these topics.

Annex 4 An introduction to using census data to profile your area

Designing a representative sample may sometimes require using census data to profile your area. Data are readily available from the Office for National Statistics website (www.statistics.gov.uk). This annex explains how to access it and make use of it.

Annex 5 Advice and templates for commissioning monitoring contractors

Many local authorities will wish to commission external agencies to carry out monitoring work. This annex includes several templates that can be used as the basis of tendering for services.

1.9 What do you want to do?

This section helps you to decide which parts of the guidance you need to read. It starts by asking you what your aims are for the performance of your service / scheme or your communication activity. It then guides you to the monitoring tools that will give you the information you need to diagnose and solve problems.

To help you decide what you want to do, we have provided a Q&A style flow chart. Check each of the statements in turn to see if they match your aims,

carefully following the routing instructions and you will end up with a list of sections to read. If you don't have any aims or objectives yet, start with Chapter 2, which will explain how to devise them, and then revisit this section to decide what to do next.

I want to increase my recycling/composting rates

What do you think are the key issues for you?

A: Don't know	You need to know more about what's holding you back. Start with an awareness survey (Chapter 4) and, if you have a kerbside service / scheme, look at participation monitoring (Chapter 5). Also make sure you are making good use of your tonnage data (Chapter 6). If these activities throw no light on the problem, move to capture rate assessment (Chapter 7) and contamination assessment (Chapter 8).
B: Lack of existing schemes, infrastructure or resources	Monitoring and evaluation may help you convince your bosses you need to improve or expand services. Start with an awareness survey that can also ask what residents want (Chapter 4) and, if you have a kerbside service / scheme, look at participation monitoring (Chapter 5) to show whether your services / schemes are efficient. Also make sure you are making good use of your tonnage data (Chapter 6).
C: Lack of awareness among residents of available services / schemes	Check that this is the real issue with an awareness survey (Chapter 4). If you choose to run an awareness campaign, make sure that you monitor its impact – start at Chapter 10 to identify what monitoring is required.
D: Low levels of use of existing services / schemes	Measure this for different parts of your authority with participation monitoring for kerbside services / schemes and usage monitoring for bring schemes (Chapter 5).
E: Incorrect use of existing services / schemes leading to contamination	To measure the extent and type of contamination, carry out a contamination assessment (Chapter 8). To assess householders' understanding of what can and can't go into a collection, carry out a survey (Chapter 4).
F: Growth in waste cancelling out increases in recycling	It's likely you will be thinking about promoting waste reduction initiatives. Check out Chapter 9 for advice on how to monitor these. Also make sure you are making good use of your tonnage data (Chapter 6).
G: Lots of recyclable materials that are targeted by services / schemes still being thrown away	Carry out capture rate analysis (Chapter 7) – it's relatively expensive but will show you what's going wrong. A survey of householders may then throw light on why people are still throwing these materials away (Chapter 4).
H: We need to add new materials to our services / schemes	Carry out capture rate analysis (Chapter 7) – it's relatively expensive but will show you which materials are worth targeting and, if designed properly, will show you which areas of your authority to target.

I want to increase the quantities of waste recycled and/or composted

What do you think are the key issues for you?

A: Don't know	You need to know more about what's holding you back. Start with an awareness survey (Chapter 4) and, if you have a kerbside service / scheme, look at participation monitoring (Chapter 5). Also make sure you are making good use of your tonnage data (Chapter 6). If these activities throw no light on the problem, move to capture rate assessment (Chapter 7) and contamination assessment (Chapter 8).
B: We need to add new materials to our services / schemes	Carry out capture rate analysis (Chapter 7) – it's relatively expensive but will show you which materials are worth targeting and, if designed properly, will show you which areas of your authority to target.
C: Lots of recyclable materials that are targeted by services / schemes still being thrown away	Carry out capture rate analysis (Chapter 7) – it's relatively expensive but will show you what is going wrong. A survey of householders may then throw light on why people are still throwing these materials away (Chapter 4).
D: Low levels of use of existing services / schemes	Measure this for different parts of your authority with participation monitoring for kerbside services / schemes and usage monitoring for bring services / schemes (Chapter 5).
E: Lack of existing schemes, infrastructure or resources	Monitoring and evaluation may help you convince your bosses you need more. Start with an awareness survey that can also ask what residents want (Chapter 4) and, if you have a kerbside service / scheme, look at participation monitoring (Chapter 5) to show whether your services / schemes are efficient. Also make sure you are making good use of your tonnage data (Chapter 6).
F: Lack of awareness among residents of available schemes	Check that this is the real issue with an awareness survey (Chapter 4). If you choose to run an awareness campaign, make sure that you monitor its impact – start at Chapter 10 to identify what monitoring is required.

I want to increase the number of households that take part in my existing services / schemes

Which type of collection system is the issue for you?

A: Household waste recycling centres (HWRCs)	Review the effectiveness of your HWRCs. Part of this review should include usage monitoring (Chapter 5). You may also want to interview users and non-users to discover the issues (Chapter 4) and assess tonnage yields (Chapter 6).
B: Kerbside services / schemes	Carry out participation monitoring to measure the problem objectively, perhaps looking at various rounds to identify low performers (Chapter 5). You may also want to conduct a survey or use focus groups to identify the issues (Chapter 4). This will help you either redesign your service / scheme or develop a communications campaign aimed at addressing the problems.
C: Bring banks	It is not normally cost-effective to carry out usage monitoring for bring bank services / schemes. Depending on the service / scheme you operate and the people it serves (e.g. communal bring bank for flats), you may want to interview users and non-users to discover the issues (Chapter 4). You should also look to assess yields (Chapter 6).

I want to increase the capture of recyclable material targeted by my existing services / schemes

Which type of collection system is the issue for you?

A: Household waste recycling centres (HWRCs)	Review the effectiveness of your HWRCs (Chapter 5). You may also want to interview users and non-users to discover the issues (Chapter 4) and assess tonnage yields (Chapter 6).
B: Kerbside services / schemes	Carry out capture rate analysis (Chapter 7) – it's relatively expensive but will show you what's going wrong. A survey of householders may then throw light on why people are throwing these materials away (Chapter 4). This will help you either redesign services / schemes, develop a communications campaign to encourage higher levels of capture generally, or focus on specific materials in order to improve areas of poor performance.
C: Bring banks	It is not normally cost-effective to carry out usage monitoring for bring bank services / schemes. Depending on the service / scheme you operate and the people it serves (e.g. communal bring bank for flats), you may want to interview users and non-users to discover the issues (Chapter 4). You should also look to assess yields (Chapter 6).

I want to decrease contamination levels in my recycling

Carry out a contamination assessment to measure the extent and type of contamination (Chapter 8). To assess householders' understanding of what can and can't go into a collection, carry out a survey (Chapter 4). This will help you redesign your service / scheme to reduce contamination, develop a communications campaign to reduce contamination, or develop incentives / enforcement strategies.

I want to demonstrate the effectiveness of my waste reduction initiatives

Take a look at Chapter 9 which deals with home composting, community composting, grass cycling, food waste prevention, reuse in the community, washable nappies and unwanted mail. This should give you some ideas about how to measure your impact.

I want to monitor the impact of my awareness campaign

Start with Chapter 10, which gives you the basics and advises you what forms of monitoring are appropriate for different types of communications activities (PR and advertising, doorstepping, education and outreach work). You should then look at the appropriate chapters of the guidance depending on what you want to achieve.

I want to do something else

Although this guidance has been designed to be comprehensive, it cannot possibly cover every eventuality. We advise you to read the introductory parts of each chapter to work out what might be appropriate, or seek advice from research professionals within your authority or in external agencies. If you have already received funding from WRAP, please follow the guidance given to you when you applied or contact your advisor.

Alternatively there may be some simple questions that you want to answer using monitoring and evaluation techniques. Take a look through the following list and see which chapters you are advised to review.

Are people happy with my services / schemes?	Go to Chapter 4 'Monitoring Awareness, Claimed Behaviour and Satisfaction'.
Are people aware of my services / schemes?	Go to Chapter 4 'Monitoring Awareness, Claimed Behaviour and Satisfaction'.
Are people using my services / schemes?	Go to Chapter 5 'Monitoring Scheme Usage, Participation and Uptake'.
Are people using my services / schemes properly ?	Go to Chapter 8 'Monitoring Contamination'. You could also look at Chapter 2 'Monitoring Awareness, Claimed Behaviour and Satisfaction' if you want to ask people about their understanding of the service / scheme.
How much recycling is being diverted through my services / schemes?	Go to Chapter 6 'Monitoring Quantities Diverted'.
What more material could I get out of my services / schemes?	Go to Chapter 7 'Monitoring Capture Rates'.
What kinds of contaminants are getting into the recycling?	Go to Chapter 8 'Monitoring Contamination'.
How successful has my real nappy scheme been?	Go to Chapter 9 'Monitoring Waste Reduction', Section 9.10.
How successful has my work with unwanted mail been?	Go to Chapter 9 'Monitoring Waste Reduction', Section 9.8.
How successful are my furniture reuse schemes ?	Look at Section 6.11 in Chapter 6 'Monitoring Quantities Diverted'.
How can I evaluate my communications campaign / outreach work ?	You can use any of the approaches outlined in the guidance to measure the impact of communication activities. To inform future work, you may also want to understand which activities worked best, or how much effort you put into each type of activity. Chapter 10 'Monitoring Communications Campaigns' helps you to decide which approaches are appropriate.

1.10 Summary of chapter

This chapter has:

- defined 'monitoring' and 'evaluation' in Section 1.1;
- explained why it is important in Section 1.2;
- summarised how the guidance will benefit you (Section 1.3);
- outlined who this guidance document is aimed at (Section 1.4), how it can be used (Section 1.5) and what it covers (Sections 1.6 and 1.7);
- provided the structure of the document (Section 1.8); and
- given you hints about where you might like to start (Section 1.9).

1.11 Where do you want to go next?

Chapter 2 explains how to set monitoring **aims, objectives and KPIs**. It then describes how to use the results of monitoring to **improve a service / scheme or to measure the effects of a communications campaign**.

Chapter 3 gives details for consideration when **sampling and profiling**.

Chapter 4 deals with monitoring **awareness, claimed behaviour and satisfaction**.

Chapter 5 deals with monitoring **service / scheme usage and participation**.

Chapter 6 looks at the use of **tonnage data**.

Chapter 7 explains how to measure **capture rates**.

Chapter 8 considers monitoring of **contamination levels**.

Chapter 9 looks at approaches to measuring **waste reduction**.

Chapter 10 deals with monitoring **communications campaigns**.

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