

## Recycling Rates Plateau - Lessons from the United Kingdom

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### ABSTRACT

Despite a significant increase in the amount of recycling in the UK over the last decade (up from 12% to 44%) recycling rates are now plateauing across the UK. In England, the largest and most populous of the UK nations, the amount of household waste recycled increased by only 0.23% from 2012/13 to 2013/14. Where plateauing recycling rates are evident, experience from the combined nations highlights a few key reasons as to why this may be the case including:

- A lack of government leadership.
- Significant reductions in local authority spending on waste collection services
- Social and demographic constraints

This paper looks at these key challenges for waste management and collection services, draws on experience of working for UK government and industry leaders CIWM and in order to offer up lessons and ideas for other nations still on the journey towards setting and meeting recycling targets.

### 1. INTRODUCTION

#### 1.1 Background

The setting of recycling targets are now the key way in which the waste management sector is guided and held to account in relation to its environmental credentials. In order to meet these targets the sector must continuously evolve and innovate to ensure that steady progression can be sustained, with the understanding that targets will continue to be extended to ensure the sustainability of the sector and that its contribution to wider circular economy ambitions are met.

In the UK this began with Best value performance indicators for each local authority allocated between 2001 and 2008 setting mandatory weight based targets for household recycling. This and the subsequent introduction of the waste framework directive in 2008 maintained pressure on the industry to take account for their activity and role in the vision of a circular economy, with maximisation of recovery, recycling and reuse activities, with minimisation of waste generation and disposal. This clear centrally driven message focusing on the concept of moving material away from waste and up the waste hierarchy has since led to significant changes in local authority service delivery and subsequently a significant increase the recycling rates.

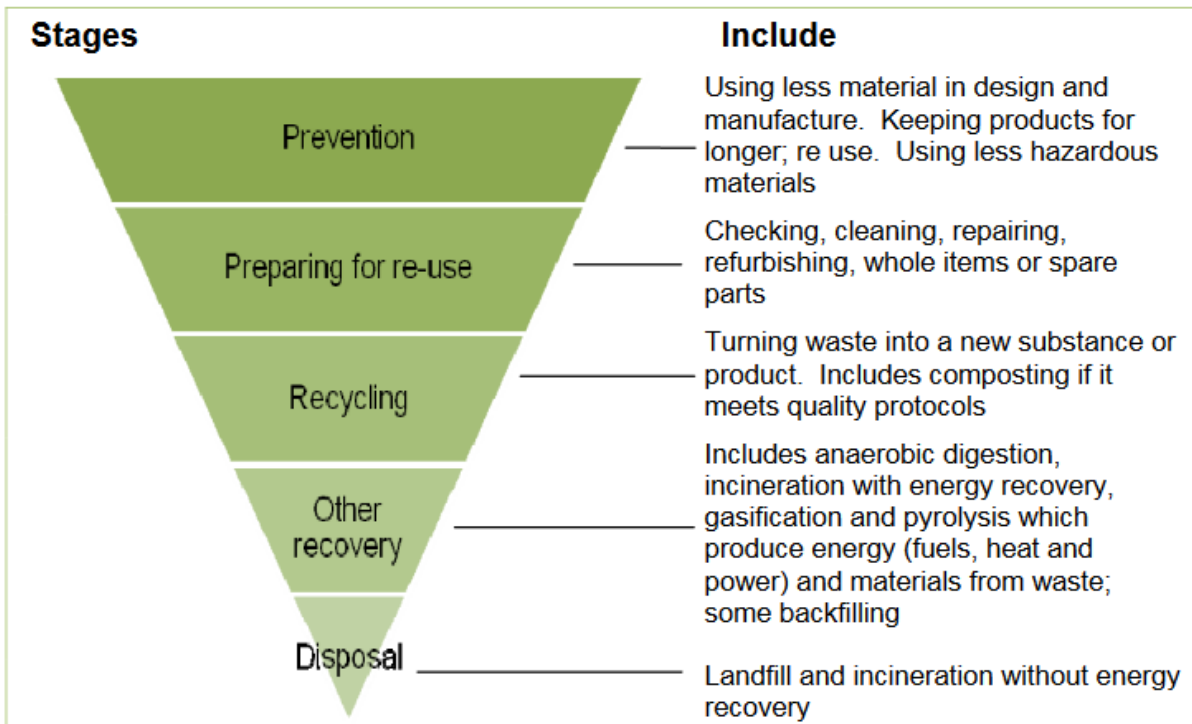


Figure 1: Waste Hierarchy on which targets emphasise shifting over 50% of waste from Disposal and other recovery up to Recycling and Preparation for re-use by 2020.

In the UK waste data reporting via waste data flow from 2001 to 2014 has demonstrated that since the introduction of weight based measures, household recycling has risen from 12% in 2001 to 44% in 2014. What this illustrates is the effectiveness of central leadership in driving recycling rates to a point, but also that in recent years, most notably from 2011 onwards this target led approach not just in the UK, but now shared by all EU member states has varied in its effectiveness with differing economic, political and social and demographic challenges including:

- Central leadership and statutory targets;
- The pressure to reduce public sector spending following the global economic recession; and
- The demographics of the population which play a role in the amount of recycling that can occur.

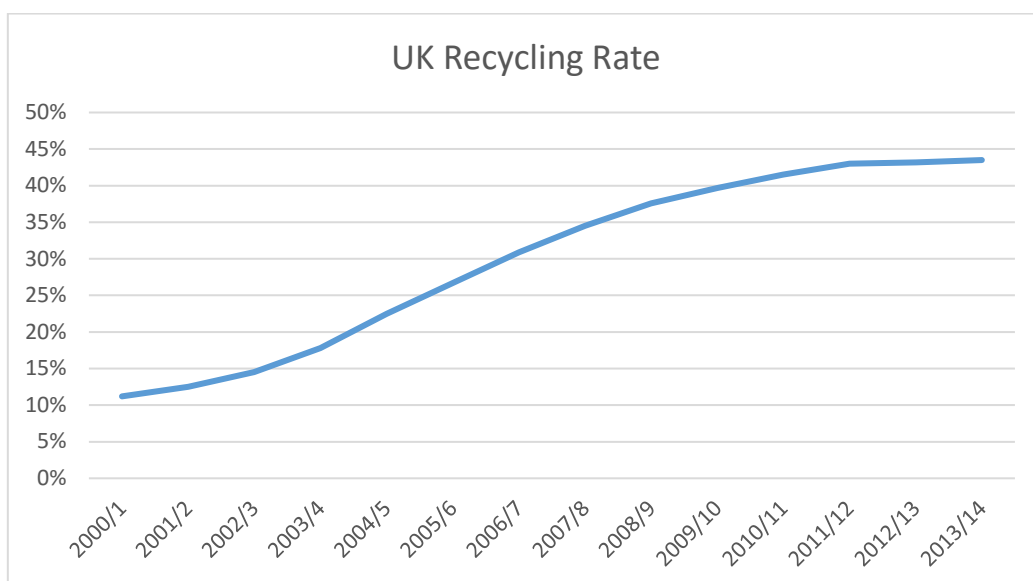


Figure 2: Time series data for UK Household recycling rate 2001 to 2014

As such many EU member states are facing the same issue: how to meet the European Commission's recycling target of 50% of all household waste arisings by 2020. In particular the four nations that make up the United Kingdom (the UK) namely England, Northern Ireland, Scotland and Wales, which are the focus of this paper are each facing their own challenges as to how they contribute towards meeting this target. Each nation has different fiscal, political, demographical and geographical challenges and opportunities, and local performance is increasingly divergent in recent years which will be reviewed in this paper in order to see if there are any key lessons to be learned in order to battle plateauing recycling rates. The paper will focus on the key points of struggle for the 4 nations in order to examine the potential impacts that these could be having on the continued progress towards recycling improvement.

## 1.2 The four nations - setting the scene

In the last 5 years recycling performance for the four nations of the UK has been varied with each nation having their own successes and failure at regional and local authority levels. England has had possibly the most obvious stagnation in recycling performance with average annual recycling rate increases of 1% per years 2010 to 2014, but only 0.5% if you exclude the last real improvement of 2.1% from 2010 to 2011. This highlights a significant period of time of very low or stagnant recycling rate improvement and something that will need to be tackled quickly should EU targets of 50% are to be met. This is placed however against the fact that at the local authority level recycling rates are wide and varied with the lowest performers rating at less than 20% and the highest performers attaining in excess of 67%. Social and demographic differentials are the core driver for this, with average householder income, as well as the mixture of urban and rural locations driving effectiveness of service delivery. As such key industry debates around possible harmonisation are ongoing as a possible solution to ensure a reduction in householder confusion at the kerbside and a resulting improvement in participation in recycling schemes.

Northern Ireland are facing similar key issues around variability of service delivery with local authority performance varying from 28% to 58%. At the national level however recycling performance has also been stagnating with average annual recycling rate improvement of 1% per annum from 2011 to 2014. However, a key ongoing development of a reduction in the number of local authorities from 26 to 11, will be monitored in relation to how harmonisation of services could lead to more efficient service delivery, and greater capture of key materials at the kerbside.

Scotland, despite ambitious targets which are in excess of the waste framework directive have only fared marginally better with growth rates per annum averaging at 1.3%. As an intermediary between England Northern Ireland and Wales it seems they are setting the ambition levels high but unlike in Wales are failing to meet them.

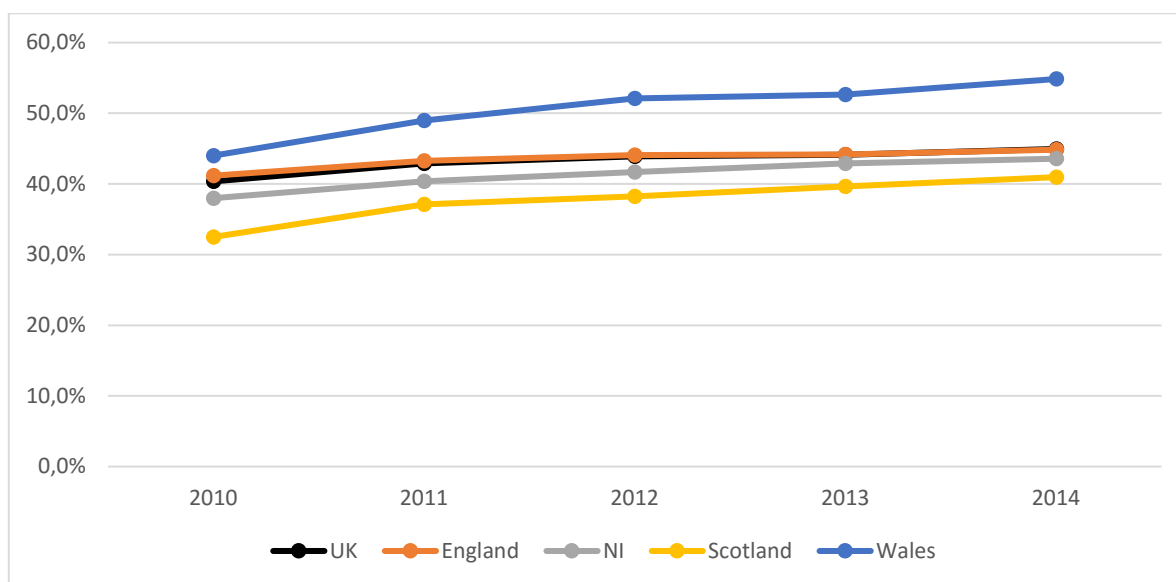


Figure 3: Recycling rates for four nations from 2011 to 2014

The only nation that has managed to maintain growth rates in the recycling rate has been Wales where average 2% annual growth rate in performance has been steadily maintained since 2011 onwards. This has bucked the trend with relation to the UK and has meant that at a national level Wales is the only of the four to have already achieved the EU target of 50% by 2020 up at 55%. It is here then that this paper will look for inspiration

as to how to maintain progress towards recycling targets, and what messages and indicators should be used to stimulate local authority decision making.

Having looked at the context therefore of recycling rates across the four nations of the UK it becomes apparent that the divergence in performance should offer up some interesting reasons as to why recent performance has been varied, and what lessons should be learned and shared in order to return all to a more steady growth to meet targets.

## 2. THE STATE OF NATIONAL TARGETS AND CENTRAL LEADERSHIP

The first key area when examining the varied performance is that of the level of ambition set by the national target process. In the case of household recycling, ambitious and more regular waypoints (for example set every 5 years rather than 10) to achieve set the precedent for strong recycling performance as a priority for local authorities. When we look at the performance of the four nations of the UK this becomes apparently clear, but broadly in the UK there are three categories of:

- the unambitious and unenforced – England and Northern Ireland;
- the ambitious but unenforced and – Scotland; and
- the ambitious with levers to act as enforcement against the targets set – Wales.

Table 1: Differing levels of ambition shown by each of the four nations with respect to Household Recycling Rate's

Nation	2013	2015	2020	2025
England	-	-	50%	-
Northern Ireland	-	45%	50%	-
Scotland	50%	-	60%	70%
Wales	52%	58%	64%	70%

England operates with very limited central governance of recycling rates with the only core targets driven by the EU waste framework directive of 50% by 2020. Other than this there are no clear targets filtered down to a local authority level, and as such the wide and varied performance of local authorities (of which there are 326 in England) have no targets which they are enforced to meet. As a result, despite the statutory national target of 50% (accountable to the EU if they are not attained), there is limited clear direction at a more localised level as to how these could and should be achieved, but also no real fiscal levers (such as fine for poor performance) which central government can use to enforce against targets. This lack of central leadership in England is an issue as the decision makers when it comes to waste management and recycling collection services are devolved to local authorities who all then pull in their own direction, and are influenced by multiple conflicting factors when developing strategies for service delivery.

Northern Ireland are facing much the same problems as England with stagnating recycling rates and failure to meet there 2015 target of 45%, but also with respect to the central leadership of recycling policy. National targets set in line with that of the EU waste framework directive, and based on current performance many of the local authorities will fail to meet these targets before 2020.

The second category of more ambitious target setters namely Scotland have fared only marginally better when reviewed against their progress towards recycling targets, with failure to meet their own 50% recycling target set for 2013 and with rates of only 43% being achieved it still looks like a long road towards 50% for 2020. This is set against a strong central policy of the concept of Zero waste which was established as early as 2006. However as in England and Northern Ireland there is still a lack of enforcement against targets, with no real costs associated with missing targets. As such local authorities are not truly assessing the true cost/benefit of investing in measures to improve their recycling performance.

The final category therefore is filled by Wales, the only one of the four nations to have already met the 50% recycling target required under the EU Waste Framework Directive.

This has been achieved through strong central leadership not just towards the 2020 target, but also beyond to 70% in 2025 with additional milestones of 50% in 2013 and 58% in 2015 to help guide authorities. What separates Wales from the others though is that ambition has been backed by real statutory targets. These targets set at local authority level where operational decisions are made, and thus local authorities have been able to be held to account for their performance. In addition although as yet unused, there is also the additional lever of fiscal penalties in the form of £200 per tonne fine for every tonne of waste for which the authority misses the target by. This allows each local authority to make more informed decisions about the true cost

benefit of investing in recycling services and adds a real intrinsic value to the of recycling, providing a real incentive for recycling not to be overlooked when conducting budgetary reviews.

## 2.1 The impact of central funding decisions

The second key area and possibly the biggest current struggle for all public services in the UK not just waste management is that of budgetary decisions. Whenever public sector funding is concerned there are always conflicting pressures as to how best to spend money most efficiently and what therefore the priority areas are. In the UK however in the last 5 years there has been a significant period of austerity following economic recession and as such not only have budgetary pressures been magnified but also there has been reductions in public expenditure equal to 40%. The key issue for the waste management sector though, and in particular recycling services, is that it has been seen as one of the first places to cut, and recent survey of local authority staff conducted by Ricardo Energy and Environment in collaboration with CIWM<sup>1</sup> has found that:

- 69% of respondents to the survey highlighting that their department's budget had been effected by central government funding reductions in the last 5 years;
- That cuts in waste management budgets have ranged from £100,000 for smaller authorities up to in excess of £2 million of larger authorities; and
- Although these significant cuts have already been made it is only the beginning, with an analysis suggesting that the process of funding cuts is only half way to completion.

Across the UK this has led to a wide variety of measures being introduced in order to make cost savings which have had varied impacts on the recycling performance.

- **Shifting charging for kerbside green waste collections** – Shifting from free to chargeable garden waste collections (in the region of £30 to £80 per annum, implemented by authorities with mixed responses and a potential to reduce recycling performance through lower participation by householders.
- **Reducing frequency of kerbside residual waste collections** – Reducing kerbside residual waste collection rounds from weekly to fortnightly, and three or four weekly in more extreme cases in order to reduce resourcing requirements. In the case of shifting from weekly to fortnightly, this has offered the quickest and most direct route to cost savings without negatively influencing service delivery. In fact in most cases reduced capacity and frequency of residual waste collection has been found to increase recycling performance.
- **Removing some rounds of kerbside food waste collections** – Authorities struggling with low participation for costly additional food waste rounds have seen cutting these as a quick win to reduce spend whilst not negatively effecting recycling rates too greatly.
- **Closure of Household Waste Recycling Centres (HWRC's)** – Harmonisation of authority services to reduce the infrastructure requirements, but potentially making some HWRC's less accessible for some householders with negative implications for non-kerbside recycling.
- **Reduced communications** – Changes to service delivery have not been backed by appropriate communications to educate householders on how to best utilise the service provided to them leading to in some cases to reduced effectiveness and increased recycling contamination.

So far the real long term impact of some of this short-termism in the approach to service change are yet to be seen. Although in many cases there are good news stories to suggest this is being well managed to maximise the costs and benefits of service change, there are concerns in the industry that this short-termist response to budget limitation could negatively impact the sector into the future and hamper progress to the 50% target. In particular there are also several authorities in England that have seen recycling rate reductions since 2011 and the reason for this could be reductions to service delivery in order to meet budgetary requirements.

In contrast to this, Wales has been able to ring fence expenditure on waste management and recycling in particular. This is led not only by the need to meet statutory targets but also due to a different ethos for waste management and environmental sector. Key to this has been the economic valuation of recycling by proxy with a £200 per tonne fine applied to each tonne of waste for which councils is below their required targets. As such it is a much easier process to assess the cost benefit analysis when investing or reducing budgets, to compare financial savings and recycling performance on a like for like basis, rather than on intangible terms of pounds savings against a recycling performance.

As a result, unlike in the England where a large number of local authorities are significantly missing targets the majority of the 22 local authorities in Wales are meeting and exceeding targets, with only 3 missing the 2013 statutory target of 52%. Even where targets have been missed the range of recycling rates was between 48% and 63% demonstrating a clear effective incentive in getting authorities performing in line with targets set.

## 2.2 Changing social and demographic challenges

In addition to difficulties of setting ambition at the right level and supporting this through appropriate economic levers, local authorities also have to deal with difficult decisions on how to set the direction of waste collection services with significant variability in social, demographic and geographic constraints. In this respect the current discussion of harmonisation of local authority waste collection services in the UK is an interesting development but one that does not reflect the true breadth and depth of alternate authority typologies that exist even in just the UK. Service delivery has to be tailored to frequency of collection, capacity requirements available at the kerbside, material compositions presented by householders at the kerbside, geographical constraints in relation to urban, or rural rounds, social communications to meet the needs of varied ethnic and aged population demographics to name just a few. As a result, the purpose of having the discussion on harmonisation presents a good platform to share best practice, but in essence should be something that all local authorities are already benchmarking against when they undertake options appraisals prior to service change. Therefore although there may be cause for simplification of service delivery, and plenty of opportunities for greater partnership working between local authorities in the UK these should not be focussed purely in the possibility of making combined cost savings, but rather should be evaluated based on the needs of each authority.

## 3. EMERGENCE OF CARBON BASED TARGETS RATHER THAN WEIGHT BASED MEASURES

A separate issue for all local authorities of the UK is the emergence of a change of thinking in the waste sector and the introduction of greater life cycle thinking. Traditional weight based measures founded when landfill divergence was still the key metric has meant that local authority service delivery has focussed on chasing bulky and heavy materials regardless of the environmental benefit of capturing and diverting these materials from landfill. Life cycle thinking on the other hand and carbon equivalent targets would therefore look beyond this to assess the true environmental benefit of each waste type collected rather than simply its weight as a proportion of all waste captured. In this process it not only captures downstream impacts of waste but also upstream impacts of waste generation and further right up to material extraction, manufacturing and transportation.

In this respect it regularly see benefits that are contrary to current weight based measures which regularly lead to targeting of waste types which have marginal environmental benefit when collected and diverted. For example Carbon league tables developed by Ricardo Energy and Environment highlight some significant difference in performance when comparing local authorities and targets, with East Hampshire ranked 315<sup>th</sup> using traditional weight based measure's, but 6<sup>th</sup> using CO<sub>2</sub> equivalent factors. As a result authorities are receiving mixed messaging as to how they best serve the circular economy which could potentially be influencing their investment in waste management services and their performance against current weight based measures in to the future.

## 4. WHAT LESSONS CAN BE LEARNED FROM UK EXPERIENCE FOR OTHER EU AND INTERNATIONAL COUNTRIES

So what can the four nation of the UK learn from one another, and what lessons can be taken to wider international markets?

- **Strong central leadership and levers are an absolute requirement to help to drive performance against targets** – experience in the UK has shown that ambition alone is not enough to ensure recycling performance continues to rise. In order to overcome conflicting pressures waste management service need to remain a priority with enforcement activity undertaken to ensure that underachievement is held to account.
- **Maintenance of waste management as a core service** – in line with central leadership from central government, waste management services need to remain a core service and not be seen as the first place to cut expenditure. There are efficiency savings to be made for all authorities in local delivery but these should be evaluated appropriately with long term impacts in mind as well as the short term cost savings available. Innovative solutions are available that can achieve cost savings without negatively impacting the service delivery, but these may just take a little more time to develop.
- **Make recycling performance a tangible asset** – Comparing the costs of service delivery with recycling performance when budgets are not under threat is not a difficult concept for local operative

to grasp and recycling league tables can be helpful to inspire performance. However when the effectiveness of public sector expenditure is under more pressure and there are many conflicting requirements for investment understanding the cost benefit of recycling can be a powerful tool in helping make decisions easier to evaluate.

- **Stick to one set of targets and be clear on the expectations against others** – In the UK weight based measures have been the standard measure of performance for over a decade with local authorities establishing services to meet these requirements. Alternate measures of environmental performance of services are available and it's important that these are not ignored but fostered, but it is equally important that they do not dilute central messaging and hamper progress towards established goals.
- **Consider harmonisation of waste service provision but don't let it hamper individual authorities choosing the most effective service delivery** – In relation to sharing best practice having the debate around harmonising service delivery can be important, but this should always be placed against the understanding of local developed powers with respect to what is the most effective solution for their social demographic and geographic constraints.

## 5. CONCLUSION

Recent experience in the UK has demonstrated that continued progression towards recycling targets is a difficult process to undertake. At times there are significant conflicting pressures on local authorities and decisions maker's agenda which cannot be separated from wider economic conditions. However clear consistent and strong leadership and clarity on prioritisation of recycling services can help to combat these distractions, with innovative solutions available to provide both cost savings and improved performance. This is especially true when recycling services can be seen as a definite core service with the importance of its outputs in the form of recycle and its value to the circular economy can be made more tangible and visible to decision makers via the use of economic indicators and levers.

It is vital that targets need to be ambitious to establish the environmental credentials of the sectors effective delivery but also realistic and enforceable to ensure that at local authority level, staff can focus on their importance and see a clear path to achieving them.

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