



SMART Waste

LIFE13 ENV-UK-000549

Results and recommendations

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Smarter regulation of waste in Europe

‘LIFE SMART Waste’ is a collaborative project aiming to develop and demonstrate innovative ways of understanding, tackling and reducing waste crime.

During the project’s conception in 2014, LIFE SMART Waste project beneficiaries recognised that there are significant gaps in our collective understanding of the causes, dynamics and triggers for waste-related crime, particularly in challenging waste streams. The project’s premise is that by identifying and developing practical indicators, deterrents and remedies for such criminal behaviour, we can help close these gaps.

This brochure provides a brief summary of the LIFE SMART Waste project’s objectives, outputs and recommendations.

Project beneficiaries



Supported by the LIFE Programme of the European Union (LIFE13 ENV-UK-000549)

Waste crime

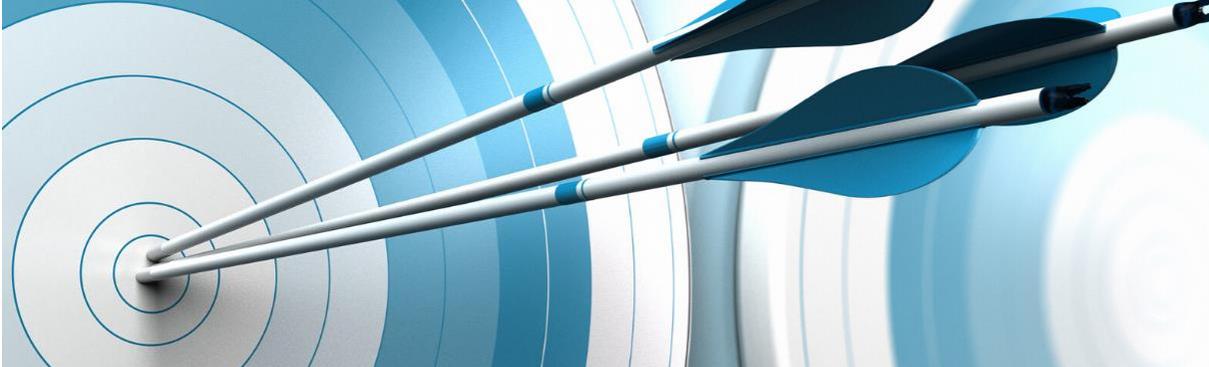
The illegal management and illegal trade of waste cause significant damage to the environment, undermine public health and distort fair competition.

The potential for illegal activity exists at all stages of the waste management chain, from production to final disposal, enabling criminals to profit at the expense of legitimate operators in the waste management industry.

Waste crime endures as a significant issue for regulators, enforcement agencies and legislators in Europe and beyond. The issue is widely acknowledged as a factor that adversely affects waste policy implementation and constrains the move towards a circular economy.

Waste crime has proven to be attractive to organised crime groups and is not constrained by national borders, making it a significant threat that requires innovative, transnational partnership work to identify and prevent it.





Project objectives

Objective 1

To develop and demonstrate innovative intelligence gathering and analytical approaches to identify and understand waste crime issues associated with 'challenging' waste streams, problem waste operators and illegal waste activities.



Objective 2

To design innovative intelligence-led interventions, and demonstrate how these can be used to tackle waste crime issues and reduce their impacts in targeted areas.



Objective 3

To communicate the project results and learning to others, selling the benefits of the approach in tackling waste crime, and to influence European policy and legislative changes.





Objective 1 To develop and demonstrate innovative intelligence gathering and analytical approaches to identify and understand waste crime issues associated with 'challenging' waste streams, problem waste operators and illegal waste activities.

Innovative tools, approaches and techniques

LIFE SMART Waste developed and piloted a range of analytical tools, approaches and techniques designed to enable environmental regulators to: **predict** emerging criminality in the waste management sector; **detect** potentially problematic waste operators; and **collaborate** effectively to address waste crime.

Predictive analytical tools	Detection tools and techniques	Collaborative tools and techniques
 Horizon scanning	 Remote Sensing	 Intervention group structures
 Competitive behaviours	 Waste flow tracking devices	 Intervention design
 Financial investigation	 Waste flow audits	 Communications Hub
	 Waste crime indicators	 Cross-border flagging database (UK)



Predictive analytical tools

Name	Description	Outputs
<p>Horizon scanning toolkit</p> 	<p>A toolkit to help build an early warning system for emerging waste sector developments and their potential for criminal enterprise. Includes a practical guide that regulatory bodies and their partners can use to:</p> <ul style="list-style-type: none"> • build intelligence about waste crime by gathering, organising and sharing weak signals of change; • create insight into changing criminal behaviours and patterns of crime through assessing, ranking and deepening their understanding of the implications of those weak signals; • work together to research, plan and deliver action to protect consumers and the industry now and in the future. 	<p>Research report Tool Evaluation report</p>
<p>Competitive behaviours toolkit</p> 	<p>A collection of core tools for analysing information from diverse sources to achieve a better understanding of market and/or industry behaviours. Such insights can potentially provide an early indication of threats, challenges, opportunities and changes within waste and recycling markets, highlighting critical vulnerabilities. In addition to improving decision-making processes, this could enhance the ability of regulators to design and implement effective interventions.</p>	<p>Research report Pilot study report Tool Evaluation report</p>
<p>Financial investigation tool</p> 	<p>A two-part screening tool to help identify those operators and activities that need to be subject to a more detailed appraisal as part of the permitting process. The aim of this tool is to help regulators to assess risk by providing additional insights to identify potential or likely future offending by regulated waste operators.</p>	<p>Research report Tool Evaluation report</p>



Detection tools and techniques

Name	Description	Outputs
Remote Sensing techniques 	<p>An investigation of the potential of using Remote Sensing techniques and data for gaining intelligence on illegal waste disposal, such as illegal stockpiling, land application and land-fill. Includes the results and recommendations from three pilot projects (with accompanying tools, workflows and guidance):</p> <ol style="list-style-type: none"> i. Detection of unknown (illegal) waste sites ii. Detection of waste materials iii. Supporting a 'live' operational case 	<p>Research reports Pilot study reports Tool Evaluation report</p>
Waste flow tracking devices 	<p>An assessment of the potential for using electronic tracking devices in innovative ways to follow the movements of different types of waste within Scotland and Wales, considering both practical and legal challenges.</p>	<p>Report</p>
Waste flow audit approach 	<p>An assessment of current barriers to developing a practical 'waste flow audit' approach that would help environmental authorities to locate illegal disposal activity by tracking waste movements, and more specifically leakages, from the point of production to the final destination. Includes recommendations for a digital solution and policy change.</p>	<p>Report</p>
Waste crime indicators toolkit 	<p>A toolkit providing practical indicators of waste crime using simple analysis of waste operator data. The toolkit provides four easy-to-use indicator methods for analysing core information typically collected by environment agencies from waste management operators. The indicators are transferable to environment agency data across Europe and can be adapted to a wide range of potential waste crime enquiries.</p>	<p>Toolkit</p>



Collaborative tools and techniques

Name	Description	Outputs
Intervention group structures 	<p>An overview of common barriers to joint working between agencies – including people, structures and processes – with recommendations for designing effective intervention group partnerships.</p>	<p>Reports</p>
Intervention design manual 	<p>A manual designed to provide environmental authorities in Europe (and beyond) with a framework for choosing and designing interventions, and making intervention agreements with partners.</p>	<p>User manual</p>
Online communications 'Hub' 	<p>An online platform, or 'Hub', for agencies and expert groups to collaborate and share non-sensitive information in secure virtual communities in real-time. Participants in the extended pilot included representatives from: UK environmental regulators (Scottish Environment Protection Agency, Natural Resources Wales, Environment Agency and Northern Ireland Environment Agency); INTERPOL's Pollution Crime Working Group; project beneficiaries; the project's External Steering Group; DEFRA's multi-agency Waste Tracking Service project (UK); and other industry experts.</p>	<p>Pilot</p>
Cross-border flagging database (UK) 	<p>A secure database that facilitates the sharing of Official (Sensitive) intelligence between national agencies, initially within the UK. The database flags if other environmental regulators hold intelligence on entities of mutual interest, related to cross-border movement of waste (e.g. suspected cross border criminals or those suspected of enabling such activity).</p>	<p>Ongoing pilot</p>



Objective 2

To design innovative intelligence-led interventions, and demonstrate how these can be used to tackle waste crime issues and reduce their impacts in targeted areas.

Intelligence gathering

LIFE SMART Waste undertook a range of investigations to fill gaps in current understanding and to generate waste crime intelligence.

Area of investigation	Description	Outputs
Waste industry perceptions of waste crime (Scotland)	A survey of Waste Management industry perceptions of waste crime in Scotland undertaken in 2016 to understand the nature of the problem and to assess its scale.	Investigation report
Waste crime intelligence (Scotland and Wales)	A review of SEPA and NRW waste intelligence for 2015-2016 to identify top priority issues for further investigation and intervention.	Intelligence report
Waste tyre sector vulnerabilities (Scotland)	A study of the Waste Tyres sector in Scotland undertaken in 2017 to identify areas in which the sector is vulnerable to criminal activity. The study is supported with recommendations for measures to mitigate the vulnerabilities identified.	Intelligence report
Illegal cross-border waste haulage (UK)	An assessment of the involvement of waste hauliers in the transportation and depositing of waste at illegal sites (within the UK). The assessment was undertaken in 2018 and is supported by recommendations for further investigations and possible interventions.	Intelligence report
Illegal waste brokerage vulnerabilities	An assessment of the Waste Management industry's vulnerability to illegal activity by unscrupulous waste brokers. The assessment was undertaken in 2019 and is supported by recommendations for changes to legislation, regulatory processes and enforcement practices.	Intelligence report
Criminal impact of (China's) waste import restrictions	An assessment of the threat of waste crime arising as a result of China's foreign waste import restrictions commencing in 2018. The assessment was undertaken in 2020 in collaboration with INTERPOL.	Intelligence report



Intelligence-led interventions

Using insights from the intelligence gathered, and piloting the project's newly-developed [Intervention Design Manual](#), LIFE SMART Waste designed cross-agency interventions to target high priority areas of vulnerability identified within the waste management supply chain.

1. Illegal warehousing of waste (2017-18)	2. Illegal haulage of waste (2018)	3. Illegal waste brokerage (2020)
<p>The project's first cross-agency intervention aimed to 'reduce the incidence of warehousing in waste crime' in Scotland. This recognised the issue of unregulated rented warehouses and farm buildings being exploited for illegal waste disposal activities.</p> <p>The intervention featured an educational campaign targeting both industry and the public. The campaign was implemented in collaboration with a range of partner organisations, including Crimestoppers (Scotland).</p> <p>No new intelligence on illegal warehouses was generated during the intervention. However, the campaign helped to raise awareness of the issue and was a successful application of the project's Interventions Design Manual.</p>	<p>The project's second cross-agency intervention aimed to 'reduce the involvement of hauliers in illegal movements of waste within the UK'.</p> <p>LIFE SMART Waste brought together the Scottish, English, Welsh and Northern Irish environment protection agencies and key enforcement agencies¹ to deliver high-profile road check points and site visits as part of a 'Drive out waste crime' awareness-raising campaign.</p> <p>In addition to raising awareness and attracting widespread media attention, the campaign was endorsed and supported by key UK transport associations, and related industry bodies.</p>	<p>The project's third intervention aimed to reduce the potential for, and incidence of, 'rogue' brokers undertaking illegal waste management activity.</p> <p>In consultation with regulatory- and industry-led expert groups, the intervention design combined both immediate and longer-term (policy change) actions that extend beyond the scheduled life of the project. The intervention bundle includes:</p> <ol style="list-style-type: none"> i. Recommendations for mandatory (digital) waste tracking and licensing changes to improve regulatory oversight of brokers; ii. Auditing registered brokers (Scotland) and collaboration with UK's environmental regulators to enhance regulatory intelligence; iii. Duty of Care campaigns to reinforce regulations and key Stakeholder engagement to improve industry competence.

¹ Police Scotland, British Transport Police, Driver and Vehicle Standards Agency (DVSA), Office of the Traffic Commissioner for Scotland, Her Majesty's Revenue and Customs (HMRC) and the Scottish Business Resilience Centre.



Objective 3

To communicate the project results and learning to others, selling the benefits of the approach in tackling waste crime, and to influence European policy and legislative changes.

Engagement and dissemination

The LIFE SMART Waste focused the project's engagement and dissemination activity on the following key stakeholders groups:

- i. [Enforcement agencies \(and industry\);](#)
- ii. [Policy makers and legislators;](#)
- iii. [Wider stakeholders.](#)

In recognition that the project's technical and policy recommendations would be available towards the end of the project, a three-phase approach to dissemination and stakeholder engagement was undertaken:

- PHASE 1: Awareness-raising (2014 - 2020)
- PHASE 2: Project advocacy (2018 – 2020)
- PHASE 3: After-LIFE advocacy (2020 – 2025)

Tailored messaging evolved to fit the needs and progress of the project during each phase. Initially project aims, key achievements and new initiatives were highlighted to raise awareness. During the 'project advocacy' phase, messaging was developed to reflect the availability of technical outputs and the project's recommendation reports. This advocacy will continue in the project's 'After-LIFE' phase.

Target stakeholders





1. Enforcement agencies & industry

The project engaged extensively with enforcement agencies and industry representatives. This helped the project to scope, develop and pilot intelligence products, capacity-building tools, and intervention design techniques. Key stakeholders included:

- Environmental regulators from EU Member States and regions;
- Enforcement agencies and networks, for example UK police, customs and financial authorities, and INTERPOL and Europol;
- Professional bodies and networks, for example IMPEL² and CIWM³.
- European 'waste crime' projects, for example: EFFACE; TECUM; BlockWaste; DOTCOM Waste; LIFE-ENPE; UK Waste Tracking; and LIFE WasteForce.

2. Policy makers and legislators

Engagement with policy maker and legislator stakeholders focused on representatives of:

- European Commission (DG Environment);
- Non-ministerial departments (UK and Scotland), for example HMRC and Revenue Scotland;
- Local/regional governments, including UK devolved governments.

A range of legislative, policy and tactical recommendations to help tackle and reduce waste crime emerged from the project's findings. These are articulated in summary reports at three levels - European (EU), national (UK) and local (Scotland) – and also listed in the [Recommendations](#) section below.

3. Wider stakeholders

LIFE SMART Waste disseminated project news, publications and recommendations to wider stakeholders throughout Europe and beyond using a range of digital media channels, including a web site, subscriber e-newsletters and social media platforms.

The project also used a range of traditional channels, including media outlets and events. Notably, the project's Final Conference in Brussels (November 2019), successfully brought together 137 delegates representing 62 organisations and 42 countries.

As per the After-LIFE communications plan, project beneficiaries will continue to communicate the project's results and recommendations beyond 2020.

² IMPEL – The European Union Network for the Implementation and Enforcement of Environmental Law

³ CIWM – The Chartered Institution of Wastes Management



Recommendations – Policy and legislative

	Recommendation	Type	Target
1	Develop a mandatory electronic waste tracking system capable of sharing data between EU Member States and the UK (applied by the four UK administrations), including Annex VII notifications ⁴ .	Policy	a. EU Member States b. UK administrations
2	EU should require consistent registration requirements for waste carriers, and as a minimum: <ul style="list-style-type: none"> Decouple waste carrier registration from brokers; Create a tiered approach to authorising waste carriers dependent on the scale and nature of waste carried. 	Legislative	EU Member States
3	EU and UK should require more stringent registration requirements for waste brokers, and as a minimum: <ul style="list-style-type: none"> Decouple broker registration from waste carriers; Identify geographical scope of operations (e.g. domestic and / or trans-frontier activity); Charge an appropriate fee to enable greater regulatory oversight and assessment of Annex VII forms⁴; Renew registration on a specified timescale (e.g. three years) and require completion of an online duty of care technical competence test as part of the application process; Include fit and proper person checks and robust identity verification; Suspend or revoke authorisation due to failure to meet duty of care obligations. 	Policy	a. EU Member States b. UK EPA's c. Scotland (SEPA)
4	Consolidate enforcement best practice, including civil powers, criminal prosecutions and disruptive action (such as seizing vehicles and asset recovery) across the EU.	Legislative	EU Member States
5	Extend Part 3 of the Investigatory Powers Act 2016 to allow all UK environment agencies to acquire communications data when investigating environmental crime.	Legislative	UK Government
6	Amend and develop appropriate legislation to enable SEPA to seize vehicles involved in waste crime, in line with environmental regulators in England and Wales.	Legislative	Scottish Government

⁴ Annex VII of Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste
<https://ec.europa.eu/environment/waste/shipments/index.htm>



Recommendations - Tactical

	Recommendation	Type	Target
1	Environmental regulators apply the Waste Crime Indicators toolkit as a proactive intelligence tool.	Tactical	a. EU Member States b. UK EPA's
2	Environment regulators incorporate LIFE SMART Waste Remote Sensing products to support investigation of illegal waste activity and proactively identify unknown waste sites.	Tactical	a. EU Member States b. UK EPA's
3	EU environmental regulators conduct waste crime strategic assessments to facilitate collaboration on common vulnerabilities.	Tactical	a. EU Member States b. UK EPA's
4	Environmental regulators (and partners) deploy collaborative analytical techniques, such as the Competitive Behaviour toolkit and the Interventions Design Manual, to tackle the causes of waste crime.	Tactical	a. EU Member States b. UK EPA's
5	Develop an Approved Broker Scheme (similar to the security industry accreditation process within the UK) that would award an 'approved status' against independently assessed criteria.	Tactical	a. EU Member States b. UK EPA's
6	Environmental regulators use the Financial Risk Assessment toolkit to screen risk and challenge operators to develop operating cost models to demonstrate financial competency.	Tactical	a. EU Member States b. UK EPA's
7	UK environmental regulators participate in the LIFE SMART Waste Cross-border Flagging Database pilot to improve intelligence exchange across the UK.	Tactical	UK EPA's



Find out more

For further information, or to access the project's reports, tools and training materials, visit the LIFE SMART Waste web site or e-mail us.

Web



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Accessibility

For information on accessing this document in an alternative format or language, please e-mail SEPA:

equalities@sepa.org.uk.

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