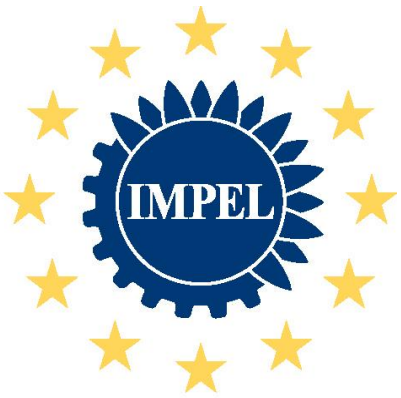

European Union Network for
the Implementation and Enforcement
of Environmental Law

WASTE SITES
Manual

Identification and control of "upstream" storage and treatment facilities used for problematic waste exports

Final version
8 November 2012

Introduction to IMPEL

The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is an international non-profit association of the environmental authorities of EU Member States, acceding and candidate countries as well as EEA countries.

The association is registered under Belgian law and both its legal seat and its Secretariat are in Brussels, Belgium. Currently IMPEL has 45 members from 32 countries including all EU Member States, Croatia, the former Yugoslav Republic of Macedonia, Turkey, Iceland and Norway.

IMPEL was set up in 1992 as an informal network of European regulators and authorities concerned with the implementation and enforcement of environmental law. The network's objective is to create the necessary impetus in the European Union to make progress on ensuring a more effective application of environmental legislation. The core of the IMPEL activities concerns awareness raising, capacity building, peer review, exchange of information and best practices on implementation, international enforcement collaboration as well as promoting and supporting the practicability and enforceability of European environmental legislation. The association undertakes its activities primarily within a project structure.

Currently IMPEL works in three clusters: "Improving permitting, inspection & enforcement" (Cluster 1), "Transfrontier Shipments of Waste (TFS)" (Cluster 2) and "Better regulation (practicability and enforceability)" (Cluster 3). The IMPEL TFS Cluster aims at improving the enforcement of the EU Regulation No 1013/2006 on Shipments of Waste.

Information on the IMPEL Network is also available through its website at: http://www.impel.eu

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Executive summary:

In view of problematic waste streams worldwide, notably of electronic waste, end-of-life vehicles and their components from Europe to Africa, waste shipment experts nowadays agree on the necessity to target more effectively the sources of illegal waste streams and the "upstream" facilities where such waste is collected, stored and/or treated prior to export. The IMPEL-TFS "Waste Sites" project, which started in early 2011, aims at a better understanding of those waste streams and facilities, at an exchange of information and best practices, and at the development of guidance on site identification, inspection and follow-up to promote compliance.

The present Waste Sites Manual is based on the experience of the project team, an analysis of existing guidance documents, questionnaires sent to IMPEL member countries and the results of an expert workshop in Frankfurt a.M. (Germany). It provides an introduction into the economics of the illegal waste trade and the legal context for waste sites, and highlights the importance of proactive measures, such as awareness-raising campaigns and the collaboration with customs authorities, trade associations and shipping lines. Guidance is then given on the identification of problematic waste sites and examples of successful methods used in some EU countries, such as the Waste Stream Approach. The central part of the Manual is devoted to the preparation and execution of site inspections, focusing on inspection methods, necessary information and contacts, distinction of waste and non-waste, and safety aspects. The last chapter of the document addresses the necessary follow-up to a site inspection. The text of the Manual is supplemented by 11 Annexes which include decision trees, checklists, relevant forms, tables of procedural requirements and useful weblinks.

Contents

1 Introduction

1.1 The problem: illegal waste streams and upstream waste sites

According to a recent report for INECE (the International Network for Environmental Compliance and Enforcement), it is estimated that approximately one out of ten containers exported from European seaports is filled with waste of some sort. The coordinated inspection campaigns of IMPEL have shown over the last years that between 10 and 20 % of all waste shipments do not comply with essential rules of EU law (in particular Regulation 1013/2006 on shipments of waste) and thus must be regarded as illegal. Calculating on the basis of an annual worldwide traffic volume of about 150 million loaded TEU containers, one may conclude that at least 1.5 million waste-loaded containers with a market value of several billion US Dollars are shipped illegally each year.

Not all waste, however, is transported in standard containers. As many inspectors in Europe are well aware nowadays, there is a widespread practice of using old cars and vans as makeshift "containers" for so-called used consumer goods that are shipped especially to Africa. On their arrival these goods often turn out to be waste which is then partly dumped, partly recycled with primitive and environmentally unsound methods.

A recent report of the IMPEL-TFS "Enforcement Actions II" project lists the four most frequent categories of waste where violations of waste shipment law occurred in 2008-9 as: paper and cardboard, plastic, metal, and electrical and electronic equipment (WEEE). Other reports at European and national level suggest that WEEE (e-waste) and end-of-life vehicles (ELVs) are probably the most common illegal waste streams from the EU to Eastern Europe, Africa and Asia. The disposal or sub-standard treatment of such wastes causes manifold environmental and health problems in developing countries.

Waste shipment inspections usually take place in seaports and along motorways that serve as major transit routes. Due to the limited resources of inspecting authorities and the vast quantity of waste movements, however, these inspections can only take the form of spot checks targeting far less than 1% of the actual waste streams. They can thus at most have a pinprick effect on the illegal waste trade. This is why experts over the last years increasingly recommend that inspections should concentrate on the "sources" of problematic waste streams or, more precisely, on the "upstream" facilities where the waste is produced, collected, stored and/or treated before the export from Europe.

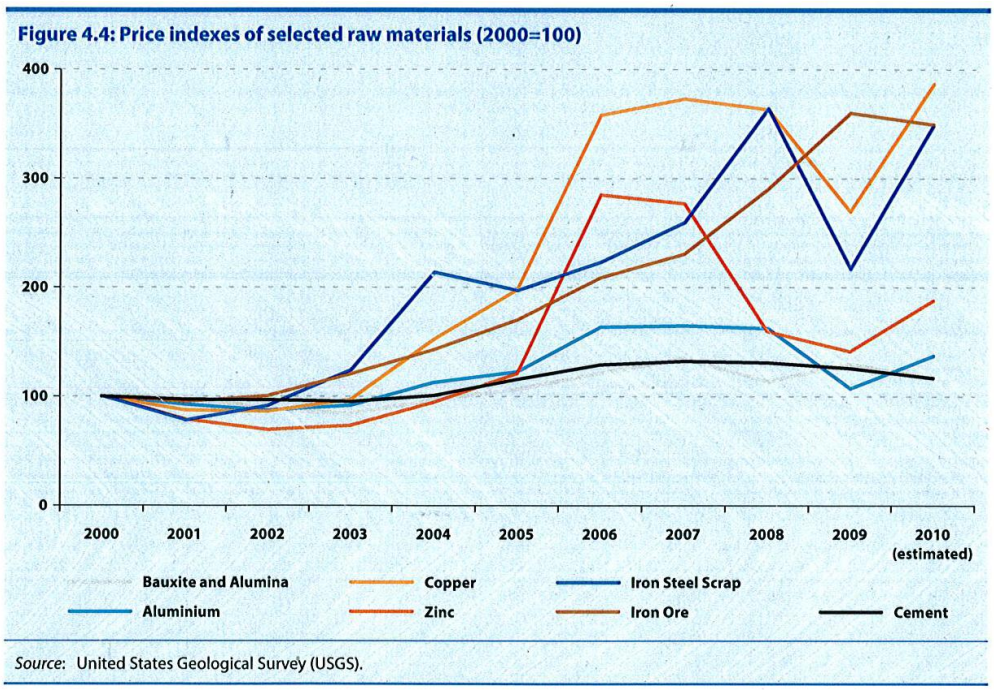
Potential sources of the waste streams in question might be industry as well as product users (business and consumers) and retailers. Users and retailers are especially involved where complete used products which are at or near their end-of-life are taken back and then exported under the label of reusable second-hand goods. Particularly in the case of WEEE and ELVs, manufacturers or licensed recycling facilities figure rarely nowadays as a source of illegal waste exports. More frequent in this context are small-scale recyclers who break up cars or other large appliances and export the more or less valuable components. These operators usually have no official license and often a criminal background. Waste sites involved in illegal shipments are thus– at least according to experience in Northern and Central Europe – mostly storage and collection points rather than industrial production and treatment facilities. In some cases (notably in the UK), however, sorting and recycling facilities for mixed household waste also proved to be sources of illegal traffic to destinations in Asia. These facilities must therefore not be neglected, even though the primary focus of this Handbook will be on a different type of "waste site".

Site-oriented policing measures have various advantages in comparison to transport inspections: They target local and regional hubs of the waste trade instead of accidentally intercepting individual shipments, they involve larger quantities of the waste, and they are more likely to uncover the underlying structure of the business behind illegal exports. On the basis of these assumptions, the "Waste Sites Manual" will try to offer useful advice on the identification and inspection of the facilities involved as well as measures to ensure future compliance of their operators with waste shipment rules.

1.2 Economics of the waste trade and illegal traffic

According to a study published by the European Environment Agency in 2009 ("Waste without borders in the EU? Transboundary shipments of waste"), the waste trade has grown considerably since the 1990s. In particular the export of paper, plastic and metal waste from the EU to the Far East increased by a factor of five to eleven in the first decade of the 21st century. This growth was and still is fuelled by the booming economy of China and other emerging Asian countries where the wastes are mostly used as secondary raw materials and recycled in industrial processes.

Shipments of hazardous and non-hazardous waste have also increased within the EU, but at a much lower level. The requirements of recent EU legislation to recycle a certain minimum percentage of different waste types provide incentives for transboundary shipments as recycling often needs either a specific technology or a critical quantity of waste to make it profitable. The legal requirements also have led to growing amounts of recyclable waste materials on the market. This development was and is supported by the rising prices of raw materials, especially metals such as iron or copper, which are in turn a consequence of the growing demand for such materials in Asia. The price rises were reversed for a time during the world economic crisis of 2008-9 but have picked up again since.



(From: European Competitiveness Report 2011, p. 114)

A somewhat different waste stream has developed between Europe and Africa. Here materials are exported from the EU mostly under the label of "used consumer goods", to which the Waste Shipment Regulation and the ban on exports of hazardous waste do not apply. While some of the materials in question – the exact quota is controversial and fluctuating – still have a market value as functioning products, others are destroyed and dismantled in order to extract the more valuable raw materials, usually with primitive and environmentally harmful methods.

The market driver behind these and other waste shipments is generally the chance of profit that is to be made out of higher prices paid for the waste, the raw material or product in the importing country, or the lower costs of recycling or waste disposal at the destination, as compared with the country of origin. The bigger the difference of prices or costs, the stronger is the incentive to carry out the waste shipment regardless of legal prohibitions or restrictions. Other factors contributing to illegal waste trade may be the poverty and lack of environmental awareness among protagonists and a low risk of detection and punishment: Where it is very unlikely that illegal waste shipments will be sanctioned, this can become a widespread practice even if profits are relatively marginal.

Research conducted in various countries (e.g. UK and Germany) shows the working of these economic mechanisms in the case of e-waste export. The Interpol report "Electronic waste and organized crime" of 2009 refers to a study by the Environment Agency of England and Wales and the report of the IMPEL Seaport project and summarizes (p. 14): "This research indicates that there are substantial profits to be made in the re-sale of e-waste. Much of it can be acquired at little or no cost to the exporter. Second-hand computers can sell for between £50 and £200, depending on specification, in some developing nations. … In Holland brokers can buy televisions from shops for €4-5 each, then sell them on in Africa for around €5 profit per piece. Generally e-waste can produce returns of around € 450/tonne…"

Waste-related crime often also has a link to corruption (at various levels) and with "white collar" and/or organized crime. Many different organized groups within the EU have broadened their range of activities and are now engaged in environmental crime too. For the

moment more information is needed in order to fill the intelligence gaps on the extent to which organized crime is involved. Apart from this, the above-mentioned Interpol report of 2009 also notes that illicit waste trafficking can be run in cooperation with legitimate business, including those in the financial services, import/export, and metal recycling sectors. As Dutch agencies discovered, in some cases all companies in a given sector may be involved in illegal e-waste export, whether they are aware of it or not.

For the moment, different types of "stakeholders" may be distinguished in illicit waste trafficking. On the one hand – though at present apparently less widespread - there are mafia-type hierarchical organizations with strong criminal potential which carry out illegal disposal of hazardous and other waste in some parts of Europe, notably in Southern Italy. On the other hand, many smaller and rather loosely-structured groups all over Europe are engaged in collecting WEEE, end-of-life vehicles, lead acid batteries, metal scrap and other wastes in an irregular way – bypassing the established collection systems and sometimes committing outright theft - and shipping them to non-EU countries. Often the members of those groups are of non-European origin and form networks with compatriots based in their respective homelands (in the case of e-waste, for example, frequently in West African countries like Ghana and Nigeria). Such nationally affiliated groups may specialize on a certain market niche and type of waste but, like other market actors, may also swiftly react to changing conditions in the EU and the countries of destination. It is also noted that established groups organizing certain types of shipments disperse under pressure to form new groups.

1.3 The legal context for waste sites

1.3.1 Permit requirements and exemptions

Under Article 23(1) of Directive 2008/98/EC on waste (the "Waste Framework Directive", "WFD"), Member States shall require any establishment or undertaking intending to carry out waste treatment to obtain a permit from the competent authority. Waste "treatment" is defined in Art. 3(14) WFD as "recovery or disposal operations, including preparation prior to recovery or disposal". This again refers to the operations listed in Annexes I and II to the Directive; it includes therefore "storage" pending any of the operations numbered D 1 to D 14 and R 1 to R 12, respectively, except temporary storage before collection on the site where the waste is produced (cf. nos. D 15 and R 13 of the said Annexes).

According to Article 24 WFD, however, Member States may exempt from the permit requirement establishments or undertakings if they perform waste recovery or if they dispose of their own non-hazardous waste at the place of production. Where a Member State allows exemptions, it has to lay down, in respect of each activity for which exemptions are granted, general rules specifying the types and quantities of waste that may be covered by an exemption, and the method of treatment to be used (Art. 25.1 WFD). Special rules apply to exemptions relating to hazardous waste, and all exemption rules have to be notified to the Commission (Art. 25.2 and 3 WFD).

Where permit requirements do not exist, Member States have to provide for a registration system, i.e. the competent authority has to keep a register of (a) establishments or undertakings which collect or transport waste on a professional basis, (b) dealers or brokers; and (c) establishments or undertakings which are subject to exemptions from the permit requirements (Art. 26 WFD).

The details on permit requirements and exemptions for waste management facilities are thus laid down in national law and can vary widely. In Germany, for instance, it is basically production facilities and bigger storage and dismantling facilities for waste which need a

license under the Federal Emission Control Act (*BImSchG*). The minimum storage capacity in this context is currently 30 t of hazardous waste or 100 t of non-hazardous waste; for scrap/ELVs the licensing requirement is coupled to a storage area of 1,000 m² or more. The minimum level for treatment facilities is a throughput performance of 1 t/d for hazardous waste and 10 t/d for other waste; for ELVs it is 5 cars per week. Facilities where long-term storage (> 1 year) takes place require a *BImSchG* license regardless of capacity. Facilities below the minimum thresholds may need a building permit if they involve the construction or conversion of a house.

Similarly, in Sweden only major production, sorting and recycling facilities generally need a permit. Smaller facilities have to notify their activities to the local enforcement authority (the municipality). Very small facilities dealing with waste are exempted from both obligations.

In Slovenia, on the other hand, all waste recycling or disposal facilities need an environmental permit issued by the Environmental Agency. Collectors, traders, brokers and carriers of waste have to register with that agency which issues certificates of registration.

The situation is similar in Latvia. In the Netherlands likewise, all waste sites need an environmental licence which is issued, as a rule, by the provincial authorities.

In the UK, all sites handling waste require some sort of permit or waste management licence. However, those sites that undertake simple or low risk waste activites with relatively small quantities of waste may register an exemption.

1.3.2 Inspection and monitoring

According to Article 34(1) WFD, establishments or undertakings which carry out waste treatment operations, establishments or undertakings which collect or transport waste on a professional basis, brokers and dealers, and establishments or undertakings which produce hazardous waste shall be subject to appropriate periodic inspections by the competent authorities. Article 34(2) of the same Directive emphasizes that inspections concerning collection and transport operations shall cover the origin, nature, quantity and destination of the waste collected and transported.

A general obligation to inspect facilities is also contained in Article 50(2) and (3) of Regulation (EC) No 1013/2006 on shipments of waste ("Waste Shipment Regulation", "WSR"). According to para. 2 of this article, Member States shall, by way of measures for the enforcement of the WSR, provide, *inter alia*, for inspections of establishments and undertakings in accordance with the WFD and for spot checks on waste shipments or on the related recovery or disposal. Under Art. 50(3), checks on shipments may take place in particular, among others, at the point of origin, carried out with the producer, holder or notifier.

Details about the frequency of inspections are laid down in Article 23(4) of Directive 2010/75/EU on industrial emissions ("IED") for installations to which that Directive applies. This is the case e.g. for hazardous waste management facilities with a capacity exceeding 10 tonnes per day, waste disposal facilities with a capacity exceeding 50 tonnes per day, or certain treatment facilities for the recovery of non-hazardous waste with a capacity exceeding 75 tonnes per day (cf. nos 5.1 and 5.3 of Annex I IED). Storage facilities are only covered by the IED where long-term storage takes place (landfills in the sense of the EU Landfill Directive) or the storage concerns hazardous waste with a capacity exceeding 50 tonnes (cf. no. 5.5 of Annex I IED).

This means that, as a rule, the waste sites relevant for this Handbook will not be covered by the IED and its rules for inspection and monitoring of installations.

In contrast to this, Recommendation 2001/331/EC providing for minimum criteria for environmental inspections in the Member States ("RMCEI") applies to all companies and facilities subject to authorization, permit or licensing requirements, but is in itself not legally binding. Until the envisaged revision of the RMCEI, which may lead to binding rules at EU level, the concrete details of inspections will therefore depend largely on national law or, more often, on non-binding administrative guidelines.

1.3.3 Environmental policy and implementation

As a rule of thumb, each Member State will have specified which administrative body has the competence regarding permitting and enforcement of waste sites. This competence may be appointed at different levels, ranging from federal, national, regional, provincial or county to the local level. Types of companies and their activities may be identified according to parameters such as company size, financial or physical turnover, environmental impact or others. Based on this identification, the company operators will have to refer to a specific administrative body to acquire a permit or to undergo an inspection.

At the applicable administrative level, choices need to be made how to address the different environmental risks in different fields, such as water pollution, soil pollution, noise production, resulting from different (human) activities. Waste sites and their activities will be only one of many risk factors that need to be targeted.

By balancing legal obligations, risk assessments, policy preferences and practical limitations a so called 'environmental policy' or 'environmental implementation plan' will usually be formulated. A further elaboration of such a document may result in an 'inspection plan', specifying the choices made regarding the different type of environmental inspections that will be carried out.

One more step of elaboration will lead to actual inspection schedules, covering a specific geographical area, a specific time frame and a specific type of environmental inspection.

The IMPEL guidance book "Doing The Right Things in Waste Shipment Inspections (DTRT-TFS), finalized in autumn 2012 and available on the IMPEL website, gives detailed information on the so called environmental inspection cycle, including the use of risk assessments. This document mentions the supply of 'guidance and equipment' as part of the inspection cycle. This "Waste Site Manual' may be seen as a guidance document in this respect.

Legal context

- Waste treatment facilities, as a rule, need a permit under the Waste Framework Directive. Beyond that, establishments and undertakings, dealers and brokers have to be registered. Details are laid down in national law.
- Waste Framework Directive and Waste Shipment Regulation prescribe inspections of establishments and undertakings for waste treatment, collection and transport. More stringent rules apply for big installations under the Industrial Emissions Directive.
- For other waste sites, inspection planning is a matter of national law and environmental policy. Apart from Recommendations at EU level (RMCEI), there is a large body of guidance available, also in IMPEL reports and manuals.

1.4 Proactive measures, collaboration and public relations

1.4.1 Information campaigns, awareness-raising

There is increasing interest in the EU Member States in using complementary interventions alongside traditional methods (such as environmental inspections) to improve the implementation and compliance of environmental legislation and deliver better environmental outcomes. In 2011-2012, **IMPEL projects** were therefore carried out under the title "Exploring the use and effectiveness of complementary approaches to inspection for ensuring compliance" and "Choosing appropriate interventions alongside inspections to ensure compliance and achieve environmental outcomes", respectively.

One important line of action in the field of waste management, especially where WEEE, end-of-life vehicles and other wastes from private consumers are concerned, is to organize **information campaigns**, in which public awareness about the problem of illegal waste shipments and their impacts on human health and the environment especially in developing countries is raised. The campaign could, for instance, take the form of regular press statements, series of articles in newspapers, contributions to Open Day exhibitions, thematic events organized by the environmental authority itself, or if more funds are available, mass distribution of information leaflets to households, poster campaigns, TV and radio spots. To achieve more practical effect, the campaign should include precise information about the legitimate paths for waste disposal. In this context it may be useful to cooperate closely with the municipality or other body that is responsible for waste management in the area.

An example of a visual document which might be used for awareness-raising is the recent film "e-wasteland" by David Fedele which shows the primitive practices of WEEE treatment and the impacts on health and environment in Ghana (West Africa). The film is available from the author via the website http://www.e-wastelandfilm.com, a videoclip can be found on YouTube at http://www.youtube.com/watch?v=t_qnwinG0ZA. For other materials, cooperation with specialized NGOs like the Basel Action Network (BAN) might be helpful; see e.g. a list of their reports at http://www.ban.org/library-page/#reports.

A more targeted form of proactive information would be to address **traders and site operators** directly, in so far as they are known to the inspection authority. Some Member State authorities (e.g. in the UK) had good experiences with inviting key stakeholders to a meeting where they were informed about the legal situation and warned of the consequences that illegal activities would have.

1.4.2 Collaboration with trade associations and shipping lines

An important element in a proactive strategy to combat illegal waste exports at source is to get the **support of the major players** in the market. Especially the industry associations concerned with waste management, take-back of end-of-life products, export trade and shipping have a role to play in preventing and reducing illegal traffic. The same can be said of major retailers who sell and take back e.g. electrical and electronic equipment, as well as big carriers and shipping lines who transport goods on the road and at sea. Governments and waste authorities should therefore establish contacts with the relevant business associations and major companies and discuss with them how to stop "leakages" in the chain of proper waste management and improve the fight against the illegal waste trade. Such talks are also useful to get a first-hand **knowledge** of current developments in the market. On the other hand, the regulatory authority can also provide information about the current law and its interpretation, raise awareness about environmental and health risks and give ad-

vice in procedural matters. In the end, collaboration with trade associations and companies should serve to make it as straightforward as possible for business to comply, while rendering enforcement against criminals and freeloaders who distort the level playing field more effective.

It may be beneficial to operate a system of **account management** for the major waste management companies and trade associations that are involved in transfrontier waste movements. This could involve a regulator's high level manager acting as a high level point of contact for each company or trade association and meet with their directors on a regular basis. This would help to develop a business-like relationship with the directors to reduce environmental impact, improve compliance, identify good practice, provide information and understand what they want from us.

Shipping lines are typically used when waste is moved across international borders in accordance with the WSR. Collaboration between shipping lines and authorities is to some extent necessary, as any person who wants to ship certain goods or wastes must notify the relevant regulators in the exporting, receiving and intermediary countries.

Best practice: UK collaboration with shipping lines

A striking example for successful collaboration with business is the work of the Environment Agency of England and Wales (EA) with shipping lines involved in exports from the UK.

Some years ago, prompted by scandals about container-loads of mixed household waste from the UK which were discovered in various Asian countries, the EA started to work with shipping lines. At first, this was done by serving notice on the 20 or so main companies to gain historical shipping data and in order to trace illegal containers back to the site they came from. The companies nowadays return 80-100k lines of data each month and each line may detail multiple container loads.

During 2010 the EA gathered intelligence on 119 sites suspected of exporting waste illegally. This resulted in 103 container inspections of which 60 were either stopped and held for prosecution or returned to the site of loading for regulated disposal.

As a result of training from the EA on waste and waste exports, shipping lines now refuse bookings from problematic sites and unlicensed facilities. The amount of illegal waste shipments from the UK intercepted in non-EU countries has greatly diminished recently. Still, illegal traffic remains a challenge and serious problems have to be faced: The extent of the waste trade is vast and unaccountable as the EA is not informed every time a shipping line rejects a booking. Some stop notices were served but current restrictions on publishing that information limit the effectiveness of the instrument. Shipping lines do not share data with each other so illegal exporters can move with impunity between them. This often results in the shipping lines accumulating huge debts and being left to pay for the disposal of illegal waste loads.

Generally speaking, when a company is not directly involved in the shipment at hand and/or it has a very good compliance track record, there is no necessity for this company to collaborate with the authorities. Therefore a clear incentive will be needed for it to do so. Such incentives could be the decreased risk of being held partly responsible for an illegal shipment, less frequent transport inspections, better image regarding corporate responsibility, etc. When you, as a government representative would enter into negotiations with a commercial party, it may be good to discuss these aforementioned incentives explicitly.

The process to reach a structural form of collaboration with a private party may be schematized as follows:

- **Inventory phase:** identify a suitable company to collaborate with. Which company plays a crucial role? Which company has access to information that your agency has not? What is the compliance track record of the envisaged company?
- **Negotiation phase:** discuss and agree on the possible areas of collaboration. Discuss the benefits that each party expects from the collaboration, discuss what information will be exchanged, in which form, at which frequency, etc. etc.
- **Formalization phase**: agree on a MoU or enter into another type of agreement, for example an enforcement covenant.

A specific problem identified recently in the UK (but also in other countries) is exemptions from permitting which may facilitate illegal waste exports. This is because under UK law they are not regulated so strongly as permitted sites and hence can provide a veil of legality under which an exporter can hide. Shipping companies thus often believe that sites with exemptions are licensed by the Environment Agency.

1.4.3 Cooperation with other authorities

Successful cooperation also with other state and local authorities can significantly improve the efficiency of both legal and illegal waste sites inspections. In particular, it is vital for environmental authorities to cooperate with police, customs and revenue service, as well as municipal authorities. Depending on the case, also the help of building, health, port and immigration authorities or even government benefit offices might be useful. Each of those agencies has a different field of expertise, legal rights, knowledge and equipment, and combining all these resources can make the fight against illegal activities more effective. This is all the more so since the activities in question frequently include not only non-licensed waste management operations but also thefts and organized crime (e.g. money laundering).

Cooperation with the police

Cooperation with the police (both municipal and state police) is important in discovering illegal sites and also in inspections where the safety of inspectors is a major concern. Depending on national law, the police might be the only authority with the power to stop vehicles and to search and arrest persons on site. This might be important when operators, staff or customers of an illegal site are trying to run away or trucks loaded for illegal waste shipments are leaving the waste site. Besides, police powers will be required if the site operator resists closing orders or prohibitions issued by the inspection authority.

Cooperation with the tax and revenue service

Environmental inspectors can easily assess and evaluate waste management activities ongoing on the inspected site, especially when records on waste amount, suppliers and destinations are available. When such information is not available and the scale of illegal activity is not certain, when waste shipments are carried out without any documents or only accounting documents are present on site, the support and expertise of the tax and revenue service might be crucial in order to track down the persons involved. This is in particular due to the fact that the revenue service (also some police units) can check money transfers. Typically, operators of illegal waste sites do not pay taxes and illegally employ persons, so if this is done together with violations of environmental law a complex approach is essential.

Cooperation with customs

Cooperation with customs is important in the collection of information about shipments of waste or used goods from and to the EU since customs has extensive declaration systems under which traders have to register the amount and type of any goods they want to export or import, the loading points and the responsible persons involved. Furthermore, customs also has the power to stop vehicles and open sealed containers.

There are a lot of benefits to be derived from cooperation with different authorities but they become accessible, as a rule, only after establishing a framework of cooperation and common understanding (e.g. by a Memorandum of Understanding, MoU) on the importance of inspections and of a coordinated approach regarding illegal waste sites. Although personal contacts are vital for swift interaction, the formal "MoU" level should not be neglected if one wants to ensure a stable inter-agency relationship in the longer term.
It is up to each environmental inspectorate how to move towards successful cooperation but some of the crucial aspects to consider are common training programs, information exchange guidelines and a legal framework with clear delimitation of competences and strong powers for immediate enforcement. Besides, any MoU should address the question in how far sensitive data are to be shared between different authorities.

Coordinating inspections between supervisory authorities in Slovenia

2 Identification of problematic waste sites

2.1 Information sources

An important key to success is good research work. It usually takes place in several stages, starting with the beginning of every file. The depth of the research is depending on personal resources.

First step for the targeted search is creating a precise, constantly supplemented **search profile** ("mind map"):

- What exactly is searched? (What or whom do I look for? What do I want to find out?)
- Description of the problem, facts, information, relevant actors and institutions around the desired subject area (legal bases? Responsibilities? Associations? Stakeholders? Experts / expert meetings? Official reports? Media and scientific information?)
- Whom do I need to talk to? (See chapter 3.2 below.)
- Which concepts, terms and characteristic keywords do I need for an in-depth research (possibly with appropriate related or synonymous terms)?

Second comes the decision which media are suitable for the search and with which to begin (where can I find best what I seek?). Ultimately, a combination of different media and searching steps is normally the most successful approach.

Thirdly, the information found in this process must be evaluated, especially checked for its topicality and accuracy and verified as far as possible.
Particularly in case of criminal activities it will be necessary to check the legal usability of the data with regard to confidentiality, privacy and copyrights.

2.1.1 Digital information

An increasingly important research tool for finding unknown waste sites, operators and their networks is the internet with its services.

The **e-mail addresses** of persons and companies (e.g. smith.demolition@..., trash.fred@..., carexport@..., @frigotrade...) can give helpful hints to their background.

Other useful information can be derived from **internet presentations** (homepages) of companies and private individuals, e.g. the exact address, legal form of a company, its representative(s), commercial register number and tax number, the company object, often also the inner organization and other details. However, the more a company is involved in illegal activities the less substantial information it will give on its website. The lack of an imprint, of address details and VAT ID number should raise suspicion. In case of a missing VAT ID number the tax office should be informed.

If the **internet address is unknown**, one can try to find it directly via www.google.com by entering a name or central keyword and using Google`s **„I`m feeling lucky"- button.**

If that does not produce the desired result and for any further search in the world wide web in general, **helping tools** should be used. The best known and usually first used is a **full text search engine** (e.g. Google, Yahoo). Because different search engines deliver different results it may be advisable to try several ones. The use of different **search technolo-**

gies (e.g. Google function "advanced search", avoiding general words, combined search) provides further help.

If the number of hits is too low **meta-search engines** (e.g. MetaGer) can bring more results. If the number of hits is too high the results can be limited with the help of **special search engines** (e.g. yasni, bloglines) which have specialized themselves on certain contents, for example information from a certain source or on certain subjects or persons.

Ranking principles help to evaluate the information according to its relevance. It should of course be noted that search engines do not deliver verified information. Therefore the information may be incomplete, outdated, wrong, deliberately distorted or not completely traceable. For verification e.g. a data comparison with other authorities can help. If possible, it saves time to establish direct online access to the internal databases of other authorities. In addition, one can make use of a catalogue.

The results in **catalogues** (including telephone books, e.g. "yellowpages", or forums like www.alibaba.com) are to some extent quality-checked. If one needs qualified information, e.g. an overview of suppliers, branches or competitors of a given company, catalogues are thus suitable searching tools. Especially the reverse search is helpful to find companies or people by a known telephone number or address.

For the search of people and their background **communities** (e.g. Facebook) **and chats** (e.g. Twitter) are nowadays good helping tools. To gain full access it may be necessary for an inspection authority to select members of its staff as "representatives" in such communities.

ELV waste site in the North of Sweden

2.1.2 Other information sources

Apart from the internet, information about unknown storage and loading points or other waste sites will often come from "conventional" sources, such as **advertising flyers** of the site itself, from **police reports** or **complaints** by neighbours and competitors. As regular **patrols** by the inspection authority will normally be too costly, it might be more practicable to make arrangements with local police forces which do carry out such patrols of "suspicious" areas, and instruct them on the type of sites and activities to look out for. In some countries (e.g. in the area of Frankfurt, Germany) surveillance flights by police helicopters have proved to be an effective means of detecting illegal waste management facilities, at least if they include larger open storage areas.

Indications of problematic waste sites which are used especially for the collection, storage and treatment of WEEE and end-of-life vehicles before their export outside the EU can often be found in the advertisement section of **newspapers, trade papers and free newspapers**, but also in leaflets and advertising flyers. Conspicuous names and activities of site operators or information about certain properties may be reported in press articles.

Once the location of a waste site is known, **announced and not announced site visits** are usually the best source of information. The main advantage of a non-announced site visit is that the operator has little chance of hiding things, e.g. of removing the waste from the premises before the inspection, and can be caught in the act. An advantage of announced site visits is that the inspector gets access to everything, also e.g. to locked rooms, and that she/he can ask questions in a **personal conversation with the manager** and the staff of the facility**.** Also a telephone conversation can provide valuable information, while correspondence is in general less productive, because the answer of the site operator will be well-considered. On the site and as long as the inspector does not have a full view of the situation, it is wise not to interrupt the other person's flow of speech, even when he seems to tell his whole life story. A hasty speech may contain valuable information, also hidden between the lines. Appropriate questions to the operator, by contrast, should be put with consideration and without disclosing too much of the desired information. In an informal conversation the operator will often provide also hints to or even names of other illegal waste sites, because he finds it unfair that he was caught while competitors seem to get away unharmed.

When the operator of an illegal waste site is unknown, it is the **property owner** who can be held liable for the situation under the law of most countries, and whom the inspector might approach for more information. The owner usually knows the site operator and, if faced with full liability, is likely to disclose his identity and put pressure on him to remedy the situation. **Other stakeholders,** e.g. **neighbours, competitors** and **environmental NGOs,** often know important details and are in general ready to talk.

Apart from that, useful information may be derived also from **public databases and other authorities.** With geographical data e.g. the exact location of a site can be determined. From the land register, which exists in most countries, the property owner can be found out. Information about the operator of a waste site might be available from the trade register and residents register. If the waste storage or treatment takes place in or around buildings, the municipal or other building authority should be able to provide information about the building permit.

Besides, information derived from other sources can often be verified by those authorities. It is useful also to maintain a steady telephonic and personal contact with colleagues who have similar or overlapping competences.

Other important sources of information can be found through **business associations, chambers of commerce and interest groups** in which most manufacturers, trading companies and other actors are organized. Relevant for the waste sites in question might be especially the associations of waste recyclers, WEEE collectors (e.g. the WEEE Forum, http://www.weee-forum.org/), tyre manufacturers and automotive recyclers (e.g. http://www.egaranet.org/).

For more advice on the necessary information when preparing an inspection see below chapter 3.1.

Research in general

- The depth of research is proportional to personal resources.
- Best results are obtained by
  - combining different information sources and methods,
  - cross–checking and evaluating the results,
  - constantly monitoring the found information and
  - searching stepwise for more or more precise information.

Research of unknown waste sites, operators, connected networks

- More and more information is available via internet, especially concerning waste recycling and trading companies who offer their services to the public. This can supplement traditional information sources on illegal waste sites.
- In order to detect unknown sites, cooperation with local police forces is vital. Other important information may come from local authorities, neighbours, competitors and environmental NGOs.
- Site visits are essential to establish the facts of the case. Both unannounced and announced visits have their advantages.

2.2 Examples of methodologies: Waste Stream Approach and intelligence-led approach

As a consequence of the increasing complexity of waste flows, with more waste now going to recovery instead of landfills, it is necessary to gain an understanding of waste streams as a whole and not just inspect and assess compliance at permitted waste management facilities.

A **Waste Stream Approach** looks at:

- the quality and quantity of input and output at collection, storage and treatment facilities;
- where different waste streams go;
- what happens to waste streams when they get to their destination, for example treatment and processing.

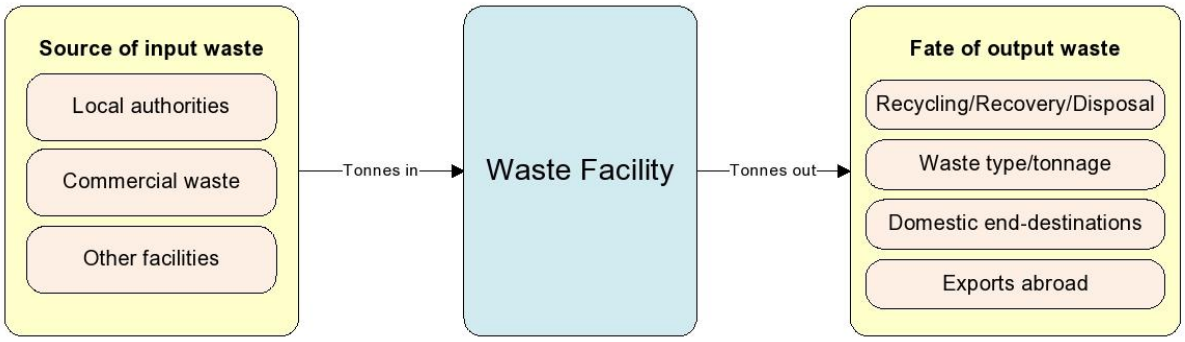
This approach is particularly appropriate for wastes destined for recycling as it will enable assessing the quality of the source waste material. Often these materials may be of a poor quality or contaminated with other waste streams. Poor quality material waste is difficult to process and the outputs are often not of a high enough quality to be used by reprocessors. As a result, these materials are sent to secondary waste sites for further sorting or alternatively could end up being illegally exported as Green List waste.

It is in every Member State's interest therefore to improve everyday practices at waste sites and thereby the quality of the material outputs they generate, and to ensure these activities do not have a harmful effect on human health and the environment. That includes effects on the local neighbourhood but also on other Member States or countries outside the EU to which the material is exported. For examples of waste-flow maps or diagrams see above page 8 and below **Annex 2.**

A Waste Stream Approach for waste going for recycling could consist of the following steps:

- Waste stream audit worksheets that enable officers to record details of waste inputs and outputs at sites. These could record responses to questions regarding possible contamination of waste site outputs.
- Following audits, the information collected is reviewed to establish if any interventions can improve the quality of the waste site's output.
- If there is evidence to suggest that any of the output waste streams are contaminated, we track these waste streams to their next destination, in order to ensure in particular that the waste is not illegally exported or sorted at an uncontrolled site.

Data quality is of critical importance to ensure confidence. Unless there is a data collection system in place to specifically monitor waste flows, a State will typically rely on the best available evidence that existing data systems can provide. The full waste–flow analysis in **Annex 2** indicates the basic data sets that should be gained, i.e. data from waste shipment notifications, from local authorities for municipal waste and data that is sent to regulators from permitted sites. Collected data may need to be verified, particularly where cross-referencing of data sets indicated weakness. In such cases it may be necessary to check weighbridge tickets as part of a site audit to confirm accurate waste inputs and outputs. Other data quality checks may be needed to ensure that data is fit for the purpose.



'Simplified Waste-Flow Diagram' as used for material recycling facilities in the UK. – 'Other facilities' may include special sites for WEEE and ELVs. A more detailed version of this diagram is to be found in **Annex 2**.

Case study: WEEE exports from the UK

The waste stream

Waste electrical and electronic equipment (WEEE) is currently the fastest growing waste stream in the EU. According to research quoted in the Ökopol study "Transboundary shipment of waste electrical and electronic equipment / electronic scrap – Optimization of material flows and control" (p. 23), the average WEEE volume per inhabitant and year was estimated at 16 to 18 kg per year in the "old" EU Member States (EU-15) before 2007. In Germany alone, therefore, the WEEE volume could be calculated at approximately 1.3-1.5 million tonnes per year, of which only 750,000 t, however, was collected and treated in accordance with the WEEE Directive. Similar figures can be found for the UK. Due to shorter innovation cycles of mobile phones and other electronic products, the amount of e-waste may have further increased in the last few years.

The problem

One area of concern is the illegal export of WEEE to far eastern and African countries. In those destinations WEEE such as old televisions, computers and monitors is broken up and burned to recover valuable metals, which are then sold into metals recycling markets. The recovered metals often end up in China and some European countries. However, the environmental and health impacts on workers in the industry and neighbouring communities have led to complaints by governments of destination countries such as China and India. This resulted in the European Commission requesting that Member States do more to prevent illegal exports of WEEE and improve compliance with the EC Waste Shipment Regulation. This case study describes the work carried out in a DEFRA-funded project that the Environment Agency (EA) of England and Wales is running, in which new ways of dealing with the illegal waste export problem are being developed.

Intelligence-led approach

In order to understand how illegal WEEE exports occur, an EA intelligence team was tasked with building a picture of the e-waste market in England and Wales. Internally, analysis by their International Waste Shipments team and government shipping data were helpful in identifying which countries of destination were targeted most by exporters of illegal shipments. The objects of these allegedly non-waste shipments were frequently described as low value electrical goods.

Working with external organizations, including shipping lines, legitimate waste companies and e-waste recycling companies, it was possible to identify how e-waste produced from local authority collections at civic amenity sites and wastes disposed of by the public sector and private companies were moving out of the legal waste chain into the illegal export market.

Intelligence products

From the initial intelligence picture, it was clear that there were gaps in knowledge. It was necessary to develop further intelligence about the amounts of waste being illegally exported, the sources of those exports and the people who were involved in exporting the waste. This required tasking field intelligence officers to investigate specific sites and operators, and work with local operational teams to fill the intelligence gaps.

Once this was achieved it became apparent that a significant amount of e-waste was being exported through a highly organized network of foreign exporters who were sourcing the

waste in a number of ways. These included posing as recycling companies, stealing e-waste from legitimate local authority collection systems and buying e-waste at low cost from small operators, who often were running illegal collection sites and sometimes posing as charities.

It was also clear that national WEEE compliance schemes were open to theft because local authority producers and treatment sites did not know how much waste was in the legal waste chain at any specific time. This meant stealing some of the waste (in one case as much as 50 per cent) for the illegal export market went undetected.

Working in partnership

In developing the intelligence picture and the tactics necessary to prevent, disrupt and stop illegal WEEE exports, the EA worked with a number of partners. These included the shipping lines and their agents, the police, local authorities and central government, and the environmental agencies for Scotland and Northern Ireland.

The interventions included the use of stop and prohibition notices for shipments in transit or about to be shipped; disruptive joint site raids involving police, government, local authorities and the Borders Agency; and arrests of company directors and key players in the illegal export market, with a view to prosecution and recovering proceeds of crime.

Benefits and outcomes

- Comprehensive picture of the illegal waste exports market;
- Partnerships with other enforcement bodies to combat organised crime;
- Shipping lines taking responsibility for turning away potentially illegal shipments;
- Evidence to encourage WEEE producers to take greater care with its collection and disposal;
- Formal partnerships with international bodies including the Netherlands regulator VROM (now ILT), IMPEL and Interpol;
- Several hundred containers of WEEE prevented from being exported illegally;
- 10 cases for prosecution;
- Recognition that to effectively tackle international waste crime, the agency needs to use its resources flexibly and coordinate their deployment centrally, as organised criminals operate over operational and geographic boundaries.

3 Site inspection (preparation and execution)

3.1 Objective of a waste site inspection

3.1.1 General objectives of a site inspection

The primary purpose of a waste site inspection is to check if the environmental and management controls to prevent pollution of the environment are effective, both at the actual site and any other site, whether legal or illegal, that may be involved in waste shipments to or from the actual site. Where the facility in question is licensed the inspector will focus on whether its operation is fully compliant with the permit and/or any directly applicable legislation, especially the WSR. Full compliance with a permit may not, however, guarantee that there are no environmental problems, so those aspects of the site's operations that could affect environmental receptors should also be checked.

Sites involved with transfrontier shipments may also be illegal, either by operating without any necessary environmental permit at all or by substantially exceeding it. For instance, the operator may act illegally by storing or treating waste when the permit only covers non-waste or by handling certain types of waste that are not mentioned there or mis-described in order to expedite shipments across state borders. In these cases the purpose of the inspection is rather to ascertain the extent of the illegal activity and stop it as soon and as effectively as possible.

3.1.2 Specific objective of a waste shipment related site inspection

From the perspective of transfrontier shipments of waste, a Waste Site may be seen as a link in the (waste) chain. The site inspection, both the physical and the administrative side of it, has the objective to gain more insight into the waste chain as a whole. Therefore, for each type of waste targeted during the inspection, three questions apply :

1. *How did this waste type reach the site?*
   From where did it come, by which means, in which condition, resulting from which process / operation, at which cost, etc. etc.;
2. *How is this waste type being handled on site?*
   What process is applied to the waste, how is it stored, how is it documented, valued, etc. etc.;
3. *How does this waste type leave the site?*
   What will be the destination, by which means, in which condition, for what purpose, at which cost, etc. etc.;

Please see also the 'Simplified Waste-Flow Diagram' in paragraph 2.2. This diagram illustrates the three main steps that these three questions refer to.
Answering these three questions, including a precise classification of the waste, will enable you, as an inspector, to judge the level of compliance at each stage, both on site and in the transport situation.
Answering these three questions will rarely be possible by consulting just one 'information source' and applying just one information gathering method. Sampling, interviewing, carry-

ing out administrative analysis and other methods may be necessary, each performed at different stages of the waste chain and each requiring a specific contact person or information source.

3.2 Preparation of a site inspection

3.2.1 What information do you need, where do you get it from and whom do you need to talk to?

When preparing a site inspection you should determine its breadth and depth by referring to and gaining knowledge of the current operations.

A site may be operating illegally without a permit.

For permitted sites, apart from the information sources mentioned above under 2.1, this will typically be based on:

- permit conditions;
- the experience from previous visits and enforcement, including waste shipment inspection records from fellow enforcement bodies within or outside of the country where the site is based;
- monitoring data, reports, complaints, notifications of non-compliance, with an emphasis on waste flow data;
- legislative requirements that may have affected operations.

The main persons/bodies that you **must** contact and talk to are:

- Site management and staff (this may be before the inspections, if prearranged, or at the start and during the inspection if unannounced);
- Regulatory staff who have been involved with the site, including any enforcement.

Persons/bodies that you **may** need to talk to are:

- Other governmental bodies, either national or local, that may be relevant to the site. These will also include regulatory regimes for transport and/or trade, competent with respect to compliance with the WSR. These may include regulatory regimes for planning, health and safety, environmental controls not directly relevant to the site's permit.
- Police – in some Member States environmental officers are accompanied on their inspections by police officers.

Annex 3.a of this manual gives a list that may be used to organize your preparatory findings. Making use of this list will enable you to see clearly which information is missing, which information sources will be essential for the intended inspection and which information collection methods you will need to apply.

It may even be helpful to elaborate the expected risks and related inspection methods to make the intended site inspection even more effective (see **Annex 4**).

An illegal site will be investigated for enforcement purposes but that should not prevent it being inspected, as far as possible, in the same manner as a permitted site. This will present more challenges as data on waste flows may not be readily available and may have to be secured by enforcement notices or other regulatory mechanisms that are available to

each State. The actual operations on the site should be assessed and recorded as if it was a permitted site and staff queried on its activities.

All sites must be inspected in accordance with each State's health and safety requirements. The safety aspects addressed in section 3.6 must be observed, particularly where the site is illegal.

3.2.2 Individual site inspection plan

An individual site inspection plan combines the preparatory findings (listed with the help of Annex 2) with a well considered choice of focus during the actual visit. The choice of focus should assist the inspector with:

- The choice of team composition (which colleagues to bring in);
- The choice of contact- / resource persons (which site personnel);
- The choice of specific administrative information sources;
- The choice of equipment (measuring, sampling, recording, etc.) to bring

Whether a lot of information is available before the site visit or not, it has proven useful to limit oneself, at least as a start, to certain possible violations. This means concentrating on certain waste streams or on a certain aspect of the waste-treatment process, when conducting the site inspection. This will allow you or your team to bring the right equipment, to be well prepared technically and to use your time as effective as possible. It also allows you to hold the initiative on your side, during the visit, instead of company staff possibly trying to influence your findings.

Crucial ('Key') when drafting an individual site inspection plan is to formulate a limited number of most serious risks or most serious possible violations, relevant for this site. The preparatory findings should be of help when formulating these risks or possible violations.

Based on the formulated risks or violations, one needs to reason which findings will be necessary to demonstrate or prove an actual breach. As an inspector, one runs the risk of seeing and hearing many things, thus collecting many 'findings', but not being able to draw legally binding conclusions based on them. In each investigation and under each set of circumstances, the type of information that is essential may vary. Spoken statements, cross-checked administrative data, certified sample analysis-results, etc. etc. Those findings that one wants to find during the inspection visit, may be formulated as research- or operational questions as part of the individual inspection plan.

Annex 4 gives an example of formulated site-specific risks or violations and for each of them a set of research-/ operational questions.

3.3 When you get to the site, what do you need to look at?

3.3.1 General waste site inspections

The following may be appropriate to discuss with the operator of a waste site during the inspection when assessing compliance with environmental rules:

- Non-compliances evident during the inspection;
- The origin and destination of wastes;
- Notifications of non-compliance received from the operator;

- Complaints received from neighbours, competitors, other authorities etc.;
- Non-compliance evident from data and reports;
- Difficult or unforeseen events, for example where bad weather has disrupted operations.

A general site inspection may reveal potential transfrontier or illegal shipments.

The results of the inspection should be recorded (see below 4.1). If possible, this record should be designed in a format that a copy can be given to the site operator at the end of the inspection.

Illegal WEEE storage site in Germany (2007)

3.3.2 TFS-specific inspections

The 'Waste Stream Approach' section above (2.2) noted that wastes passing though waste recycling sites may be of a poor quality and, as a result, may be sent to secondary waste sites or further sorting or end up being illegally exported as Green List waste. There have been a considerable number of cases in the UK, but also in other EU Member States, of such waste being imported and exported. Even more frequently, the waste sites in question are used to store and sometimes to treat (dismantle, recycle) WEEE, batteries and end-of-life vehicles before their export to non-EU countries. Therefore an inspection needs to focus on the waste characteristics of the materials on site and on evidence of exporting activities, such as cars with indications on packaging, foreign number plates or customs documents.

Checklists of relevant points for TFS-specific site inspections are contained in **Annex 3**

3.4 How to distinguish waste and non-waste

When is a used item to be classified as waste? According to Article 3(1) of Directive 2008/98/EC (the Waste Framework Directive), the term waste means any substance or object which the holder discards or intends or is required to discard. The European Court of Justice has defined more specific limits of waste and non-waste over the years in its case-

law, most of which is listed on the Commission's website at http://ec.europa.eu/environment/waste/shipments/case_law.htm.

In order to make a decision if an item is waste one has to examine its life history on a case by case basis. To distinguish waste from non-waste in a waste shipment context the following criteria should be considered:

- Is there evidence of a sale and/or transfer of ownership? Copies of receipts or the relevant contract should be provided by the holder.
- To be classified as non-waste, the item must be in functional order (it must be evaluated and fully tested, as shown by a certificate) and it should be marketable.
- In this case, the item should also not contain a substance which is prohibited by law and requires the holder to dispose of it as waste.
- The age of the item does not necessarily qualify it as waste but may do so if it reduces the usability and market value to zero.
- If it is supposed to be shipped as a product, the item should not look damaged or spoilt or otherwise display external waste characteristics.
- Likewise, the packaging must be sufficient for protection during transport, loading and unloading.

In **Annex 5** the distinction of waste and non-waste will be exemplified for the main waste types (priority waste streams) that are relevant in the context of illegal waste exports, namely waste electric and electronic equipment (WEEE), end-of-life vehicles (ELV), car parts and lead-acid batteries. Note that the new WEEE Directive 2012/19/EU spells out in Annex VI minimum requirements for distinguishing WEEE from used equipment (EEE). There exist also databases at national level which can help with classification, such as the waste database of the Hessen Environment Agency (HLUG) which is accessible via internet under http://www.hlug.de/static/medien/abfall/abfall_client/EN/.

3.5 What information do you need to collect on site?

The relevant information that the inspector needs to collect on site depends very much on the objective of the inspection and the risk assessment done beforehand. If a site is not well known to the inspector, for example, it may be necessary first of all to establish what types of waste and what quantities are stored and/or treated at the facility, which persons are responsible, whether the operator has a permit, where the waste comes from and where it will go from here, whether the site is rather involved in export or import of waste, etc. Under the law of some countries, e.g. Germany, the question whether the storage or treatment facility actually needs a permit depends on the exact capacity and thus on the quantity of waste stored or treated on site, the available area and technical performance of machinery which the inspector will have to establish.

If there are indications for the site being used for exports e.g. of WEEE, end-of-life vehicles, batteries or the like, the fact-finding may have to focus on the waste quality of the materials, on the question how the operator himself distinguishes between "used goods" and "waste", on customs documents and the identity of other persons involved in the shipment (carriers, brokers, receiving traders and facilities, etc.).

Using a waste stream approach is particularly appropriate for waste destined for international waste shipment. Before undertaking a waste stream approach audit/site inspection, officers should collate the best available intelligence (data) to compile a picture of how waste 'flows' through the facility. The 'best available intelligence' is predominantly returns

data submitted to the monitoring authority by the facility operator, or by others, such as other EU states, where waste is sent to a facility.

If the inspector is better acquainted with the facts, more specific questions may reveal additional information that might be more interesting, e.g. in how far the site keeps records of storage or treatment, whether the waste flow can be followed via notification and movement documents, accounting databases, receipts or consignment notes, or in how far the site itself is affected by theft of scrap metals and other valuable wastes for recycling.

Compiling a pre-audit intelligence package enables the monitoring authority to focus the inspection on specific areas of concern. E.g. if the waste facility appears to be exporting significant amounts of waste, the monitoring authority may focus on the quality and destination of that material.

During the site visit, the pre-audit intelligence package can be verified. A second picture of how waste flows through the facility is compiled based on what is actually happening at the site. Anomalies/discrepancies between the pre-audit intelligence and the results of the audit are highlighted – identifying further investigation or the appropriate intervention.

3.6 Safety aspects

The inspector who carries out the actual inspection should be aware of the higher risk that may be involved when checking compliance with Regulation (EC) No. 1013/2006. A specific risk assessment should be made before each inspection, based on the general risk analysis in relation to a waste stream or a category of waste sites (see above 3.1.2). Increased controls mean for inspectors that some opposition can be expected and it is therefore important that they are mentally prepared for it and that the agency supports them in the field. In any case, normal precautionary measures should be taken as foreseen for inspections in general. In addition, further measures might be necessary. Prior to a waste site inspection, it is e.g. useful to check if the operator or local manager of the facility have been convicted of a crime.

Furthermore, when dealing with a sector where a high amount of profit is involved the inspector may be faced with various types of pressure, sometimes aggressive behaviour and even personal threats to life and limb. Knowledge about de-escalation strategies helps to correctly assess the counterpart, analyse and control the situation and take the right action to prevent a threatening situation or deal with it, taking into account the inspector's own capabilities. Therefore, a regular de-escalation training is advisable for each member of the field staff. Besides, for reasons of safety but also to prevent accusations of corruption, field inspections should be done by a minimum of two colleagues, never alone. If the inspectors feel threatened they should call the police for assistance when they execute the inspection – but preferably they should do this already beforehand, when a risk assessment has confirmed such threats.

Personal information about inspectors should be handled with care and not be published on the homepages of the inspection authority or other cooperating agencies. It is important to raise the awareness within the agency of this problem and develop internal routines/policies how to deal with it.

Personal safety equipment

When carrying out waste shipment inspections, it is necessary to be aware of the safety risks posed by the various types of waste. Inspectors should thus pay attention to hazard symbols and other indications of dangerous substances on the packaging and in travel documents. Containers loaded with waste should generally be opened by the driver. All safety instructions must be observed in order to avoid any accident.

A list of standard safety equipment is to be found in **Annex 9.**

3.7 Immediate interventions

Following Article 36 of Directive 2008/98/EC on waste, and Article 50(1) WSR, the waste authorities of the Member States have to take all necessary measures to prohibit the abandonment, dumping or uncontrolled management of waste, and to provide for effective, proportionate and dissuasive penalties in case of non-compliance. Note that under Article 8 of Directive 2010/75/EU on industrial emissions authorities have to suspend the operation also of permitted installations falling under this Directive where the breach of permit conditions poses an immediate danger to human health or the environment.

Depending on the urgency of the situation, it may be necessary for the inspector to take immediate action during his/her site visit, in order to prevent illegal waste shipments or the continuation of illegal waste management operations. This is especially the case if the site operator does not appear willing to cooperate with the authorities, and if there is an imminent danger that the ongoing operation of the facility will damage the environment, or that hazardous and other problematic wastes will leave the site to be exported to non-EU countries.

At the administrative level and in accordance with national law, the inspector will have to consider issuing a closing order against the illegal facility and a prohibition of waste transports to and from the site, except for the purpose of environmentally sound recovery or disposal at an authorized facility. If the wastes on site are hazardous and present an acute danger for the environment it will be necessary to order their removal and the clean-up of the site. For reasons of evidence and legal certainty an oral command will, as a rule, not be sufficient. Instead, some authorities e.g. in Germany use partially completed forms which the inspector on site can supplement, sign and deliver by hand to the operator. As far as necessary, this action can be confirmed later by a more formalized and properly reasoned written order of the inspection authority.

In addition and depending on the competences of the inspector under national law, it may be appropriate to impose a fine on the operator and/or to report the matter to the police for criminal prosecution. Note that under Article 3 of Directive 2008/99/EC on the protection of the environment through criminal law, which Member States had to transpose by December 2010, the collection, transport, recovery or disposal of waste which causes or is likely to cause substantial damage to the quality of air, soil, water etc., as well as the illegal shipment of a non-negligible quantity of waste under Article 2(35) WSR, should all be punishable as criminal offences in the Member States.

The help of the police may of course also be necessary if the inspector has to enforce a closure order or a transport ban against serious resistance by the site operator or his staff.

Site inspection

- Site inspections should have a clear objective. For waste shipment related inspections the three questions are most relevant: *How did this waste type reach the site? How is this waste type being handled on site? How does this waste type leave the site?*
- The preparation and execution of a waste site inspection depend on whether the site operates with a permit or illegally. Inspections of permitted sites will typically be based on permit conditions, previous reports and monitoring data. Dealing with illegal sites requires flexibility and possibly support from the police.
- Before the inspection, apart from site management and staff, other regulatory staff who have previously been involved with the site must be contacted.
- An individual site inspection plan is useful to combine preparatory findings with a well-considered choice of focus during the actual visit. It is imperative to assess the most serious risks and possible violations beforehand.
- TFS-specific inspections need to focus on the waste characteristics of the materials on site and on evidence of exporting activities. Checklists can help.
- The distinction of waste and non-waste is often difficult in practice. Inspectors need to be aware of legal clarifications (e.g. in the WEEE Directive), case-law and guidance documents on various waste types.
- A waste stream approach is particularly appropriate for waste destined for transfrontier waste shipments. The best available intelligence should be used to compile a picture of how waste 'flows' through the facility, which is then verified during the site visit.
- Safety aspects are crucial and precautionary measures should be taken according to a prior risk assessment.
- Inspectors should prepare for immediate interventions that may be necessary on site, in accordance with the powers they have under national law.

4 Follow-up to a site inspection

4.1 Recording of inspection data

According to the new IMPEL step-by-step guidance book "Doing the right things for waste shipment inspections (DTRT-TFS)", the following measures should be considered in the follow-up to an inspection, especially with regard to reporting (explanations have been added in brackets for the specific purposes of the Waste Sites project):

- *Reporting should be done after every inspection and should be finalized as soon as possible.*
- *The findings of the inspection should be communicated to the inspected facility.* (This might not apply where the site is illegal and the findings are needed for further criminal investigation).
- *The findings of the inspection should be exchanged with partner organizations* (i.e., as applicable, in particular the police, customs, the local authority, waste shipment authorities in other relevant regions and Member States).
- *Inspection data should be processed and evaluated for further actions.*
- *Inspection data/reports should be stored in an accessible database.*
- *Inspection reports should be made publicly available within 2 months, in so far as not confidential* (which may be the case in particular with illegal waste sites).

Standard forms can be useful and time-saving for the recording of inspection data, especially at larger waste management facilities which hold a license and work with standardized procedures and conditions. An example of an inspection result form based on company-check inspection forms used in IMPEL-TFS and twinning projects is contained in **Annex 7**

However, many of the waste sites in question require typically a different approach from the inspection of large-scale industrial installations or licensed waste management facilities. As e.g. collection and storage points for WEEE and old vehicles are frequently operated in an informal and highly flexible way, it is all the more important for an inspection authority to react swiftly and not wait with the follow-up to an inspection until conditions on site have changed again considerably. An inspection report should therefore not be too thorough – not more than absolutely necessary – but rather short, succinct and focusing on the essential points. The inspector should ideally finalize his/her report in the days after the inspection and certainly not later than one month afterwards, otherwise the document will lose much of its purpose. Likewise, the communication of inspection results to other relevant authorities should take place within days rather than weeks. For urgent messages telephone and e-mail should of course be used as appropriate.

Best practice to record inspection data includes the taking of photos and nowadays also the filming (video recording) of the inspection with oral explanations by the inspector. Prosecutors in Sweden, for instance, now recommend to use such films as documentary evidence, and the practice has also been allowed by criminal courts in the UK. For this evidence a secure storage (with limited access) is important to prevent arguments by defence that the material has been manipulated.

4.2 Analysis and determination of next steps

If immediate measures have not been taken already on site (see above 3.8) the inspection report will be the main basis for further action. The report itself should contain recommendations what needs to be done after the inspection and within what timescale.

Where the inspection has not delivered conclusive results and the facts of the case are still unclear, further investigations have to be carried out. It may be necessary for the inspectorate to request additional information from the operator and/or to make enquiries to his suppliers and trading partners, to the waste shipment authorities along the waste chain, to the police, the tax office or other suitable authorities (see Chapter 2.1).

On the basis of the available information, the inspection authority has to carry out another risk assessment. The measures to be taken depend on the seriousness and urgency of the situation. The authority should consider the quantity and hazardousness of the wastes found on site, the environmental and health risks associated with them, the probability of their uncontrolled dumping or export, the possible impacts in the countries of destination, the effect on competition, and others. The risks relating to the inspected site have to be measured against those of other waste sites or waste shipments within the jurisdiction of the competent authority, taking into account the authority's resources and priorities (see the risk assessment when preparing the inspection in chapter 3.1).

If the risks and irregularities are relatively minor it is in general sufficient to send a warning letter to the site operator and, as appropriate, impose a fine for the administrative infraction. If, on the other hand, the activity of the site operator causes major ecological or health risks and/or constitutes a criminal offence – operating without permit or in breach of essential permit conditions, arranging for an illegal shipment etc. – stronger measures will be required. In accordance with national law the competent authority will usually issue a closing order against the illegal facility and prohibit any further acceptance of waste. In addition, it will be necessary to regulate the removal of the wastes which are presently stored at the site and order their environmentally sound recovery or disposal at an authorized facility. Depending on whether soil and water are contaminated, further rehabilitation measures might be necessary. If the operator did possess a permit but disregarded its conditions consistently it might also be appropriate to revoke the license.

In case of a criminal offence the operator or other responsible persons should be reported to the police for criminal prosecution. This may also help to stop the operator from continuing with illegal activities and to make him comply with the administrative measures.

The results of the inspection should be taken into account for the updating of the authority's existing inspection plan or strategy.

4.3 Dissemination of inspection results

One of the necessary steps to take after an inspection is to communicate swiftly its outcome to all relevant persons inside the inspection authority as well as externally to other waste shipment authorities, the police, local authorities and other relevant agencies. Beyond this, it may be necessary and also advisable to inform the public of the inspection results, at least in case of well-prepared inspection campaigns aiming at one of the major waste streams. A press statement can help to raise awareness among the business community and the general public, in particular regarding the rules on proper waste management, the ban on exports of hazardous waste, and the consequences of illegal behaviour. In view of possible criminal proceedings, however, the publication of names and other personal data must be handled with care, and not every information about individual sites is suitable for publication.

Follow-up

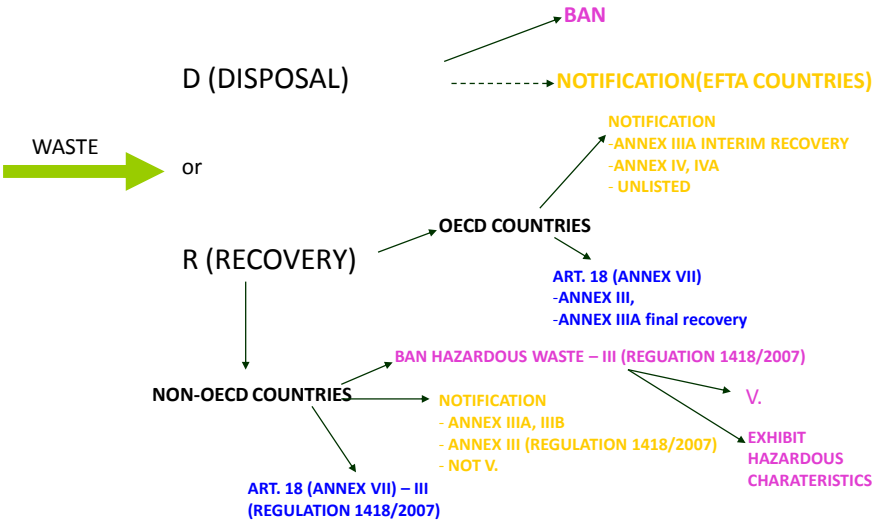
- Reporting should be done after every inspection and should be finalized as soon as possible. In view of quickly changing conditions on waste sites, reports should focus on the essential points.
- Best practice nowadays includes taking photos and filming (video recording) of inspections. The recorded material should be stored securely.
- On the basis of the collected information, a further risk assessment should be made in order to determine the next steps, especially closing orders and other measures that may be taken under national law.
- Inspection results should be taken into account for the updating of inspection plans.
- Swift communication of the results to police and other important cooperation partners is a key for effective sanctions that may be necessary.
- Media coverage may be useful to raise public awareness of illegal waste shipments, the possible consequences and the importance of proper waste management.

Annexes

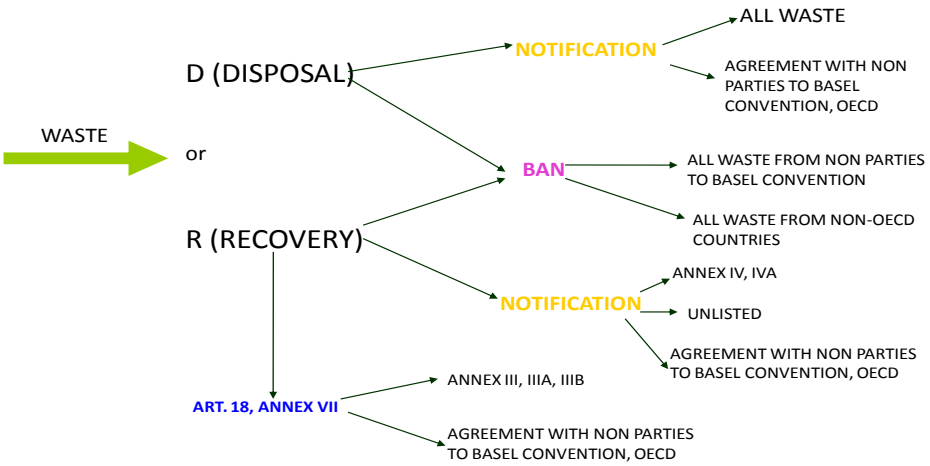
Annex 1: Decision trees for waste shipment procedures

The flow schemes are aimed to help inspectors to find the appropriate procedure for the relevant waste shipment. For export to non-OECD countries it is necessary to take into account Regulation (EC) No 1418/2007 concerning export for recovery of certain green-listed wastes.

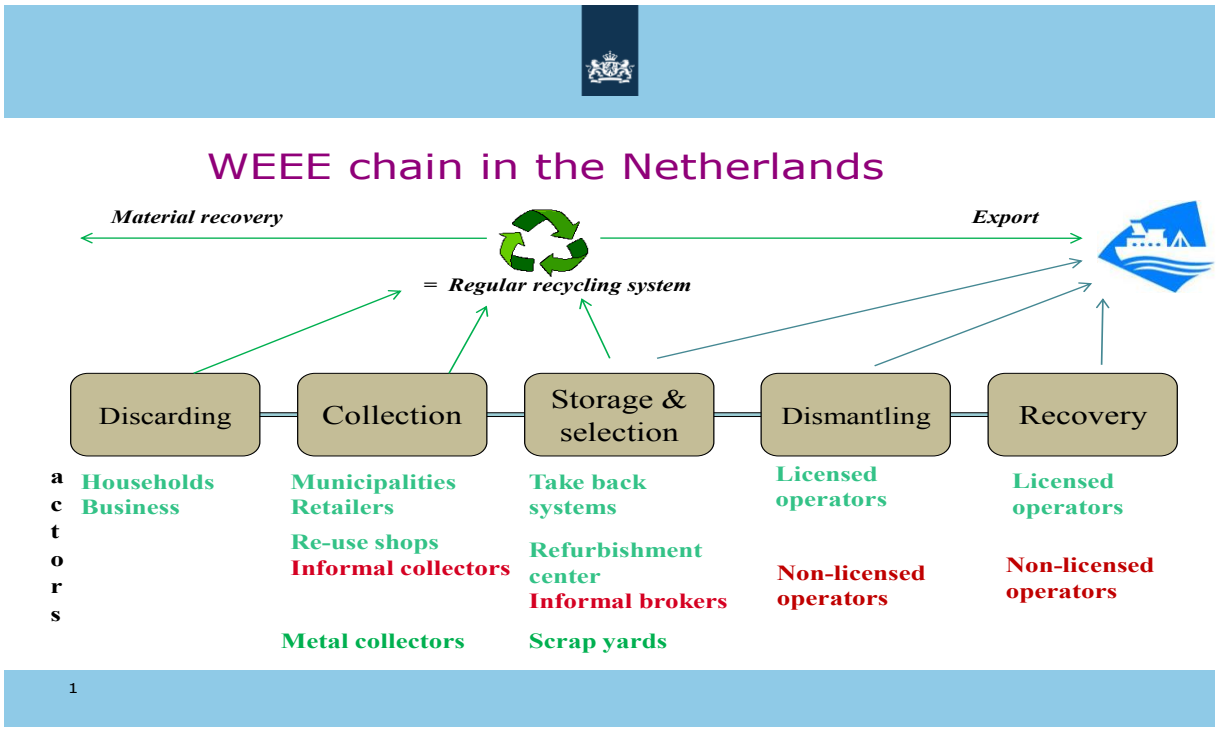
Export from the EU



Import into the EU



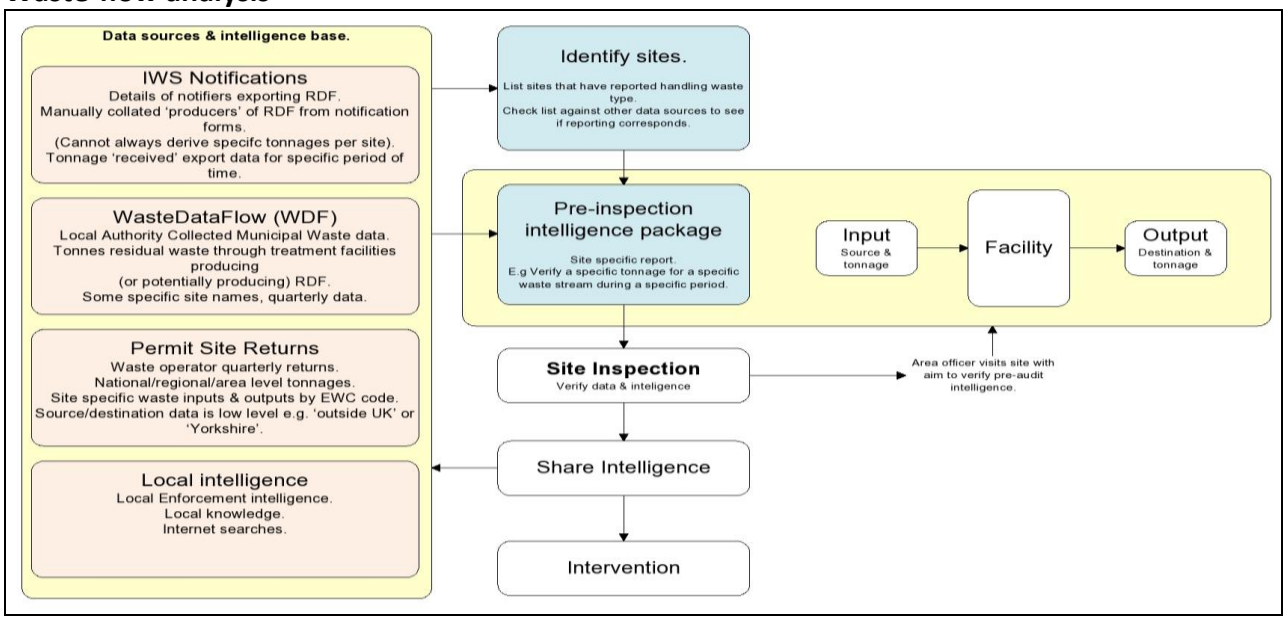
Annex 2: Examples of waste-flow diagrams

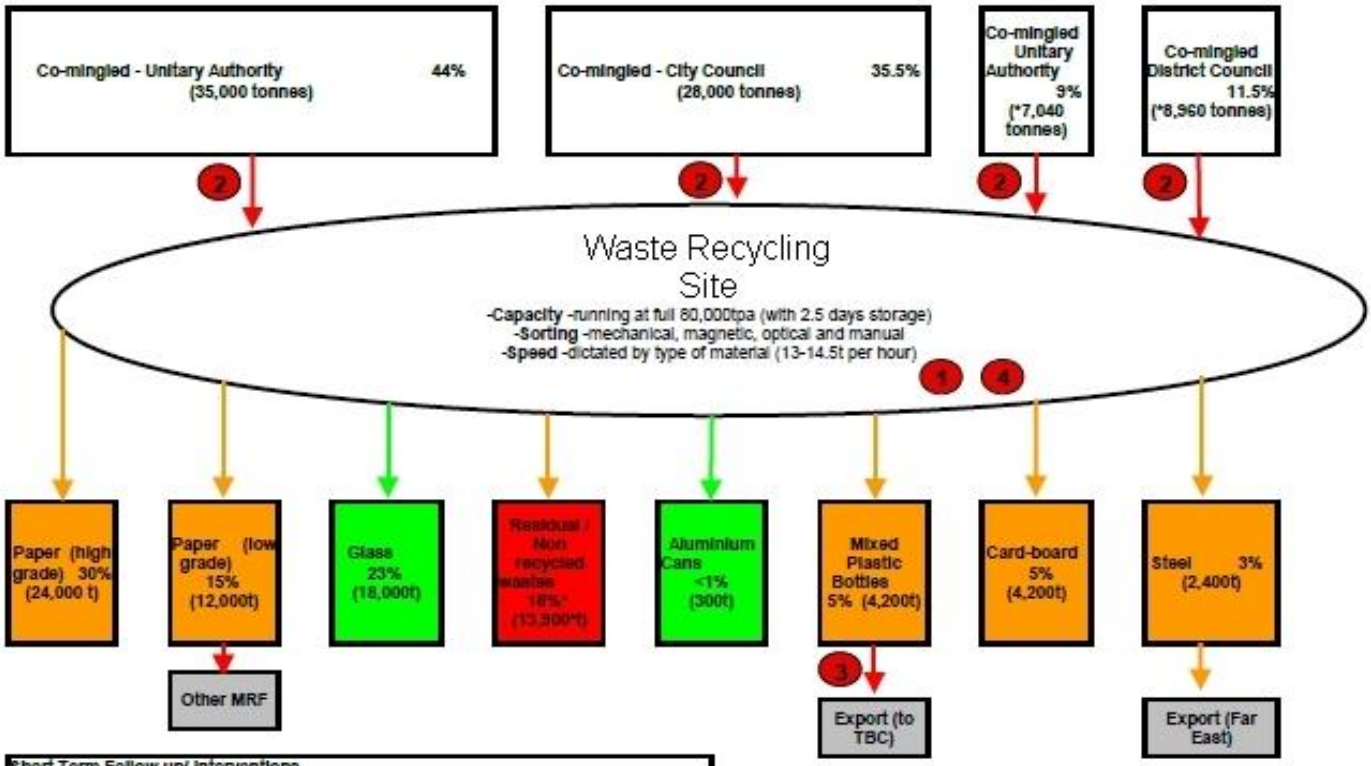


The following diagrams used by the Environment Agency (EA) of England and Wales illustrate the Waste Stream Approach for material recycling facilities (MRFs) and the flow of refuse-derived fuel (RDF). The first diagram (waste-flow analysis) depicts the underlying sources of intelligence. The second diagram shows:

- the quality and quantity of input and outputs at collection recycling and treatment sites;
- where different waste streams go;
- what happens to waste streams when they get to their destination, for example treatment and processing.

Waste-flow analysis





Short Term Follow up/ Interventions	
Action	**Outcome**
Obtain sampling results for segregated waste	Contamination levels give indication of the effectiveness of the process and identify possible intervention(s)
Reduce compaction/ improve cleanliness in transportation (Waste Disposal Authority)	New procedures in place to reduced contamination from compaction and produce cleaner recyclate
Contact operator to check level of contamination in plastic and final destination of the plastics	Plastic is suitable for being exported to its ultimate destination as it is described by exporter.
Discuss with MRF how they can gain more feed back from receiving sites on their output	Producer and processor work better together to produce improve quality output and maximise use of the resource

Waste Flow

Intervention

Follow up required

Flow established

Final Fate

Recover, Recycle, Reuse

Verify Recover, Recycle, Reuse

Disposal

Fate TBC

N.B. Quantities are annual as given at site audit (* =estimations)
Co-mingled = paper, glass, card, plastic and metal containers

Annex 3: Checklist for inspections

Suitable for use in the field

A. Preparing the inspection

The checklists in this section (A) are meant as a reminder when taking the necessary preparatory steps and while assembling a basic set of information.

1. Health and safety assessment

- Is the site operator potentially hostile? Yes □ No□
- Background check with other agencies Yes□ No□
- Supportive actions from other agencies? Yes□ No□
- Safety clothes and safety shoes Yes□
- Leaving travel note to the agency Yes□ No□
- Invite additional enforcement officer to join Yes□ No□

2. Equipment

- Map and ground plan Yes□ No□
- Mobile phone Yes□ No□
- List of contact details (operator, owner, police etc.) Yes□ No□
- Business cards Yes□ No□
- Camera Yes□ No□
- Recorder Yes□ No□
- Yardstick/metre Yes□ No□
- Torch Yes□ No□
- Binoculars Yes□ No□
- Sampling equipment Yes□ No□
- PAH quick test Yes□ No□
- Other Yes□ No□

3. Necessary guidance and legal documents

- Permits and licenses for the specific site Yes□ No□
- History of inspection visits, compliance records, both from your organisation and from other authorities Yes□ No□
- Legal provisions (EU, national, regional etc.) Yes□ No□
- Guidelines Yes□ No□

B. Determining the goal and the depth of the inspection

The following questions should assist the inspector to bring specific focus into the planned inspection visit. This can be done by making a description of the Site that will be inspected, based on the information that has been collected in the preparatory stage. This description serves to list a number of possible violations, to decide by what means information will be collected at site and subsequently what the team composition for the Site Inspection will be.

1. General description

In this stage it is necessary to give a general description of the site, its physical characteristics, its activities and legal status.

- Name of the company
- Type of company (role in the waste chain, which waste streams, which waste related activities)
- Ownership status (e.g. part of a larger holding)
- Company size (capacity in tonnes per annum, no. of staff, etc.)

2. Company specific risks / possible violations

- What led to the intended inspection? (Routine inspection, specific complaint, request for assistance made by other authority, etc.)
- What is the kind of irregularity that one could most likely expect at this site?
- May violations be expected regarding waste acceptance / import? If yes, which? Same question regarding waste storage? Regarding waste processing? Regarding waste discharge / output / export?

3. Inspection set-up

This set of questions is meant to determine how exactly the inspection will be carried out, as far as the intended inspection differs from a routine inspection.

- With regard to the specific risks or possible violations expected on site, where exactly or in which section / department / unit of the company do you expect to collect your information?
- Which methods of information collection will be used?
    1. Interviewing, if yes, whom?
    2. Sampling, if yes, which material, by which method?
    3. Administrative inspection, if yes, how?
- What will be the team composition for the inspection visit? Do you need to bring in specific technical, legal or financial expertise?

C. Carrying out the site inspection

The following checklist for carrying out the site inspection focuses on information relevant for "upstream" pre-export and for "downstream" after-import waste sites. The questions are designed as open questions and the purpose is to collect all necessary information on the site that the officer visits. The officer must in the end summarize the information and in some cases also ask for clarification on different issues before taking any actions.

1. General information

In this section it may also prudent to also ask for a general description of the site at large and how the work is carried out.

- Date for the inspection:
- Name of the company:
- Address:
- Telephone number:
- E-mail address:
- Organizational number:
- Contact person at the company:

Other issues:

- Does the site keep records of waste storage and/or waste treatment procedures?
- What type of waste fractions and what quantities are handled at the site?
- Does the operator claim to handle only non-wastes (used goods, products)?
- Does the operator keep permits etc. at the site?

- Ask for copies Yes□ No□

- Ask for verifications and consignment notes / receipts in order to track the waste flow chain. Yes□ No□

- Does the site export non-hazardous waste or hazardous waste?

- Is waste being transferred to brokers or dealers?

- Is the site operator aware of the guidance material from the authorities on waste and the export of waste? Yes□ No□

- (Do thefts of waste occur at the site? Yes□ No□

- If yes on last question: How many thefts have occurred during the past 12 months, what quantities and types of waste were stolen?)

Note: The last two questions might not be appropriate in some cases, especially where the operator himself is suspected of being involved in illegal traffic.

2. Importing / accepting waste

- How does the operator distinguish between second hand materials and waste?

- Has the site documented routines to carry out controls of different items? Yes□ No□
- What types of non-hazardous waste and hazardous waste are imported?

- Who is the person organizing the shipment?

- Who are the sending traders / facilities and in which country are they situated?

- Who is/are the carrier(s) for the transports?

- Specify in the table if the wastes on site are meant to be recovered or disposed.

Waste type	R or D	Amount	Country of dispatch	Organizer of the transport	Country of destination	Waste treatment facility in country of destination	Other

- Notification procedures – prior written notification and consent

  i. Are the relevant notification forms in order? Check that the notifications are still valid. Yes□ No□
  ii. Do movement documents exist and are the documents handled in accordance with Regulation (EC) No. 1013/2006 (WSR)? Yes□ No□

- General information requirements

  iii. Has an Annex VII document been completed prior to the transport? Yes□ No□
  iv. Are the documents saved for three years? Yes□ No□
  v. Is there an agreement between the person who arranges the shipment and the consignee for recovery of the waste? Yes□ No□
  vi. Is the sender known in the sending country and approved for waste treatment activities? Yes□ No□

3. Processing waste

Questions regarding all processes that are applied to the waste on Site, sorting, mixing, dismantling, upgrading, size reduction, re-packing, etc. etc.

- For each of the waste streams on Site, describe what process is applied to it, from the moment the waste has been accepted at the entrance of the facility. NOTE: If the site inspection focuses on just one waste stream, then it is sufficient to describe this specific stream.

- For those waste streams that you focus on, describe what typically remains of one metric ton of waste.

- If possible, use the quantitative to compile a waste flow diagram for the company or site as a whole.

4. Exporting waste

- How does the operator distinguish between second hand materials and waste?

- Has the site documented routines to carry out controls of different items? Yes□ No□

- What types of non-hazardous waste and hazardous waste are exported?
- Who is the person organizing the shipment?
- Who are the receiving traders / facilities and in which country are they situated?
- Who is/are the carrier(s) for the transports?
- Specify in the table if the wastes on site are meant to be recovered or disposed.

Waste type	R or D	Amount	Country of dispatch	Organizer of the transport	Country of destination	Waste treatment facility in country of destination	Other

- Notification procedures – prior written notification and consent
  i. Are the relevant notification forms in order? Check that the notifications are still valid. Yes□ No□
  ii. Do movement documents exist and are the documents handled in accordance with Regulation (EC) No. 1013/2006 (WSR)?
  Yes□ No□
- General information requirements
  iii. Has an Annex VII document been completed prior to the transport?
  Yes□ No□
  iv. Are the documents saved for three years?
  Yes□ No□
  v. Is there an agreement between the person who arranges the shipment and the consignee for recovery of the waste?
  Yes□ No□
  vi. Is the consignee known in the receiving country and approved for waste treatment activities? Yes□ No□

5 Other parties involved in shipments to and from the site (e.g. brokers, dealers)

- Name of the broker/dealer:
- Address:
- Telephone number:
- E-mail address:
- Organizational number:
- Contact person at the company:
- Other issues:

D. Summary of follow-up

1. Prepare a report
2. Report violations
3. Compile the collected data on waste flows onto a map –refer to UK map
4. Share information with other agencies if relevant
5. Plan follow-up visits

Annex 4: Elements of a waste site inspection plan (especially risk analysis)

- **Filled in as an example, cf. chapter 3.2**

Risk analysis

"This example is based on a wood-waste processing facility. The facility receives different qualities of wood-waste from many different sources, both public and private. The facility shifts, crushes, sorts and has different qualities of wood leaving the facility. Large quantities are being exported on the basis of Waste Export Notifications"

Identify, based on analysis of fact sheets, permit conditions, compliance history etc. etc, the key risks where the WSR may be violated and where the research will be focused on.

Determine research questions or actions for each identified risk

State the risks and research questions in the table below

Determine the inspection method

Determine, on the basis of the information given above how the inspection visit is to be carried out, such as with the use of interviews, retrieving documents, assessment of waste on-site

Indicate inspection methods in the table below

Carrying out the Inspection

The inspection is performed on the basis of the inspection plan. During the site visit issues will always emerge that are different than expected in the inspection plan. This must be handled flexibly, but it must be ensured that the identified risks will be investigated with sufficient depth.

Provide the answers to the research-questions in the table below

Table : Risk analysis – risk (1)

Use this space to describe the prime risk(s) that you have recognized through your analysis prior to the Site Inspection.

"The prime risk for this facility concerns the outflow of waste-wood. The risk is that waste is being exported under Notification, while the composition of the waste does not meet the specifications as stated in the Notification document."

	Research question	Control method	Answer	Received documents	Follow-up ?
1	How has the composition of the waste been determined when the export was notified initially?	Interview company representative. View analysis records	The composition as stated in the Notification document shows very wide margins	Detailed background information retrieved from the Notification database.	No
2	How are individual loads / shipments being checked for their composition?	Interview site representative on-site. Ask for demo.	Category C-wood is always kept seperate. Other categories separated visually	New Site-permit allows mixing of all non-hazardous waste-wood categories.	No
3	How often are composition analyses being carried out by sender and/or receiver ?	Interview on-site and view analysis records	Analysis is done visually, no further method.	--	No
4	Have responsibilities regarding non-conform shipments been layed down in a contract?	Ask for commercial contract between the sender and receiver.	Discussed this briefly on the basis of one know case. Shipment has been redirected to other site. Financial compensation followed.	--	No
5	Is the receiver content with the quality of the waste; how many shipments have been refused in the year 2010?	Interview	One, shipment, please see above	--	No
6	What is the price/ton for the shipped waste?	Interview and financial administrative check	Unknown	--	Yes
7	Which are the parties involved in this waste flow? Broker? Transporter? Etc.	Interview, administrative check	Waste deliverd by Third parties, direct delivery by private households. Batches of waste (-wood) are joined on site. Further transport in company trucks.	National waste transport registration system, observation during inspection visit, interview	No
8	Who pays for the transport? (Conditions of delivery	Interview, Contract details	Unknown for exported loads.	--	Yes
9	Who sends out invoices? Is the price stable? Are there any credit-invoices?	Check financial administration	Unknown	Did not reach this point during inspection visit	No
10	What is the exact composition of the last shipment of waste, delivered to this Waste Site?	Sampling	Unknown	Did not carry out sampling	No

Conclusion (after the inspection) related to this risk:

"Good separation and treatment of the waste wood, once arrived on site. Satisfactory handling of off-spec shipment. Poor administration on site. Advise for more detailed and more frequent mass balance of waste passing through this site, to be carried out by company."

Annex 5:
Examples for the distinction of waste and non-waste

Waste electrical and electronic equipment

Following the Waste Shipment Correspondents' Guideline No. 1, Annex VI of the new Directive 2012/19/EU on waste electrical and electronic equipment (WEEE Directive recast) defines minimum requirements for shipments and in particular distinction criteria between WEEE and (used) electrical and electronic equipment (EEE). The waste definition of the Waste Framework Directive should be taken into account, i.e. EEE becomes WEEE if its holder discards it, or intends or is required to discard it. To make this judgment it is necessary to examine the history of an item on a case by case basis.

Where the holder of the equipment claims that he intends to ship or is shipping used EEE and not WEEE, he has to substantiate his claim with the following evidence:

- A copy of the invoice and contract relating to the sale and/or transfer of ownership of the EEE which states that the equipment is for direct re-use and fully functional;
- Evidence of evaluation in the form of a copy of the records (certificate of testing – proof of functional capability) on every item within the consignment and a protocol containing all record information;
- A declaration made by the holder who arranges the transport of the EEE that none of the material or equipment within the consignment is waste;
- Sufficient packaging to protect it from damage during transportation, loading and unloading.

EEE would normally be considered as waste if the product is out of order or an essential part is missing. If the EEE is destined for disposal or recycling instead of re-use or destined for cannibalization to gain spare parts it should also be considered as waste.

Photo: County Administration Board Västra Götaland, Sweden

Refrigeration appliances containing ozone-depleting substances (CFCs or HCFCs) may not be exported outside the EU. This applies regardless of whether the device is new or old. It is also prohibited to export devices that rely on CFCs or HCFCs for their functioning. Even if the refrigerant has been emptied from the device, the export is prohibited in this case.

Prevalent CFC containing refrigerants are R 11 (other denomination: Freon-11, Freon 11a, Freon 11b, CFC-11, Freon-HE, Freon MF, Arcton 9), R 12 (other denomination: Freon 12, CFC-12, P-12, Propellant 12, Halon 122, Arcton 6, Arcton 12, E940), R 13, R502 (other denomination: Freon 502, Frigen 502). The necessary refrigerant is normally noted on the type plate at the refrigerator compressor, sometimes inside the refrigerator. The type plate is firmly connected with the housing of the refrigerator.

Lead acid batteries

When targeting waste sites which deal with lead acid batteries, it is important to determine if the batteries are waste or not. If someone intends to ship waste across borders as second-hand goods he must show that the batteries are not classified as waste. Where the holder of the material claims that this is the case he should provide the following evidence to state authorities to back up his claim:

- A copy of the invoice and contract relating to the sale and/or transfer of ownership of the batteries which states that the goods are for direct re-use and fully functional.
- Evidence of evaluation/testing in the form of a copy of the records on every item.
- A declaration made by the owner that none of the batteries are waste.
- The batteries should be properly packed to protect them during transport.
- ADR regulations (transport of hazardous substances) must be complied with.

The batteries must be in good condition and functional, this means that

- All caps are in place.
- The battery must be free of cracks and show no signs of leakage.
- The battery should not be too old. Normal lifetime is about five years.
- Terminals are protected with plastic lids during transport.

If the lead acid batteries are considered as waste the Waste Shipment Regulation applies.

Photo: Västernorrland County Police, Sweden

End-of-life vehicles

A vehicle that is considered as waste must not be exported to a country outside EU or OECD if it still contains liquids or other hazardous components or is destined for disposal. Besides, cars and other vehicles once submitted for scrapping must never again get out into traffic and therefore also not be exported out of the EU.

A roadworthy vehicle in good condition and approved in the national technical roadworthiness test regime can be exported out of Europe as a used vehicle which is considered as non-waste. A copy of the records from the roadworthiness test must be provided to competent authorities or any other state authority on request. The test should have been conducted shortly (e.g. not more than one month) before any shipment takes place.

Cars and other vehicles that after minor repairs are roadworthy may be exported as non-waste. Such minor repairs include, for example, the refurbishment of a broken windscreen or lamps, or if the battery or a pedal need to be replaced. The cost to repair the vehicle in the EU member state of dispatch should not be higher than its market value.

In the case of a repairable used vehicle the owner or exporter need to provide one of the following upon request by state authorities:

- A "vehicle is repairable" certificate;
- Other evidence such as copy of the record form from the national roadworthiness test regime in order to determine if a repair is minor.

A sample certificate is found in Correspondents' Guidelines No.9 on Shipments of Waste Vehicles.

Where the holder claims that the vehicle he intends or is about to ship is not waste he also needs to provide a copy of the invoice and contract relating to the sale and/or transfer of ownership of the vehicle with, for example in the case of an operational used vehicle, a guarantee stating that the vehicle is fully functional and roadworthy.

Other important things to consider:

- The vehicle should not be loaded with broken car parts, electronic waste or other waste.
- There should be no signs of leakage of oil or other liquids.
- The vehicle must not contain parts or fluids that are banned from export out of EU according to national or EU-legislation, e.g. refrigerants such as CFCs or HCFCs from air conditioners.

Additional and more detailed information is to be found in Correspondents' Guidelines No.9 on Shipments of Waste Vehicles.

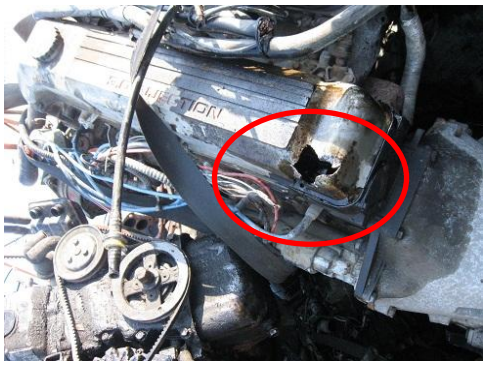
Car parts

Car parts for export should be intact and functional. The parts should not leak any oil or other fluids.

If someone intends to ship used car parts across borders as second-hand goods he must show that the parts are not classified as waste. Where the holder of the material claims that the parts are not waste the following should be provided to back up his claims:

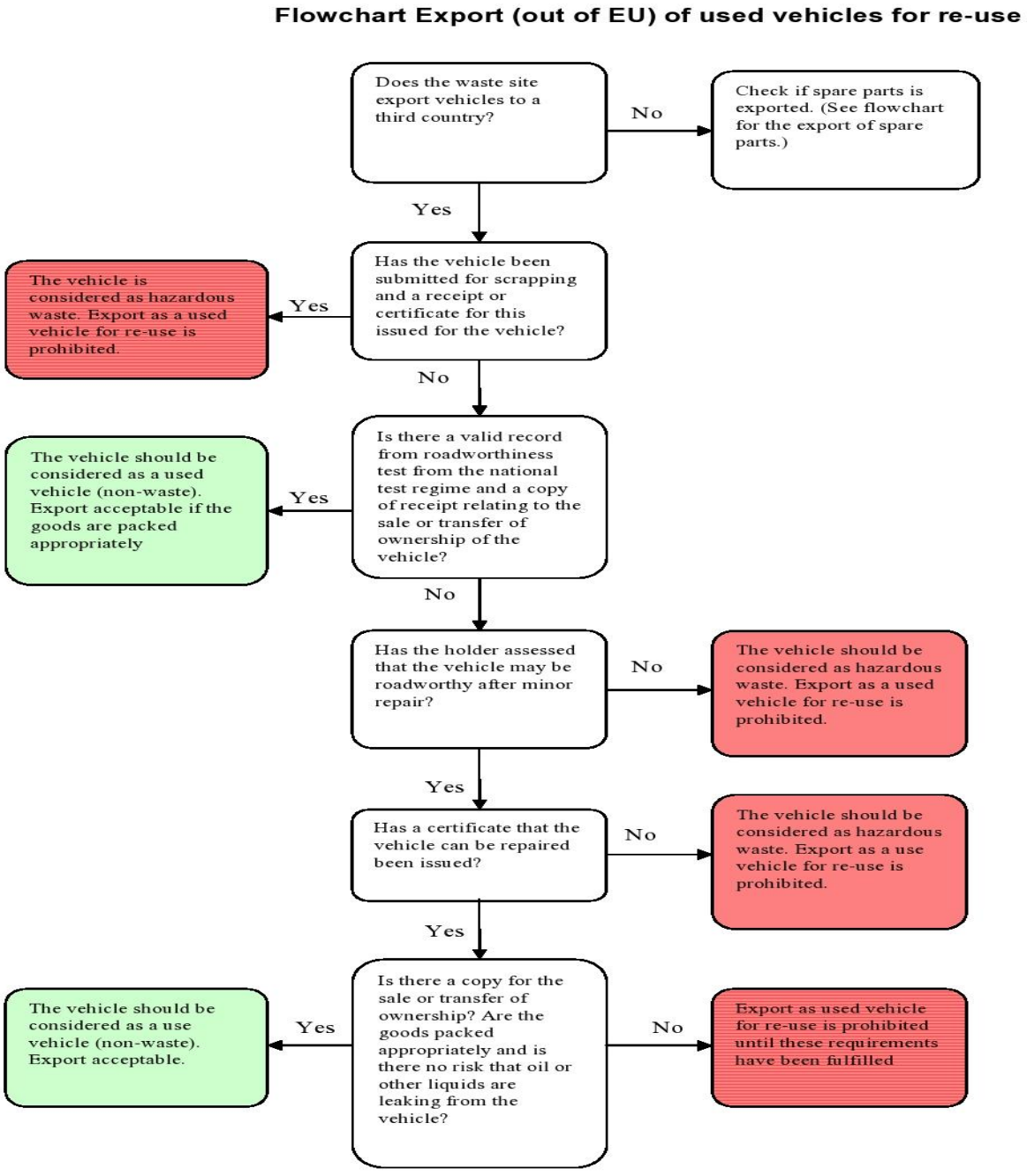
- A copy of the invoice and contract relating to the sale and/or transfer of ownership of the items in question which states that the goods are for direct re-use and fully functional.
- Evidence of evaluation/testing in the form of a copy of the records on every item.
- A declaration made by the owner that none of the car parts are waste.
- During transport the parts should be properly packed to protect them during transport.

Car parts that are damaged or very rusty should be considered as waste.



Photos: Eskilstuna Municipality, Sweden

Annex 6: Example of decision tree for distinguishing waste/non-waste (used vehicles / ELVs)



Decision tree used by Swedish waste authorities for distinguishing used and end-of-life vehicles

Annex 7: Example of an inspection result form for waste sites

1.1 Date and time of inspection	…. ……. 20… from ……..h until …… h		
1.2 Competent authority			
1.3 Inspector(s)	Name(s):	E-mail:	Phone:
1.4 Other participants			
2 Reason for the inspection	☐ Routine check ☐ Complaint / information by …. ☐ Follow-up inspection ☐ Other ☐ See enclosures		
3 Controlled facility Name			
Address			
Country			
Tel. / Fax			
E-mail			
Responsible manager			
4 Type of facility	☐ Collection point ☐ Storage facility ☐ Treatment facility ☐ Other (specify)		
5 Permit	☐ Yes, issued … ☐ No		
6 Type of waste	☐ WEEE ☐ End-of-life vehicles ☐ Batteries ☐ Mixed municipal waste ☐ Other (specify)		
7 Specific findings (Quantity, origin and destination of waste, condition of facility, signs of pollution etc.)			

8 Need for action	☐ No deficits detected ☐ Information / warning issued to operator on site ☐ Order of technical improvements necessary ☐ Prohibition of waste shipment ☐ Closure of site ☐ Report to police / other authorities ☐ Other (specify)
Signature of inspector	Date Name

Annex 8: Example of Annex VII document

ANNEX VII

INFORMATION ACCOMPANYING SHIPMENTS OF WASTE AS REFERRED TO IN ARTICLE 3(2) AND (4)

Consigment information[(1)]

1. Person who arranges the shipment
Name: ABC d.o.o.
Address: Sample 1, 1000 Ljubljana

Contact person: Mark Sample
Tel.: + 386 1 1234567 Fax: + 386 1 9876543
E-mail: mark@abc.si

2. Importer/consignee
Name: XYZ
Address: Samplestr. 1, D- 25464 Munchen

Contact person: Hans Specimen
Tel.: 0041/ 123-567-489 Fax: 0041/123-489-567
E-mail: hans@xyz.de

3. Actual quantity: Tonnes (Mg): **22,500 kg** m^3:

4. Actual date of shipment: 15.8.2012

5.(a) first carrier *(2)*:
Name: Carrier d.o.o.
Address: Carrier street 1, 2000 Maribor

Contact person: John Driver
Tel.: + 386 41 111 111
Fax: + 386 4 7654 321
E-mail: carrier@carrier.si
Means of transport: truck, LJ1111Z
Datum prevzema: 15.5.2012
Signature: **Signature**

5.(b) second carrier:
Name:
Address:

Contact person:
Tel.:
Fax:
E-mail:
Means of transport:
Datum prevzema:
Signature:

5.(c) third carrier:
Name:
Address:

Contact person:
Tel.:
Fax:
E-mail:
Means of transport:
Datum prevzema:
Signature:

6. Waste generator*(3)*
Original producer(s), new producer (s) or collector:
Name: ABC d.o.o.
Address: Redidential st. 112, 1000 Ljubljana

Contact person: Mark Sample
Tel.: + 386 1 1234567 Fax: + 386 1 9876543
E-mail: mark@abc.si

8.Recovery operation (or if appropriate disposal operation in the case of waste referred to in Article 3(4):
R-code/D-code: R12
9. Usual description of the waste

Waste electric motors

7. Recovery facility☐ Laboratory ☐
Name: XYZ
Address: Samplestr. 1, D- 25464 Munchen

Contact person: Hans Specimen
Tel.: 0041/ 123-567-489 Fax: 0041/123-489-567
E-mail: hans@xyz.de

10. Waste identification (fill iin relevant codes*)*:

(i) Basel Annex IX:
(ii) OECD *(if different from (i))*: GC010
(iii) EC list of wastes: 16 02 14
(iv) National code: 16 02 14

11. Countries/states concerned:

Export/dispatch	Transit	Import/destination
SLOVENIA	AUSTRIA	GERMANY

12.Declaration of the person who arranges the shipment: I certify that the above information is complete and correct to my best knowledge. I also certify that effective written contractual obligations have been entered into with the consignee (not required in the case of waste referred to in Article 3 (4)*)*:

Name Date: 15.8.2012 Signature: **Signature and stamp**
ABC d.o.o.
Residential St. 112, 1000 Ljubljana

13. Signature upon receipt of the waste by the consignee:

Name: Date: Signature:

TO BE COMPLETED BY THE RECOVERY FACILITY OR BY THE LABORATORY:

14. Shipment received at recovery facility ☐ or laboratory ☐ Quantity received: tonnes (Mg): m^3:

Name: Date: Signature:

(1) Information accompanying shipments of green listed waste and destined for recovery or waste destined for laboratory analysis pursuant to Regulation (EC) No 1013/2006. For completing this document, see also the corresponding specific instructions as contained in Annex IC of Regulation (EC) No 1013/2006.

(2) If more than three carriers, attach information as required in blocks 5.(a), (b), (c).

(3) When the person who arranges the shipment is not the producer or collector, information about the producer or collector shall be provided

Annex 10: List of safety equipment

Reflective vest

Suitable footwear

Different kinds of gloves, depending on the kind of waste

Working clothes

Protective helmet

It is recommended to use at least the following equipment during the inspections:

- Camera,
- Mobile phone,
- PC with printer,
- Internet access to different databases,
- Meters to measure radioactivity,
- Meters to measure carbon monoxide.

For other equipment see the checklist for inspections (Annex 4).

Annex 10: Tables of procedural requirements for waste shipments

Table 2: Procedural requirements for transboundary movements of waste between members of EU, in transit across members of EU and between members of EU across teritories of third countries

	DISPOSAL	**RECOVERY**	
	All waste	»green waste« from Annexes III, IIIA, IIIB, which do not exhibit hazardous character-istics	Other waste
Between EU members	notification	Art. 18. (document from Annex VII)	notification
Transit across EU mem-bers	notification	Art. 18. (document from Annex VII)	notification
Between members of EU across territories of third countries	notification	Art. 18. (document from Annex VII)	notification

List of EU countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Hungary, Malta, Ger-many, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Great Britain

Table 1:	Procedural requirements for transboundary movements of waste from/into European Union							
	DISPOSAL		**RECOVERY**					
	All waste		**»green« list**			**»amber« list**		**Hazardous waste**
	export into	import from	export of waste from Annex III, IIIA into	export of waste from Annex IIIB into	import of waste from Annex III, IIIA, IIIB from	export of waste from Annex IV, IVA and unlisted into	import of waste from Annex IV, IVA and unlisted from	Export of waste from Annex V, 3. part of Annex V, other hazardous waste into
EFTA countries	notification				Art. 18. (document from Annex VII)			
Non-EFTA countries	ban				Art. 18. (document from Annex VII)			
Parties of Basel convention		notification			Art. 18. (document from Annex VII)		notification	
Non-parties of Basel convention		ban, but not for**			ban, but not for**		ban, but not for countries which the OECD decisions applies and **)	
Countries to which the OECD decision (C 2001 (107) applies			Art. 18. (document from Annex VII)[1]	notification	Art. 18. (document from Annex VII)	notification	notification	permit (notification)
Countries, which the OECD decision (C 2001 (107) does not apply			ban or	ban or	ban, but not for**	ban or	ban, but not for**	ban
			notification or	notification		notification (only for waste which exhibit hazardous characteristics)		
			Art. 18. (document from Annex VII)					
** bilateral or multilateral agreements		notification			Art. 18. (document from Annex VII)		notification	
** situations of crisis/war		exemption			exemption		exemption	

[1] Regulation 1418/2007, exemption: notification in case of export of waste from Annex IIIA (procedure of interim recovery)

Annex 11: Useful weblinks

Relevant EU legislation (latest consolidated versions)

- Regulation (EC) No 1013/2006 on shipments of waste (WSR): http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R1013:EN:NOT
- Latest amendments to the WSR (Commission website): http://ec.europa.eu/environment/waste/shipments/legis.htm
- Commission Regulation (EC) No. 1418/2007 concerning export of green-listed waste: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32007R1418:en:NOT
- Directive 2008/98/EC on waste (Waste Framework Directive): http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32008L0098:EN:NOT
- Directive 2012/19/EU on WEEE: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:197:0038:0071:EN:PDF
- Directive 2010/75/EU on industrial emissions: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:334:0017:0119:en:PDF
- Directive 2008/99/EC on the protection of the environment through criminal law: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32008L0099:EN:NOT
- Recommendation 2001/331/EC providing for minimum criteria for environmental inspections in the Member States (RMCEI)
- Review of the RMCEI (Commission website): http://ec.europa.eu/environment/legal/law/inspections.htm

Waste Shipment Correspondents' Guidelines 1-9:

http://ec.europa.eu/environment/waste/shipments/guidance.htm

IMPEL guidance on waste shipments and site inspection

- Manual on the return of illegal shipments of waste (2008): http://impel.eu/projects/manual-on-the-return-of-illegal-shipments-of-waste
- Step-by-step guidance book "Doing the right things for waste shipment inspections (2012): http://impel.eu/projects/doing-the-right-things-for-waste-shipment-inspections-dtrt-tfs/
- Exploring the use and effectiveness of complementary approaches to inspection for ensuring compliance (2011): http://impel.eu/projects/exploring-the-use-and-effectiveness-of-complementary-approaches-to-inspection-for-ensuring-compliance/
- Transfrontier shipment of e-waste (2010; including Conducting a threat assessment …): http://impel.eu/projects/transfrontier-shipment-of-electronic-waste

- Development of an easy and flexible risk assessment tool as a part of the planning of environmental inspections linked to European environmental law and the RMCEI (easyTools; phase 2, 2012): http://impel.eu/projects/development-of-an-easy-and-flexible-risk-assessment-tool-as-a-part-of-the-planning-of-environmental-inspections-linked-to-european-environmental-law-and-the-rmcei-easytools-phase-2/

Studies and other useful guidance documents - international

- Waste without borders in the EU? Transboundary shipments of waste (European Environment Agency, Report No. 1/2009): http://www.eea.europa.eu/publications/waste-without-borders-in-the-eu-transboundary-shipments-of-waste
- Movements of waste across the EU's internal and external borders (EEA Report No. 7/2012): http://www.eea.europa.eu/publications/movements-of-waste-EU-2012
- Manual on waste control (Twinning project Austria/Bulgaria, 2010): http://www2.moew.government.bg/waste/englisch/transboundary/manual_waste_control.pdf
- Study on Inspection Requirements for Waste Shipment Inspections (IEEP, Bio and Ecologic for the European Commission, 2009): http://ec.europa.eu/environment/waste/shipments/pdf/report_august09.pdf
- Assessment and guidance for the implementation of EU waste legislation in Member States (BiPRO and others for the European Commission, 2011): http://ec.europa.eu/environment/waste/shipments/pdf/Annex%20VII.pdf
- Transboundary shipment of waste electrical and electronic equipment / electronic scrap – Optimization of material flows and control (Ökopol for German Environment Agency, 2010): http://www.umweltdaten.de/publikationen/fpdf-l/3933.pdf
- Where are WEEE in Africa? Findings from the Basel Convention E-waste Africa Programme (2012): http://www.basel.int/Implementation/TechnicalAssistance/EWaste/EwasteAfricaProject/PublicationsReports/tabid/2553/Default.aspx
- Electronic waste and organized crime: Assessing the links (Interpol, 2011): www.**interpol**.int/content/download/5367/45070/version/.../**Waste**report.pdf

National guidance tools

- Swedish EPA Guide for exporters of used goods: http://www.naturvardsverket.se/Documents/publikationer/978-91-620-8494-3.pdf
- Norwegian KLIF Guide for exporters of used goods: http://www.klif.no/publikasjoner/2516/ta2516.pdf
- Swiss BAFU Guide "Exporting consumer goods – Second-hand articles or waste?": http://www.bafu.admin.ch/publikationen/publikation/01613/index.html?lang=en
- Germany / Hessian database on classification of transported waste: http://www.hlug.de/static/medien/abfall/abfall_client/EN/

- UK waste export controls tool:
  http://www.environment-agency.gov.uk/business/sectors/124357.aspx

Key websites for waste shipments

- European Commission / DG Environment:
  http://ec.europa.eu/environment/waste/shipments/index.htm
- European Commission / DG Trade:
  http://ec.europa.eu/trade/wider-agenda/environment/index_en.htm
- Secretariat of the Basel Convention: http://www.basel.int/
- IMPEL-TFS: http://impel.eu/cluster-2/
- INECE (International Network for Environmental Compliance and Enforcement):
  http://inece.org/topics/chemicals/
- WSCEP (Waste Shipments Compliance and Enforcement Platform):
  http://wscep.org/public/