Analyses and Findings

19 June 2015

Market Analysis
Legal Analysis
Crime Analysis
Concept of Operations

Disclaimer: This deliverable contains preliminary findings and should not actively be redistributed until the final review and/or the press campaign end of August 2015.
Market Analysis

One of the objectives of the CWIT project is to construct an accurate picture of the WEEE trading flows for Europe and comprehensive facts and figures on the WEEE volumes. Understanding the market dynamics as well as economic drivers and impacts of this are instrumental for intervening in the trading chain to reduce illicit trade and for delivering market intelligence to enforcement agencies.

The research focused on analysis of:
- The WEEE actors and typology of the WEEE chain,
- The estimation of the volumes of WEEE generated and its destinations, and
- The economic drivers behind illicit trade.

The WEEE chain
A generic typology provides a standardised way of mapping WEEE flows and associated market behaviour. However, the actual market flows between various actors are very country specific. There is obviously a high heterogeneity in terms of size, number and types of actors involved in these flows.

To better understand these actors and the many different data and literature sources, the Consortium developed two support tools:
- An online database of key actors per country, providing an EU overview of the quantity and complexity of interested parties: [http://www.cwitproject.eu/reports-downloads/database-ewaste-stakeholders](http://www.cwitproject.eu/reports-downloads/database-ewaste-stakeholders)
- The LibraWEEE ([http://www.libraweee.eu/](http://www.libraweee.eu/)) where all the documents and initiatives dealing with or containing information on WEEE flows are publicly available.

The WEEE volumes
From analysis, we can ascertain that the amount of WEEE illegally exported lies somewhere between 2% as a minimum and 8% as a maximum of the total e-waste generation of 9.500.000t in the EU28+2 for 2012. See the below diagram with all key explanations included:
Noticeably, of this volume only a few kilotons are actually seized and result in successful and reported prosecution and sentencing by law enforcement authorities. It appears that it is not the lack of inspections, but rather the difficulty and lack of intelligence and evidence gathered prior to prosecution that is generally insufficient to bring solid cases to court and thus to realize proper sentencing.

The economic drivers

Environmental and economic damages occur all along the WEEE chain. In the last stages of the project the economic drivers and impacts are estimated and indicated below. The amounts based on above flows:

<table>
<thead>
<tr>
<th>Indication of the Opportunity costs and Intrinsic Economic Value not available for the legitimate recycling industry (in millions €)</th>
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<tbody>
<tr>
<td>Opportunity costs lost due to Other recycling with mixed metal scrap</td>
</tr>
<tr>
<td>Scavenging of components from WEEE prior to treatment (only HDDs, motherboards, memory and compressors)</td>
</tr>
<tr>
<td>Small appliances in waste bin</td>
</tr>
<tr>
<td>Legal + illegal export + remaining undocumented gap</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

These figures indicate very roughly the maximum potential loss for legitimate industry due to poor enforcement of existing regulations. Different dynamics have different root causes and a complementary approach is needed to tackle the challenges of securing access to raw materials and achieve a level playing field among industry in EU.
Legal Analysis

One of the objectives of the CWIT project is the comparative overview of relevant legal policies and requirements relating to WEEE, and how these are implemented and enforced globally. Understanding the current legislative framework of each country is of crucial importance when analysing illegal trade in WEEE. Without a clear and comprehensive legislative base, enforcement authorities and prosecutors are powerless to address illegal WEEE flows.

The research consisted of questionnaires (directed at EU and non-EU countries) and analysis of:

- The WEEE Directive articles affecting the illegal trade in WEEE,
- The implications of the Waste Shipment Regulation (which implements the provisions of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, as well as the OECD Decision concerning the Control of Transboundary Movements of Wastes Destined for Recovery Operations), and
- The UN Basel Convention on the Control of Transboundary Movements of Hazardous Wastes.

In particular, the project sought to establish a baseline of the general legal framework on WEEE such as the requirements for functionality testing, WEEE treatment conditions, packaging of used EEE, permits required (collection, transportation, storage, treatment). The research also assessed the type of liability (civil, criminal, administrative), the actors involved, and the severity of the penalties applied.

Consistency of definitions

The study highlights the issues of consistency across the implementation of the WEEE Directive for EU Member States. EU countries were obliged to transpose the Directive into their national legislation by 14 February 2014. To date 25 of the EU Member States have formally transposed the Directive.

Unclear definitions and misinterpretation of concepts complicated the transposition of the WEEE Directive in some countries and highlighted the need for uniformity at European level on the classification of waste. In certain countries, additional legislative instruments have yet to be enacted that would coordinate the responsibilities of other WEEE actors, for example the monitoring of the entire WEEE system in Italy.

In both the EU and non-EU countries, the broad definition of how waste is classified and in particular the differences between EEE for re-use and WEEE is a particularly fraught area. It was indicated that one of the proposed solutions to this ambiguity, functionality tests, could be economically unfeasible. Technical guidelines aimed at clarifying the distinction between used EEE (UEEE) and WEEE is under development under the Basel Convention, which, if adopted, would reflect global agreement on this issue. At the recent Basel Convention COP 12, the adoption of technical guidelines on WEEE faced a number of objections from member countries with the result that the guidelines have been adopted on an interim basis, on the understanding that they are of a non-legally binding nature and that the national legislation of a party prevails over the guidance provided within the technical guidelines. Nevertheless, a number of OECD guidelines concerning WEEE shipments are currently followed by countries in the region. Clarity and applicability of guidelines, definitions of WEEE and of what constitutes offensive behaviour is vital for all personnel engaged in the fight against illegal trade in WEEE. Examining the legal framework of WEEE and its implementation and enforcement enables authorities to focus on measures and strategies that will most effectively improve the detection and prosecution of WEEE violations.

Penalties

The penalties for the illegal trade in WEEE varied greatly in terms of prison durations and monetary fines. However, based on the data received from EU countries, there did not appear to be a relationship between the magnitude of the penalty and WEEE collection rates (Spain has high penalties but low recovery rates). Some countries however do distinguish based on the involvement of organised crime (France and Italy), meaning that WEEE crimes perpetrated by organised criminal elements are punished differently.
Some EU Member States also require further legislation to facilitate enforcement. For example, in some instances when a shipment is intercepted before it has left national borders, authorities are only able to classify the act as an “attempt” to ship. In some countries, this means that the penalty is much lower than for the actual act of illegally exporting WEEE, and in others, it may not be considered an offence at all.

At international level, it was suggested to harmonise the minimum standard on offences and provisions, such as the ban on cash transactions in scrap metal trade. This would simplify enforcement in trans-border cases, and would prevent criminals from simply shifting their activities to lower-risk countries within the EU.

**Best practices**

The study highlights a number of instances where countries have developed detailed guidance documents for actors involved in the WEEE chain to help clarify and expedite inspections, monitoring, and reporting activities. Also, France’s ban on cash transactions involving the purchase of metal is an important step in reducing the profitability of illegal trade. The success of this measure is evident in the displaced illegal activities across French borders into neighbouring countries. This ban makes it more difficult for individuals to sell stolen material (including WEEE) anonymously to scrap dealers.

The following diagram illustrates how the legal framework affects the entire WEEE system:
Crime Analysis

The CWIT Project aims to conduct a comprehensive study of the involvement of organised crime groups in the global distribution of WEEE, to identify the specific criminal activities associated with illegal WEEE shipments, and to provide an estimation of the volume of WEEE that is generated and illegally traded. The study is based on extensive data collected through surveys, expert interviews and open source material.

In the illegal trade of WEEE, there is a varying degree of compliance and criminality that spans across a continuum ranging from minor unintentional violations or non-compliance by individuals to deliberate illegal activities following a criminal business model. The organisational structure differs by country and region, from individual traders to structured criminal groups. Current gaps – including legislative loopholes, inadequate enforcement, and the application of penalties that are too low to create a disincentive – result in an environment susceptible to the involvement of international crime groups.

In the WEEE offences officially reported by authorities in the context of the CWIT Project, thirteen different types of actors were identified and grouped into five categories: collection, consolidation, brokering, treatment and transport. The distribution of cases indicates that vulnerabilities exist across all stages of the WEEE supply chain. The offences included inappropriate treatment and violations of WEEE trade regulations, the use of false documents, fraud, theft, lack of required licenses/permits, smuggling and false declaration of the load. WEEE offences in some cases were also connected with money laundering and tax evasion. The use of fraudulent documents also indicates that offenders are aware of the required authorisations and are simply circumventing them. Finally, the instances of fraud, tax evasion and money laundering demonstrate the links of WEEE offences with financial offences.

The close connection between legal and illegal markets of WEEE has been underlined during the analysis, with the involvement of both legitimate companies and informal actors. Importing and exporting companies in particular were the main reported actors involved in illegal activities related to WEEE. Informal collectors, WEEE brokers, internet traders, recyclers/end processors, sorting/consolidation sites, and freight forwarder/logistics operators were also cited as being involved in the cases reported to the CWIT Project. Furthermore, there were instances where producer responsibility organisations, municipal employees, and NGOs were implicated in the offences.

The most frequent destinations and routes of illegal WEEE trade were also explored. Cases analysed most commonly include WEEE detected in Europe and intended for export to Africa and Asia. The Middle East was reported to be a destination in a limited number of cases. Analysis was also carried out concerning WEEE transported from Western to Eastern Europe.

Based on open source studies, it is estimated that the total quantity of WEEE (mixed with used electrical and electronic equipment, UEEE) illegally exported from EU Member States to non-OECD countries is 1.3 Mt (1,300,000t). Additional analysis based on the number of WEEE violations identified during waste inspections and compared with EUROSTAT data on all EU waste shipments indicated that an estimated 400,000t of WEEE was illegally shipped in 2012.

However, it should be noted that such estimates are all subject to a number of limitations. The actual amount of WEEE reported to be seized by law enforcement authorities, was 11,000t between 2009 and 2013, or an average of 2,000t per year. Of the WEEE seized, temperature exchange equipment and screens made up the majority of the volume.

### Overview of reported quantities seized between 2009-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Nr of countries that reported</th>
<th>Quantity reported to be seized (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>5</td>
<td>700</td>
</tr>
<tr>
<td>2010</td>
<td>3</td>
<td>1400</td>
</tr>
<tr>
<td>2011</td>
<td>7</td>
<td>3500</td>
</tr>
<tr>
<td>2012</td>
<td>11</td>
<td>2500</td>
</tr>
<tr>
<td>2013</td>
<td>7</td>
<td>2700</td>
</tr>
</tbody>
</table>
Concept of Operations (CONOPS)

CWIT Deliverable 5.6 provides a vision of how a comprehensive law enforcement system that effectively mitigates illegal WEEE disposal would operate. The Concept of Operations (or ‘CONOPS’) is based upon data gathering and analysis conducted during the first four steps of CWIT Work Package 5, supplemented by open source information and law enforcement expertise.

An analysis of the current law enforcement system, consisting of an evaluation of its threats, opportunities, weaknesses, and strengths, demonstrates that co-operation and data management are essential elements if we seek to strengthen law enforcement and counter illegal trade in WEEE. Therefore the CONOPS proposes to integrate and combine two systems:

1. Operational Intelligence Management System (OIMS)

An OIMS enables the secure input, management, development, analysis and dissemination of intelligence and critical information, especially during the planning of law enforcement actions. It seeks to promote and support intelligence-led enforcement, advance collective knowledge about the offences related to the illegal trade and disposal of WEEE, identify the risks associated with (transnational) organised crime groups (OCG), and recommend actions. Designing, developing and implementing an OIMS at national and European level can further mitigate the illegal trade and disposal of WEEE.

2. National Environmental Security Task Force (NEST)

The second proposed system is a NEST that fosters a coordinated multi-agency response to tackle the illegal trade in WEEE. This system seeks to enable a law enforcement response that is collaborative and coordinated at national, regional and international level, detailing the role of EU stakeholders in the enforcement of WEEE regulations. Figure 3 illustrates the task force and its different stakeholders. By creating a team of experts, each with specialised skills, a NEST could ensure that all criminal activities related to the illegal trade in WEEE can be addressed.