

# Chapter 7

## Transboundary Movement of E-waste





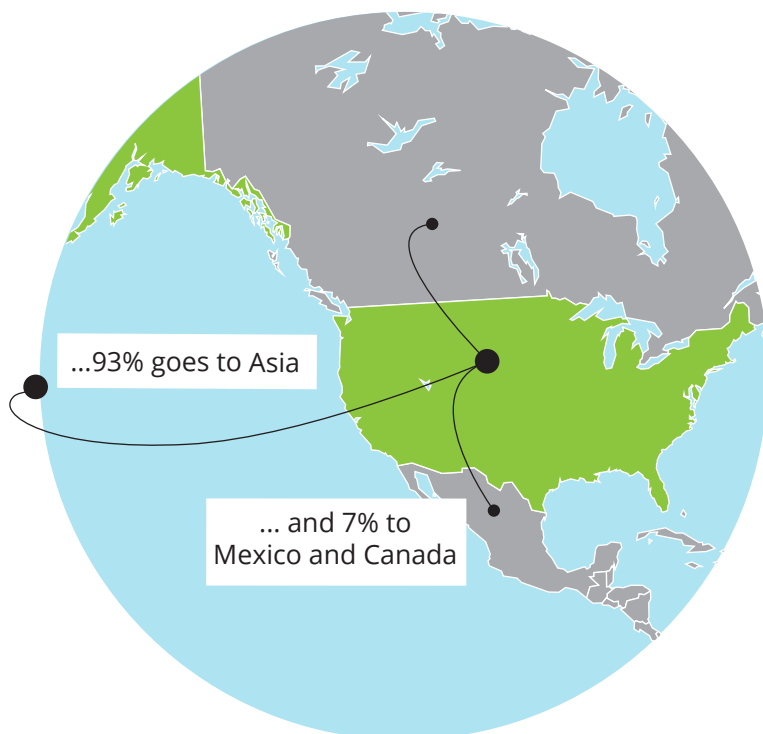
Countries measure import and exports flows with international trade statistics, which are usually based on trade from customs. Such statistics use the global Harmonized Trade System (HS) codes. However, the HS codes do not distinguish between new and used electronics. Though there have been some attempts and dialogue between the US and EU to create indicators for used electronics and e-waste within national export systems, the inclusion of used electronics within the trade code systems remains elusive. Countries are providing the Basel Convention Secretariat with statistics on e-waste imports and exports. However, countries do not cover the complete scope of e-waste, and countries are only partly, if at all, fulfilling their reporting obligations. Secondly, the statistics also do not cover trade of equipment that's wasted though functional. Therefore, statistics on imports and exports of used equipment and e-waste are non-existent or of low quality for most countries.

However, over the last decade, it has become clear that oftentimes "e-waste" is classified as "used electronics" because of a potential for reuse, refurbishment, and recycling. It is currently difficult to determine whether the classification of used electronics is correct. This is not only related to the technical status of the product, but also to the market of the importing country. For example, the interest in reusable CRT is globally decreasing at a fast rate. For this reason, it may be too difficult to have countries assess whether their exports and imports are "e-waste", and should turn attention toward collecting information on used electronics.

Methods to quantify a complete overview of imports and exports of used-EEE and e-waste therefore still need to be developed and tested. One potential method is to identify used or waste equipment based on a price threshold of the shipment. Although the method is applicable, it often yields estimates that are too low (Duan et al. 2016) (Baldé et al. 2016).

### Illustration 7.2: Percentages of obsolete EEE exported from USA

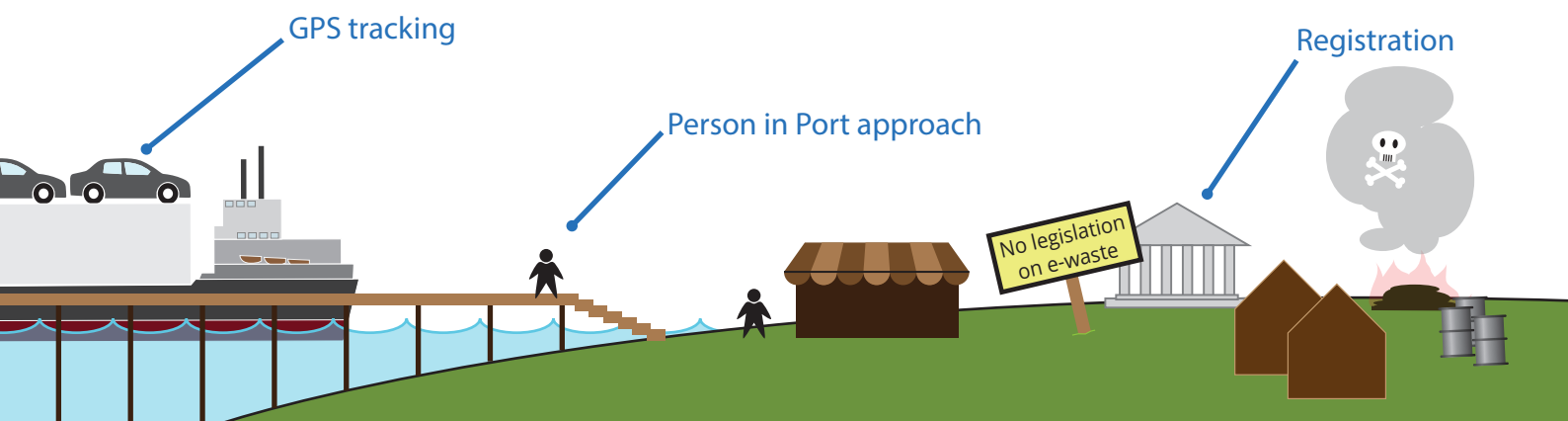
34% of the 205 tracker deployments move off shore from USA and EU. Of this 34%...



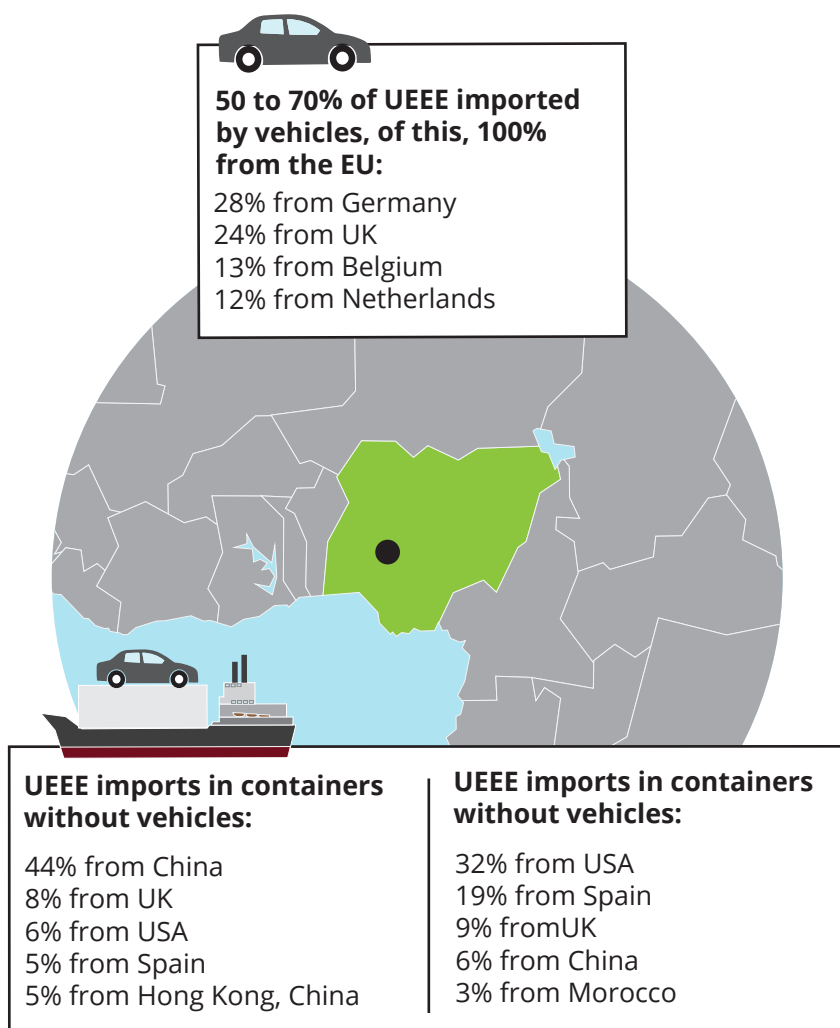
Source: Hopson, et al. 2016

There are alternative methods to assess these flows, and two recent examples will be demonstrated. One was performed by a number of journalists and the Basel Action Network (BAN), which placed GPS trackers in obsolete equipment in the EU and USA (Hopson et al. 2016). One of BAN's main findings showed that 34% of the 205 tracker deployments moved off shore, almost all to developing countries. Of those exported, 93% went to developing countries in Asia where no proper recycling is performed. 7% moved to countries

### Illustration 7.1: Methods to assess import and export flows



**Illustration 7.3: Percentages of imported EEE into Nigeria by means of transport**



contributed around 18,300 t of UEEE per year with 52% imported in containers with vehicles.

Almost 100% of the roll-on/roll-off imported vehicles were exported from ports located in the EU, mainly from Germany (28%), the UK (24%), Belgium (13%), and The Netherlands (12%). Around 44% (based on weight) of the imported UEEE in containers without vehicles originated from ports in China, the UK (8%), USA (6%), Spain and Hong Kong (China)\* (each 5%). The EU Member States are the source of around 25% of these imports. UEEE imports in containers with vehicles came from ports located in the USA (32%), Spain (19%), UK (9%), China (6%), and Morocco (5%). The EU Member States are responsible for around 35% of such imports into Nigeria.

In total, most imported UEEE originated from ports in Germany (around 20%) followed by the UK (around 19.5%), and Belgium (around 9.4%). The Netherlands (8.2%) and Spain (7.35%), followed by China and the USA (7.33% each), are next in the ranking of main exporters, followed by Ireland (6.2%). Overall, these eight countries account for around 85% of UEEE imports into Nigeria. EU

member states were the origin of around 77% of UEEE imported into Nigeria.

Although the Nigerian Government banned the import of CRT-devices, around 260 t were found to be imported annually. The main sources of these CRT-TVs were China (23%), USA (15%), UK and Spain (14%), Italy (8%), Hong Kong (China) and the Netherlands (4%). These six economies accounted for about 80% of the total CRT imports.

Around 80% of the UEEE imported in containers was clean and undamaged, but only around 40% was properly packaged. Basic functionality tests showed that, on average, at least around 19% of devices were non-functional, and among those with the highest non-functionality and import rates were LCD-TVs and displays, refrigerators, and air conditions, which may contain mercury and (H) CFCs.

such as Mexico and Canada. One of these studies showed that around one-third of the e-waste tracked by the 200 GPS trackers in the US ended up in developing countries.

Another alternative way to measure imports of used EEE and e-waste is to place a researcher in the receiving port. The approach is typically called 'Person in the Port'. In the following report, we mention the highlights from the most recent Person in the Port study.

### Case study: Person-in-the-Port Project in Nigeria

This was conducted in 2015 / 2016 in Nigeria. In 2015/2016, around 71,000 t of UEEE were imported annually into Nigeria through the two main ports in Lagos. Around 69 % were stuffed in cars, buses, and trucks imported via roll-on/roll-off mode. UEEE imported in containers, with and without vehicles,

\* Special Administrative Region of Hong Kong, China