



EXECUTIVE SUMMARY



A RAPID RESPONSE ASSESSMENT

WASTE CRIME – WASTE RISKS

GAPS IN MEETING THE GLOBAL WASTE CHALLENGE



Preface

More than ever, our future depends upon how we manage the future of our waste. As an integrated part of sustainable development, effective waste management can reduce our global footprint. Ignoring or neglecting the challenges of waste, however, can lead to significant health, environmental and economic consequences.

A staggering 1.3 billion tonnes of food is produced each year to feed the world's 7 billion people. Yet, according to the Food and Agriculture Organization (FAO), around US\$1 trillion of that food goes to waste. With 200,000 new people added every day, the world can ill afford to waste such a massive amount of food.

Global waste, however, does not stop at food. Consumers are increasingly buying products that are wrapped in plastics and paper. Much of this packaging – and eventually the products themselves – will end up in landfills. This trend has both health and environmental consequences, especially given the rapid rise of hazardous waste such as electronics.

Innovative solutions to combat “e-waste” are emerging. Recovering valuable metals and other resources locked inside electronic products, for example, can reduce e-waste. Not only can recycling reduce pressure on the environment, it can also create jobs and generate income. Indeed, the global waste market sector – from collection to recycling – is estimated to be US\$410 billion a year, excluding a very large informal sector.

As with any large economic sector, however, there are opportunities for illegal activities at various stages of the waste chain. In the rush for profits, operators may ignore waste regulations and expose people to toxic chemicals. On a

larger scale, organized crime may engage in tax fraud and money laundering.

About 41.8 million metric tonnes of e-waste was generated in 2014 and partly handled informally, including illegally. This could amount to as much as USD 18.8 billion annually. Without sustainable management, monitoring and good governance of e-waste, illegal activities may only increase, undermining attempts to protect health and the environment, as well as to generate legitimate employment.

The evolution of crime, even transnational organized crime, in the waste sector is a significant threat. Whether the crime is associated with direct dumping or unsafe waste management, it is creating multi-faceted consequences that must be addressed.

The Basel, Rotterdam and Stockholm Conventions are at the forefront of global action to track and manage the transboundary flows of hazardous waste. More recent efforts such as the Solving the E-waste Problem (StEP) initiative, led by the United Nations University, are generating additional momentum. We hope that this pioneering report contributes to the debate, and leads to concrete and meaningful action.

Achim Steiner
UN Under-Secretary General and UNEP Executive Director



***The evolution of crime,
even transnational
organized crime, in
the waste sector is a
significant threat.***

Executive summary

Waste covers a very wide spectrum of discarded materials ranging from municipal, electrical and electronic, industrial and agricultural, to new types including counterfeit pesticides. It also includes anything in size and scale from decommissioned ships, oil or liquid wastes, hundreds of millions of mobile phones to billions of used car tires.

With rising global population, urbanisation and consumption, the amount of waste continues to increase, providing vast environmental, social, health, economic and even criminal challenges of unknown proportions. Due to high costs of treating and disposing hazardous and other wastes, weak environmental regulations, poor enforcement and low environmental awareness, illegal transboundary movements of hazardous wastes and other wastes from developed countries to developing countries have become an increasing global concern. Despite the significant efforts undertaken in the framework of the Basel, Rotterdam and Stockholm Conventions and by some government agencies, detailed knowledge of the illegal transnational flows remains limited and at best fragmented.

The current publication is based on the latest research findings, and involvement from practitioners such as the formal waste sector, inspectors, law enforcement officers and prosecutors. It provides insight into the possible scale and features of the main

drivers, along with case studies. It is not an exhaustive or fully comprehensive overview, but it intends to identify major areas of policy deficits and challenges that require further investigation, policy action and intervention for prevention and damage control, as well as to identify opportunities.

The global waste market sector from collection to recycling is estimated to be USD 410 billion a year (UNEP 2011), excluding a very large informal sector. In common with any large economic sector, there are opportunities for illegal activities at various stages of legal operations.

The exact size of the global illegal waste trade is unknown. The latest research on e-waste, a product of one of the world's largest and fastest growing manufacturing industries, estimates that about 41.8 million metric tonnes (Mt) of e-waste was generated in 2014 and that this number will increase to 50 Mt already by 2018 (Balde et al. 2015). According to various



estimates, the amount of e-waste properly recycled and disposed of ranges between 10 to 40 per cent (UNODC 2013). The presence of the informal economy makes solid estimates of the value for the sector difficult. However, using an estimate previously used by INTERPOL of an average value of e-waste at USD 500 per tonne (INTERPOL 2009), the range of e-waste handled informally or unregistered, including illegally, amounts to USD 12.5-18.8 billion annually. It is not known how much of this e-waste that is subject to the illegal trade or simply dumped.

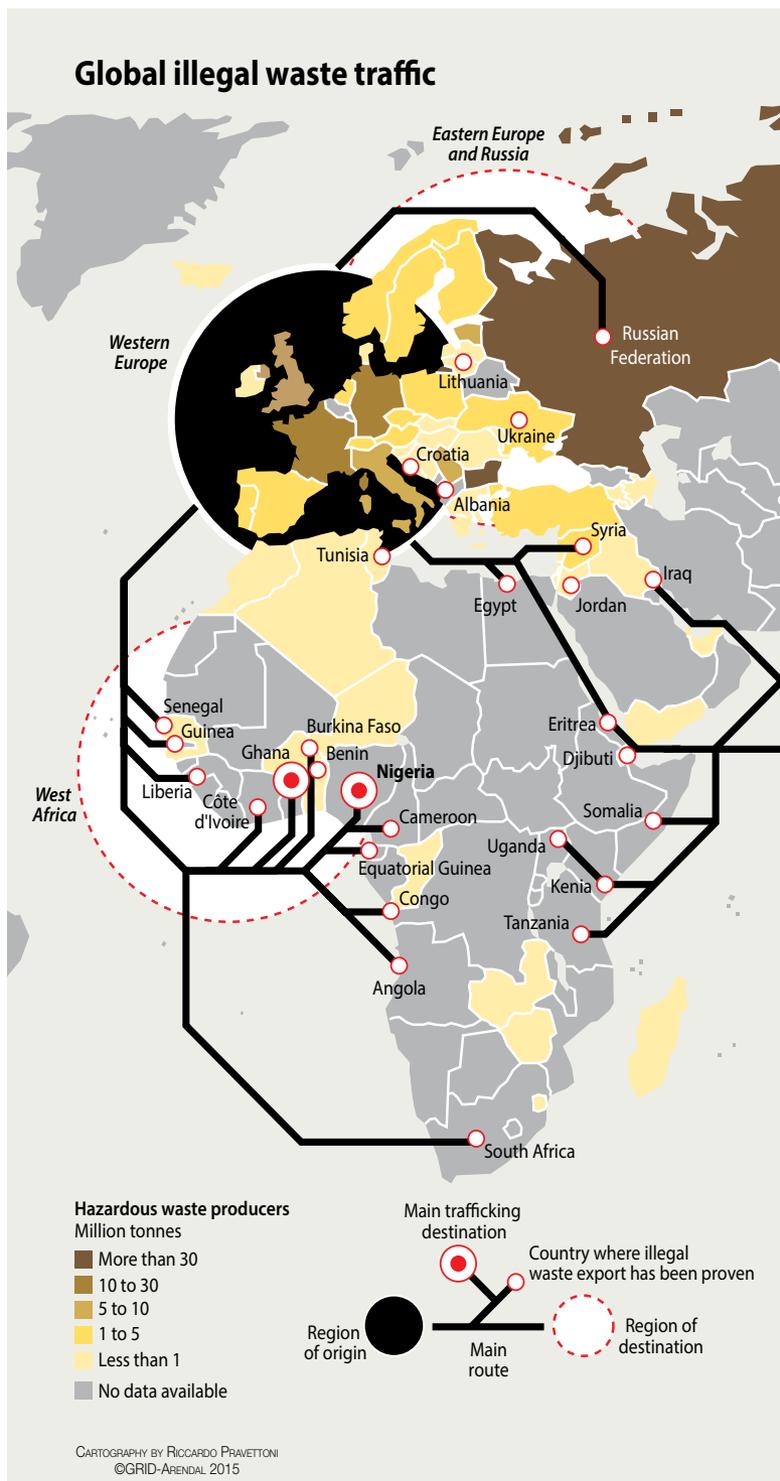
The Basel, Rotterdam and Stockholm Conventions provide the forefront of our global efforts in tracking and managing hazardous waste and chemicals, along with other initiatives such as the UN Solving the E-waste Problem (StEP) Initiative on electronic waste. The Basel Convention is the main global umbrella institution that regulates the transboundary movement and disposal of hazardous and other wastes. One of its provisions includes an obligation for Parties to cooperate in cases where illegally shipped waste has to be repatriated. Regional conventions such as the Bamako Convention, a regional agreement for the African region, and the Waigani Convention for the South Pacific region, are additional legal mechanisms aimed at preventing illegal trade. Lack of legal clarity may lead to both unintentional and intentional breaches of the regulations dealing with waste management and transboundary movement. Furthermore, the Basel Convention allows the Parties to define the wastes in addition to the waste lists under the Convention, and recognizes the right of the Parties to adopt their own national legislation to prevent and control of hazardous wastes and other wastes (Article 3.1 and Article 4.1). These grey zones and different national legislations are clear challenges for the law enforcement community. Enforcement is undoubtedly also a challenge.

The report has a global scope, but it also has a European focus mainly for two reasons. First, Europe has a high consumption level making the region one of the major waste producers in the world. Second, the issue of waste is gaining increasing attention in the region. Some European countries have a lot of experience and knowledge due to a high incidence of waste crime prosecutions. The assessment focuses on these countries with some illustrations from other regions.

This Rapid Response Assessment report describes the results of the present enforcement efforts, and stops short of delineating actual global illegal waste trade patterns. The assessment highlights known cases and available information. It does not follow that countries and regions that are not discussed in detail are less affected by the problem of waste crimes. The activities in these countries may simply be monitored to a lesser extent.

Serious crimes may take place in any part of the waste chain, including exposing populations to toxic material through improper handling and disposal. They are not necessarily

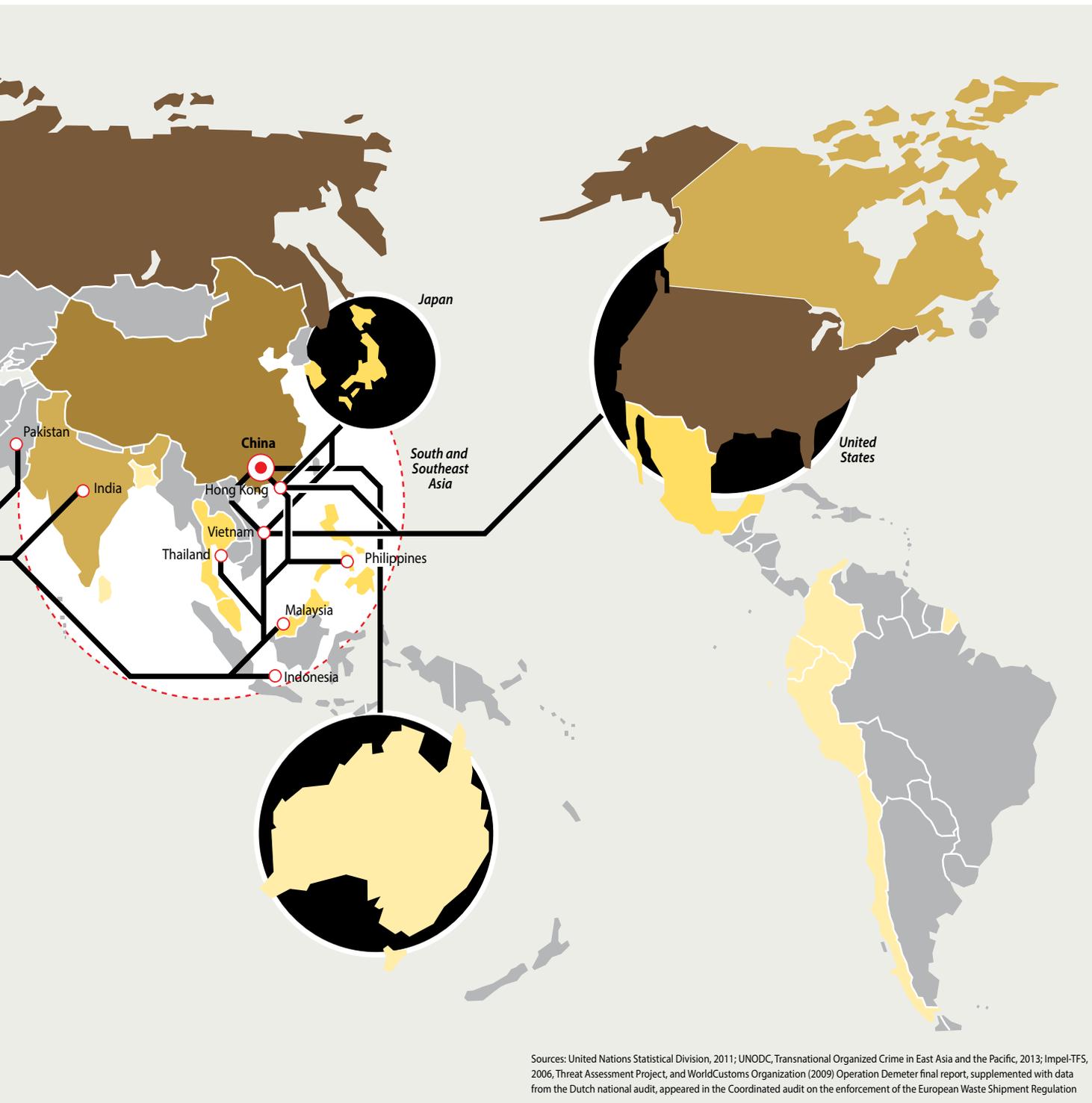
associated with breach of soft, unclear or waste environmental regulations. Rather, serious crimes such as tax fraud or money laundering, take place as the large-scale economic and transport sector of waste receives very little attention. Furthermore, larger business interests may deliberately bypass environmental legislation and tax laws for profit. In



some cases some recyclable waste such as plastics, paper or metals may be used directly to cover or hide hazardous waste, although the scale of this remains unknown. Companies can be paid significant sums for appropriate treatment, but instead dump large quantities mixed with regular waste for substantial profit. Thus, these companies may commit envi-

ronmental crimes (with important health implications), such as fraud through falsification of customs forms, or tax fraud through over- or under invoicing costs and incomes.

Waste is also deliberately classified as other items to deceive law enforcement authorities. This is often done by using





non-hazardous waste codes for hazardous wastes or using product codes for hazardous wastes. As e-waste is largely categorized as hazardous due to the presence of toxic materials such as mercury, lead and brominated flame retardants, it requires proper management. E-waste may also contain precious metals such as gold, copper and nickel, and rare materials of value such as indium and palladium making it an attractive trade. However, in practice, many shipments of e-waste are disguised as second hand goods.

Inadequate resources for monitoring, enforcement and low penalties provide an environment of major opportunity for transnational organized criminal actors to commit large-scale breaches of environmental laws. As volumes are unknown, this situation in effect generates a permissive environment for tax fraud.

Key destinations for large-scale shipments of hazardous wastes, such as electrical and electronic equipment, include Africa and Asia. In West Africa, a significant recipient is Ghana and Nigeria, but high volumes also go to, but not limited to, Cote D'Ivoire, and the Republic of the Congo. South Asia and Southeast Asia also appear to be major regional destinations, including, but not limited to, China, Hong Kong, Pakistan, India, Bangladesh, and Vietnam.

The key driver for illegal waste shipments to destination countries is the profit generated from payments for safe disposal of waste that in reality is either dumped or unsafely recycled. It may, however, also include an additional profit from recycling certain components. While the latter appears to be positive, in practice it develops environments that are hazardous to health, and typically leads to subsequent dumping of majority of the waste. Profit is the fundamental objective of the different players in illegal waste shipments. These may include exporters, middlemen and informal recyclers. Their

activities are usually structured along a legal chain of operations, albeit where the players take advantage of loopholes in control regimes and actual control capacities.

Both small- and large-scale smuggling techniques can be observed all over the world, from organized truck transport across Europe and North America to the use of major smuggling hubs in South Asia, including widespread container transport by sea. Large numbers of abandoned waste containers with unknown contents are stored in different ports in Asia and in other parts of the world. Dumping at sea or even more so in ports is logistically easy. The use of such methods warrants much further investigation given the possible scale of tax fraud and larger organized breaches of environmental regulations.

Stringent enforcement in one country commonly leads to changes in illegal shipment routes through neighbouring countries. Strong enforcement practices, such as China's Green Fence campaign, have been changing the traditional routes for illegal waste shipments.

The shipment of toxic material and electronic waste poses a particular acute threat for involvement and growth of organized crime. It entails money laundering, increased criminal proceeds revenues and an opportunity for further diversification of criminal proceeds. There is likely no other area of organized crime that provides such a significant opportunity for money laundering and tax fraud as waste disposal, with its near complete lack of monitoring, statistics or reporting.

Without any significant enforcement efforts dedicated to the mapping, investigation and possible prosecution of criminals involved in illegal waste collection, illegal dumping and transport activities are likely to grow, as will the associated threats to human health and environmental security.

Recommendations

■ Strengthen awareness, monitoring and information

1. Acknowledge and raise further awareness of waste crime as an important threat to security, people and environment.
2. Strengthen mapping of scale, routes and state of hazardous waste and possible involvement of organized crime.
 - a. Strengthen awareness and request countries to specifically address the risks associated with organized crime involvement in waste management.
 - b. Strengthen awareness in the enforcement chain and of prosecutors of the risks for conducting fraud, tax fraud and money laundering through the waste sector.
3. Encourage non-governmental organizations and other stakeholders to expose waste crimes and build awareness of the massive health risks to waste end-users. If waste recycling activities are taken up there should be an adequate knowledge of sound recycling methods to prevent direct exposure to toxic substances.

■ Strengthen national legislation and enforcement capacities

4. Strengthen national legislation and control measures by:
 - a. Improving national legislation frameworks as the primary basis for effectively and efficiently combating and monitoring of hazardous waste crimes. Establish the required competences and resources for the responsible law enforcement authorities to perform their duties, including inspections of transboundary movements within their mandates.
 - b. Strengthen multi-agency cooperation at the national level between enforcement agencies – customs, police, environment authorities, and prosecutors.
 - c. Build capacities of the entire enforcement chains, including customs, police, environmental enforcement officers, prosecutors and judges, to address waste crimes.
 - d. Strengthen the capacity of customs authorities to enforce waste crimes mitigation through application of the UNODC-WCO Container Control Programme (CCP) or Green Customs Initiative (GCI) protocols.
 - e. Promote identification of the tariff codes corresponding with the Codes of Basel Convention present in Annex I, in Annex VIII and Annex IX.

■ Strengthen international treaties and compliance measures

5. Strengthen effective monitoring and enforcement approaches at global, regional and sub-regional levels, including sharing of tools, best practices and intelligence for environmental inspectors, police and customs officers using existing networks such as the UNODC and INTERPOL. Environmental inspectors may also consider taking part in networks like IMPEL within the EU to share information with fellow government environmental agencies.

■ Promote prevention measures and synergies

6. Facilitate the proper return of illegal waste shipments at cost to shipper as a measure of prevention. Proceed with a technical assessment of quantities and qualities of abandoned containers particularly in Asia and of dumping of hazardous waste worldwide.
7. Take a comprehensive and integrated approach in combating environmental crime and exploring opportunities for building synergies with current efforts in combating wild-life and Ozone depleting substance (ODS) trafficking
8. Encourage waste producers and waste management companies to share experiences and lessons learned and obtain control of the downstream supply chain through
 - a) the contract to document the value chain until the end disposal or recycling, and b) a legal obligation that only players with the necessary licenses all along the chain can handle the waste. This applies for both hazardous and non-hazardous waste. The waste management companies are encouraged to agree upon business standards that exempt so called “grey zones” in legislation to secure environmentally sound waste management practices.



www.unep.org

United Nations Environment Programme
P.O. Box 30552 - 00100 Nairobi, Kenya
Tel.: +254 20 762 1234
Fax: +254 20 762 3927
e-mail: unep@unep.org
www.unep.org



A Centre Collaborating with UNEP

GRID-Arendal
Teaterplassen 3
N-4836 Arendal
Norway
grid@grida.no
www.grida.no