



## Global WEEE management needs to step up efforts

**A recent international analysis** of waste electrical and electronic equipment (WEEE) management has indicated that current practices will not be able to deal with future increases in WEEE. It calls for rapid, co-ordinated and bold responses that are both technical and non-technical to deal with this ever-increasing global issue.

**It has been estimated that**, globally, 20 to 50 million tonnes of WEEE is discarded each year. In coming years, these quantities are likely to increase with more technological updates and falling costs of appliances. This has several environmental and health implications as WEEE contains potentially harmful materials and contributes to resource depletion if it is not recycled or reused. The study summarised global trends in WEEE in each of the five continents and analysed current approaches for regulating and preventing WEEE.

In 2007, EU countries disposed of an estimated 6.5 million tonnes of WEEE and it is estimated that by 2015, this figure could nearly double. In North America, the estimated amount of WEEE was 2.25 million tonnes in 2007. There are no figures for South America as a whole, but it is estimated that Brazil alone generates 0.68 million tonnes of WEEE per year. In Asia, there is no official data from China, but in India the waste from computers, printers, washing machines, mobile phones and televisions was estimated to be 0.44 million tonnes in 2007. Meanwhile, Japan produced an estimated 0.86 million tonnes of WEEE in 2005. Africa has few figures, but amounts of WEEE will be increasing with greater demand for electrical appliances. Australia has no overall estimate of WEEE.

Asia imports large amounts of WEEE, either for re-use, recycling or disposal. It is estimated that 80 per cent of discarded WEEE is exported to Asia, with the vast majority going to China. Africa imports WEEE and tends to stockpile it for dismantling and (informal) recycling. North America also has a storage habit (about 75 per cent of obsolete WEEE is in storage) but this is likely to be the result of high disposal fees and sufficient storage capacity. In China and India, the majority of recycled WEEE is processed informally in small workshops. There is concern that many of the figures on WEEE imports underestimate the reality, perhaps due to illegal shipments. The EU has the most comprehensive regulation with its WEEE Directive<sup>1</sup> that promotes reuse, recycling and other forms of recovery. North America has little federal legislation although several states have implemented WEEE programmes, such as takeback schemes which oblige distributors of the original products to take back WEEE. China has three legislative documents providing guidance on recovery and disposal of WEEE and Japan has the Home Appliance Recycling Law.

In summary, global quantities of WEEE will continue to increase with the emergence of new technologies and affordable electronics. Reported quantities of WEEE may be underestimated and there is a need for standardised methods and techniques to provide more accurate estimates. Informal recycling, particularly in developing countries, could help reduce quantities of WEEE, but operations must be in line with modern safety requirements to prevent damage to health and the environment. The pace of implementation of current legislation is not fast enough to deal with the increasing amount of WEEE and, in some countries, it is non-existent. Rapid and co-ordinated responses are needed on a global scale.

1. See: [http://ec.europa.eu/environment/waste/weee/index\\_en.htm](http://ec.europa.eu/environment/waste/weee/index_en.htm)

**Source:** Ongondo, F.O., Williams, I.D. & Cherrett, T.J. (2011) How are WEEE doing? A global review of the management of electrical and electronic wastes. *Waste Management*. 31:714-730.

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