

THE EDUCATION UNIVERSITY OF HONG KONG
FACULTY OF LIBERAL ARTS AND SOCIAL SCIENCES

Research Output/Impact Prize for the Dean's Research Fund 2017-18

**Brief Introduction of Awardee's
Research Publication/Study and Future Research Development**

Awardee (Dept): Dr. Deng Wenjing, Assistant Professor (SES)

Publication Title: End-of-life (EoL) Mobile Phone Management in Hong Kong Households

A. *Briefly introduce your research publication/study for which you have received the prize.*

The rising generation amount of electronic waste in the world has been a hotspot. More people live in cities now than ever before. This concentration of people in cities presents opportunities to plan and design smarter systems and infrastructure. Unfortunately such a concentration also results in a concentration of use and consumption of electronic consumer products. E-waste is now recognized as a major contamination threat to human health and the environment. Understanding the life cycle of consumer products, including electronics, is important to implement sustainable supply chains that minimize health and ecological risks.

Material flow analysis (MFA) has been used to investigate large annual number of end-of-life (EoL) mobile phones generated in Hong Kong in this important work. According to this work, the average lifespan of a mobile phone in Hong Kong was almost 23 months. Most EoL mobile phones were transferred to Mainland China for not environmentally sound or sustainable recycling. It is of regional importance due to e-waste activities in Shenzhen and other parts of China. For example, Asia will be the leading producer of e-waste by 2030. But even more importantly, the output is international important due to the approach taken in the paper to understand life cycle of mobile phones.

This work entitled " **End-of-life (EoL) mobile phone management in Hong Kong households**" has been published *Journal of Environmental Management* with an impact factor of 4.010 (2016). The results of this work can be provided to the Hong Kong Government of planning a better waste management in Hong Kong. Many other regions will also benefit from this contribution.

B. How you used/will use your prize and perhaps its usefulness to your research development?

This prize provides a remarkable support to my research development on waste management, such as food waste management, from a life-cycle assessment perspective. Around 3,640 tons of food waste are disposed of in landfills daily in Hong Kong in 2014, around 70% of which is generated from households and 30% from the commercial and industrial sectors. To evaluate and compare the options of food waste management, environmental impact assessment with life cycle approach will be gaining ground. These results provide quantitative evidence that can be used to enhance food waste management in Hong Kong.

C. Expected research outcomes/outputs/impacts arising from this prize.

This prize can help to create new perspectives to solve e-waste problems. Results can be used to improve our society.