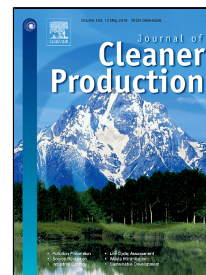


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**An Integrated Method of Life-cycle Assessment and System
Dynamics for Waste Mobile Phone Management and Recycling in
China**

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Abstract: With the popularity of electronic products, most consumers are fully aware of the consequences of excessive resource consumption and the need to protect the environment. One of the more disposable electronic products is the mobile phone, which has experienced exponential sales growth over the past decade. **With the rapid growth of mobile phone use as well as rapid technological progress**, the number of old and discarded mobile phones has been rising, leading to ecological damage. This paper analyzes waste mobile phone management and recycling in China by using an integrated method of life cycle assessment (LCA) and system dynamics (SD). The first step is using the LCA approach to analyze the various factors associated with waste mobile phone recycling. Moreover, **three major parts (resources, human health, and ecosystem quality)** are considered to be significantly influenced in this process. Then, a system dynamic model is built to explore the influences of different recycling

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