

# CONSUMER FEES, REFUNDS & SITES FOR MORE E-WASTE RECYCLING

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THE GLOBAL GOALS

## SUSTAINABILITY SOLUTION

Laws should require manufacturers of electronic products to accept and reuse/recycle used electronics from consumers and inform consumers on recycling options. Additionally, e-waste collection sites accessible to consumers should be required.

## UN SUSTAINABLE DEVELOPMENT GOAL 12

SDG 12 points to the importance of sustainable consumption and production. Worldwide, meeting consumer needs and economic growth depend on using natural resources. Many products degrade the land, water, and air in their production, consumption, and end-of-life disposal. Product reuse and recycling can save costs and promote well-being for people and for the environment.

## E-WASTE OVERVIEW

E-waste products include:

Cell  
Phones



Computing  
devices



Kitchen/  
Household  
Appliances



Batteries



- E-waste is the fastest growing waste stream in our modern world
- Many electronics contain recyclable elements like copper and lithium
- Electronics also have heavy toxic metals such as mercury and cadmium, which must be buried underground to prevent contamination
- Increasing e-waste recycling in the US will limit ecological harm in several facets

## COMMERCIAL E-WASTE REGULATIONS IN THE US



Many states (including Illinois) require manufacturers to take financial responsibility for collecting and recycling used electronics. The range of products covered by such laws varies.



California requires consumers to pay an advanced recycling fee for some e-waste. New York and several other states have beverage container deposit laws.



States such as Colorado prohibit e-waste disposal in landfills due to toxic contamination

# CONSUMER KNOWLEDGE ON E-WASTE

## Factors Affecting Consumer Recycling Decisions



- Consumers' recycling actions fall short of consumers' awareness of the need to recycle ("intention-behavior gap").
- This gap is affected by the factors shown above and varies depending on the political, cultural, economic, and social conditions.

### A study from a midwestern public university found that:

- Less than 1/3 of consumers are aware of e-waste recycling programs near them
- Consumers correctly identified e-waste items 70% of the time

# CONTEXTUAL AND STAKEHOLDER ANALYSES

To increase e-waste recycling, industries and governments should analyze the stakeholders and their motivations.

## WHO ARE THE STAKEHOLDERS?

-  Manufacturers of e-products
-  Businesses who sell e-products
-  Consumers purchasing e-products
-  Recycling programs for e-waste

## WHAT AFFECTS THEIR DECISION MAKING?

-  How can e-products be designed for easier recycling? At what cost?
-  How can my business benefit from increased recycling? Can I incentivize consumer recycling? At what cost?
-  Why should I recycle e-waste? How easy is it? How much does it cost?
-  What motivates consumers to participate in recycling programs? How can consumers be better informed on local recycling options? What factors hinder consumer access to e-waste recycling?

# PROPOSED ACTION AND FEASIBILITY

## ACTIONS

- Require businesses to take back and reuse/recycle used home electronics
- Require manufacturers to publish the cost and benefits of recycling various electronics
- Provide e-waste collection sites which are accessible to consumers

## EFFECTS ON STAKEHOLDERS

-  **Manufacturers:** May need technical and financial support to reuse and recycle additional products.
-  **Retailers:** May need financial support to establish new system of fees and refunds for returned electronics.
-  **Consumers:** Consumer participation will increase with more information on recycling benefits and costs, monetary incentive from the fee/refund, and increased convenience for recycling sites.
-  **Recycling programs:** Need community acceptance and financial support for more local collection sites, and technical support for additional recycling.

## EFFECT ON OTHER SDGS



**SDG 3:** Improving e-waste recycling practices will help reduce the deaths and illnesses caused by hazardous materials including toxic metals.



**SDG 6:** Improving e-waste recycling practices will help reduce pollution and dumping, minimizing the release of hazardous materials into drinking water.



**SDG 14:** Pollution from e-waste will carry into marine ecosystems in some cases, which can be mitigated through improving e-waste recycling practices.



**SDG 11:** Rapid urbanization requires new solutions to address rising human health and environmental risks. Proper e-waste management will contribute towards reducing the per capita environmental impact of cities.



**SDG 9:** Practices of designing electronics for improved recyclability will contribute to more sustainable industry growth. As electronics grow and evolve, the importance of innovative solutions for recycling becomes more critical.

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