

# Policy gaps in managing solid and health care waste during the COVID-19 pandemic: Perspectives from the Philippines



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Amidst the COVID-19 pandemic, existing waste management policies in the country have been found inadequate toward both environmental protection and public health promotion.



**630k** metric tons of health care (HC) waste generated in the Philippines between 2020 and 2021, a 700% increase from 2019, and the highest in the Southeast Asia region.<sup>1</sup>

**8.22** million tons of solid waste generated annually during the pandemic, a 300% jump from baseline, exacerbating pre-pandemic plastic pollution issues.<sup>1</sup>

Mismanagement of infectious medical waste and poor segregation of potentially infectious waste from households may lead to further spread of infection.<sup>2</sup>

It may lead to open burning and open dumping, with marine ecosystems bearing the brunt of their negative effects & creating negative feedback loops to food safety & public health.<sup>2</sup>



Preserving the integrity of the waste management chain through responsive and responsible policymaking is critical in containing COVID-19 transmission, protecting the public's health, and mitigating further environmental pollution.

## METHODS

Mixed-methods, participatory approach to policy content analysis

### STEP 1: Identification of policies

- Keyword search in key gov't policy databases
- "COVID-19," "waste," "waste management"
- Validation of policy list



51 policies identified

- Laws (4)
- Implementing policies (31)
- Technical guidelines (16)



### STEP 2: Lifecycle assessment

- Identification and categorization of policies and provisions along the 5 steps of the waste lifecycle<sup>3</sup>



Policy gaps in

- Production
- Utilization
- Waste storage
- Collection
- Treatment
- Disposal



### STEP 3: Criteria assessment

- Internal validity of policies assessed across 11 criteria, adapted from Rutten et al.<sup>4,5</sup>



### STEP 4: Stakeholder validation

- Policy gaps and recommendations were validated with national-level policymakers

## RESULTS

Policies exist for every stage of the waste lifecycle, but policy gaps abound.



### PRODUCTION

50% of policies

- Policies mandate an increase in production of commodities, particularly single-use PPEs.
- No guidance on needs-based production and rational distribution.
- Manufacturing guidelines emphasized safety and quality but not sustainability.
- List of Non-environmentally Acceptable Products and Packaging is outdated and under-regulates the rise in use of single-use plastics.



### UTILIZATION

60% of policies

- Lack of guidelines on the rational and extended use of PPEs & testing kits → overuse.
- No disincentives or regulation of hoarding & panicked market behavior.
- No guidance on the safe and environmental use of disinfectants which generate toxic byproducts and persistent organic pollutants.
- No safety guidelines nor incentives promoting use of reusable domestic products.



### DISPOSAL

66% of policies

- Technical guidelines exist on temporary disposal and on-site treatment of HC waste.
- Comprehensive guidelines on sorting waste for recyclable resource recovery.
- Non-specific guidance to the segregation of household health care waste leads to improper mixing with general solid waste.
- Risks from mis-segregation of HHC waste cascade down the waste lifecycle stages.



### COLLECTION

52% of policies

- Policies regulate waste transport providers to ensure occupational safety.
- Timing and regularity of waste collection was not adjusted to pandemic context.
- Absence of guidelines on the separate handling, collection, and transport of HHC waste.
- Exclusion of informal waste pickers and lack of safeguard is a missed opportunity for scaling up materials recovery and poverty reduction.



### TREATMENT

34% of policies

- Positive list of acceptable waste treatment methods.
- Policy contradiction with a recent issuance on allowing waste incineration during the pandemic, conflicts with Clean Air Act of 1999.
- Absence of treatment guidelines for HHC waste.
- Exploration of best available technologies and environmental practices on waste treatment methods not yet in place.



### END-OF-LIFECYCLE

46% of policies

- No policy mandate to expand capacity of landfills amidst surge in pandemic waste.
- Unsegregated HHC waste cannot be co-processed and would be permanently disposed on landfills, which cannot be open dumps.
- Unsanitary dumping of untreated waste in landfills can cause viral transmission to informal waste pickers and leaching of harmful chemicals into the environment.

No policies specific to household health care (HHC) waste—from patients isolating at home or community facilities.

## INTERNAL VALIDITY MULTI-CRITERIA ASSESSMENT

Waste management policies need further improvement to support effective implementation amidst present and future public health emergencies.

### ACCESSIBILITY

- Policies were widely available online and offline, but dissemination is fragmented across issuing agencies → variable understanding and uptake.

### POLICY BACKGROUND

- Limited use of supporting evidence, legal and authoritative grounds are not well established, and use of scientific evidence is scant.

### PUBLIC OPPORTUNITIES

- Mechanisms for stakeholder and community engagement are minimal and non-inclusive.

### CLARITY OF GOALS

- Although goals were clearly stated, the results chain from policy outputs to outcomes is not well established and lacks supporting evidence.

### FINANCING

- Financing sources, agents, and accountability lines are not clearly defined, and increased financing amidst emergencies not provided.

### EQUITY

- No provisions for considering specific needs of vulnerable populations.

### HUMAN RESOURCES

- Dedicated personnel and their roles were provided, but no adjustments and additional investments during the pandemic.

### CAPACITY DEVELOPMENT

- Little to no provisions for training, technical support, nor additional investments to augment absorptive capacity of local implementers.

### OBLIGATIONS

- Penalties are in place to ensure compliance to policy implementation.

### RESILIENCE & SUSTAINABILITY

- Non-existent contingency plans for adapting implementing mechanisms during public health emergencies.

### MONITORING & EVALUATION

- Most policies had absent mechanisms for M&E, and indicators are unclear.

Legend:

Strongly fulfilled Needs improvement

Not fulfilled or weak

## CONCLUSION & RECOMMENDATIONS

Dedicate policies, guidelines, and supporting mechanisms for the proper management of HHC waste.

Reinforce existing mandates to encourage rational consumption to prevent overwhelming the waste management chain.

Develop guidelines for the safe use and reuse of PPEs and other commodities, with incentives for sustainable materials and product development.

Contingency plans must be formalized to ensure continuity of waste management amidst future public health emergencies.

Safeguards for waste handlers (formal and informal) must be strengthened in policy and through capacity building.

Leverage policy development for ensuring adequate and adaptive financing and organizational capacity building.

Policy opportunities must be maximized for public participation and creating supportive environments to ensure compliance.

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