

# **ACEF 2025**

### Strategies and Solutions for End-of-Life EV Batteries in Samoa

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## Framing the Challenges: Samoa

### Samoa faces PICs-specific challenges

- Geographic Isolation
- Small and Largely Dispersed Population
- Inability to Achieve Critical Mass

### **Municipal Waste Collection**

- Free Service Provided by MNRE
- Collection Subcontracted to 5 Private Sector Companies
- Small Fraction of Total Volume of Generated Waste Reaches
  Landfills

### Uncollected Municipal Waste

- EOL Vehicles
- E-Waste
- White Goods
- Used Batteries
- Used Tires
- Agricultural Waste
- Construction and Demolition Waste



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## Why EV Battery Waste Management?



U N D P

### Pathways to Effective EOL EV Battery Management in Samoa





UNITED NATIONS DEVELOPMENT PROGRAMME

## **Reverse Logistics Chain and 2<sup>nd</sup> Life**





Source: Project Cobra (2022)

### Role of the Private Sector EOL EV Battery Recycling





### U N D P

### **Policy and Regulatory Gaps - EOL EV Batteries**



#### National Waste Management Strategy:

- Gaps in solid waste chemical and hazardous waste management
- Need to advancing the transition to circular economy systems

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### Waste Management Act 2010:

• Required supporting legal, regulatory, financing, coordinating and other institutional mechanisms



#### Standards: Supporting Mechanisms to Finance Waste Management:

- Low incentives to return the waste materials
- Producer not assuming the responsibility of the product's environmental impact

## **UNDP Support to the Government of Samoa**



#### Samoa's National Waste Management Strategy 2025-2029

- 1. Transition to **circular economy**
- 2. Recognize that waste is everyone's responsibility
- 3. Promoting 'waste' to '**resource**'
- 4. **Polluter pay** principleenforcement and compliance.
- 5. Data driven policymaking.
- Foster behavior change towards more sustainable living habits and circular behaviors.
- 7. Promote Public Private Partnership (**PPP**)
- 8. Community and stakeholders engagement
- 9. Inclusivity and gender representativeness

#### Policy Recommendations

1.

2.

- Alignment to international standards:
  - Battery handling and storage.
  - Battery removal.
  - Battery storage.
  - Transport.
- Supporting mechanisms/schemes:
  - ARFD
  - EPR

#### EOL EV Battery Storage Container

- 1. Hazardous waste container for temporary storage of EOL EV (Li-Ion) batteries.
- 2. Can safely store Li-Ion batteries for up to 20 years.
- 3. Anti explosive and fire control systems, air-cooling system.



