

Integrated Policy Solutions to End Open Waste Burning in Lao PDR

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The Open Waste Crisis: A Snapshot

Insufficient waste management infrastructure has led to a major public health and environmental crisis. With limited access to formal collection services, a significant portion of the population resorts to burning waste, resulting in severe air pollution and preventable deaths.

75%

Household Burning

In rural areas without collection services, three-quarters of households burn their waste.



34%

Collection Coverage

Only about one-third of households nationwide have access to formal waste collection.



2,686

Annual Deaths

Deaths in 2019 attributed to air pollution, including 184 children.



184 children

540 Tons

Tons Burned Daily

This approximate amount of waste is burned daily in Vientiane Capital alone.



Vientiane Capital

Source: WHO - Addressing solid waste management and climate change: a triple win for Lao PDR

The Hidden Dangers of Burning Waste

Open burning of waste releases toxic pollutants, creating significant health risks, particularly for vulnerable groups, and has measurable, fatal consequences.

Fine Particulate Matter (PM2.5)

Tiny particles that penetrate deep into the lungs, causing respiratory issues.

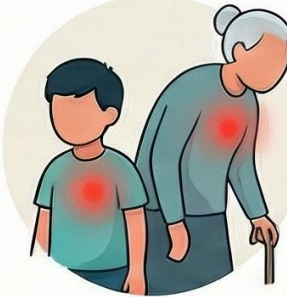
Dioxins and Furans

Highly toxic compounds released specifically from burning plastics.

Carbon Monoxide & Nitrogen Oxides

Harmful gases that contribute to respiratory and cardiovascular problems.

Who is Most at Risk?



Children & The Elderly

Developing and aged respiratory systems are more susceptible to damage.



Waste Workers & Outdoor Labourers

Prolonged exposure at dumpsites and farms increases their health risks significantly.

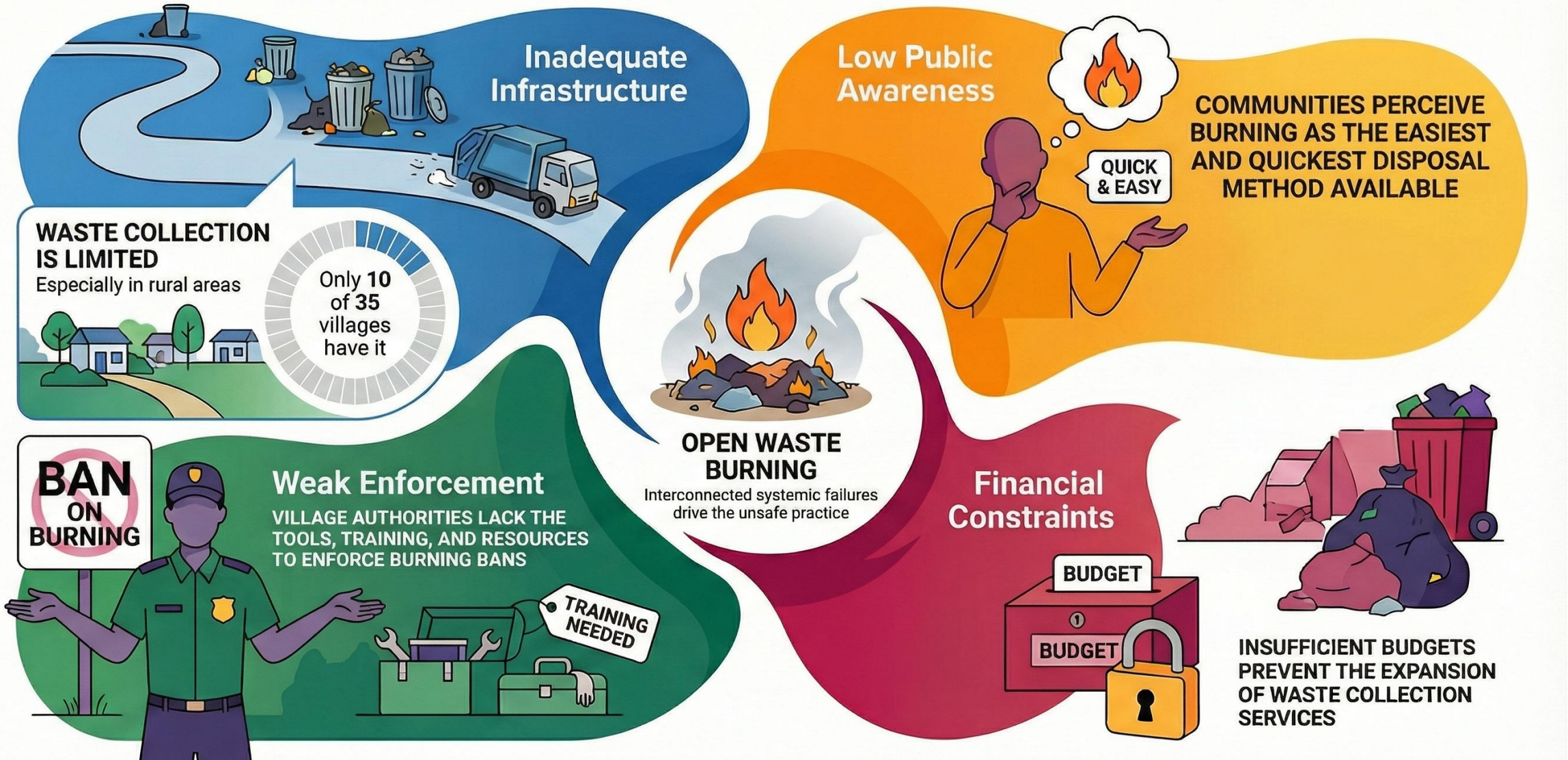
2,686



deaths in Lao PDR
linked to air pollution in 2019.

Open burning is a major contributor to this deadly air pollution.

Root Causes of Open Waste Burning



Mind the Gap: Open Waste Burning in Current Policy

Existing Policy Framework

Waste Management Strategy 2021-2030

NDC 2.0

Policies target 100% waste collection by 2030 and include waste in climate commitments.

Key policies overlook Open Waste Burning (OWB) as a primary pollution source.

National pollution and climate strategies do not explicitly incorporate or target OWB reduction.

Local bans on open burning exist but are difficult to enforce.

A governor's order bans burning in Vientiane Capital but locks enforcement at the village level.



The Critical Policy Gap

Open Waste Burning is not explicitly treated as a regulated pollution source.

This core omission prevents its integration across related policy sectors.

The gap hinders a coordinated response.

Meaningful action on climate, air quality, and health is blocked without this recognition.

Critical Policy Gaps in Environmental and Public Health

An analysis reveals significant, systemic gaps in policy and implementation across crucial environmental and public health areas. These deficiencies range from weak enforcement and inadequate infrastructure to a lack of data, resources, and public awareness.

Waste Management



Policy and Enforcement Weaknesses

Existing regulations are not effectively implemented or enforced.



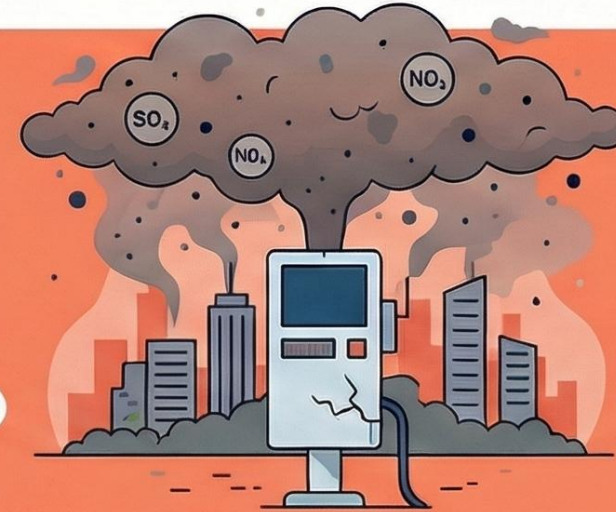
Infrastructure and Operational Deficiencies

Lacking the necessary facilities and systems for proper waste management.



Critical Data, Funding, and Awareness Gaps

Decisions are hampered by a lack of information, financial barriers, and limited public knowledge.



Air Pollution



Regulatory and Enforcement Deficiencies

The rules governing air quality are inadequate or poorly enforced.



Resource and Monitoring Limitations

Insufficient funding and equipment to effectively track air pollution levels.



Knowledge and Integration Gaps

A lack of understanding and coordination hinders effective action.

Climate Change



Inadequate Coordination and Data Sharing

The governing structures for climate action are underdeveloped.



Inadequate Coordination and Data Sharing

Different agencies and groups are failing to work together effectively.



Limited Human Capacity and Monitoring Systems

There is a shortage of skilled personnel and technology to address climate issues.



Weak Institutional Framework and Enforcement

The governing structures for climate action are underdeveloped.



Inadequate Coordination and Data Sharing

Different agencies and groups are failing to work together effectively.

Public Health



Lack of Awareness and Enforcement

Health care centres are unaware of or fail to enforce medical waste regulations.



Improper Medical Waste Disposal

Both hospitals and private facilities show a lack of knowledge and appropriate practices.

Gender & Youth in Waste Management: Risks and Opportunities

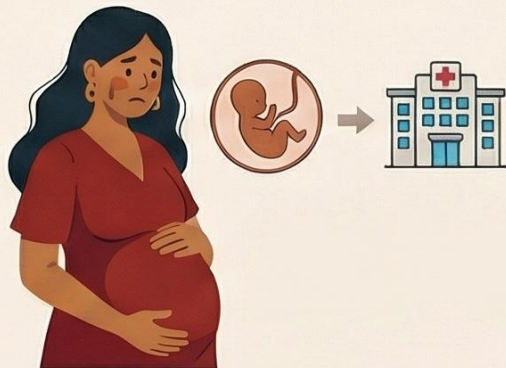
WOMEN'S VULNERABILITY: RISKS & CHALLENGES



- **Dominating the High-Risk Informal Sector**
Women primarily manage household and informal wastes, leading to high exposure to toxins.



- **Lacking Protection and Recognition**
Informal waste pickers often work without protective equipment or legal rights.



- **Protent housemid waste**
Informal waste pickers often work without protective equipment or legal rights.
- **Facing Severe Health Consequences**
This exposure is directly linked to serious health issues, including adverse pregnancy outcomes.

YOUTH AS CHANGE AGENTS: OPPORTUNITIES & ACTION



- **Powerful Advocates for Change**
Youth use high environmental awareness and digital skills to promote sustainability.



- **Leading Community Action**
They initiate community clean-ups, school recycling programmes, and social media campaigns.



- **Building Future Capacity**
By leading these initiatives, young people are developing into long-term environmental leaders.

ASEAN Approach to tackle SLCP/Super pollutants



ASEAN Agreement on Transboundary Haze

A regional framework for coordinated hotspot monitoring and fire prevention.

Haze-Free Roadmap 2023-2030

Nine interconnected strategies emphasizing sub-regional collaboration and fire risk management.



Regional Knowledge Exchange

Shared experiences help countries reduce burning through capacity building platforms.

ASMC Hotspot Data

A practical tool for Outbreak Warning Boundary (OWB) identification and monitoring.



Strategy to address Open Waste Burning

FOUNDATIONAL POLICIES & FRAMEWORKS

1



STRENGTHEN LEGISLATION AND REGULATIONS

Integrate clear OWB bans and enforcement into national solid waste regulations.




3

BUILD INSTITUTIONAL CAPACITY

Train health and environmental officers on OWB risks and support provincial governments.

2



ESTABLISH FINANCIAL MECHANISMS

Leverage grants and prioritise low-cost investments like composting and segregation.

COMMUNITY & INFRASTRUCTURE DEVELOPMENT

4



LAUNCH PUBLIC AWARENESS CAMPAIGNS

Use local media and establish Village Environmental Committees for monitoring.

6



IMPLEMENT GENDER-RESPONSIVE SOLUTIONS

Mandate the inclusion of women and support women-led waste initiatives.

5



DEVELOP WASTE MANAGEMENT INFRASTRUCTURE

Focus on improving technology and infrastructure for waste management.

A Pathway to a Cleaner Lao PDR: Ending Open Waste Burning

A Three-Pillar Strategy for an OWB-Free Nation



Mainstream Integration

Embed OWB prevention into existing national frameworks, not standalone policies.



Community Engagement

Empower villages through committees, incentives, and practical alternatives to burning.



Multi-Stakeholder Action

Coordinate efforts across ministries, local authorities, civil society, and development partners.

Vision & Requirements for Success



Comprehensive strategies can curb waste burning, improve public health, and mitigate climate change. This approach also fosters a sustainable circular economy for Lao PDR.

Critical Success Factors

Requires political commitment, financing, strong enforcement, and active participation from all sectors.

Thank you

