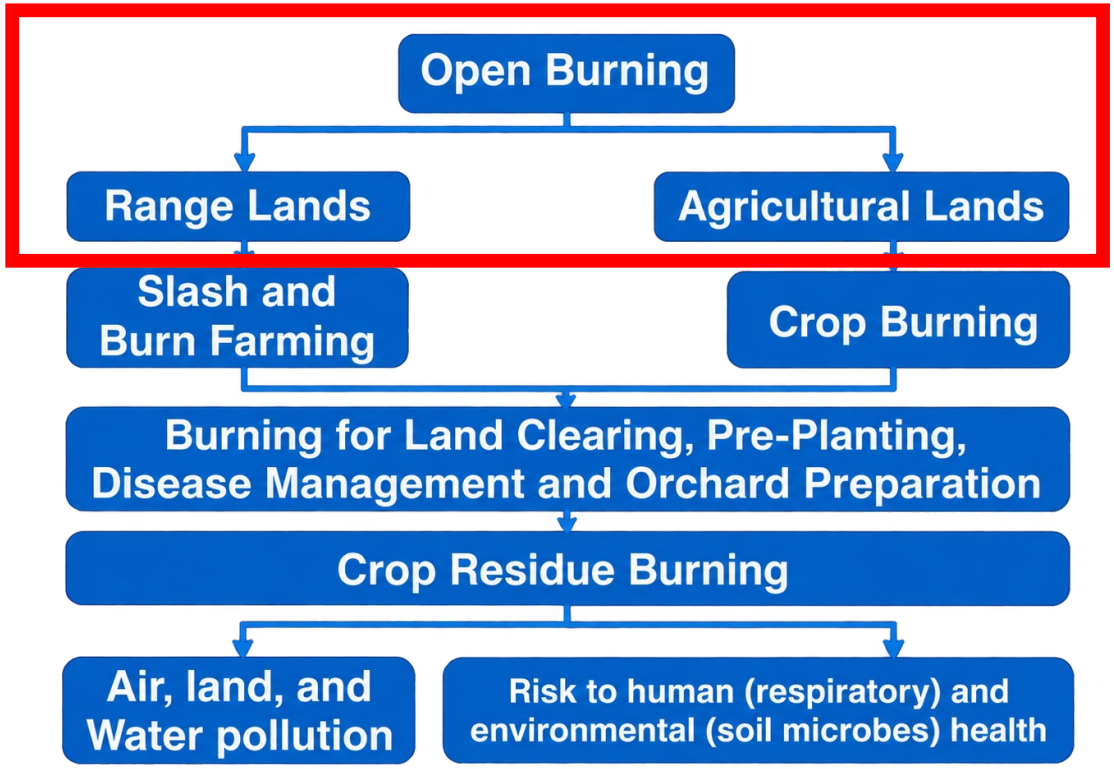
Implementation Reference of The ASEAN Guidelines on The Reduction Of Crop Burning

Hotman Fajar Simanjuntak
ASEAN Sectoral Working Group on Crops (ASWGC) Focal Point
Ministry of Agriculture, Republic of Indonesia

Eleventh Regional Forum on Sustainable Agricultural Mechanization
Climate-smart Agricultural Mechanization for Sustainable Crop Residue Management and Resilient Agrifood Systems
26-28 October 2026 – Tianjin, China

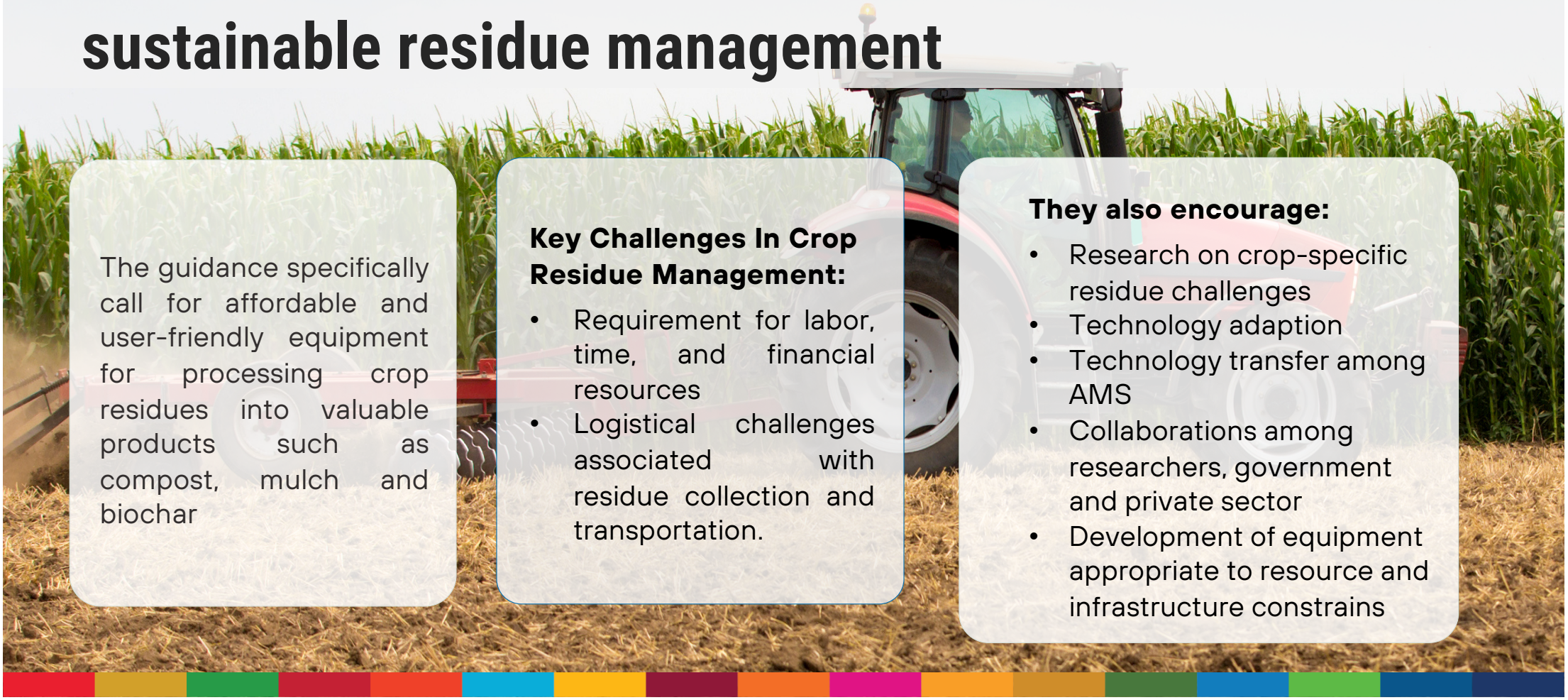
Scope of ASEAN Guidelines on Reducing Crop Burning



Five Strategic Elements Of The ASEAN Guidelines

STRATEGIC ELEMENT	PRACTICAL IMPLEMENTATION
Sustainable agricultural practices	Zero-burn approaches, incorporation, mulching, composting, conservation agriculture
Skills & knowledge	Training, demonstrations, extensions and peer learning
Research & technology innovation	Affordable, user-friendly and location-specific technologies
Policy system	Clear framework, gradual implementation, incentives, monitoring
New markets & co-benefits	Residue products, services, infrastructure and circular value chains

Mechanization as an enabler of sustainable residue management



The guidance specifically call for affordable and user-friendly equipment for processing crop residues into valuable products such as compost, mulch and biochar

Key Challenges In Crop Residue Management:

- Requirement for labor, time, and financial resources
- Logistical challenges associated with residue collection and transportation.

They also encourage:

- Research on crop-specific residue challenges
- Technology adaption
- Technology transfer among AMS
- Collaborations among researchers, government and private sector
- Development of equipment appropriate to resource and infrastructure constrains

AMS Experience of Reducing Crop Burning: Mechanization for Crop Residue Management

1. **Integrated straw management pilot - Sleman, Yogyakarta**
    - Collaboration between BRMP Mektan, UN-ESCAP CSAM, and Universitas Gadjah Mada
    - Demonstrated mechanized straw management technologies, including straw chopping, tillage, baling, and compost processing, to support the utilization of rice straw instead of leaving it unmanaged.

2. **BRMP Mektan-UN-ESCAP CSAM Collaboration - Tangerang**

    Conducted agricultural machinery demonstrations and Agricultural Machinery Services Unit (UPJA - *Usaha Pelayanan Jasa Alsintan*) management training to strengthen farmers' knowledge of mechanization and improve access to machinery services for crop residue management.







From Crop Residues to Market Value

Mechanized, market-oriented solutions to reduce crop burning and unlock co-benefits

PROPOSED OBJECTIVE

Turn crop residues into marketable products—such as biochar and compost—so non-burning alternatives deliver tangible economic benefits to farmers.

1) PILOT & TECHNOLOGY

- Select priority residues and suitable locations in participating ASEAN Member States.
- Demonstrate affordable machinery for residue collection, size reduction and conversion (e.g., small-scale pyrolysis for biochar).

2) MARKET & CO-BENEFITS

- Assess product quality, safety, production costs and potential uses.
- Develop value chains, buyer linkages and viable service/business models for farmers and local enterprises.

3) REGIONAL LEARNING

- Share pilot results, technical protocols and lessons across ASEAN.
- Identify policy options, standards and incentives to scale up residue-based products.

REGIONAL VALUE

Move beyond residue disposal: build demand and market incentives that make non-burning practices economically attractive and scalable across ASEAN.

THANK YOU

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