



MEMBER ECONOMIES' REPORT

APEC 2019 Expert Consultation on Reducing Food Loss & Waste (FLW) for Addressing Interlinked Challenges of Food Security and Climate Change in APEC Member Economies

MASNIZA SAIRI (PhD)
MARDI, Malaysia

Chinese Taipei
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Content

- Actions to reduce FLW in Malaysia
- Actions to assess the relationship between FLW and climate change (and food security)
- Support needed

Actions to Reduce FLW in Malaysia

No.	Type	Program
1	Education Campaigns (Consumer Education Campaigns & Education Campaigns on FLW in Schools)	<p>MYSaveFood campaign</p> <ul style="list-style-type: none">• Local network: 150 (ministries/private companies, agencies, universities, NGO)• International network: FAO, France, Denmark, OIC, APEC• Awareness: 100 programs (e.g. MYSaveFood Ramadhan)• Education: 50 schools, > 10,000 students (e.g. urban farming, composting, healthy eating etc.)• Media: Media Prima, TV Al-Hijrah, Hypp TV• Module: MYSaveFood Ramadhan and CSR at school (collaboration with Tesco)

Reducing Food Loss and Waste in Malaysia

Achievements March 2016 – 2018



**Local
Network**

150
Ministries,
Private
companies,
Agencies,
Universities,
NGO



**International
Network**

FAO
France
Denmark
OIC
APEC



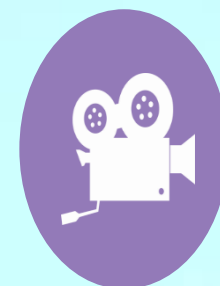
Awareness

100
Programs



Education

50
Schools
>10,000
students



Media

Rome:
RM1.5
million

Advertisement
with
Media Prima
TV AlHijrah
HypTV





MYSaveFood Education Campaigns at school

- 1) Reducing food waste
- 2) Home gardening
- 3) Composting
- 4) Healthy eating (MOH)



Actions to Reduce FLW in Malaysia

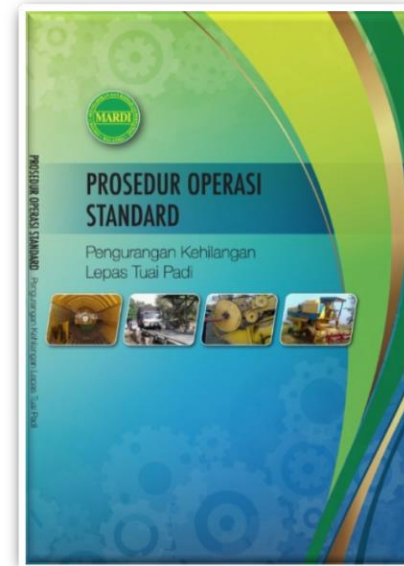
No.	Type	Program
3	Pre-harvest technical support 	<ul style="list-style-type: none">Government agencies under Ministry of Agriculture and Agro-based Industry (MOA) (e.g. MARDI, FAMA, DOA etc.) is providing technical support to farmers etc. to equip them with knowledge and skills in maximizing yield and minimizing losses of agricultural producesDOA introduces Malaysian Good Farm Certification Scheme (SALM), Malaysian Good Agricultural Practices (myGAP)
4	Harvesting technical aid	<ul style="list-style-type: none">Government agencies under MOA (e.g. MARDI, FAMA, DOA etc.) is providing technical support to farmers etc. to equip them with knowledge and skills in maximizing yield and minimizing losses of agricultural produces

Actions to Reduce FLW in Malaysia

No.	Type	Program
5	Postharvest Facility Support	<ul style="list-style-type: none">• Government agencies under MOA (e.g. MARDI, FAMA, DOA etc.) is providing technical support to farmers etc. to equip them with knowledge and skills in maximizing yield and minimizing losses of agricultural produces• Study on postharvest losses of paddy (MARDI)• SOP for reducing paddy postharvest losses (MARDI, 2017)• Grading, Packaging and Labeling guidelines (GPL) (FAMA)

PADDY POSTHARVEST LOSSES (PHL) STUDY

Process	Paddy Postharvest Losses (%)		
	1985 (Baseline)	2015	2016
Harvesting	9.00	4.90	1.39
Transportation	6.00	1.10	0.63
Drying	3.50	0.37	0.12
Milling	6.00	2.40	3.05
Storage	4.00	1.20	2.71
Total	28.50	9.97	7.89



SOP for Reducing Paddy Postharvest Losses (MARDI, 2017)

VALUE OF PHL AND VALUE GAINED POST PHL REDUCTION

Elements	1985	2015	2016
Paddy production (million MT)	1.95	2.60	2.60
Price (RM/MT)	496	1200	1200
Postharvest loss (thousand MT)	555.75	259.22	205.14
Value of loss (million RM)	276	311	246

*54.1 thousand MT paddy equivalent to RM 65 million saved in 2016 compared to 2015

Actions to Reduce FLW in Malaysia

No.	Type	Program
9	Capacity building for FLW (conferences/ workshops/ training courses)	<ul style="list-style-type: none">• Training for player throughout supply chain (farmers, wholesaler, exporters, retailers) to maximize yield and minimize losses of fruits and vegetables by agencies under MOA• Conferences related to postharvest losses: International Postharvest Symposium (2012) and Postharvest Losses and Food Waste Conference (2013)• Workshop on maintenance of postharvest quality of vegetables in ASEAN: PH-AARNET (2017)• Training Course and Workshop on Capacity Building on Warehousing and Storage Management by COMCEC (2019)

Actions to Reduce FLW in Malaysia

No.	Type	Program
11	Food Donation Support	<ul style="list-style-type: none"> Food Bank Malaysia (initiative under Ministry of Domestic Trade and Consumer Affairs)



FOOD BANK MALAYSIA PROGRAMME



Benefited **45,850** households as of **February 2019**

Saved **1,055 tonnes** of food

Launched in Penang on **Dec 22, 2018**

TARGET :



Households from the B40 group, including students of public universities

METHOD :



Gathering surplus food such as bread, vegetables & fruits from hypermarkets, and distributing these to the needy

Feb 19, 2019

The government decided to extend the Food Bank Malaysia programme to all universities to help address the rising cost of living faced by students.



The Relationship between FLW and Climate Change (and Food Security)

Rice Yield Loss due to
Weather Variability in
Malaysia
(1980 – 1999)

Source: MARDI Intellectual Discourse (2017)

	Average yield loss (%)
Year without El-Nino	5.65
Year with El-Nino	6.80
El-Nino effect	- 1.15

Actions to Assess the Relationship between FLW and Climate Change (and Food Security)

- Research by MARDI:
 - Night temperatures $> 25^{\circ}\text{C}$ may reduce rice production by 9 – 10 %
- Simulation study for Muda Agricultural Development Authority (MADA) region:
 - Increase of T of 2°C , could result in the rice yield drop by 1 tonne/ha
 - T further increases by 4°C , the reduction in yield is expected to further drop to about 2 tonnes/ha
 - The occurrence of flood associated with 15 % increase in rainfall, and dry spell associated with 15 % decrease in rainfall, during early growing period can affect yields to drop by some 80 %

Actions to Assess the Relationship between FLW and Climate Change (and Food Security)

- Impact and vulnerability assessments for granaries located within Peninsular Malaysia
 - Model simulations for the periods of 2030 & 2050
 - MADA, KADA and IADA BLS may face significant reductions in average rice yield productions over all the seasons
 - The low yield projected is due to a combined impact of lower total rainfall, solar radiation and average temperature over the cultivation period

Table 4.8: Average Rice Yield in kg/ha and Percentage of Yield Reduction for MADA, KADA and IADA Barat Laut Selangor in 2030 and 2050 due to the Impact of Climate Change

Areas	Seasons	2014 (kg/ha)	2030		2050	
			kg/ha	Reduction (%)	kg/ha	Reduction (%)
MADA	Main	5,536	4,570	-17.4	4,623	-16.5
	Off	5,542	4,971	-10.3	5,072	-8.5
	All	5,539	4,771	-13.9	4,847	-12.5
KADA	Main	4,406	3,844	-12.8	4,147	-5.9
	Off	4,188	3,641	-13.1	3,592	-14.2
	All	4,297	3,743	-12.9	3,870	-9.9
IADA BLS	Main	6,247	4,186	-33.0	4,368	-30.1
	Off	6,560	4,671	-28.8	4,532	-30.9
	All	6,403	4,428	-30.8	4,450	-30.5

Source: Malaysia Third National Communication and Second Biennial Update Report to the UNFCCC, 2018

Actions to Assess the Relationship between FLW and Climate Change (and Food Security)

- The targeted self-sufficiency level (SSL) of rice (100 %), fruits (106.5%) and vegetables (95.1%) by 2020
 - Implementation strategies guided by National Agrofood Policy (NAP) (2011-2020)
 - Strong correlation between the targeted SSL of food commodities and FLW
 - Study on postharvest losses of paddy (MARDI)
 - Supply chain: harvesting, transportation, drying, milling, storage
 - SOP for reducing paddy postharvest losses (MARDI, 2017)

Support Needed

- **Capacity building** to institutional (research institute, university, government agency, private sector) to enhance national technical capacities to address FLW and accelerate climate action/enhance climate resilience
 - Number of experts needs to be increased and retrained
 - Conferences/workshops/training courses etc.
 - International assistance
 - E.g. Capacity building for the preparation of national GHG inventory, development of policies and programs to enhance mitigation and adaptation and their implementation, effective measurement, reporting and verification (MRV) system etc.
- **Financial requirement** for capacity building



THANK YOU