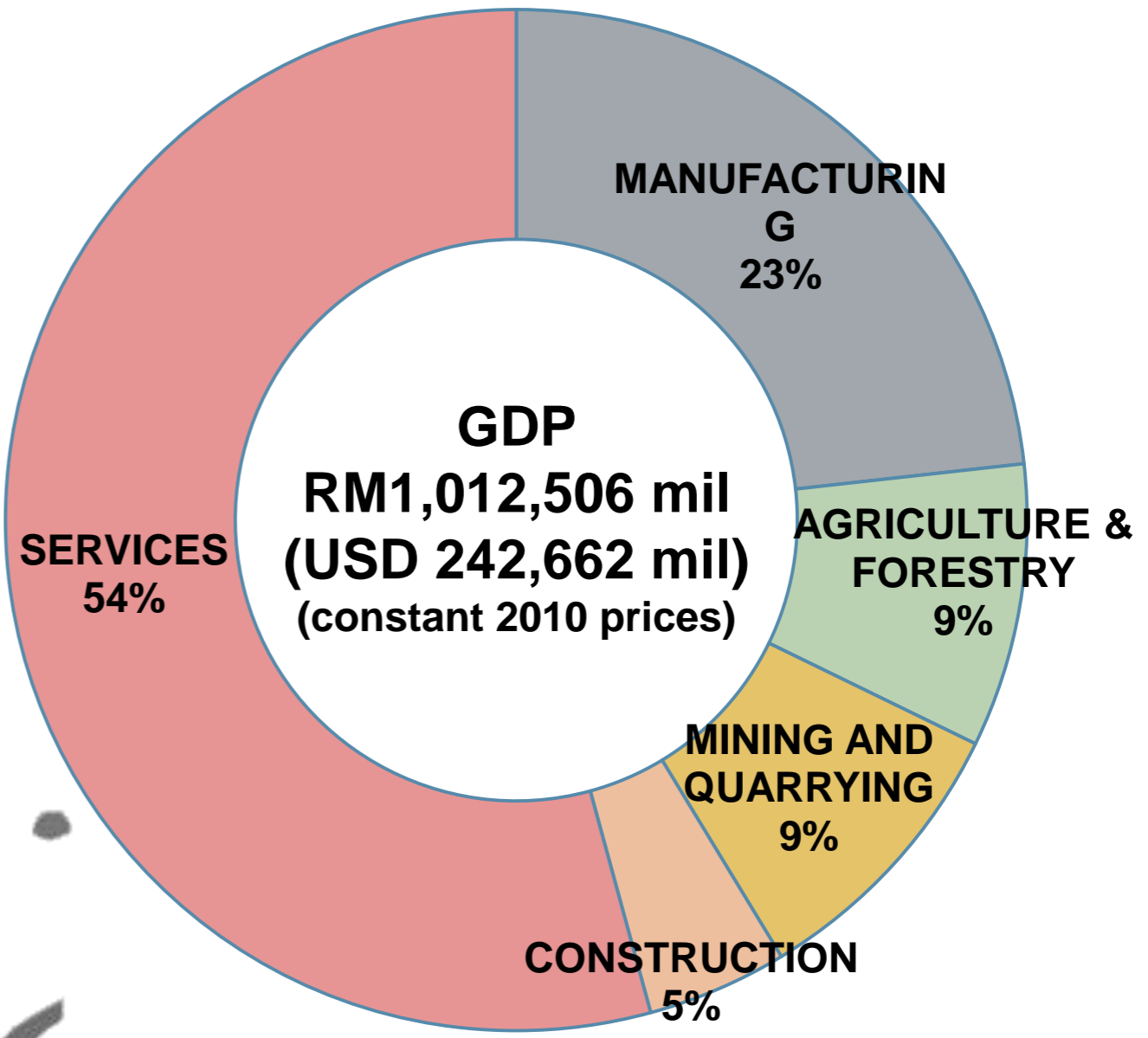




FACILITATIVE SHARING OF VIEWS

MALAYSIA
9 DECEMBER 2019

NATIONAL CIRCUMSTANCES



AREA	POPULATION	CLIMATE	FOREST COVER	MAIN AGRICULTURE CROP (OIL PALM)	PRIMARY ENERGY SUPPLY	ENERGY DEMAND
330,345 km ²	30.7 Million	Moist Equatorial	55.33%	5,392,240 ha	92,486 ktoe	52,210 ktoe

INSTITUTIONAL ARRANGEMENTS FOR BUR

National Steering Committee on Climate Change

National Communication and Biennial Update Report

Project Management Group & Secretariat

GHG Inventory
Technical
Working Group

Energy

IPPU

Agriculture

LULUCF

Waste

Mitigation
Technical
Working Group

Energy

IPPU

Agriculture

LULUCF

Waste

Finance and
Needs
Technical
Working Group

Measurement,
Reporting and
Verification
Technical
Working Group

Energy

IPPU

Agriculture

LULUCF

Waste

GHG INVENTORY

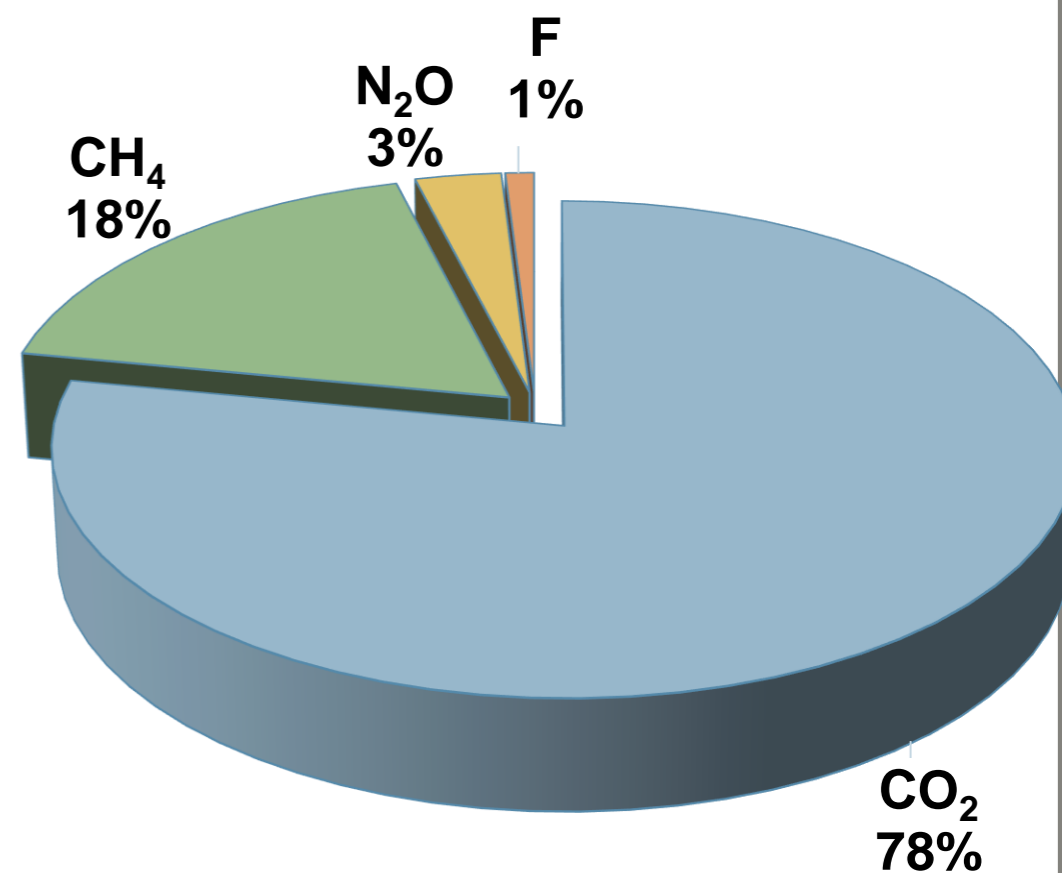
EMISSION AND REMOVALS OF GREENHOUSE GAS FOR EACH SECTOR IN 2014

SECTOR	EMISSIONS/ REMOVALS FOR 2014 (Gg CO ₂ eq)	PERCENT EMISSIONS (%)
Energy	253,517.23	79.8
Industrial Processes	20,257.83	6.4
Agriculture	10,850.77	3.4
LULUCF (Emissions)	3,317.15	1.0
Waste	28,217.35	8.9
Other	1,466.48	0.5
Total emissions	317,626.83	100
Total sink	-267,147.77	
Net total (after subtracting sink)	50,479.06	

GHG INVENTORY

TOP 8 KEY CATEGORIES – WITHOUT LULUCF (2014)

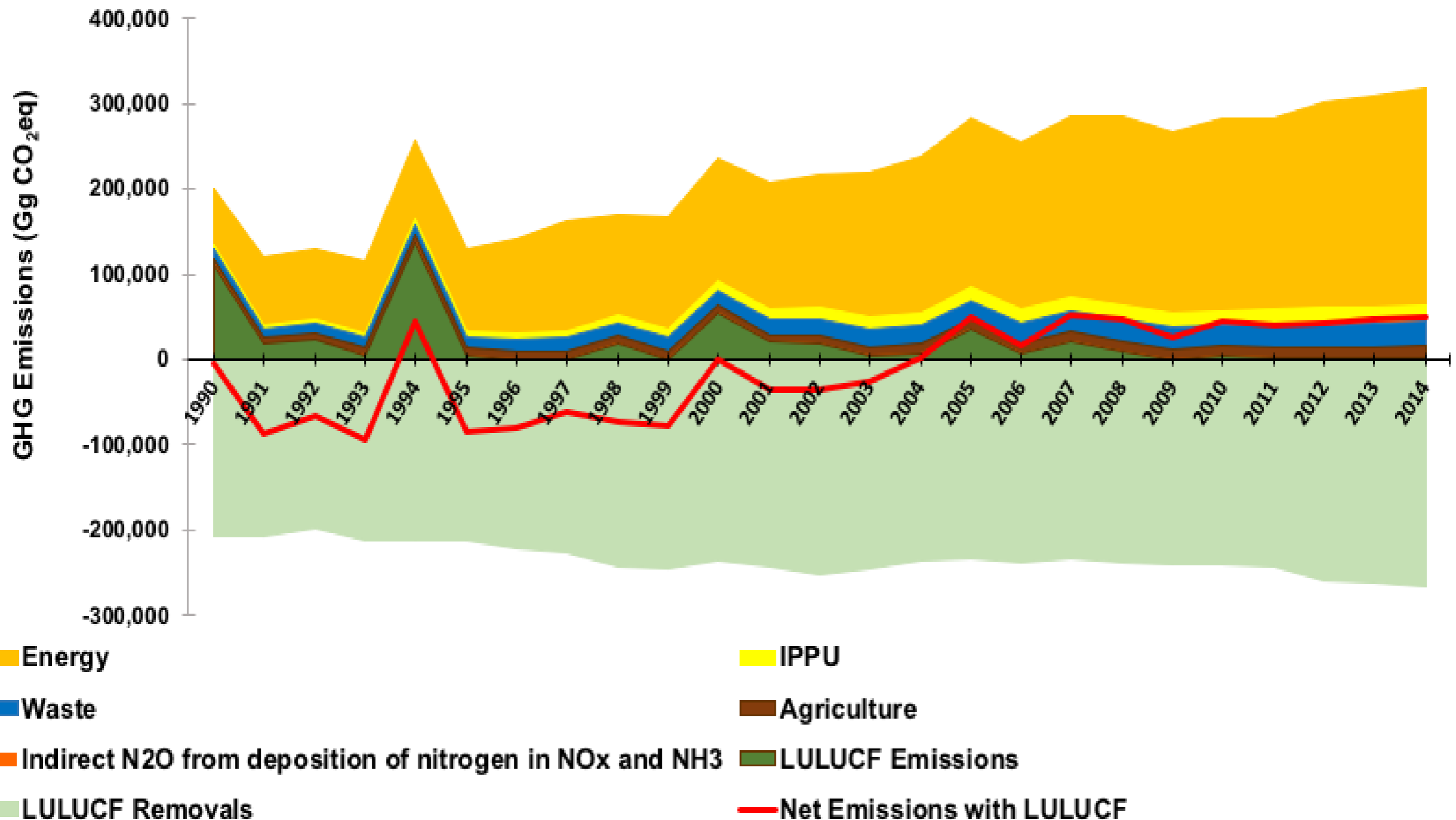
SECTOR	KEY SOURCE	GAS	CURRENT YEAR ESTIMATE (Gg CO ₂ eq)	LEVEL ASSESSMENT (%)
Energy	Energy industries: Gaseous Fuels	CO ₂	66,719.84	21.2%
Energy	Transport: road transportation	CO ₂	55,366.46	17.6%
Energy	Energy Industries: Solid Fuels	CO ₂	54,876.21	17.5%
Energy	Fugitive emissions from fuels: Natural Gas	CH ₄	22,395.51	7.1%
Waste	Solid waste disposal sites	CH ₄	31,127	5.0%
Energy	Energy Industries: Liquid Fuels	CO ₂	11,501.10	3.6%
Energy	Manufacturing Industries and Construction: Gaseous Fuels	CO ₂	11,428.40	3.6%
Waste	Solid Waste Disposal	CH ₄	10,305.40	3.3%



PERCENTAGE OF EMISSIONS ACCORDING TO GREENHOUSE GAS IN 2014

GHG INVENTORY

EMISSION TIME SERIES FROM 1990 TO 2014



MITIGATION RELATED POLICIES AND PLANS

MITIGATION ACTIONS

5-YEAR NATIONAL
DEVELOPMENT PLANS



SECTORAL &
ECONOMIC
POLICIES



NATIONAL CLIMATE CHANGE POLICY

MITIGATION RELATED POLICIES AND PLANS

SECTOR	POLICIES & PLAN	INTERVENTION
ENERGY	<ul style="list-style-type: none"> • National RE Policy & Action Plan 	Increase RE in Fuel Mix
	<ul style="list-style-type: none"> • National Transport Master Plan • National Automotive Policy • National Biofuel Policy 	Energy Efficiency in Transport Shift to Public Transport in Urban Areas
TRANSPORT	<ul style="list-style-type: none"> • National Biofuel Policy 	Biodiesel blending programme
AFOLU	<ul style="list-style-type: none"> • National Forestry Policy • National Biodiversity Policy • REDD Strategy 	Sustainable Forest Management
	<ul style="list-style-type: none"> • National Commodity Policy • National Agrofood Policy 	Good agriculture practices
WASTE	<ul style="list-style-type: none"> • National Strategic Plan for Solid Waste Management • MPOB Mandatory Regulation 	Recycling Methane Capture in POME

MITIGATION ACTIONS AND THEIR EFFECTS

SECTOR	ENERGY	LULUCF	WASTE	TOTAL
EMISSION REDUCTION ACHIEVED IN 2014 (Gg CO ₂ eq)	7,365	18,710	3,247	29,328
POTENTIAL EMISSION REDUCTION IN 2020(Gg CO ₂ eq)	10,656	Not estimated	5,076	Not estimated

International Mechanism	CLEAN DEVELOPMENT MECHANISM (2006 - 2016)
Total CERs issued (tonnes CO ₂ eq.)	11,458,586

MITIGATION ACTIONS AND THEIR EFFECTS

	GHG emissions Indices	Without LULUCF	With LULUCF (Emissions only)
Differences in 2014 against 2005 (%)	CO ₂ eq Emissions per capita (tonne/capita)	+8.07%	-4.7%
	CO ₂ eq Emissions per GDP (kg/RM)	-16.99%	-26.79 %

DOMESTIC MRV ARRANGEMENTS

- MRV through TWG and external experts
- Members of MRV TWG consists of multi-agency experts
- GHG Inventory MRV follows more robust procedure
- Mitigation actions MRV requires further enhancement

CONSTRAINTS AND GAPS



GHG INVENTORY

- Limited availability of activity data according to IPCC Guidelines requirements
- Limited country-specific emission factors



ADAPTATION

- Limited funding and capacity to undertake vulnerability impact assessments
- The need to develop a National Adaptation Plan



MITIGATION

- Limited funds, regulatory framework and cohesive institutional arrangements for implementing mitigation actions



CAPACITY BUILDING

- Limited funding and technical capacity for enhancement of research and systematic observation



TECHNOLOGY

- Require Technology Needs Assessment (TNA)

SUPPORT RECEIVED AND NEEDED

Support Received	REPORTING CAPACITY-BUILDING	TECHNICAL	CAPACITY BUILDING	TECHNICAL, CAPACITY BUILDING
TOTAL	USD1,204,000	USD10,452,790 and £40,000	USD480,000 and £3,250	£251,336

Needs	FINANCE	TECHNOLOGY	CAPACITY BUILDING
MITIGATION	Energy, IPPU, waste, and Agriculture <ul style="list-style-type: none"> Ongoing: USD 2,232 million Future: USD 2,268.95 million 	RE, EE, Industrial process, transportation, waste water	<ul style="list-style-type: none"> Expertise in MRV for each sector Legal and financial expertise Operational and maintenance GHG emissions projection modelling
	REDD Plus USD 400 million		
ADAPTATION	USD104 million (initial enhancement of adaptation measures)		<ul style="list-style-type: none"> Best agriculture practices Sector-specific vulnerability and impact assessments Statistical methods and modelling
GHG INVENTORY	Inventory improvement for key categories USD 6.05 million		<ul style="list-style-type: none"> 2006 IPCC Guidelines Country Specific emission factor

BUR AND ICA PROCESS – LESSONS LEARNED



INSTITUTIONAL ARRANGEMENT

- Taken significant steps to establish institutional arrangement that allow for sustainable preparation on BUR
- Making organizational improvement and developing knowledge-sharing procedures to facilitate sectoral information transfer



MRV

- Operationalized a system for continuous data collection and timely reporting
- Tracking progress of mitigation actions
- Improving methodologies for quantifying mitigation effects



CAPACITY BUILDING

- Agencies overseeing key emission sector continue to enhance respective technical capacity and technological know-how as required by UNFCCC reporting



AWARENESS

- Increased willingness to share data
- Increased awareness of transparency

AREAS OF IMPROVEMENT SINCE TECHNICAL ANALYSIS



OVERALL

- Improved understanding of the UNFCCC decisions on BUR in particular reporting requirements



GHG INVENTORIES

- Stakeholders further improving their data collection and reporting
- Addressing TTE's capacity building needs for Malaysia reporting
- Increased transparency, completeness and accuracy of Inventory



MITIGATION

- More mitigation programmes planned
- Greater commitment by implementing agencies on quantification.

RESPONSE TO QUESTIONS RECEIVED RELATING TO NATIONAL GHG INVENTORIES

QUESTIONS FROM GERMANY

Question on the reasons for the decline of plastic in the solid waste composition and in terms of GHG emissions

- Malaysia has reduced its composition of plastic in the solid waste composition in 2012 through recycling activities.
- However, in terms of GHG emissions of the waste sector, the trend of emissions is increasing.

Question on raw data used to get a per capita generation of solid waste for the estimation of emissions in the waste sector

- 2006 IPCC Guidelines (1970-2000)
- Expert judgement, splicing technique (2001-2011)
- National survey (2012 onwards) (waste per capita for rural and urban areas; which includes solid waste from household, industrial, commercial and institution that are disposed in the landfills).

RESPONSE TO QUESTIONS RECEIVED RELATING TO NATIONAL GHG INVENTORIES

QUESTION FROM SINGAPORE

Question on the on the extrapolation tools and models used, including any activity-specific considerations and assumptions applied in historical data for some activities under the IPPU

- Splicing techniques (non-key categories such as the electronic industry)
- Expert judgement
- International review (GIZ)

QUESTION FROM TURKEY

Question on the on the extent of official statistics used in estimating emissions from agricultural activities in Malaysia's National GHG Inventory?

- In estimating emissions from all the activity data of the agriculture sector, official data and statistics were sourced.

RESPONSE TO QUESTIONS RECEIVED RELATING TO NATIONAL GHG INVENTORIES

QUESTION FROM THE UNITED STATES

Question on lessons learned from the development and use of these data collection/forest inventory systems utilizing a combination of geospatial data, ground surveys and national statistics to monitor land-use changes in the country.

- The use of geospatial and ground surveys has been undertaken since 1982.

Challenges

- harmonising data from geospatial images and official gazettes (earliest forest gazette dates back to 1905) and converting the units of area in the gazette with current images.
- the presents of cloud cover also affected the analysis of the images.

RESPONSE TO QUESTIONS RECEIVED RELATING TO NATIONAL GHG INVENTORIES

QUESTION FROM NEW ZEALAND

Question on the reasons for the trend of Malaysia's GHG emissions from its agriculture sector which grew at an average rate of 2.2% per year from 1990 to 2014, including the areas of the agriculture sector which are responsible for this trend?

- Based on the time series (1990 – 2014) for agriculture sector, direct N₂O emissions from agricultural soils contribute the most to the increasing trend of the emissions.
- This is mainly due to an increase in use of fertilizer.

THANK YOU