



**PETRONAS**

# **PETRONAS' Efforts on Sustainability**

September 5, 2013

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**Group Health, Safety & Environment Division**

# Outline

- PETRONAS' Journey in SD
- Sustainability Focus Areas
- Carbon Management
- Water
- Social Performance
- HSE



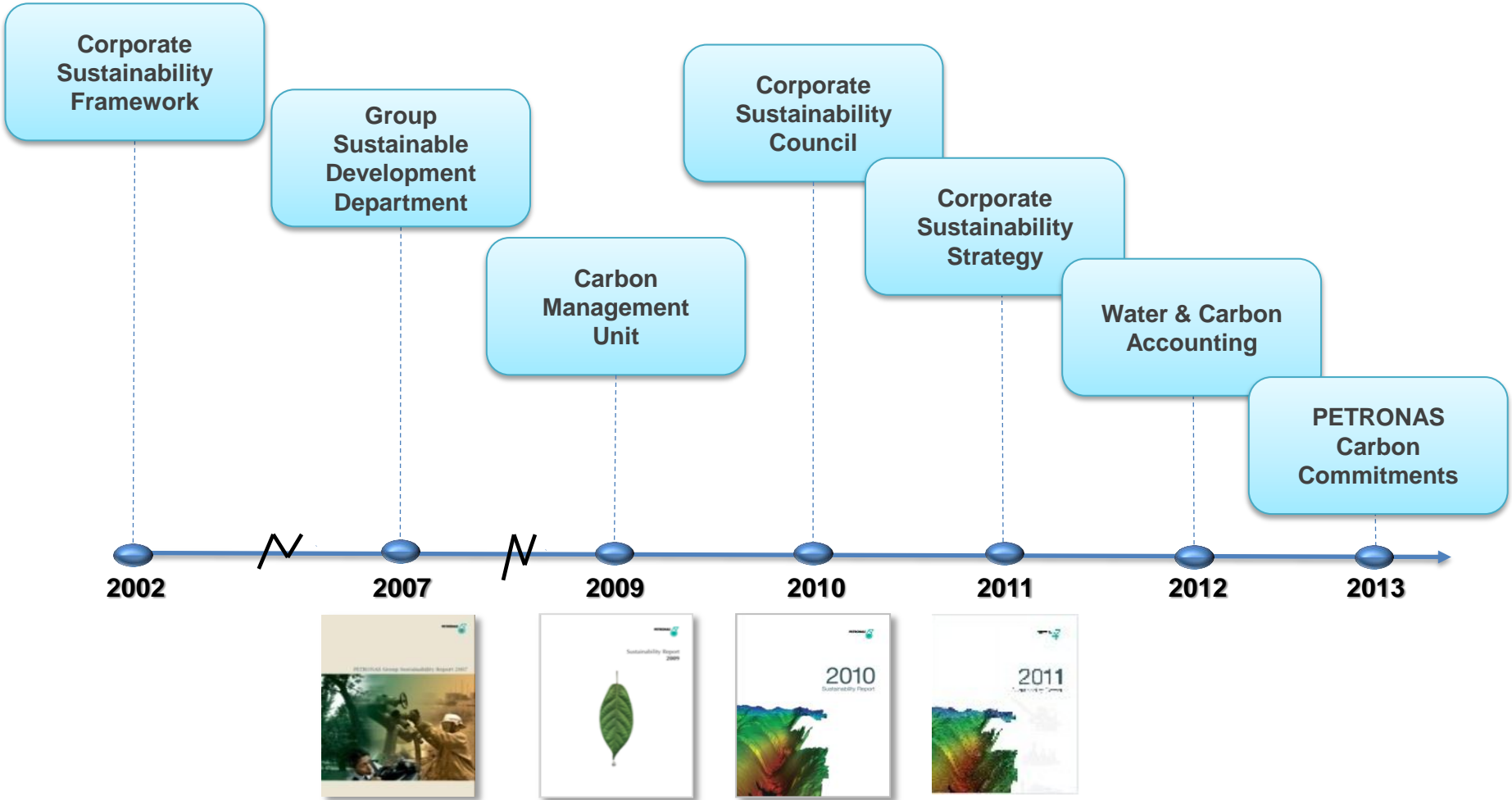
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# Sustainable Development

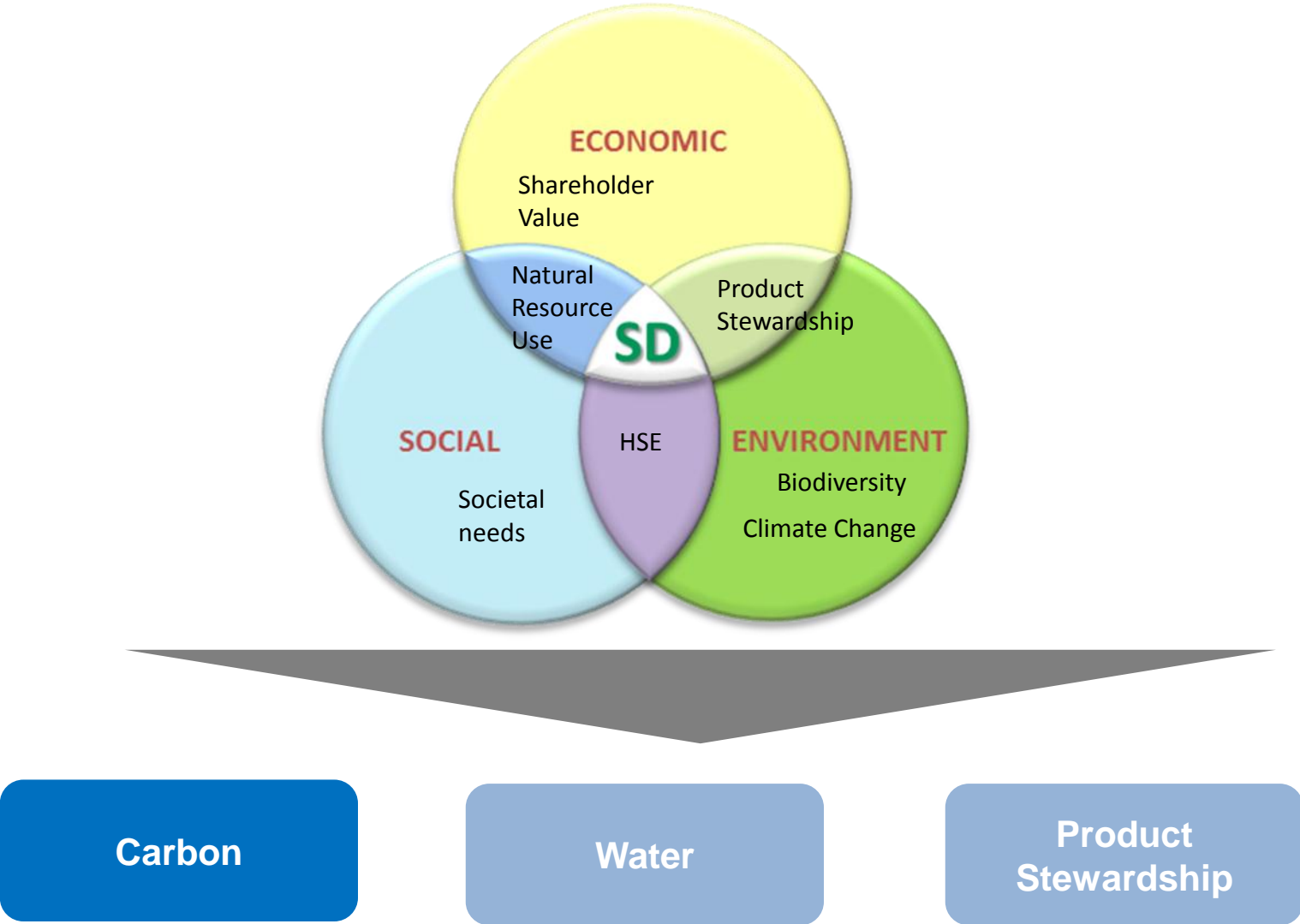
# PETRONAS' Journey in SD

*“...We continue to be guided by our imperative of striking a delicate balance between our commercial objectives and our responsibility towards socio-economic development and environment”*

- President & CEO, PETRONAS 2010



# PETRONAS SD framework - Initial focus on value creation and minimizing product risks





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# Carbon Management

# PETRONAS' Carbon Commitments

## Carbon

- Zero continuous venting & flaring to be incorporated in the design of new facilities by 2013.
- Zero continuous venting for all existing assets with more than 20 years remaining life for upstream by 2017.
- Reduce flaring for all facilities where operationally and economically-feasible.
- All G&P and downstream assets to meet and sustain design or best achieved Energy Index by 2017.

## Processes / Structure/ Resources required

- Business to obtain approval for CO<sub>2</sub> emissions for new projects based on functional sign-off
- Establish carbon price in project economics
- Establish Carbon Emission reduction targets / KPIs
- Businesses to identify dedicated function for Energy / Carbon Management

# Flaring Reduction Projects

## FRR: Optimization of Boil Off Gas (BOG)



- Reduce flaring at Terminal area through diverting excess BOG to fuel gas header
- Estimated to reduce 102, 250 tons of CO<sub>2</sub>e
- Project duration : (2012 – 2015)

## FRR: LPG Surge Drum Flaring Reduction



- Reduce flaring by diverting LPG to fuel gas header during surge drum overpressure in all three modules of MLNG DUA
- Estimated to reduce 7,510 tons of CO<sub>2</sub>e
- Project status: On-stream



# PETRONAS' Challenges in Managing Carbon

Balancing nation gas demand and environment

- Engagement with government in balancing nation gas demand and environment
- High CO<sub>2</sub> fields management

Technology options for CO<sub>2</sub> management

- Enhanced Oil Recovery
- Converting CO<sub>2</sub> to methane
- Carbon Capture Storage
- R&D

High capital expenditure with no Government financial incentives

- Seek tax exemption

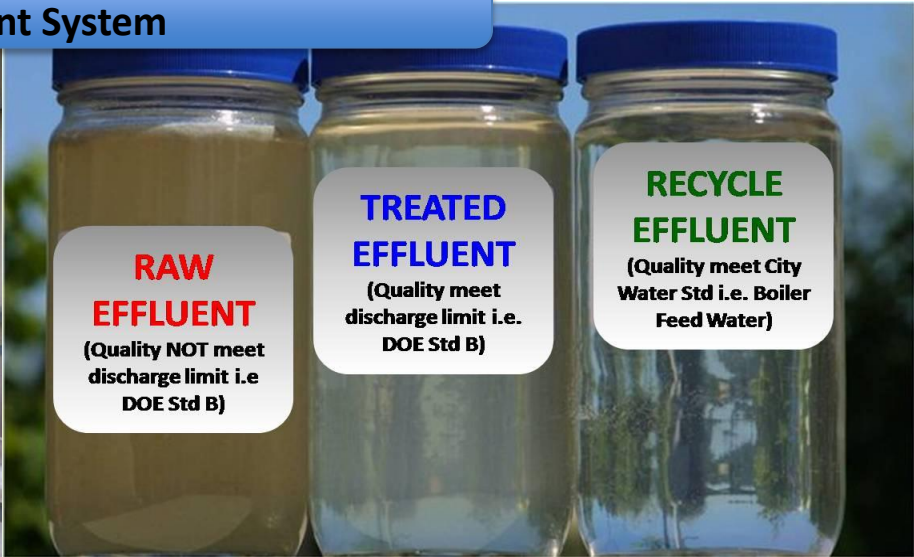


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# Water

# Water Efforts

**Pilot water recycle plant tested at Effluent Treatment System**



**Water recovery at Heat Exchanger at CRU unit**



**Selection of disk filter instead of sand filter for COGEN & MG3 Cooling Tower**





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## Social Performance

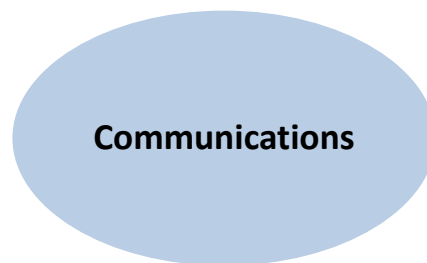
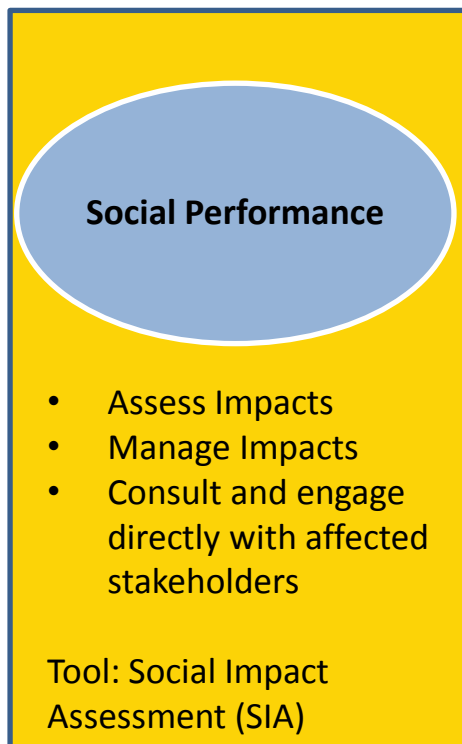
# Definition of Social Performance for PETRONAS

Managing impacts arising from areas of our business  
while contributing to the society in a responsible  
manner

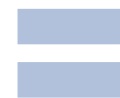
References: PETRONAS Code of Business Conduct (2012), IFC Environmental and Social Performance Standards (2012), Equator Principles (Version 3) (2013), IPIECA Guidelines on Social Impact Assessment (2004), Voluntary Principles on Security and Human Rights (2013)

# Social Performance and Reputation Management

## Organizational Performance



- Stakeholder engagement
- Advertisement
- Promotions
- CSI (e.g. education)
- Events
- Collaterals



Who:

SD/GHSE

GCAD

GCAD



# Social Performance Framework



References: Project HSE Management Standard (2012), IFC Social And Environmental Performance Standards (2012), IPIECA Guidelines on Social Impact Assessment (2004), SPE HSSE SR (2013)

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HSE



# HSE Efforts

Process Safety



Product Responsibility



Occupational Health & Industrial Hygiene



# PETRONAS' efforts in SD will be done in phases

Result Area	Focus Areas	2012	2013	2014	2015	2016	2017
Shareholder value	Operational Excellence	E&P, G&P, DS					
HSE	HSE						
Climate Change	Carbon	Baselining	E&P, G&P, DS				
Natural Resource Use	Water		E&P, G&P, DS				
Product Stewardship	Product Stewardship	PCG	E&P, G&P, DS				
Biodiversity	Biodiversity	OPU-driven initiatives	Direction Setting	E&P, G&P, DS			
Societal Needs	Social Performance	RAPID and Canada LNG					
Shareholder Value	Supply Chain	Engagements with vendors/suppliers Contractor HSE Mgt					



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Thank you