

Improving Industry Performance in the Offshore Petroleum Regime

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OGP Safety Committee
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- NOPSEMA and legislation
- Industry performance
 - Accidents + Dangerous occurrences
 - Process safety survey
 - Inspection findings

Monitor & Enforce	Investigate
Promote	Advise
Co-operate	Report

Compliance

Improvement

Governance

Operations

- Offshore petroleum operations
- Offshore greenhouse gas storage operations

Scope

- Occupational health and safety
- Structural integrity of facilities and wells
- Environmental management of petroleum activities

Commonwealth Offshore Area

Coastal Waters

Internal Waters

* Note - State Waters = Internal Waters + Coastal Waters

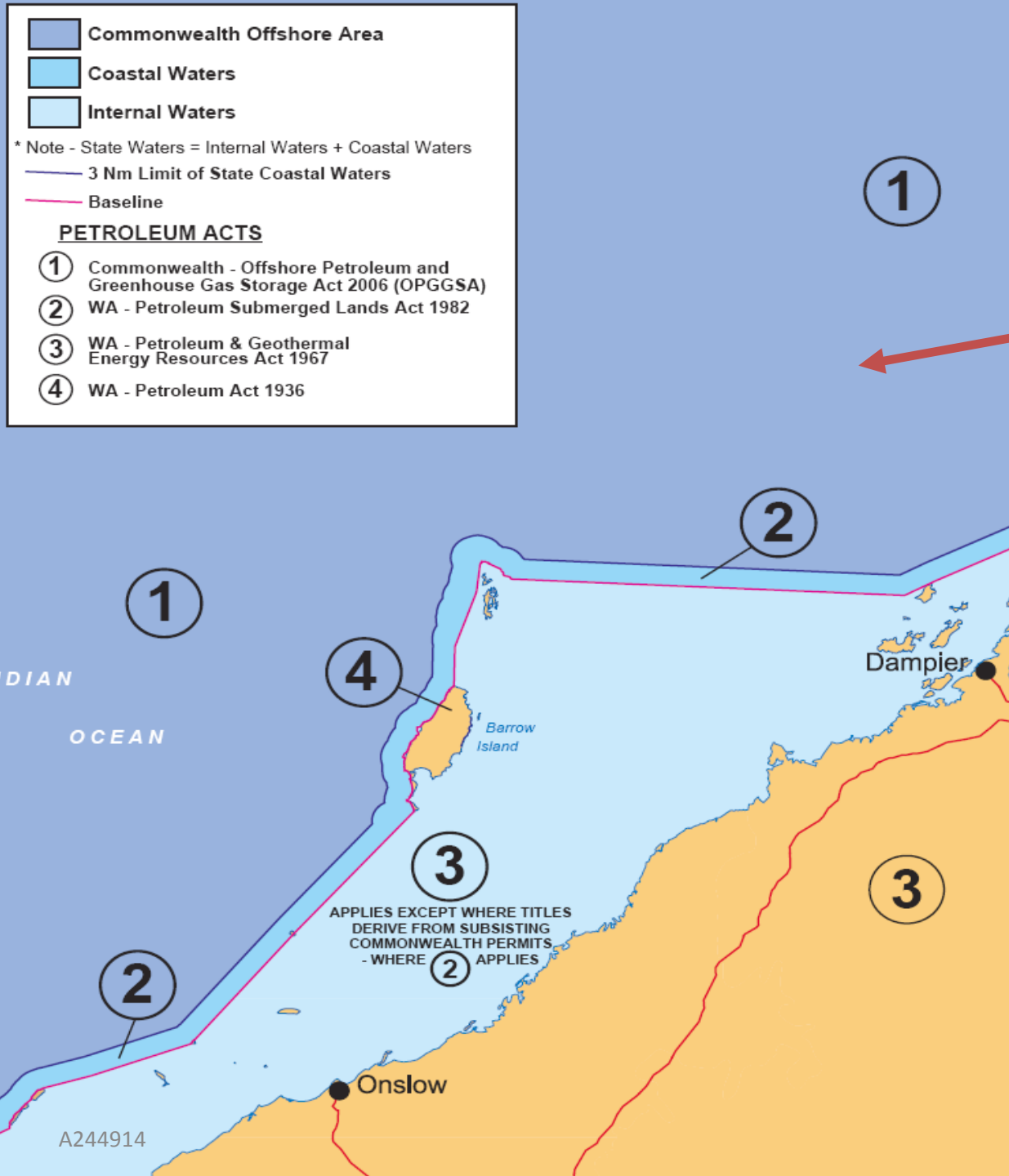
— 3 Nm Limit of State Coastal Waters

— Baseline

PETROLEUM ACTS

- ① Commonwealth - Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGGSA)
- ② WA - Petroleum Submerged Lands Act 1982
- ③ WA - Petroleum & Geothermal Energy Resources Act 1967
- ④ WA - Petroleum Act 1936

1. OPGGSA



Functions Aspects	Safety	Wells	General Administration	Environment
Scope	People at facilities	Well integrity	Petroleum exploration and recovery	Petroleum activity
Dutyholder	Operator of a facility	Titleholder	Titleholder	Operator of a petroleum activity
Permissioning document	Safety Case	WOMP	Titles + conditions	Environment Plan
Compliance	OHS inspectors	OHS inspectors	Petroleum Project Inspectors	Petroleum Project Inspectors
Powers	OHS related entry, seizure, Notices	OHS related entry, seizure, Notices	Entry & information	Entry & information
Money	Safety Levy	Well Levy	Reimbursement from NOPTA	Environment Levy

INDUSTRY

35 Operators

209 Facilities

447 Assessments submitted

340 Incidents Notified

30 Accidents

310 Dangerous Occurrences

NOPSEMA

48.2 FTE Regulatory Staff

23.3 FTE Support staff

382 Assessments Notified

157 Facilities Inspections

0 Major Investigations

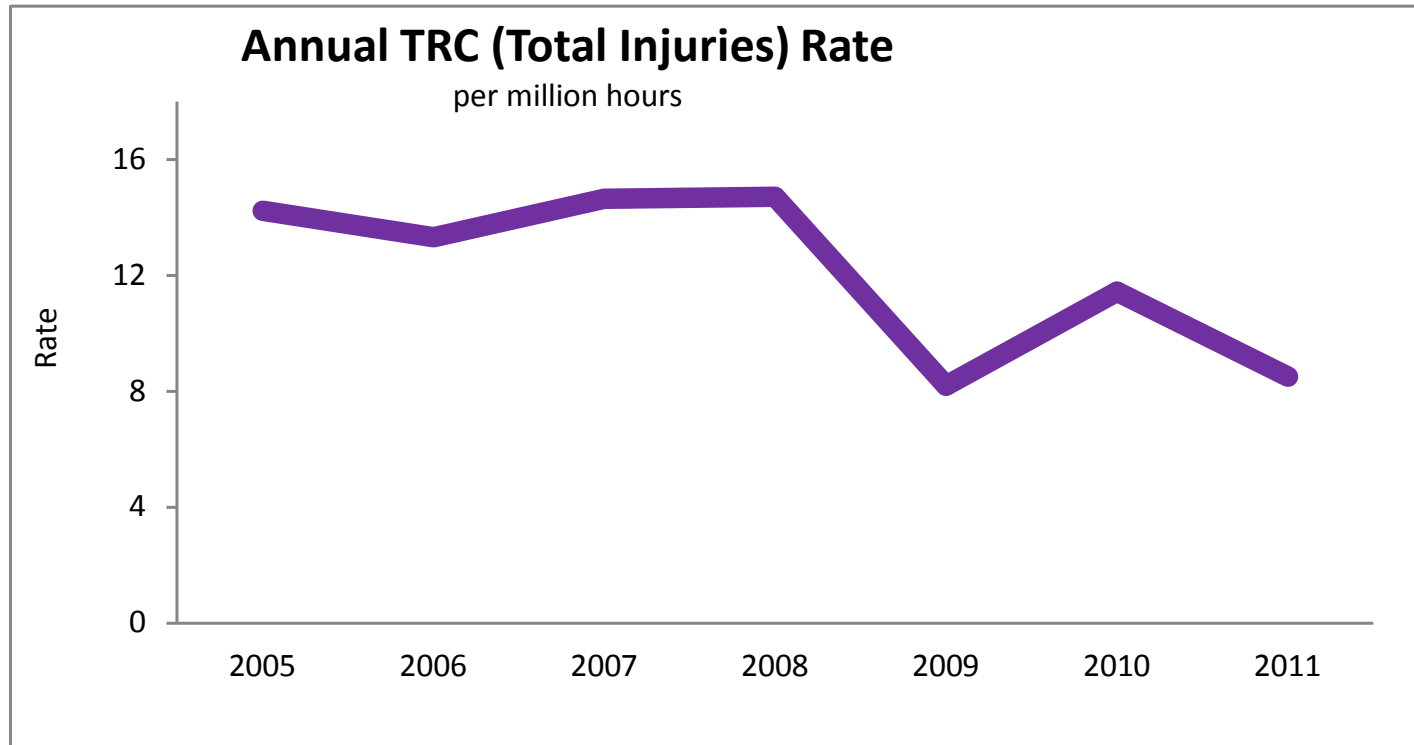
11 Minor Investigations

329 Incident reviews

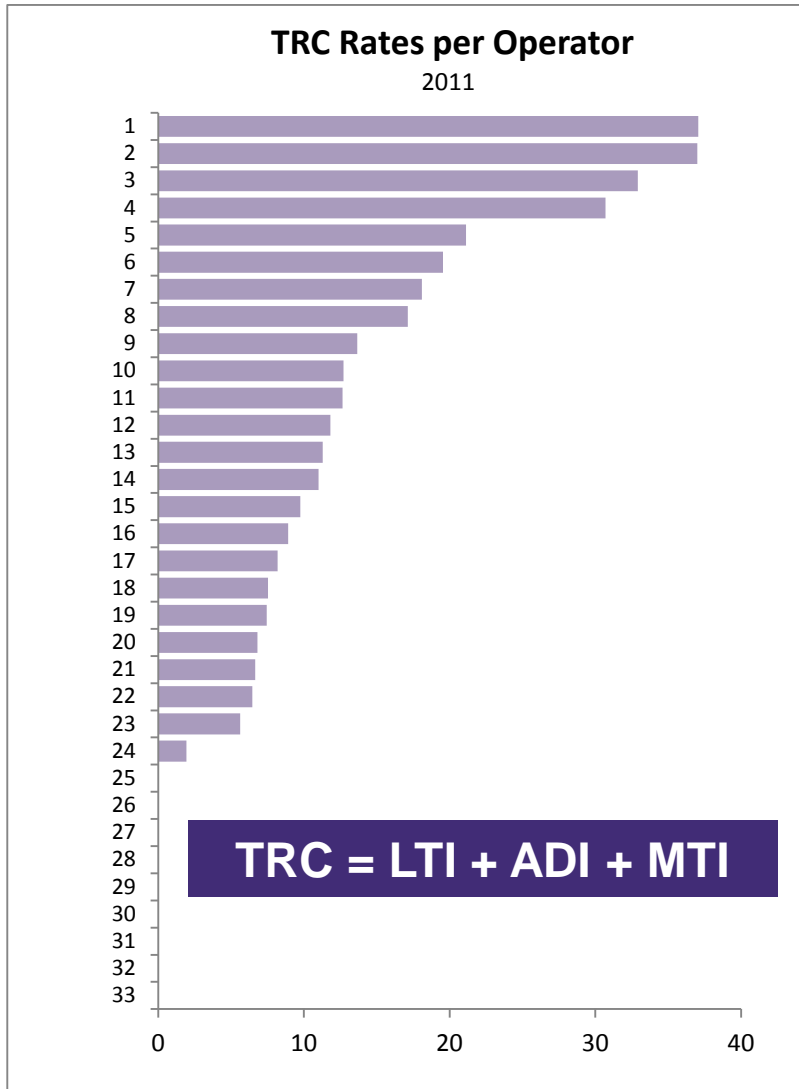
100 Enforcement actions

Facility Group	Based on Current (2011) data *
Platforms	58
FPSOs	14
MODUs	15
Vessels	13
Pipelines	109
TOTAL:	209

** Numbers fluctuate slightly as facilities enter and leave the regime e.g. mobile facilities and inactive facilities*



$$\text{TRC} = \text{LTI} + \text{ADI} + \text{MTI}$$



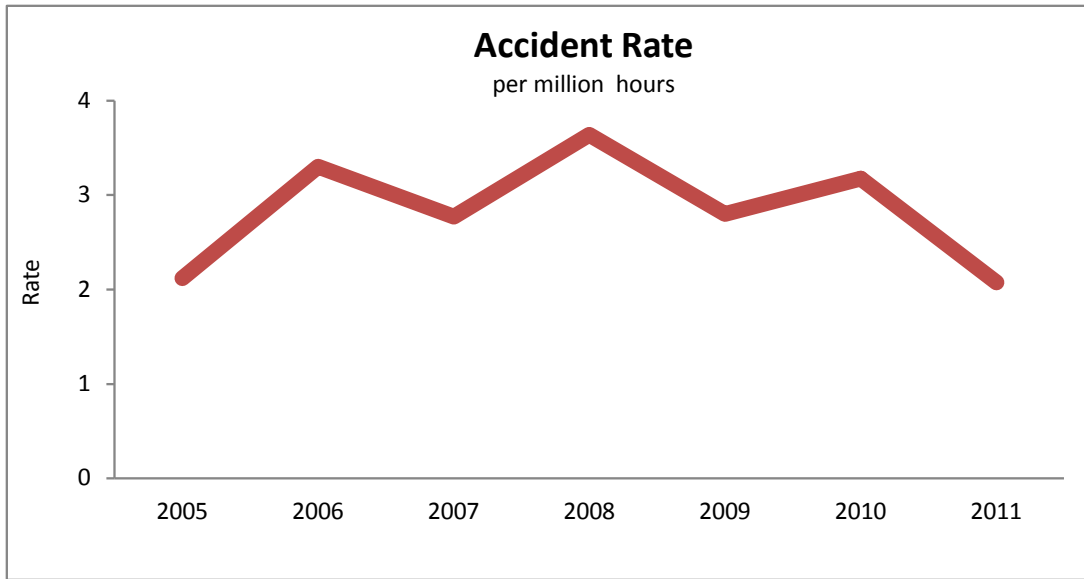
#1 = Vessel Operator

#2 = MODU Operator

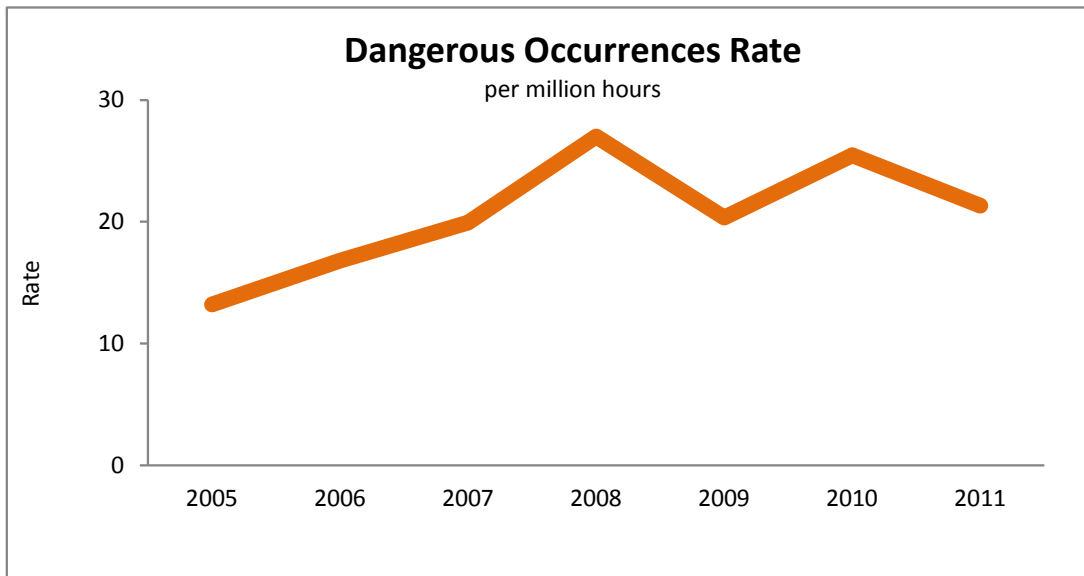
#3 = Platform Operator

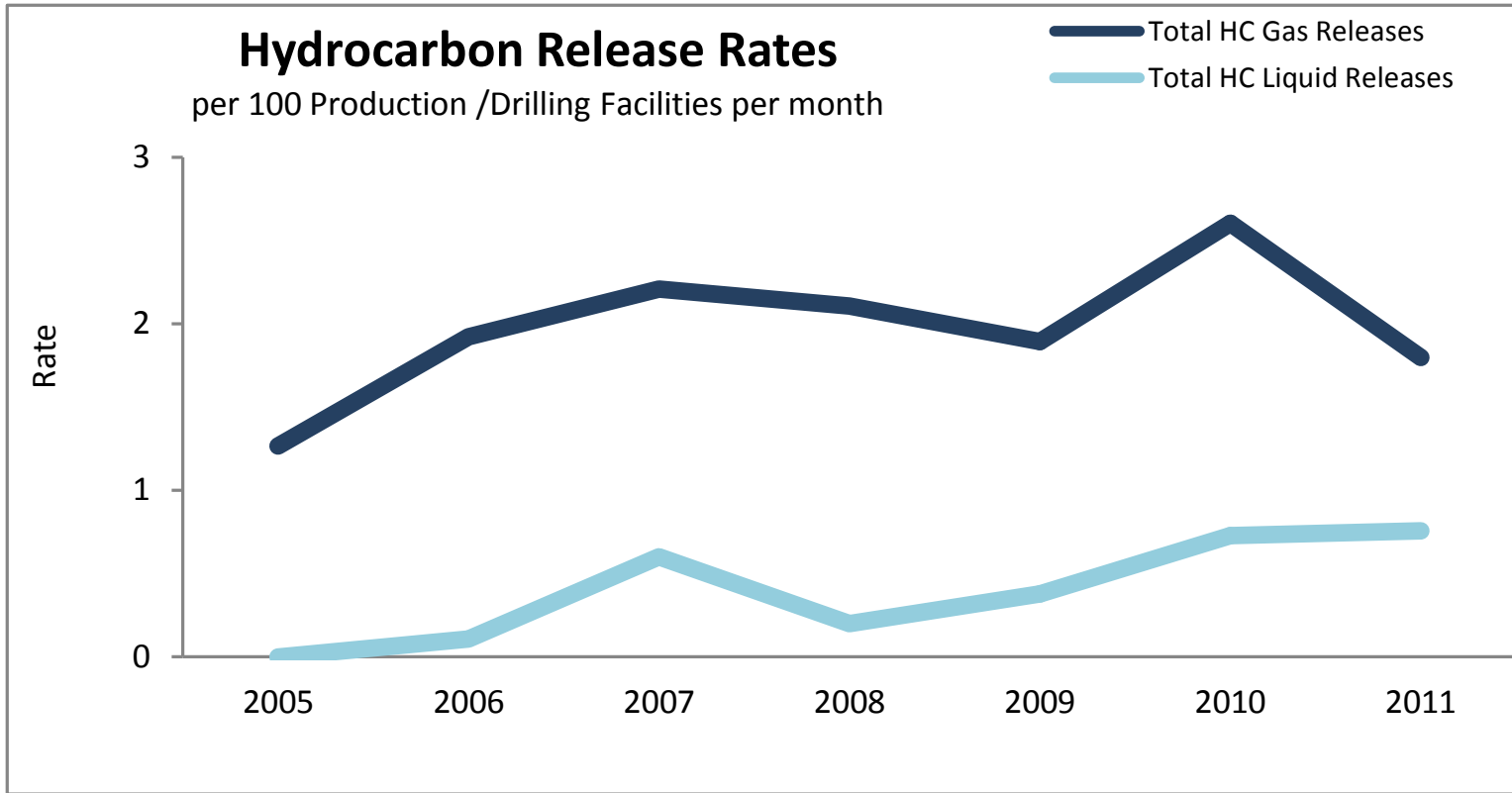
#24 = Platforms Operator

Variation amongst operators

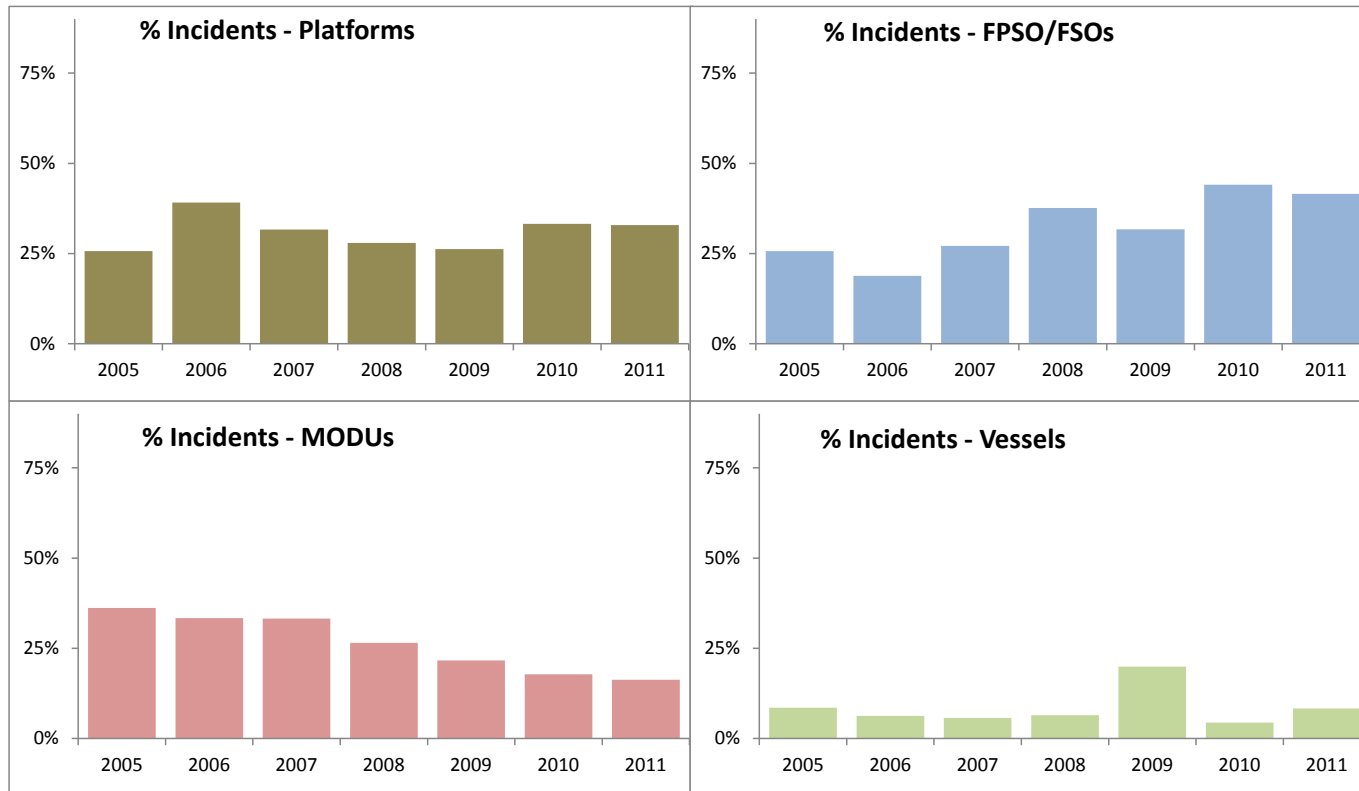


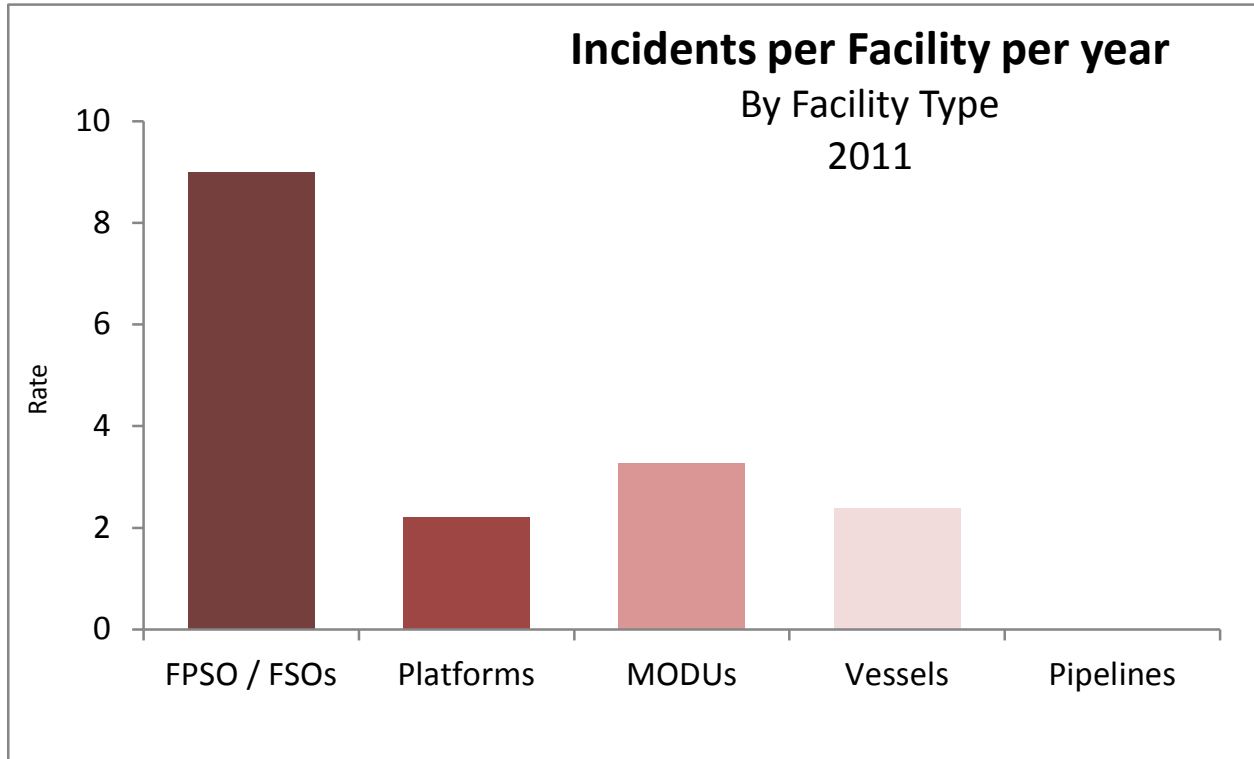
Offshore Industry Rates





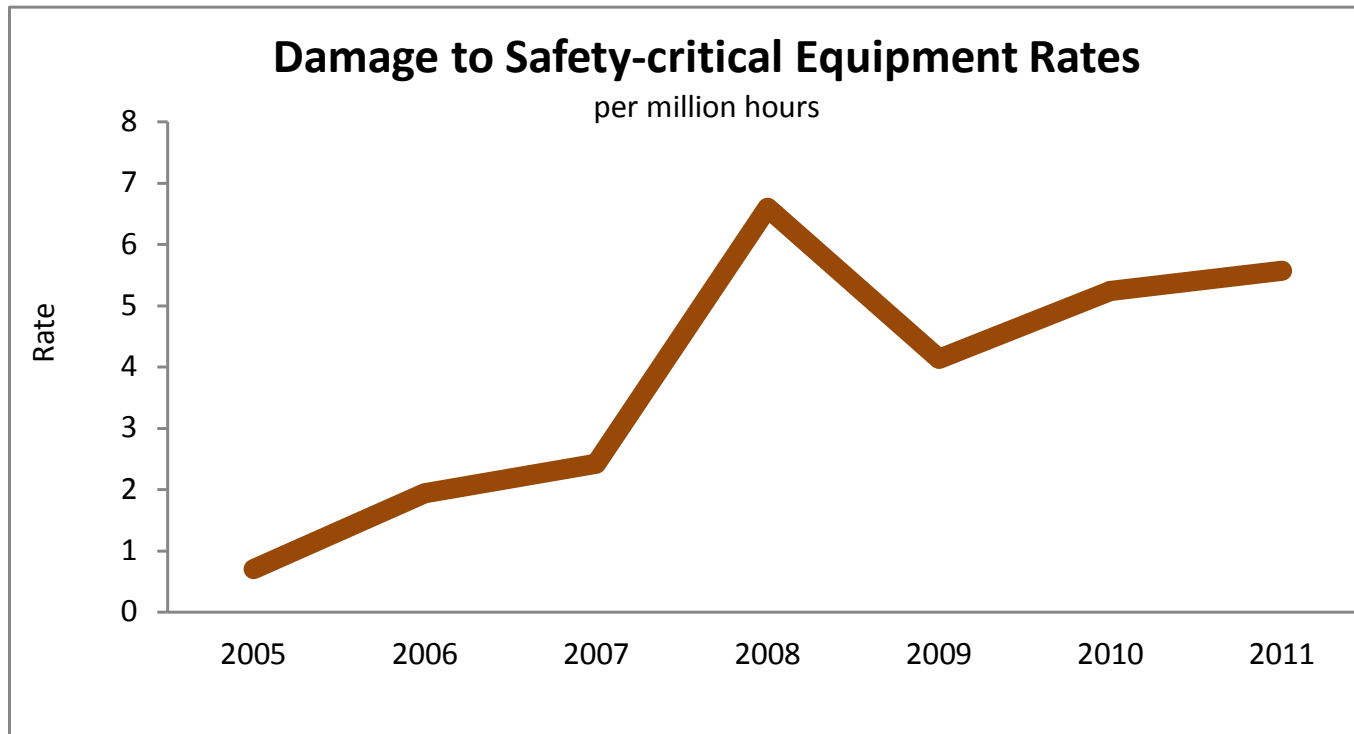
- >35% of all incidents occur on FPSOs
- >25% of all incidents occur on Platforms



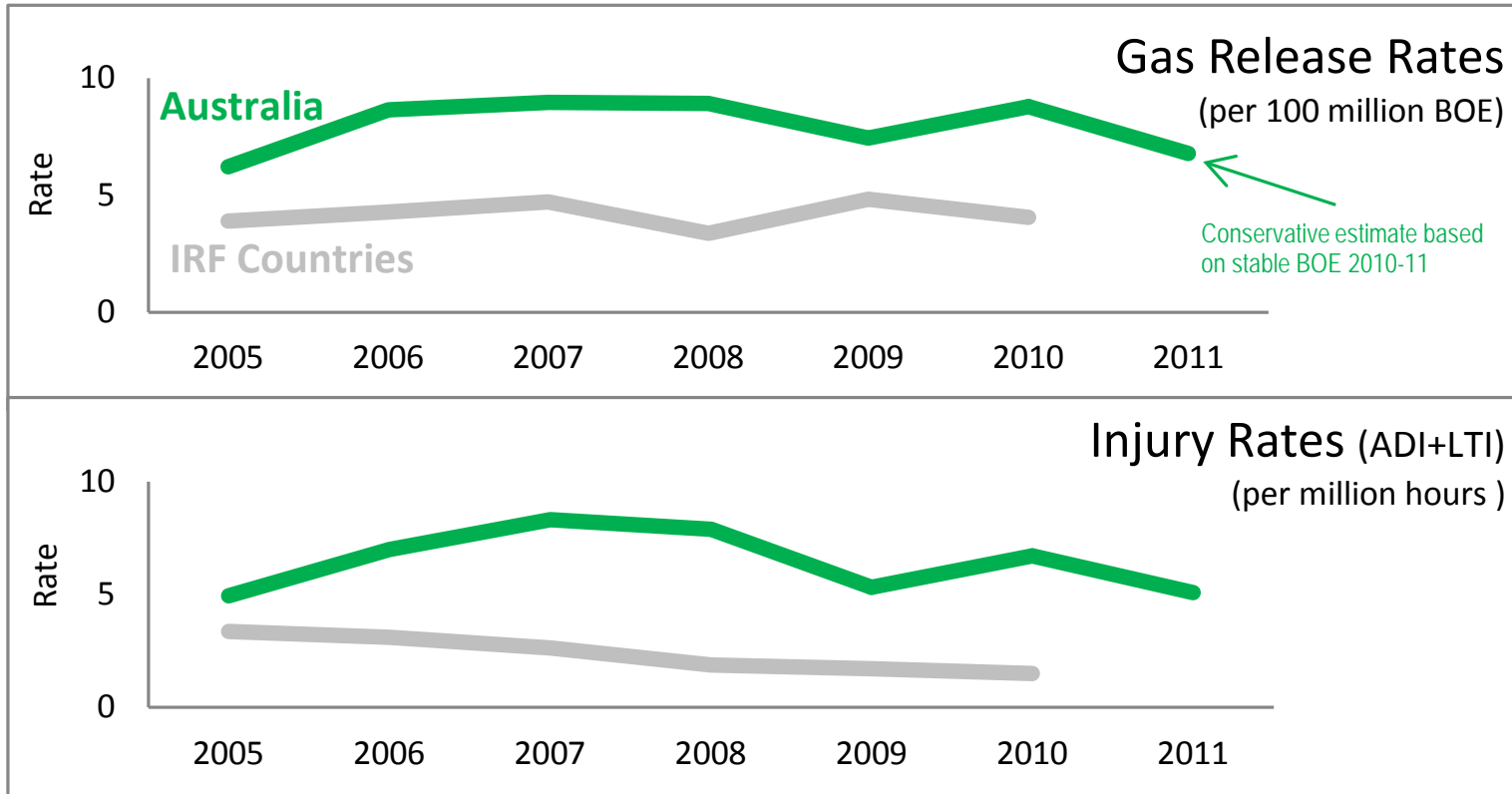


NB : Incidents includes Accidents and Dangerous Occurrences

Control measures relied on to reduce the risk of one or more MAEs to ALARP



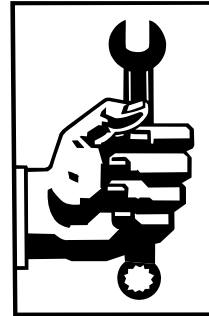
- AIChE, CCPS (2008): Ensure Safety Critical Equipment is functional:
SCE inspections completed/Total SCE inspections due



Incident Root Causes 2011	
ALL OPERATORS	
ED - DESIGN - Design specs	12%
ED - PREVENTIVE MAINTENANCE	10%
ED - EQUIPMENT / PARTS DEFECT	8%
HPD - PROCEDURES	7%
ED - TOLERABLE FAILURE	3%

Safety Culture Survey TOPIC AREA	Areas of concern
Safety Values / Commitment	Pressure to work overtime - loyalty to their own work unit
	Process safety programmes don't have adequate funding
Reporting	Hazard identification, control and reporting training not adequate
Training	Contractors don't receive adequate training to do their job safely
Worker Professionalism / Empowerment	Workers don't actively participate in incident investigations

– Maintenance Management



– Ageing Facilities



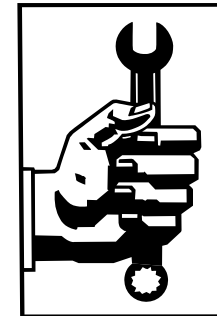
– Emergency Management



– Contractor Management



- Variation between documented maintenance system and how maintenance is actually conducted
- Formal deferrals process not used – risks not assessed
- Temporary repairs risk assessment - poor
- 3rd party competency – EHS assessed but not technical competencies
- Maintenance supervisors workload
- Remote technical support
- Auditing – inadequate



- Some current integrity management systems take ageing into account
- Little evidence of systematic approach to systems (process, blowdown, electrical) other than structural
- Corrosion management – variable to poor
- Critical function tests (CFTs) – not conducted to equipment manual or overdue
- Classification for floating facilities – reliance on Class may not be sufficient to demonstrate ALARP



- Drills being undertaken but do not cover all emergency controls
- PA systems ineffective
- Emergency escape routes not clearly marked or obstructed
- Response times – not subject to performance standards and not tested
- Inadequate debriefs
- Auditing - inadequate





- Variable level of supervision
- Contractors often considered as part of core workforce and given important emergency roles, however, not subject to the same level of training or supervision
- Lack of procedures for management of contractor OHS

Thank you