



# 2016 IPLOCA Health, Safety & Environmental Statistics Report

issued September 2017

## Message from the HSE Committee

Last year the IPLOCA Board of Directors decided to make the submission of Environmental Statistics compulsory for Regular Members as was already the case for the Health & Safety Statistics. Consequently, both forms have been combined and you will find all the aggregate statistics in one single report.

In 2016, the HSE Committee adopted long term targets for H&S key performance indicators for 2020, to better define the actions to be undertaken:

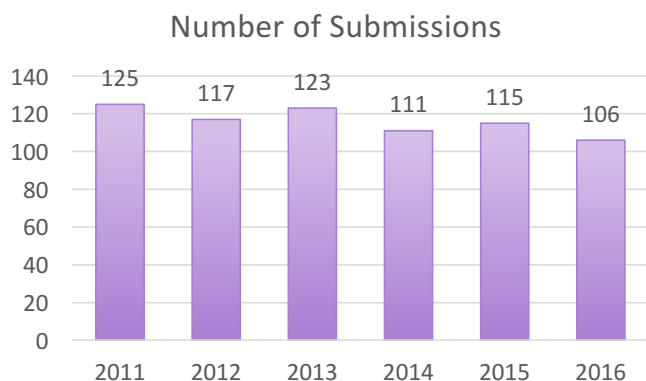
- Lagging indicators: zero fatalities and total recordable incidents rate (TRIR) of less than 1
- Leading indicators: minimum 30 000 near misses recorded per year and a training rate of more than 15 000 hours per million worked hours

After an alarming 2015 year, the number of fatalities has more than halved, but we still have a large number of fatal accidents on our work sites, and we are far from the 2020 target. This is despite an increase in near miss reporting and training hours, which also remain far from the targets set. There is significant work to be undertaken in order to eliminate fatalities in our industry.

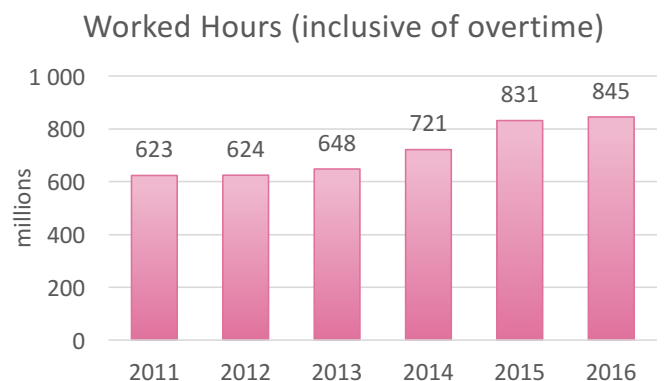
The good news is that Lost Time Injuries (LTI) and TRIR have significantly decreased, showing the continuous efforts and improvements made by our members. The HSE committee recognises these results and congratulates all members for these remarkable achievements.

On the environmental side, there is a general decrease in the number of incidents. This shows the growing dedication of members towards the preservation of the environment, and again the HSE Committee congratulates IPLOCA members for this achievement. However, the continuous reduction, over the last two years of the number of training hours is a real concern. There is no doubt that accidental releases are likely to increase in the near future if important and comprehensive environmental training programmes are not included in the routine activities of our members.

We encourage you to diligently read through this report in detail and take appropriate, purposeful action for the future.



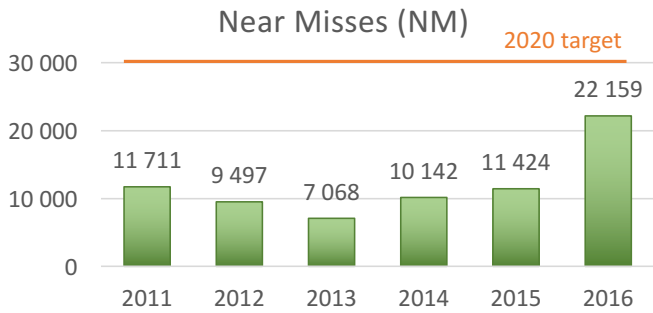
The 2016 IPLOCA HSE statistics were derived from data provided by 94 Regular Members (97% of total Regular Membership), and 12 Associate Members.



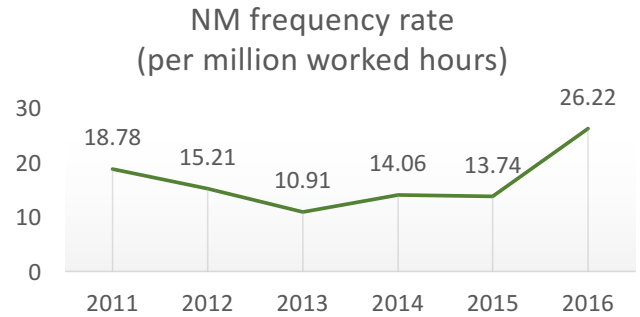
The number of hours worked during which the employee is present in the work environment as a condition of his or her employment, plus the extra hours put in as overtime.

# Health & Safety (H&S)

## Leading Indicators

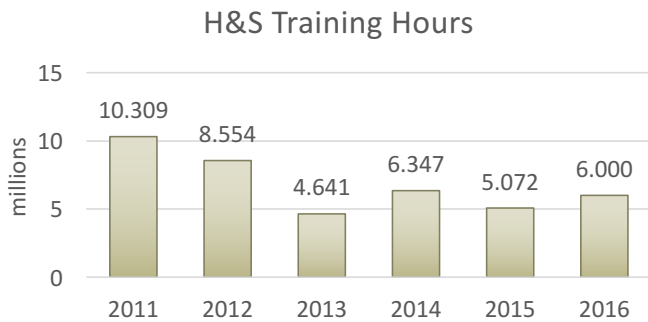


Near Miss: Any event which had the potential to cause injury and/or damage and/or loss but which was avoided by circumstances. The term "incident" includes "near misses".

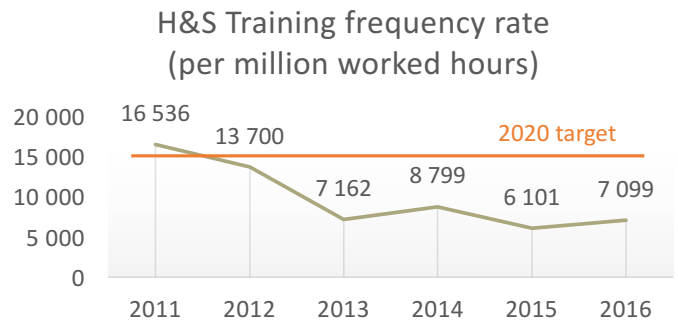


**Near Misses frequency rate:**  

$$\frac{\text{number of NM} \times 1\,000\,000}{\text{total worked hours}}$$



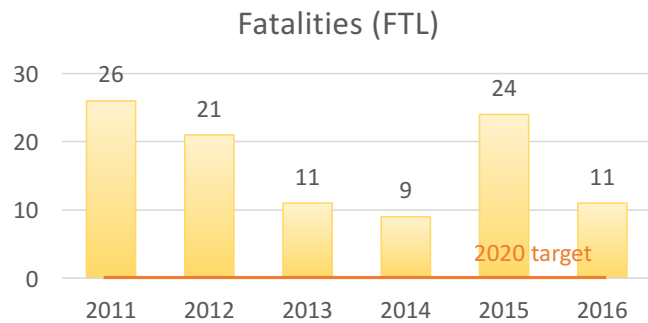
H&S Training Hours are the number of hours spent by personnel to get trained to H&S standards (includes all the hours spent by all the personnel to get trained).



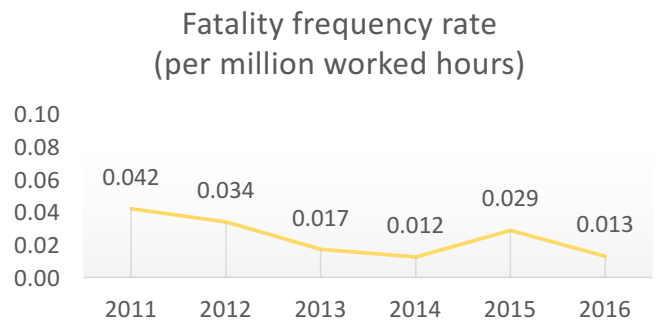
**H&S Training frequency rate:**  

$$\frac{\text{number of H&S training hours} \times 1\,000\,000}{\text{total worked hours}}$$

## Lagging Indicators

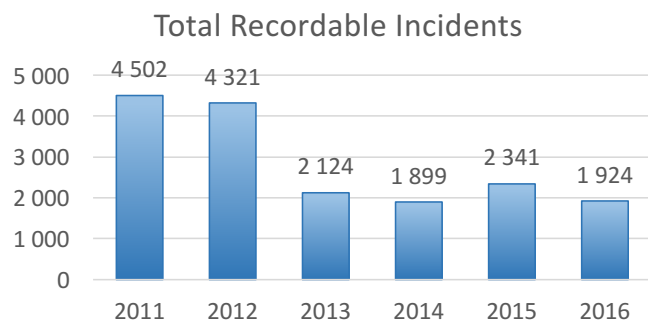


A fatality is a death resulting from a work injury or occupational illness, regardless of the time intervening between injury and death.



**Fatalities frequency rate:**  

$$\frac{\text{number of fatalities} \times 1\,000\,000}{\text{total worked hours}}$$



Total Recordable Incident cases are calculated with number of Lost Time Injuries (LTI), Medical Treatment Cases (MTC), and Restricted Work Cases (RWC).

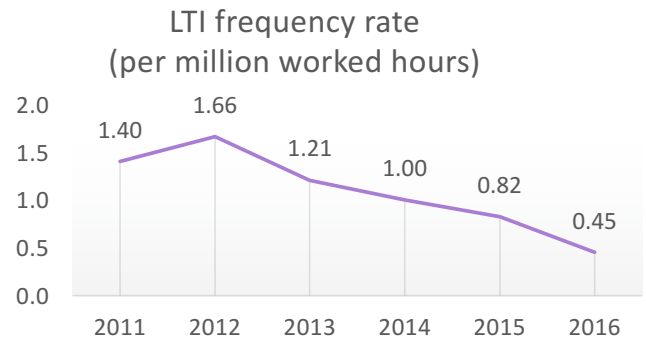
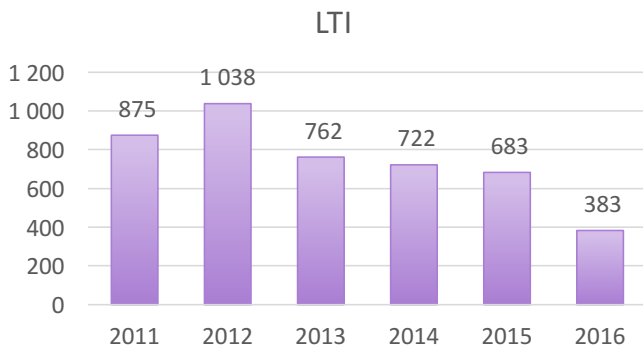


**TRIR:**  

$$\frac{\text{number of TRI} \times 1\,000\,000}{\text{total worked hours}}$$

# Health & Safety (H&S)

## Lost Time Injury Cases (LTI)



Lost Time Injuries are the sum of fatalities, permanent total disabilities, permanent partial disabilities and lost workday cases. Note: if in a single incident 20 personnel receive Lost Time Injuries, then it is accounted for corporate reporting purposes as 20 LTIs (not 1 LTI).

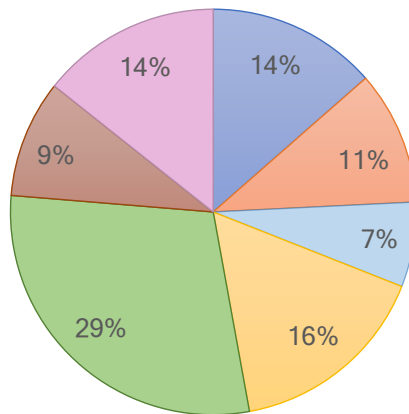
$$\text{LTI frequency rate} = \frac{\text{number of LTI} \times 1\,000\,000}{\text{total worked hours}}$$

## Description of Incidents/Accidents

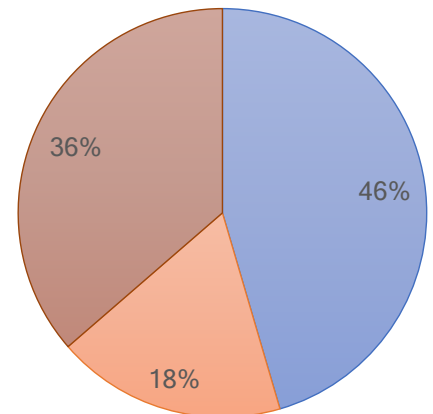
### Causes of Incidents/Accidents

- Vehicle accidents
- Lifting Operations
- Work at height / scaffolding
- Hand tool
- Involving fall
- Impact with construction equipment
- Others

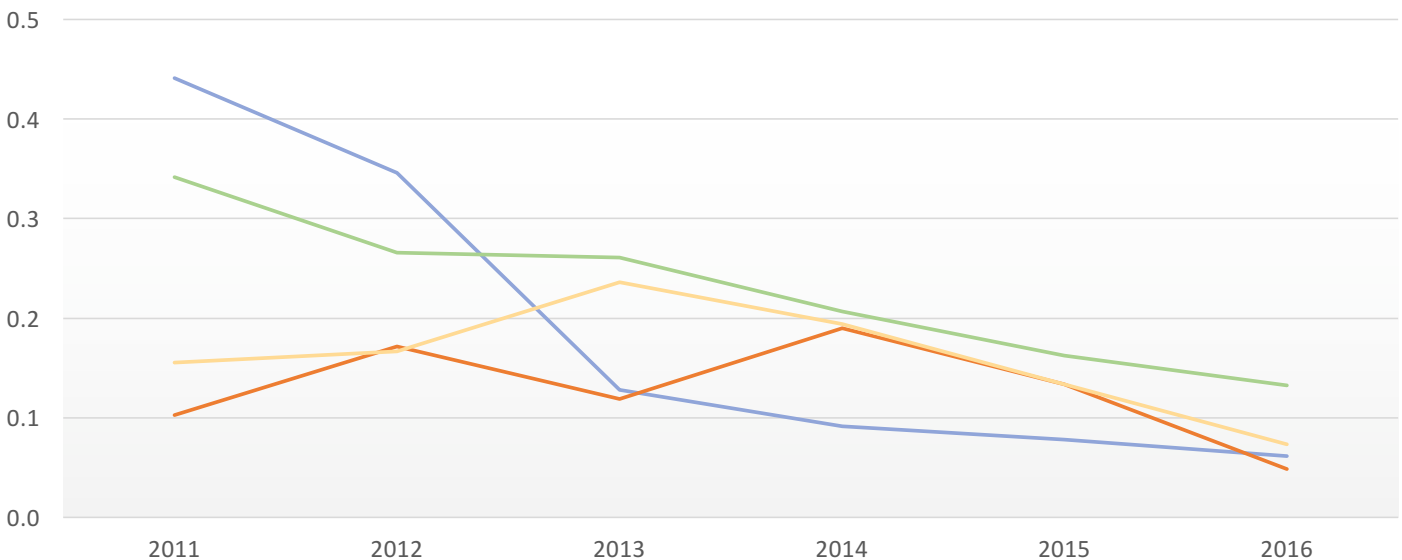
### Split of LTI



### Split of Fatalities

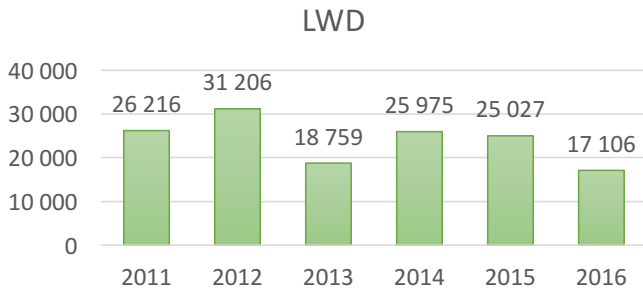


### LTI frequency rate for the four most frequent causes (per million worked hours)

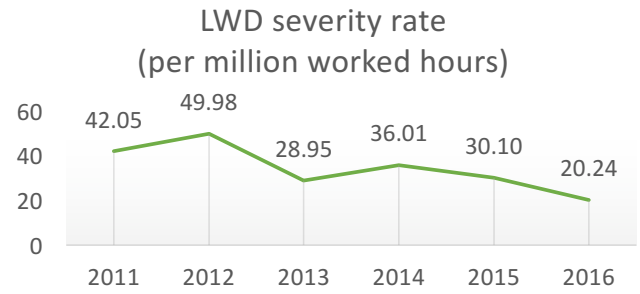


# Health & Safety (H&S)

## Lost Work Days (LWD)



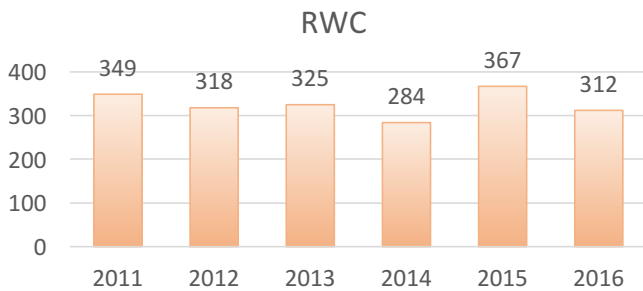
Lost Work Days are the sum of calendar days lost as a result of a work-related accident.



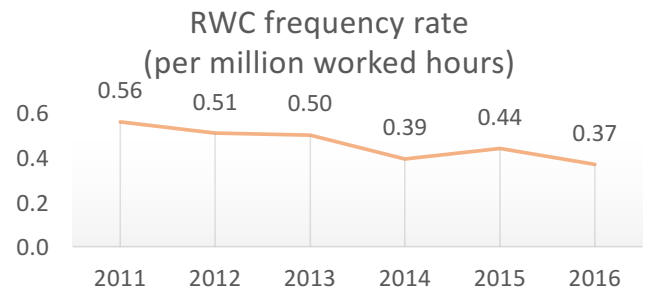
**LWD severity rate:**  

$$\frac{\text{number of LWD} \times 1\,000\,000}{\text{total worked hours}}$$

## Restricted Work Cases (RWC)



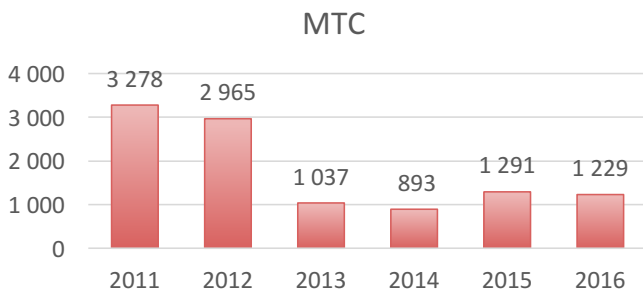
A Restricted Work Case is any work injury, which results in an employee not being able to conduct normal duties, after the day the Incident occurred.



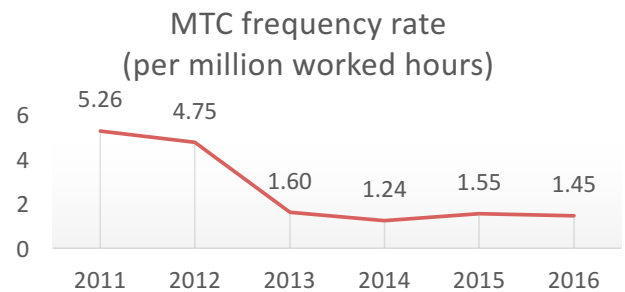
**RWC frequency rate:**  

$$\frac{\text{number of RWC} \times 1\,000\,000}{\text{total worked hours}}$$

## Medical Treatment Cases (MTC)



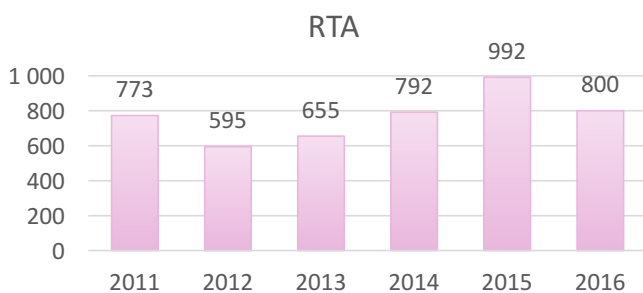
A medical treatment case is any work related injury that involves neither Lost Work Days nor Restricted Workdays but which required treatment by medical personnel.



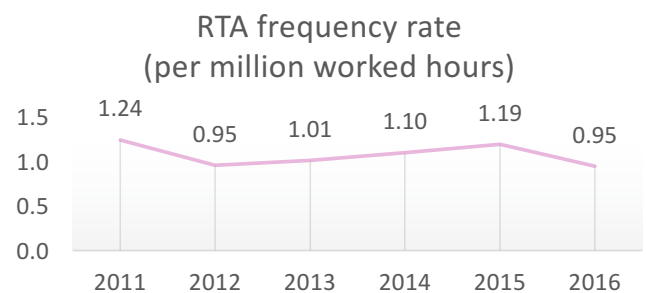
**MTC frequency rate:**  

$$\frac{\text{number of MTC} \times 1\,000\,000}{\text{total worked hours}}$$

## Road Traffic Incidents / Accidents (RTA)



A road traffic incident/accident is any incident involving one or more moving vehicles which result in injuries and/or damage to property, vehicle(s) or loads being moved or carried by vehicles. Incidents during travel from camp, home or any other location to and back from the worksite should be included.

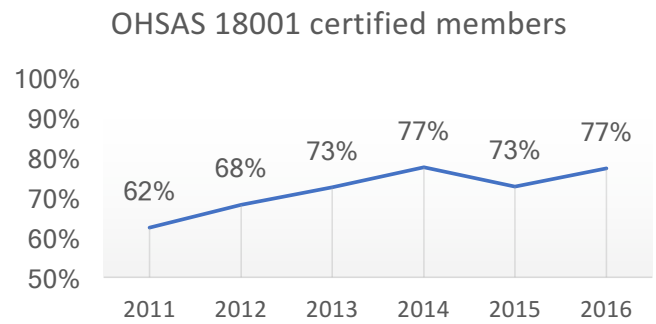
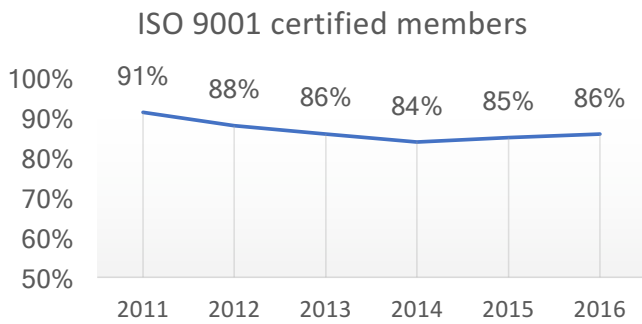


**RTA frequency rate:**  

$$\frac{\text{number of RTA} \times 1\,000\,000}{\text{total worked hours}}$$

# Health & Safety (H&S)

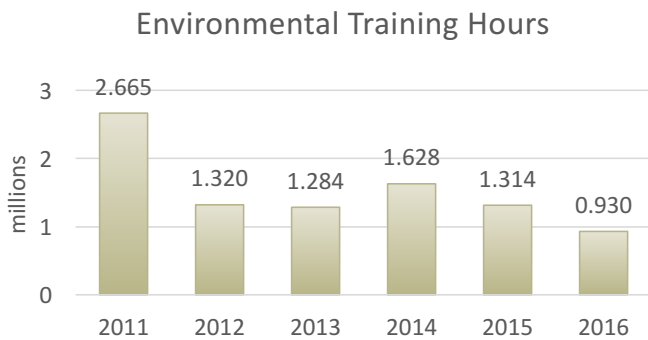
## Health & Safety Management Systems



The ISO 9001 and OHSAS 18001 management system certifications have a high adoption rate – clearly leading certifications in the pipeline industry.

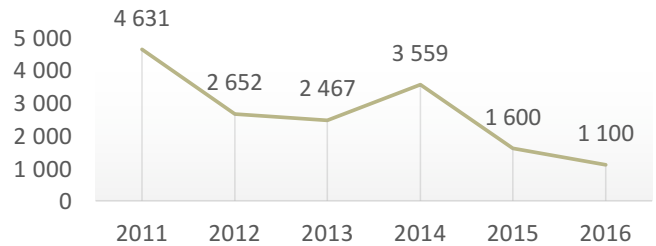
# Environment

## Environmental Training Hours



Environmental Training Hours are the number of worked-hours spent by personnel to get trained to environmental standards (includes all the hours spent by all the personnel to get trained).

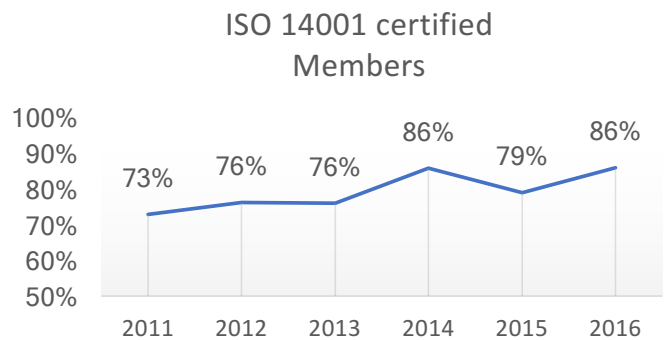
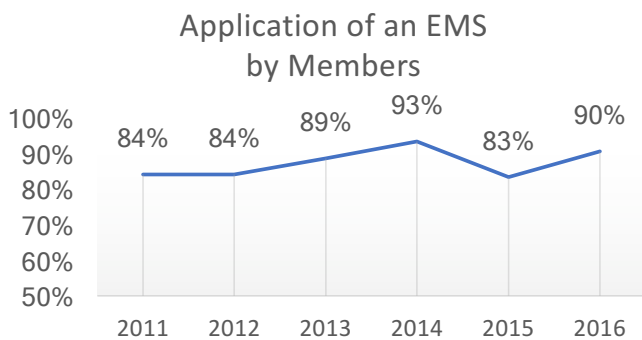
## Environmental Training frequency rate (per million worked hours)



**Environmental Training frequency rate:**  

$$\frac{\text{number of Environmental Training hours} \times 1\,000\,000}{\text{total worked hours}}$$

## Environmental Management Systems (EMS)

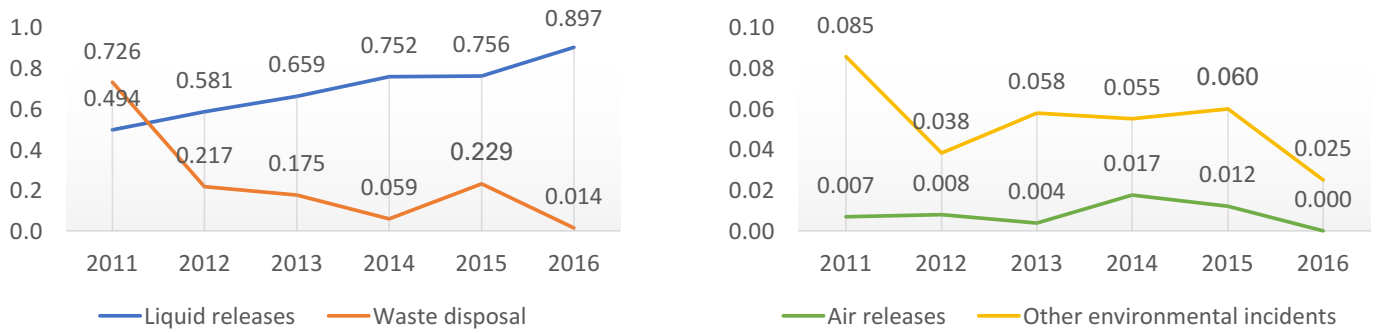


The ISO 14001 environmental management system certification has a high adoption rate – clearly a leading certification in the pipeline industry.

# Environment

## Environmental Incidents

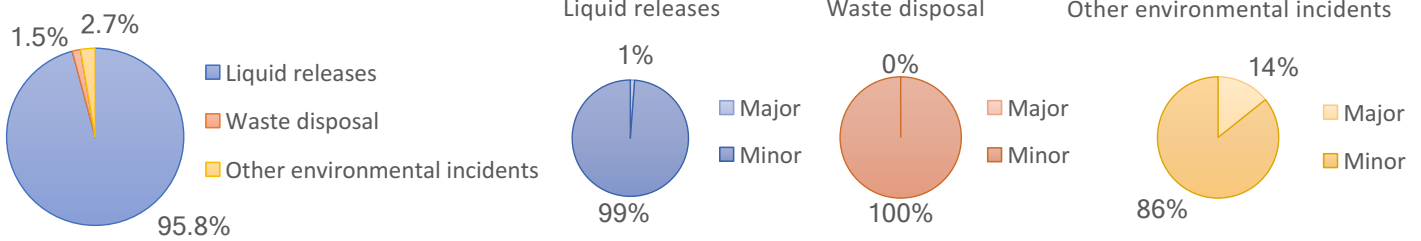
Environmental Incident frequency rates (per million worked hours)



Environmental incident frequency rates:  

$$\frac{\text{number of Environmental Incidents} \times 1\,000\,000}{\text{total worked hours}}$$

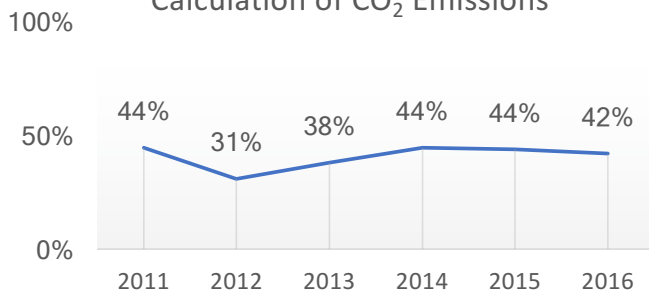
## Major vs. Minor Environmental Incidents



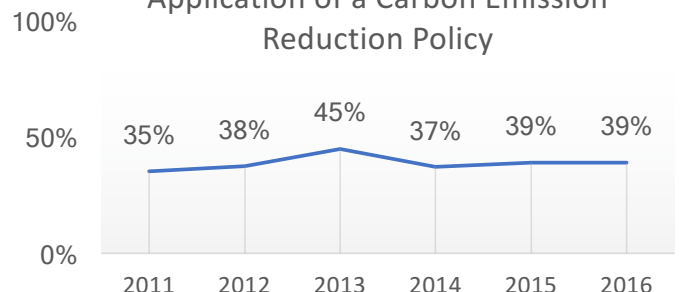
For complete details on classification of incidents, please visit our website [www.iploca.com/hsestatistics](http://www.iploca.com/hsestatistics)

## CO<sub>2</sub> Emissions

Calculation of CO<sub>2</sub> Emissions



Application of a Carbon Emission Reduction Policy



42% of the members chose to use CO<sub>2</sub> emissions as an indicator of their environmental performance, and 39% apply a carbon emission reduction policy.

## Carbon Emissions Calculation

Below is an extract of various methods used by the respondents to calculate their carbon emissions.

- 'In accordance with the Australian Federal Government, National Greenhouse and Energy Act 2007 (NGER Act)'*
- 'Using an ISO 14064 based software'*
- 'Using IPCC Methodology and GHG Protocol Calculation Tools'*
- 'Using US EPA (US Environmental Protection Agency) estimation methods'*

- 'Based on the total fuel consumption'*
- 'Based on the Russian Federation document: Methods of Calculation of Air Pollution Emissions Applicable for Transport Companies'*
- 'Using the OMEGA TP software'*
- 'World Resource Institute (WRI) protocol and calculator'*

## Disclaimer

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