



2019 IPLOCA Health, Safety & Environmental Statistics Report

issued September 2020

Message from the HSE & CSR Committee

This report combines IPLOCA member's Health, Safety and Environmental statistics received for 2019.

The good news is that the number of fatalities is decreasing. However, 3 fatal accidents in our worksites have been informed by our members and we are not reaching yet the 2020 target of zero fatalities.

There is also a good tendency in the Near-Misses reporting and Health and Safety training, which were both well below the targets set in the past and are now approaching the 2020 targets set by IPLOCA.

The HSE & CSR Committee encourages IPLOCA members to adopt behavioural Safety programmes which are considered the best practice in the industry. Significant work still needs to be done to eliminate fatalities in the pipeline industry.

Graphics also show a minor increase of lost-time injuries but a reduction in total recordable incident rates. The Committee highly recommends all IPLOCA members to focus on training and share industry best practices using the IPLOCA shared experience portal: www.iploca.com/hseplatform.

On the environmental incidents reported, the frequency of incidents has slightly decreased for liquid releases and waste disposal while showing a second year of substantial reduction in other environmental incidents.

The continuous increment over the last two years of the number of overall training hours (both on Safety and Environment) are a good sign of management commitment.

The Committee is also seeking to gain a better understanding of the type of environmental incidents occurring and continues to collect more detailed information on the nature of incidents to improve reporting of major and minor incidents.

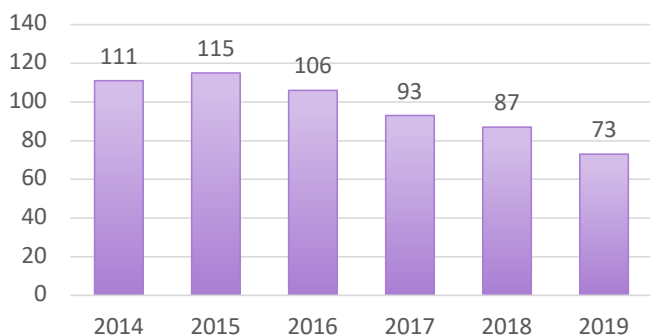
We encourage all our members to share their best practices and case studies to populate our HSE Portal.

The Committee would like to remind IPLOCA members that organisations already certified to OHSAS 18001 will have until March 2021 to transition to the new ISO 45001 standard, although certification of conformity to ISO 45001 is not a requirement of Health & Safety legislation. ISO 45001 was introduced in March 2018 to replace OHSAS 18001.

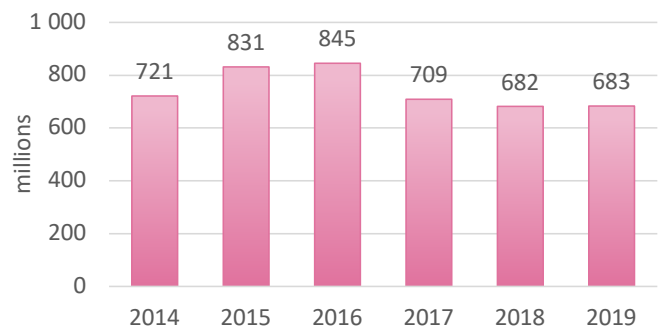
The Committee is seeking to assist companies to adopt best practice by working together while providing training and networking within the industry so as to minimise the risks associated with the design, construction, operation and decommissioning of pipeline projects.

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

Number of submissions



Worked Hours (inclusive of overtime)

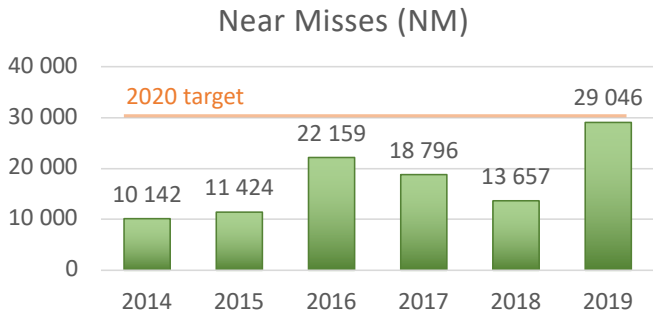


The 2019 IPLOCA HSE statistics were derived from data provided by 69 Regular Members (84% of total Regular Membership), 3 Associate Members and 1 Corresponding Member.

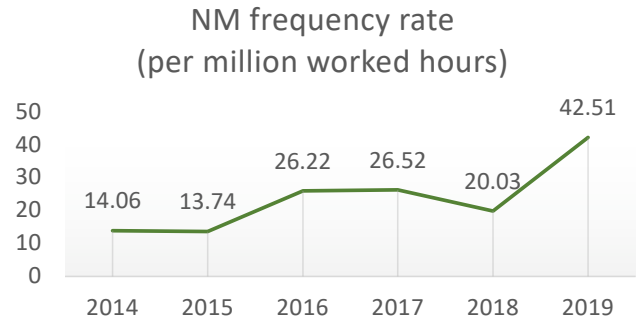
The number of hours worked during which the employee is present in the work environment as a condition of his or her employment, plus the extra hours put in as overtime.

Health & Safety (H&S)

Leading Indicators

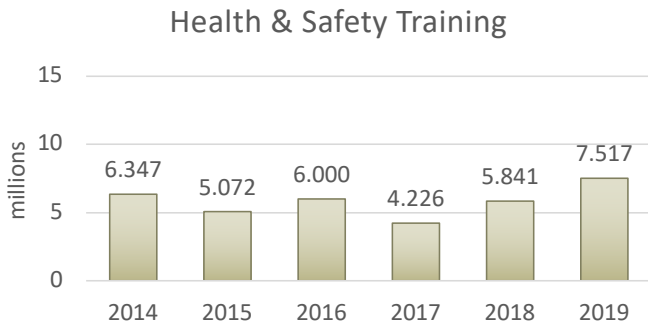


Near Miss: Any event which had the potential to cause injury and/or damage and/or loss but which was avoided by circumstances. The term "incident" includes "near misses".

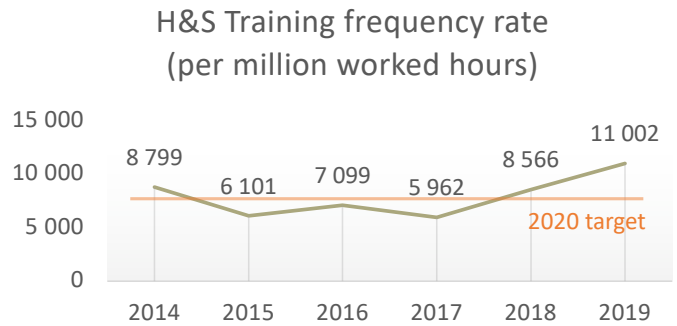


Near Misses frequency rate:

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



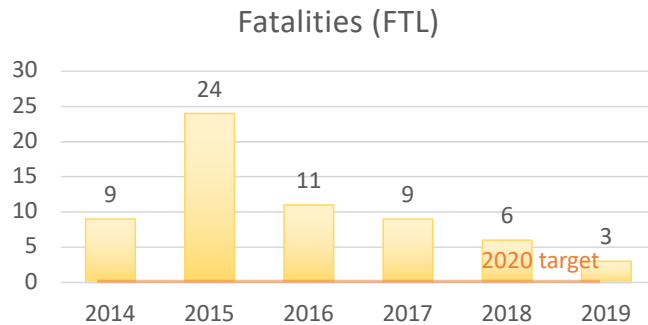
H&S Training Hours are the number of hours spent by personnel to get trained to H&S standards (includes all the hours spent by all the personnel to get trained).



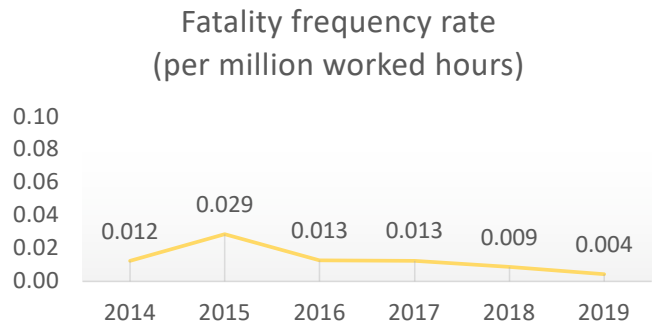
H&S Training frequency rate:

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

Lagging Indicators

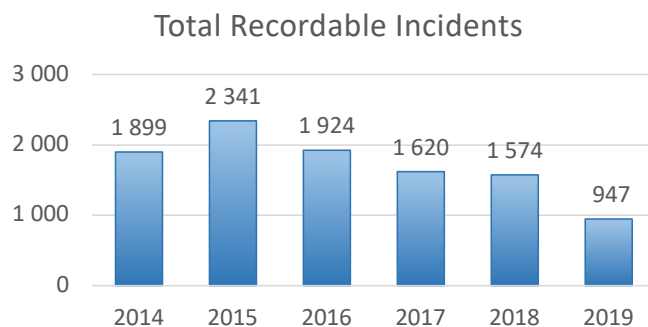


A fatality is a death resulting from a work injury or occupational illness, regardless of the time intervening between injury and death.

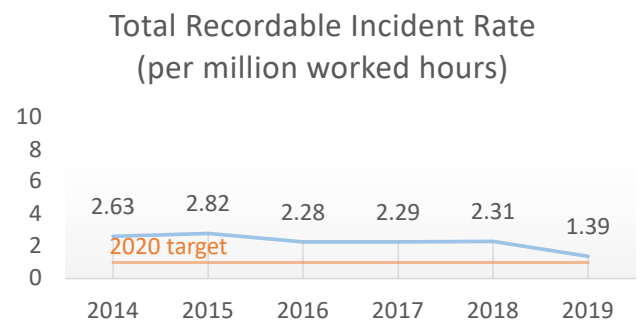


Fatalities frequency rate:

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



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

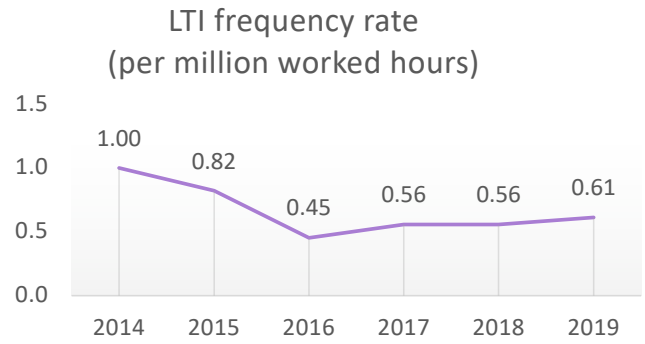
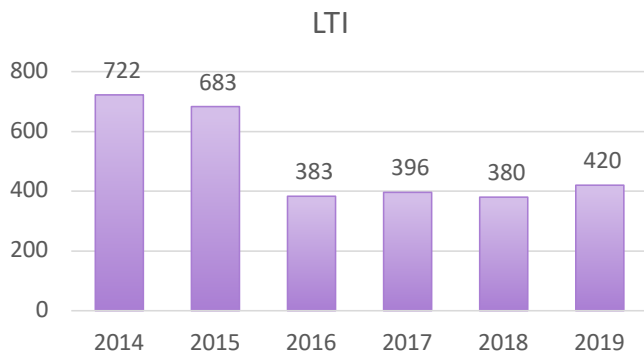


TRIR:

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

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).

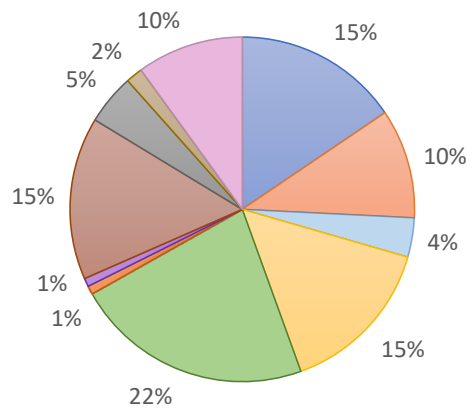
$$\text{LTI frequency rate} = \frac{\text{number of LTI} \times 1\,000\,000}{\text{total worked hours}}$$

Description of Incidents/Accidents

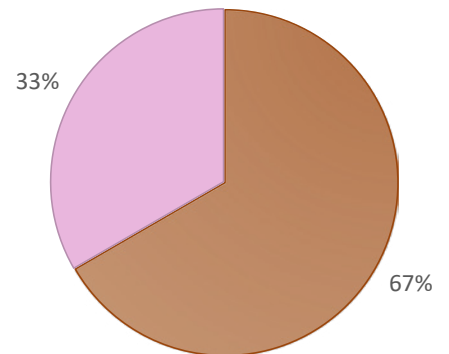
Causes of Incidents/Accidents

- Vehicle accidents
- Lifting Operations
- Work at height / scaffolding
- Hand tool
- Involving fall
- Excavation / Earth collapse
- Confined spaces
- Impact with construction equipment
- Welding operations
- Hazardous substances
- Others

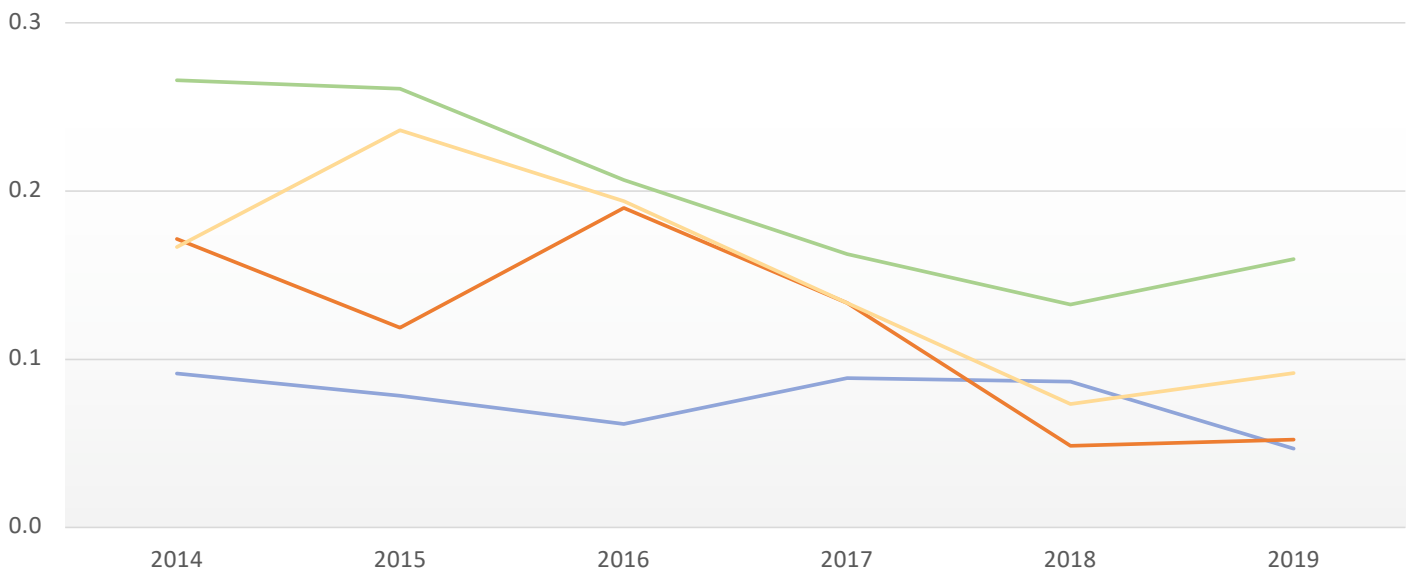
Split of LTI



Split of Fatalities

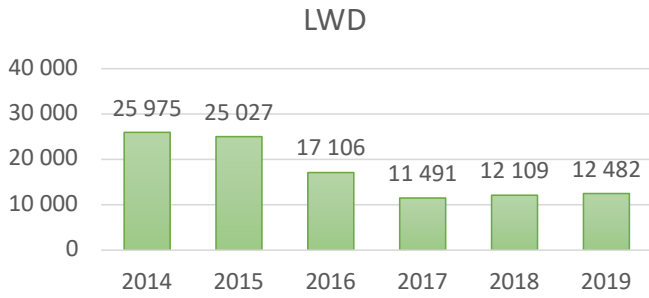


LTI frequency rate for the four most frequent causes (per million worked hours)

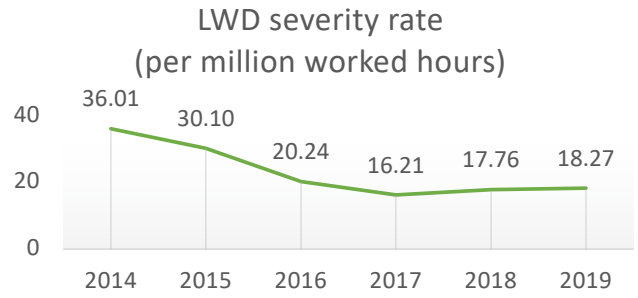


Health & Safety (H&S)

Lost Work Days (LWD)



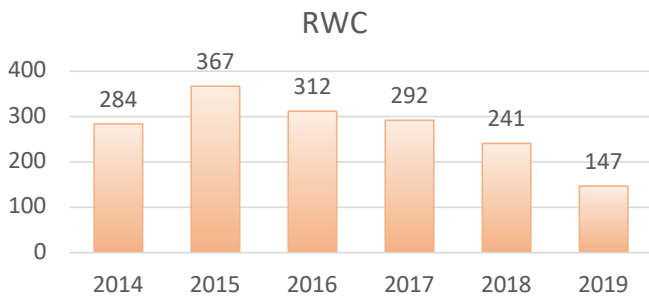
Lost Work Days are the sum of calendar days lost as a result of a work-related accident.



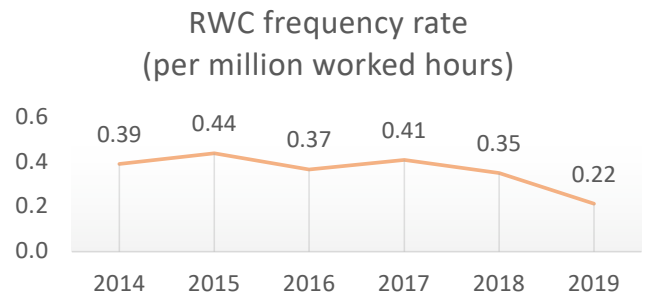
LWD severity rate:

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

Restricted Work Cases (RWC)



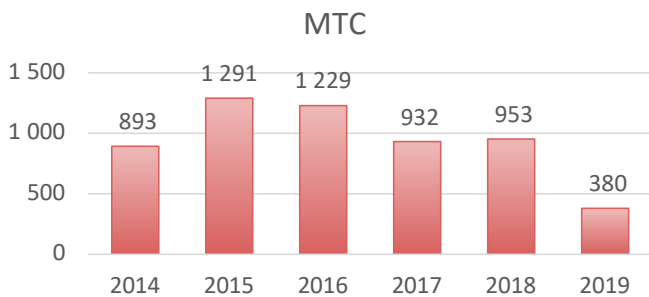
A Restricted Work Case is any work injury, which results in an employee not being able to conduct normal duties, after the day the Incident occurred.



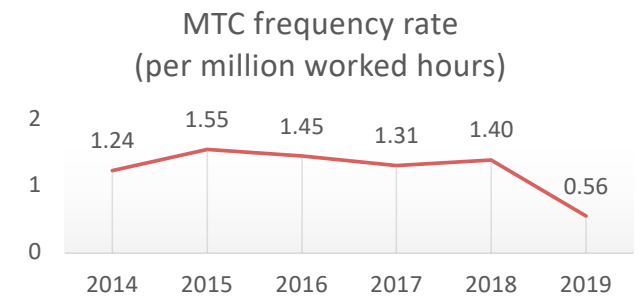
RWC frequency rate:

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

Medical Treatment Cases (MTC)



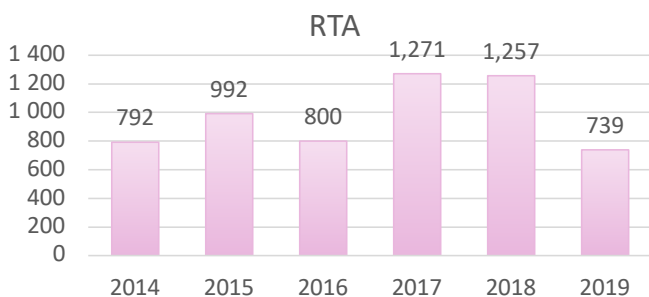
A medical treatment case is any work related injury that involves neither Lost Work Days nor Restricted Workdays but which required treatment by medical personnel.



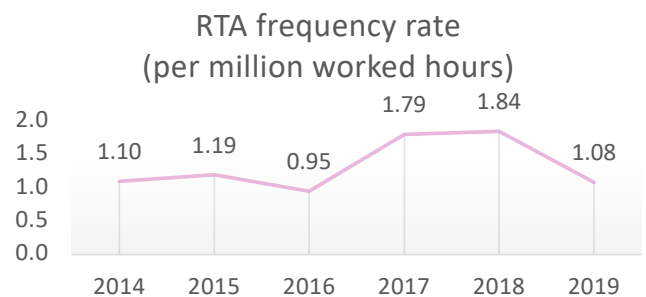
MTC frequency rate:

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

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.

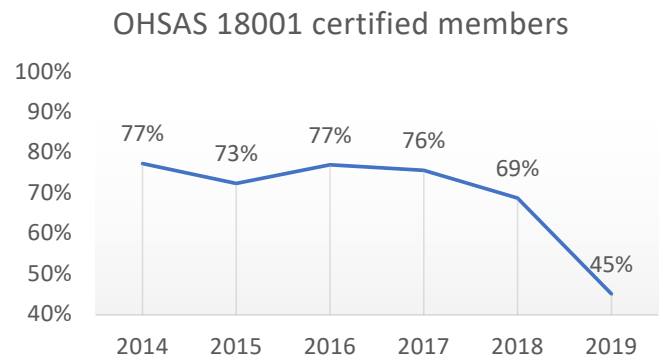
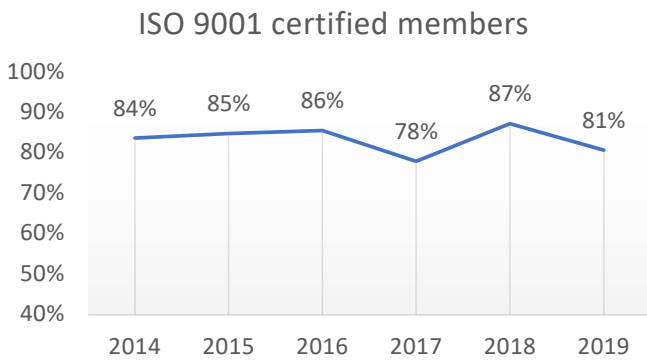


RTA frequency rate:

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

Health & Safety (H&S)

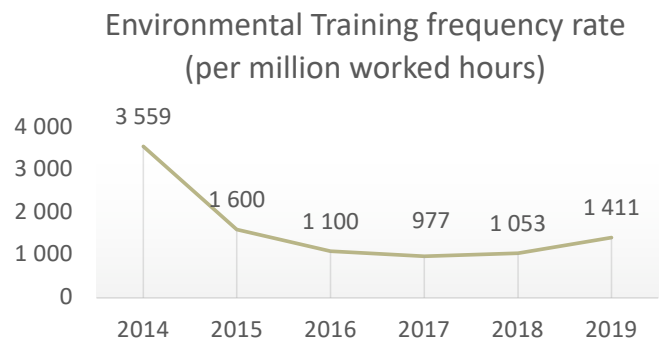
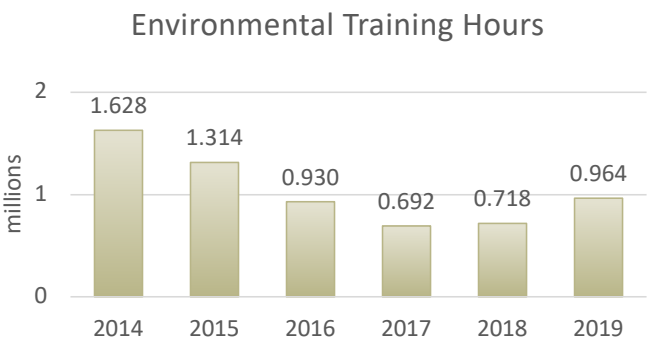
Health & Safety Management Systems



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

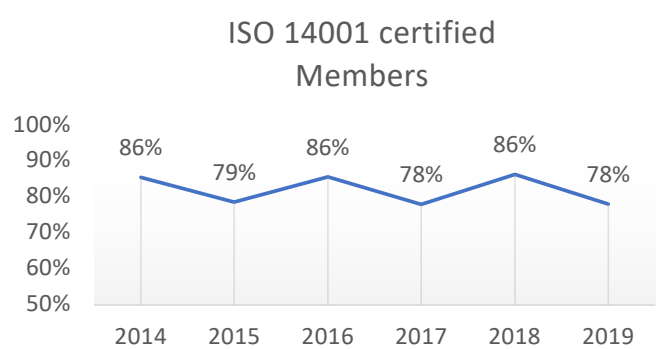
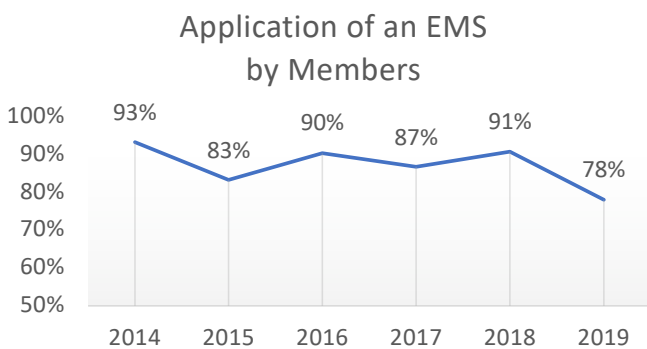


Environmental Training Hours are the number of worked-hours spent by personnel to get trained to environmental standards (includes all the hours spent by all the personnel to get trained).

Environmental Training frequency rate:

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

Environmental Management Systems (EMS)



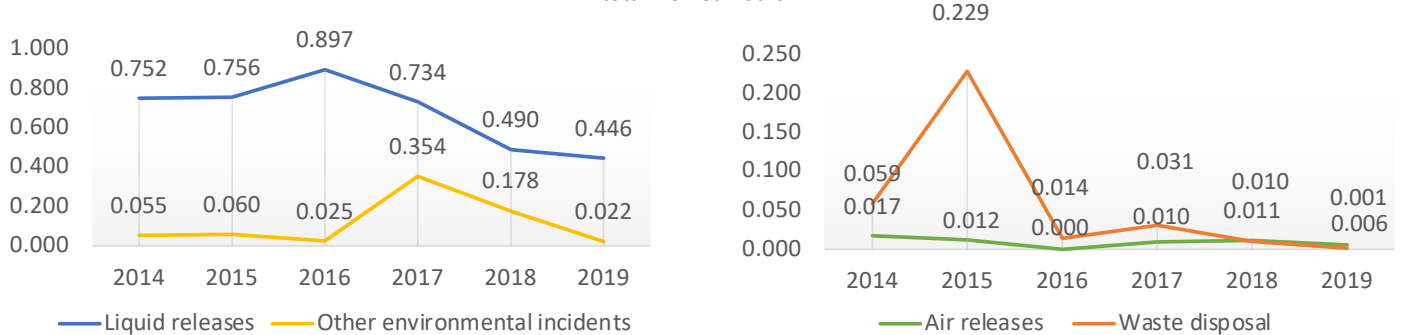
The ISO 14001 environmental management system certification has a high adoption rate – clearly a leading certification in the pipeline industry.

Environment

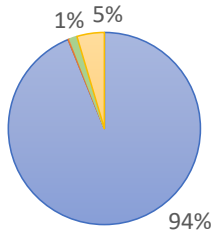
Environmental Incidents

Environmental Incident frequency rates (per million worked hours)

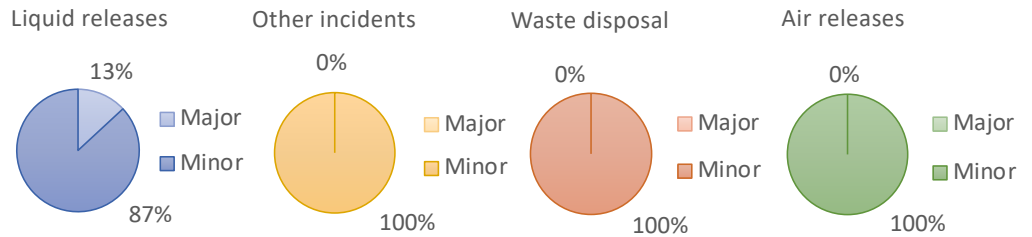
$$\text{Environmental incident frequency rates:} \\ \frac{\text{number of Environmental Incidents} \times 1\,000\,000}{\text{total worked hours}}$$



Split of Incidents



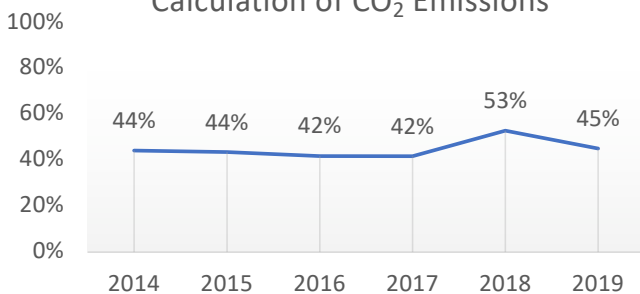
Major vs. Minor Environmental Incidents



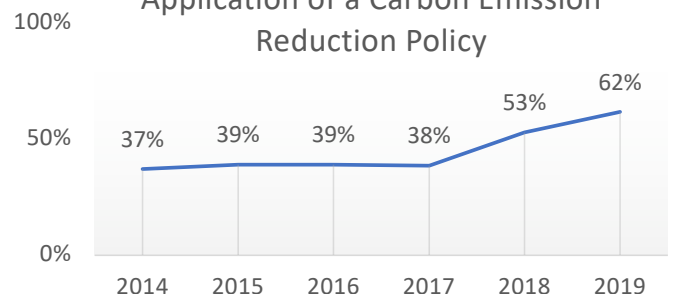
For complete details on classification of incidents, please visit our website www.iploca.com/hsestatistics

CO₂ Emissions

Calculation of CO₂ Emissions



Application of a Carbon Emission Reduction Policy



53% of the members chose to use CO₂ emissions as an indicator of their environmental performance, and 53% 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 US EPA (Environmental Protection Agency) estimation methods'
- 'Using DEFRA GHG conversion factors'

- 'Using IPCC Methodology and GHG Protocol Calculation Tools'
- 'Based on total energy consumption (fuel, gas, electricity)'
- 'Using the OMEGA TP software'
- 'Using the Panama Oil Record Book and Emissions according to MARPOL Annex VI'

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