



# 2020 IPLOCA Health, Safety & Environmental Statistics Report

issued September 2021

## Message from the HSE & CSR Committee

This report combines IPLOCA members’s health, safety and environmental statistics received for 2020.

The bad news is that the number of fatalities is increasing. Seven fatal incidents in our worksites have been reported by our members and we have not reached the 2020 target of zero fatalities.

There is a good tendency in the Near-Misses reporting which in previous years was well below the target set in the past and has now reached the 2020 target 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 efforts still need to be done to eliminate fatalities in the pipeline industry.

Graphics also show a major increase of lost-time injuries and an increase 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](http://www.iploca.com/hseplatform).

Special attention should be put in the 22% of incidents involving falls and in the 20% of incidents involving hand tools. On the

environmental incidents reported, unfortunately the frequency of incidents has increased breaking the downward trend over the five last years. Still, the 2020 environmental incidents rate remains better than the average rate for the last five-year period.

The number of overall training hours (both on Safety and Environment) has decreased this year so it is necessary to reinforce management commitment.

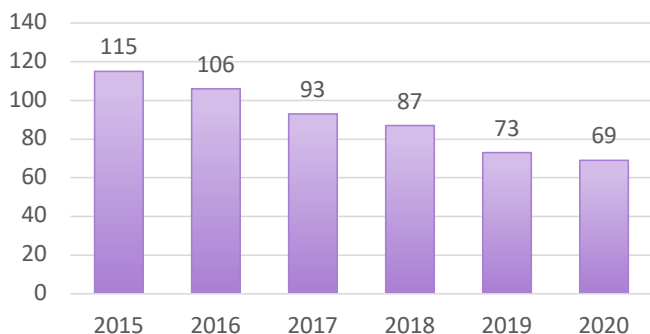
The Committee is also seeking to gain a better understanding of the type of environmental incidents occurring and continues to collect more detailed information on the nature of incidents to improve reporting of major and minor incidents.

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

The Committee 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.

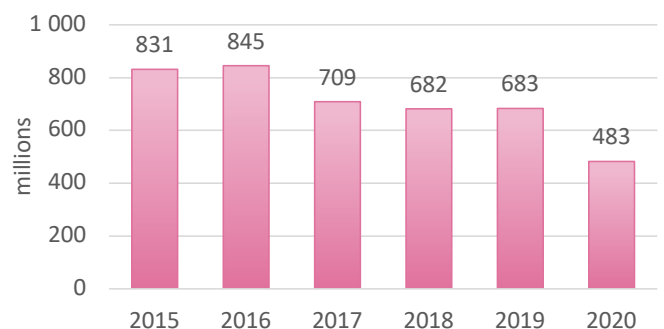
We encourage you to read through this report in detail and take appropriate and purposeful action for the future.

Number of submissions



The 2020 IPLOCA HSE statistics were derived from data provided by 66 Regular Members (90% of total Regular Membership), 2 Associate Members and 1 other Member.

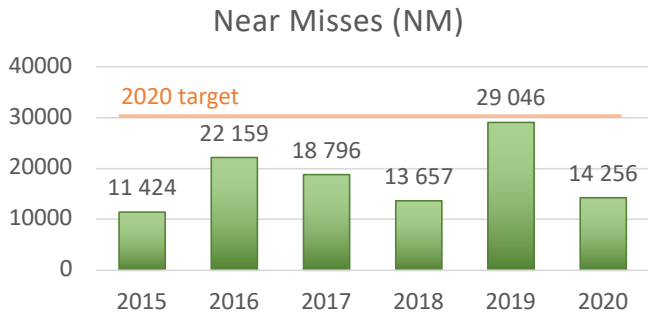
Worked Hours (inclusive of overtime)



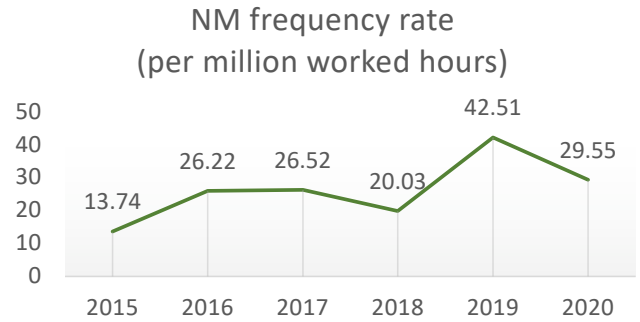
The number of hours worked during which the employee is present in the work environment as a condition of his or her employment, plus the extra hours put in as overtime.

# Health & Safety (H&S)

## Leading Indicators

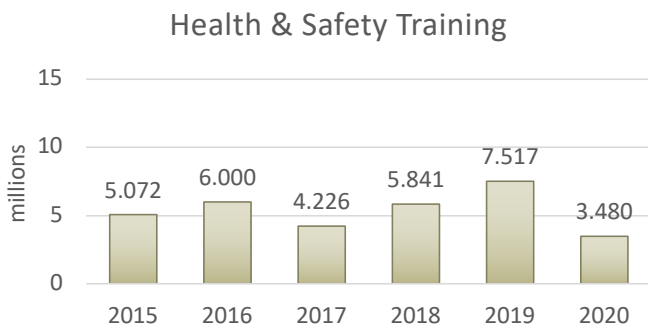


Near Miss: Any event which had the potential to cause injury and/or damage and/or loss but which was avoided by circumstances. The term "incident" includes "near misses".

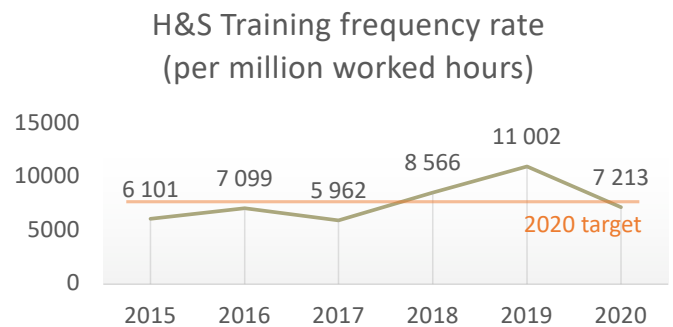


**Near Misses frequency rate:**  

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



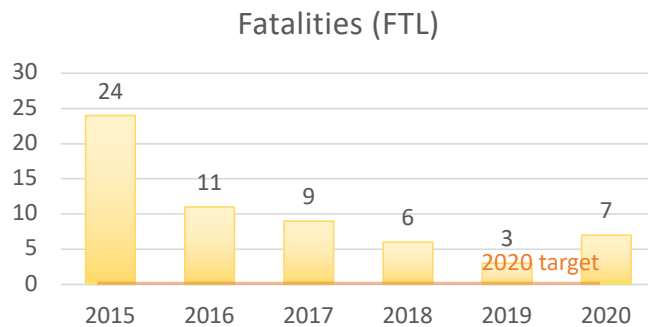
H&S Training Hours are the number of hours spent by personnel to get trained to H&S standards (includes all the hours spent by all the personnel to get trained).



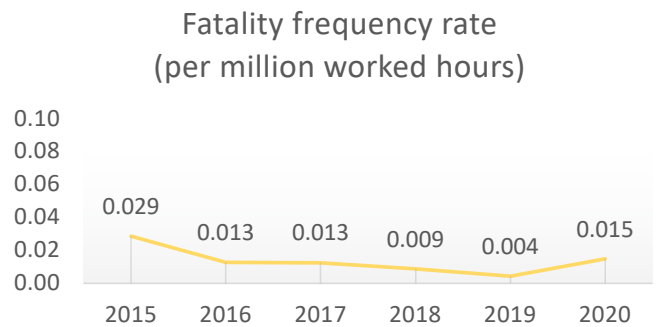
**H&S Training frequency rate:**  

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

## Lagging Indicators

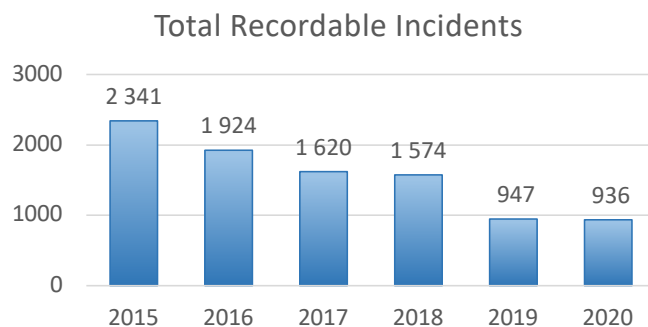


A fatality is a death resulting from a work injury or occupational illness, regardless of the time intervening between injury and death.

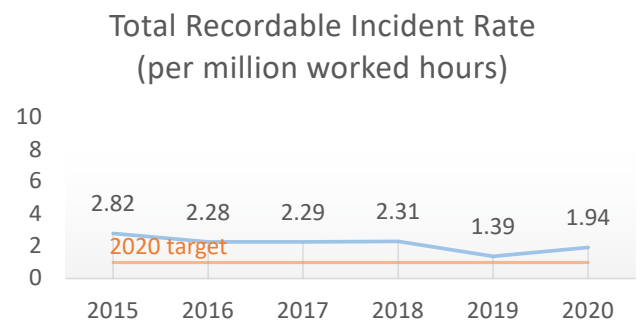


**Fatalities frequency rate:**  

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



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

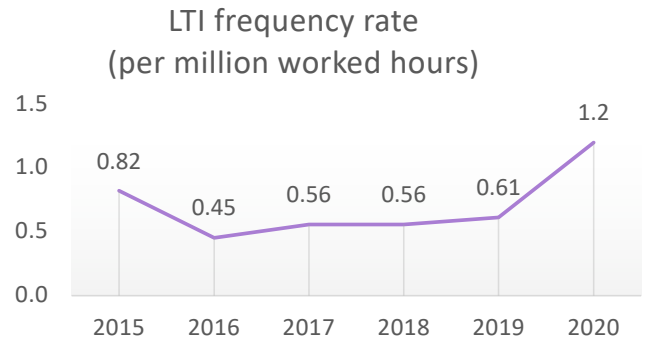
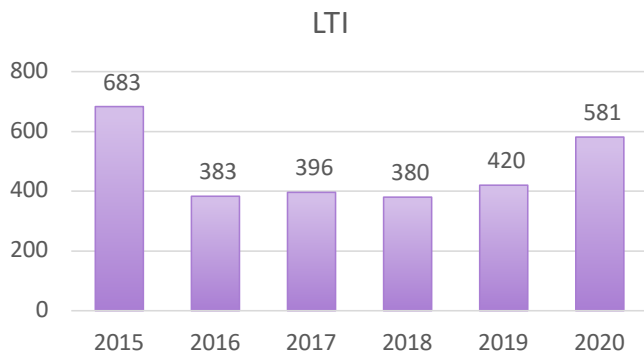


**TRIR:**  

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

# 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).

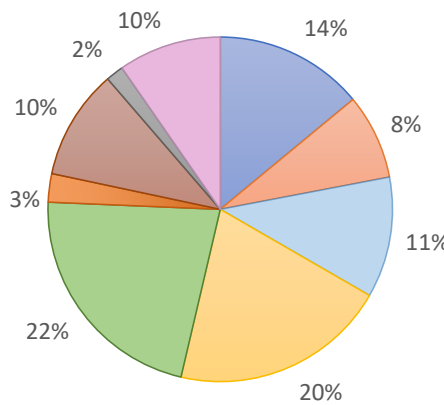
$$\text{LTI frequency rate} = \frac{\text{number of LTI} \times 1\,000\,000}{\text{total worked hours}}$$

## Description of Incidents/Accidents

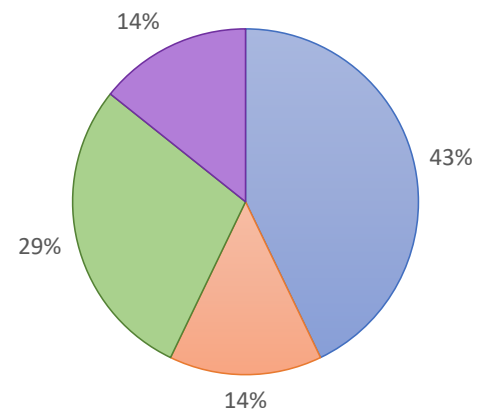
### Causes of Incidents/Accidents

- 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

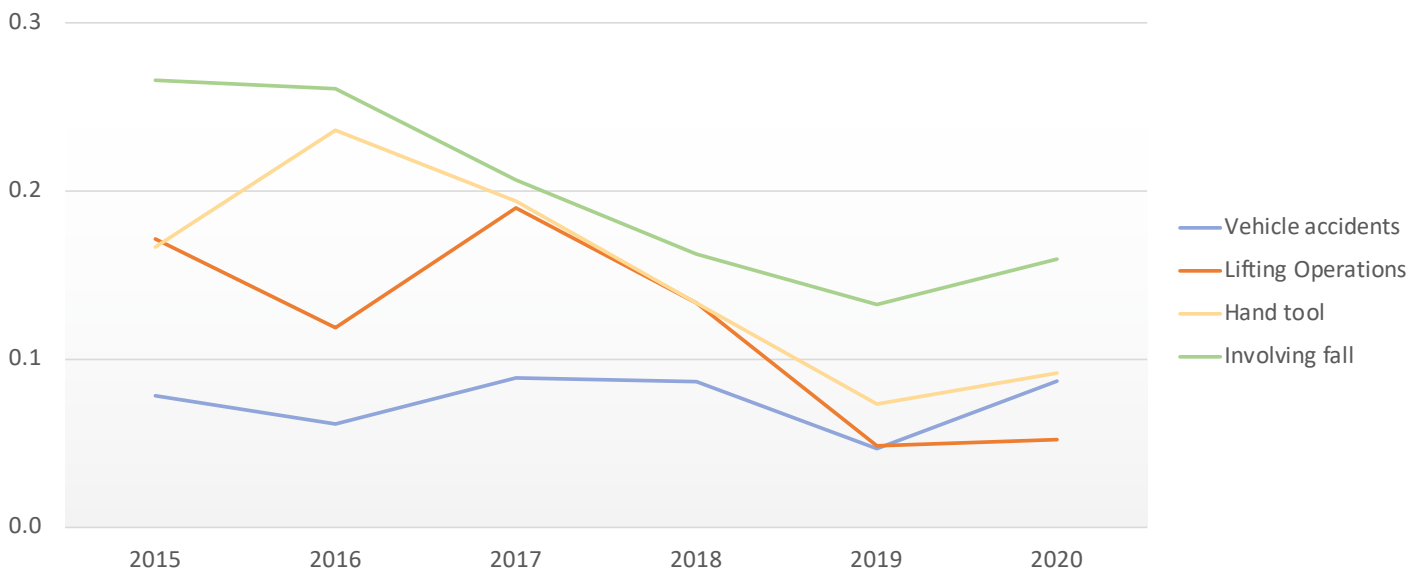
### Split of LTI



### Split of Fatalities

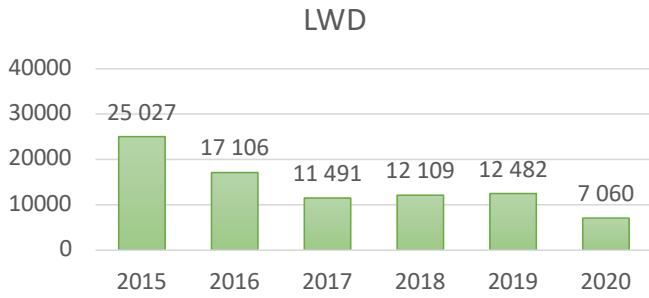


### LTI frequency rate for the four most frequent causes (per million worked hours)

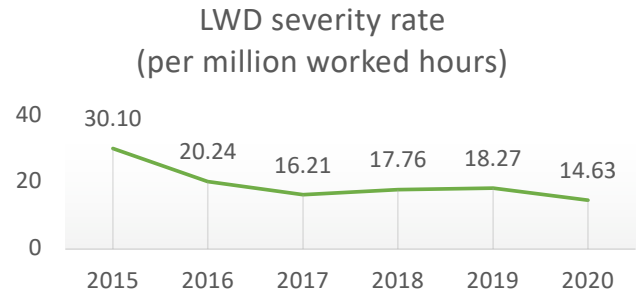


# Health & Safety (H&S)

## Lost Work Days (LWD)



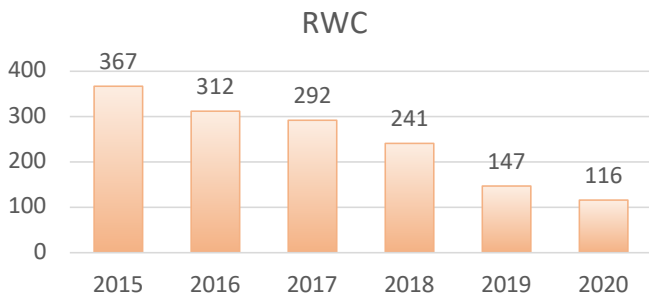
Lost Work Days are the sum of calendar days lost as a result of a work-related accident.



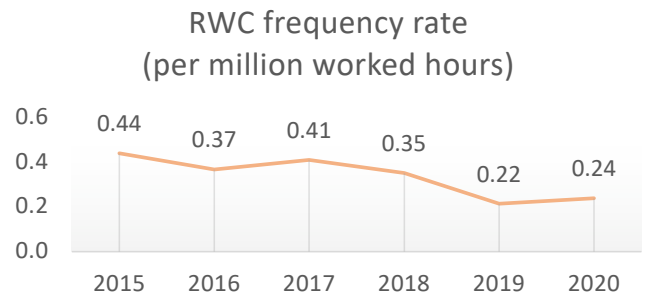
**LWD severity rate:**  

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

## Restricted Work Cases (RWC)



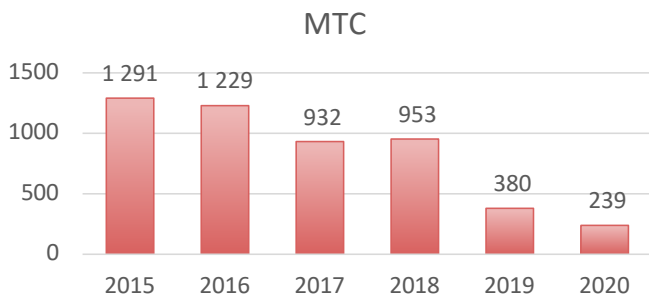
A Restricted Work Case is any work injury, which results in an employee not being able to conduct normal duties, after the day the Incident occurred.



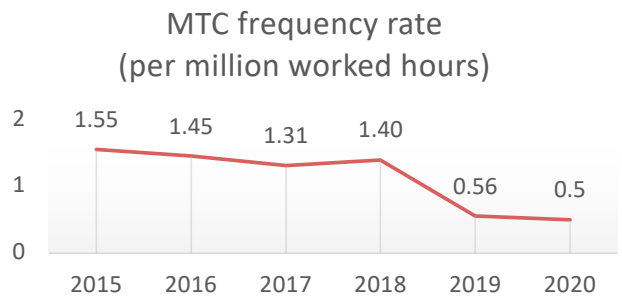
**RWC frequency rate:**  

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

## Medical Treatment Cases (MTC)



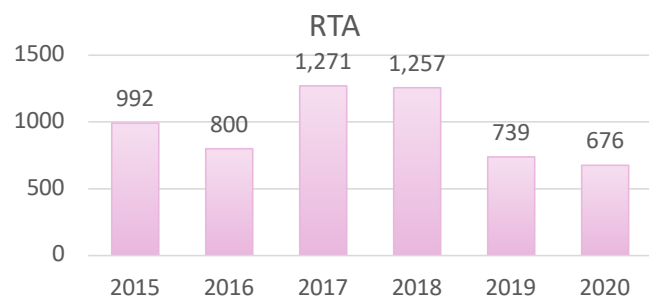
A medical treatment case is any work related injury that involves neither Lost Work Days nor Restricted Workdays but which required treatment by medical personnel.



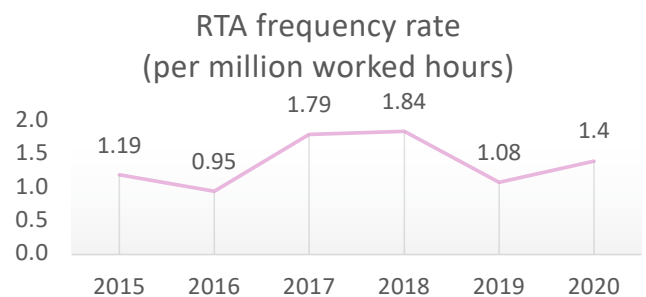
**MTC frequency rate:**  

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

## 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.

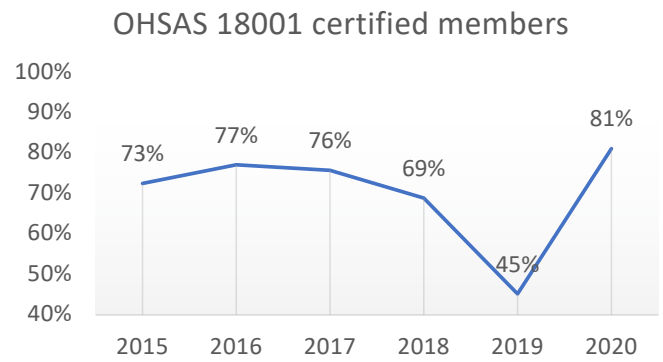
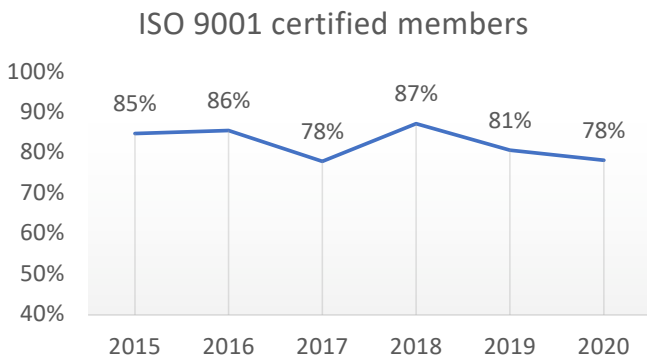


**RTA frequency rate:**  

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

# Health & Safety (H&S)

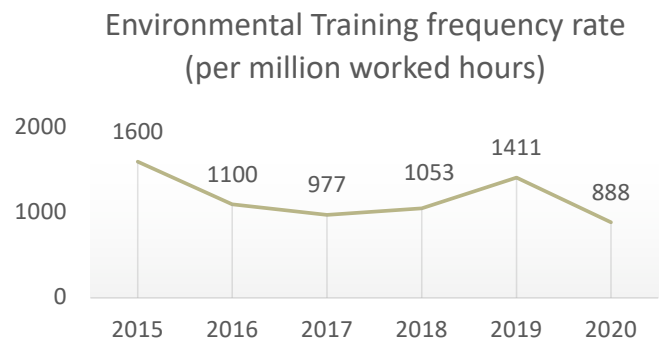
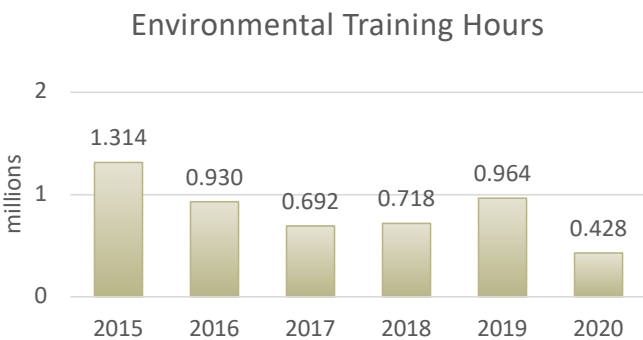
## Health & Safety Management Systems



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

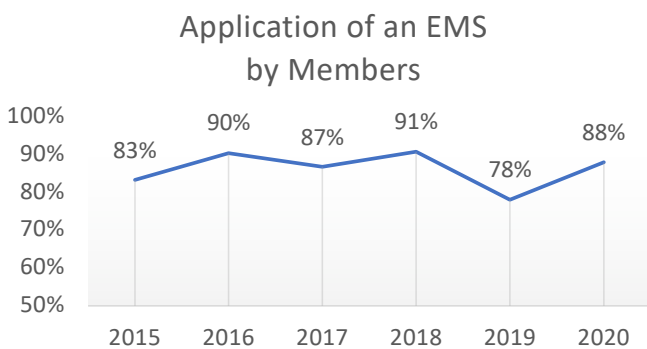


Environmental Training Hours are the number of worked-hours spent by personnel to get trained to environmental standards (includes all the hours spent by all the personnel to get trained).

**Environmental Training frequency rate:**  

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

### Environmental Management Systems (EMS)



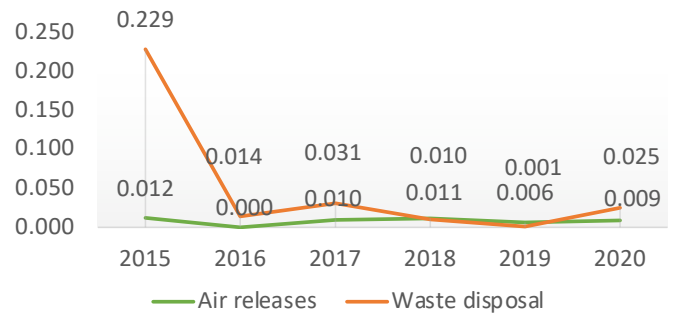
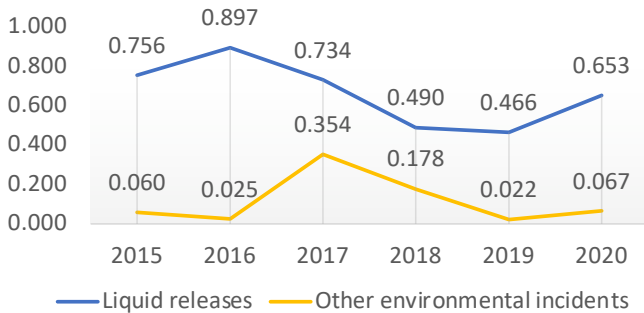
The ISO 14001 environmental management system certification has a high adoption rate – clearly a leading certification in the pipeline industry.

# Environment

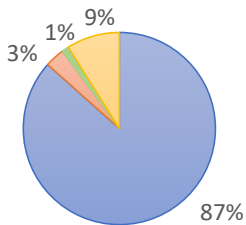
## Environmental Incidents

Environmental Incident frequency rates (per million worked hours)

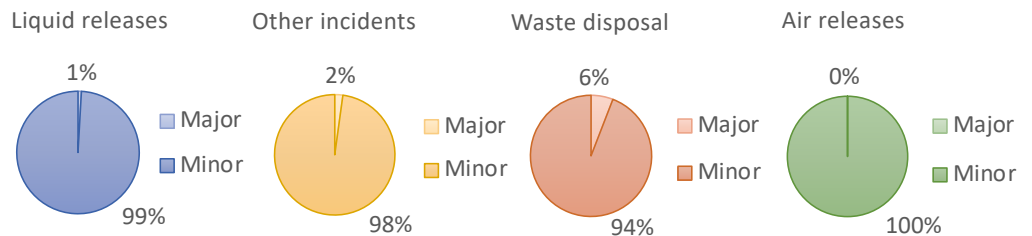
$$\text{Environmental incident frequency rates:} \\ \frac{\text{number of Environmental Incidents} \times 1\,000\,000}{\text{total worked hours}}$$



### Split of Incidents



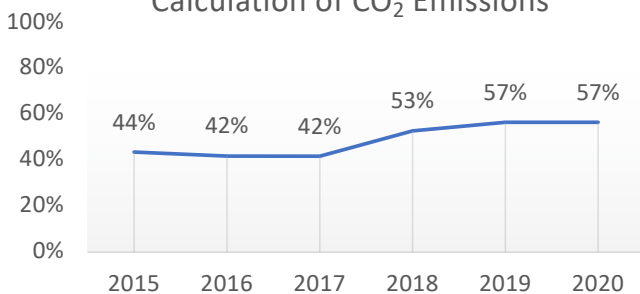
### Major vs. Minor Environmental Incidents



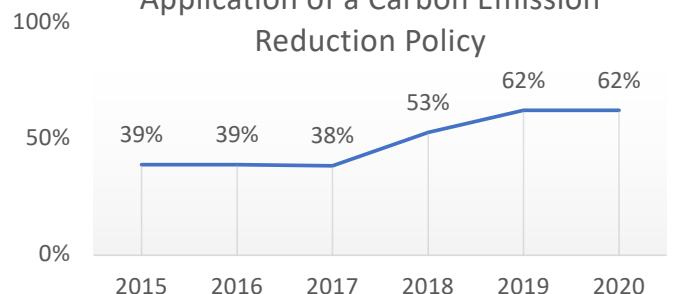
For complete details on classification of incidents, please visit our website [www.iploca.com/hsestatistics](http://www.iploca.com/hsestatistics)

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

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



Application of a Carbon Emission Reduction Policy



53% of the members chose to use CO<sub>2</sub> 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'*

## Disclaimer

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