

Safety Statistics for IMCA Members Report for the period 1 January-31 December 2006

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1 Introduction

IMCA has for the past ten years produced an annual report of safety statistics (covering fatalities and injuries) supplied by members. This information note reports the annual statistics for 2006. Safety statistics are a useful insight into the performance of a company in the areas of health, safety and environment. The purpose of the statistics is to record the safety performance of IMCA contractor members each year and to enable IMCA members to benchmark their performance. Nearly half of all IMCA contractor members, 74 companies and organisations, took part in the exercise this year – a record for the second year running. The continued increase in reporting from member companies is a good thing and is to be encouraged. IMCA would like to thank all those who took part in this important annual benchmarking exercise.

This will be the fourth year that IMCA has collected leading indicators of health, safety and environmental performance, and the second year that IMCA has calculated a total recordable incident rate (TRIR) from data supplied by members. This was requested by members to enable further benchmarking and to move away from reliance on lost time injuries (LTIs) as a primary arbiter of safety.

Appendix 1 defines all the acronyms and rates used in the document.

2 Summary of Safety Statistics for 2006

Overall number of lost time injuries	226
Overall lost time injury frequency rate (overall LTIFR)	1.02
Range of overall LTIFR (second highest-second lowest)	13.5-0.06
Offshore lost time injury frequency rate (offshore LTIFR)	1.06
Onshore lost time injury frequency rate (onshore LTIFR)	0.86
Overall total recordable incident rate (TRIR)	4.14
Range of overall TRIR (second highest-second lowest)	40.7-0.11
Offshore total recordable incident rate (TRIR)	4.35
Onshore total recordable incident rate (TRIR)	3.06

Table 1 – Summary of IMCA safety statistics for 2006

The 2006 dataset is drawn from 74 IMCA contractor members, based upon 220 million man-hours of work overall (185.5 million man-hours offshore). This is an increase on the 2005 figures, particularly the man-hours worked and the number of contributors. The number of contributors has increased by 45%, rising from 51 in 2005 to 74 in 2006. The increase in overall man-hours between 2005 and 2006 was 38%, and offshore working hours recorded increased by 85% from 102 million man-hours in 2005 to 185.5 million man-hours in 2006. Onshore data was provided by 64 of 74 companies (86%), slightly more than in 2005.

As usual, the data is separated into offshore and onshore activity to improve consistency in the data collected. The offshore statistics cover offshore work only, whereas onshore work covers such areas as fabrication yards and office work.

The statistics over the past ten years have been as follows:

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Million hours worked per year	47.6	52.9	52.8	65.6	54.5	197.31	200.40	145.35	159.5	220.5
Million hours offshore						62.14	66.39	72.83	101.8	185.5
Million hours worked onshore						135.16	134.01	72.18	57.7	35.0
Overall number of LTIs	236	257	196	227	162	244	198	164	189	226
Overall LTIFR	4.96	4.86	3.72	3.46	2.97	1.24	0.99	1.13	1.18	1.02
Offshore number of LTIs				4.25	3.77	2.96	133	120	172	196
Offshore LTIFR				1.05	0.86	0.44	0.49	0.61	0.29	0.86
Onshore LTIFR										
Overall number of fatalities	3	2	4	5	4	3	5	3	6	6
Overall fatal accident rate	6.30	3.80	7.60	7.60	7.30	1.52	2.49	2.06	3.13*	2.72
Offshore number of fatalities						4	2	5	5	6
Offshore fatal accident rate				10.12	10.14	4.83	6.03	2.75	3.93*	3.23
Onshore fatal accident rate						0	0.75	1.39	1.73	0.00
Overall number of recordable injuries								645	864	914
Overall TRIR									5.42	4.14
Offshore TRIR								8.87	7.29*	4.35
Onshore TRIR									2.10	3.05
No. of participating companies	23	32	28	31	32	32	31	36	51	74

*statistics altered owing to reclassification of one fatality as being not work-related. See 5.5.1 and information note IMCA SEL 18/06 for more details

Table 2 – Summary of IMCA safety statistics 1997-2006

2.1 Contributors by Region

IMCA's regional sections enable members to collaborate at a regional level, sharing best practice, networking and co-ordinating discussions with client and regulatory bodies. This year, the IMCA regional section to which contributors belong has been recorded, with a view to assessing if there is a correlation between accident rates and region.

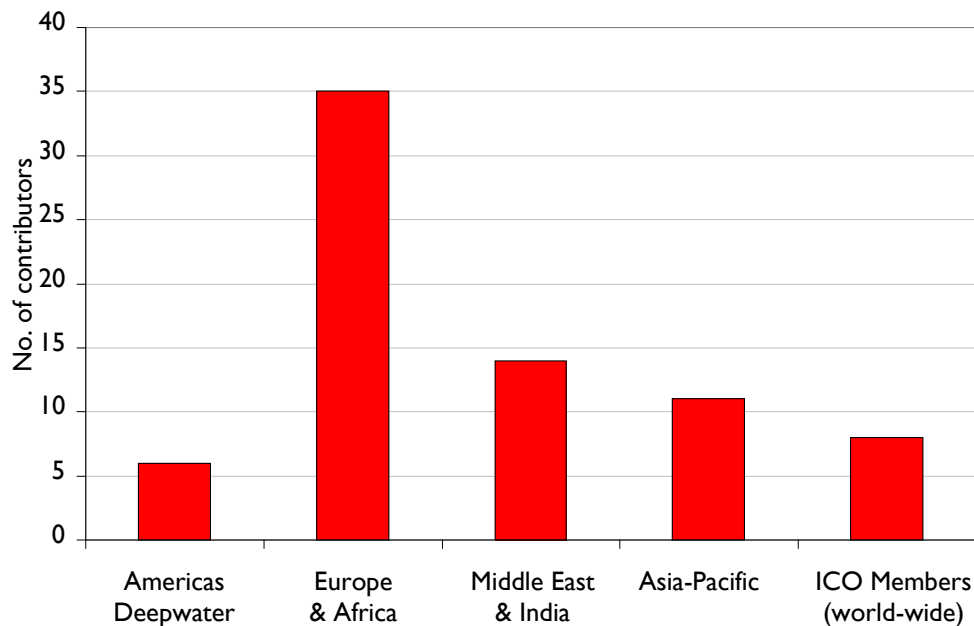


Figure 1 – Contributors by region

IMCA region	Contributors
Americas	6
EA	35
MEI	14
AP	11
ICO (world-wide)	8

Table 3 – Contributors by region

		FAR	LTIFR	TRIR
Offshore	Americas	0.00	0.51	2.96
	AP	0.00	0.71	3.76
	EA	1.42	1.19	4.29
	MEI	0.00	1.40	2.74
	ICO	8.52	1.12	5.60
Onshore	Americas	0.00	0.33	3.68
	AP	0.00	0.74	1.47
	EA	0.00	1.13	3.19
	MEI	0.00	1.48	5.91
	ICO	0.00	0.66	2.70
Overall	Americas	0.00	0.49	3.03
	AP	0.00	0.72	3.58
	EA	1.18	1.18	4.11
	MEI	0.00	1.41	2.99
	ICO	6.77	1.03	5.01

Table 4 – Lagging safety indicators region

	SOFR	RAL	MVR	LLR
Americas	132.09	208.51	0.87	1.34
AP	72.31	176.57	0.96	1.84
EA	250.73	297.73	3.16	0.78
MEI	376.74	125.12	2.71	2.11
ICO	34.69	275.33	0.36	0.22

Table 5 – Leading safety indicators by region

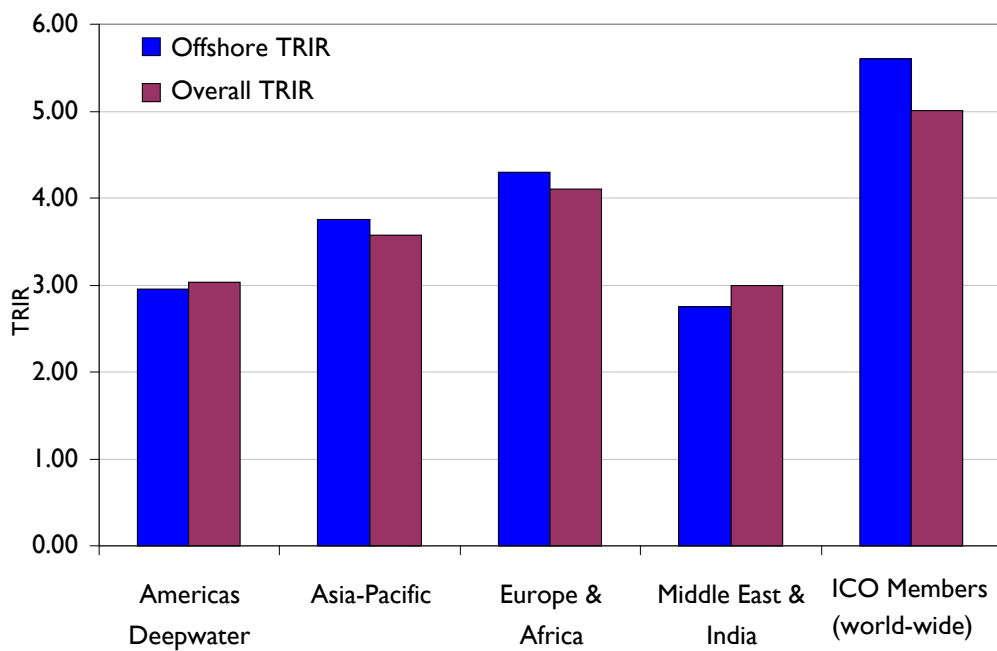


Figure 2 – Overall and offshore TRIR by region

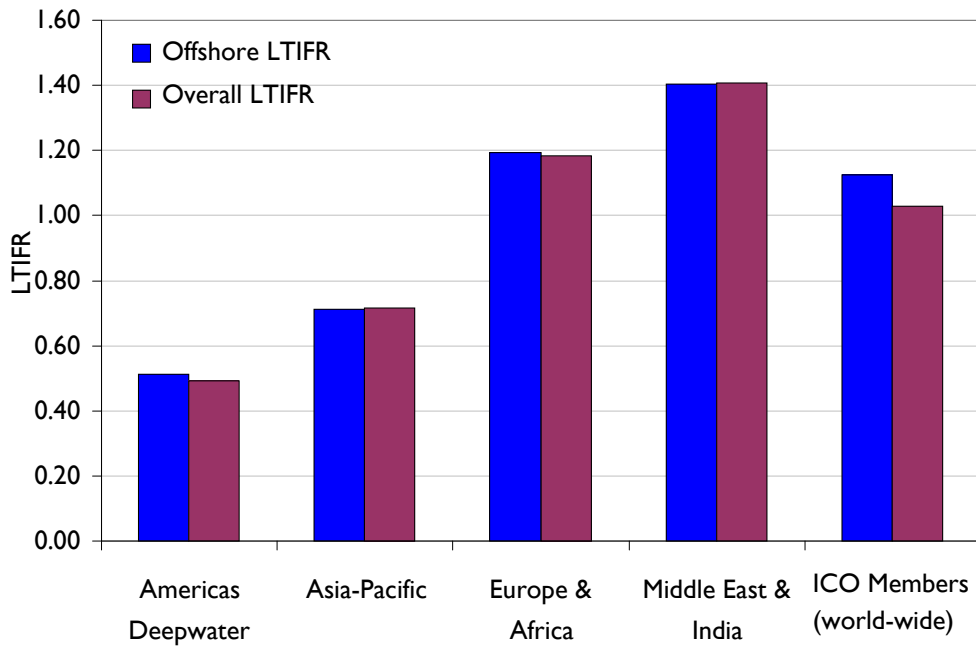


Figure 3 – Overall and offshore LTIFR by region

3 Individual Company LTIFR and TRIR Statistics

The following tables show the important statistical rates for each of the 74 companies with an identifying number and a letter indicating the band into which they fall.

In order for members to identify how their company compares to others of like size, four bands are used for contributing contracting companies, categorised by their annual amount of overall working hours.

Band	Hours worked
A	<500,000
B	500,000-1,000,000
C	1,000,000-5,000,000
D	>5,000,000

Table 6 – Hours worked bands

It should be remembered that last year there was an adjustment of the positioning of the bands, as there was a noticeable increase in data coming from very large (more than five million man-hours overall) companies. This is dealt with in more detail in Section 4.

A letter has accompanied this report addressed to each contributing member which lets each recipient know only its own identifying number.

Co	Banding	Offshore LTIFR	Onshore LTIFR	Overall LTIFR	Offshore TRIR	Onshore TRIR	Overall TRIR
1	C	0.00		0.00	0.00		0.00
2	C	1.27		1.27	1.78		1.78
3	A	0.00	0.00	0.00	7.03	0.00	5.26
4	C	1.49	1.26	1.42	2.48	2.51	2.49
5	C	0.27		0.27	5.93		5.93
6	B	1.68	0.00	1.61	5.04	0.00	4.83
7	D	1.50	1.43	1.48	6.01	2.58	4.65
8	A	0.00	0.00	0.00	31.93	0.00	21.13
9	C	4.64	0.00	4.51	5.42	0.00	5.26
10	B	3.56	0.00	3.24	14.24	0.00	12.95
11	A	6.34	0.00	5.91	19.03	0.00	17.73
12	C	3.32		3.32	11.63		11.63
13	B	0.00	7.70	2.17	4.52	7.70	5.41
14	A	4.53	0.00	3.03	9.06	0.00	6.05
15	C	0.94	3.45	2.07	17.85	16.11	17.07
16	D	0.44		0.44	3.43		3.43
17	B	0.00	0.00	0.00	1.82	0.00	1.57
18	B	3.04	0.00	2.16	6.08	0.00	4.32
19	C	0.75	0.00	0.73	2.24	0.00	2.18
20	A	12.72	0.00	9.46	25.44	36.90	28.38
21	D	0.16	0.00	0.16	0.16	0.00	0.16
22	D	0.06	0.00	0.06	0.11	0.00	0.11
23	C	0.32	0.00	0.30	1.90	6.20	2.10
24	B	8.69	0.00	5.86	8.69	0.00	5.86
25	B	2.67	0.00	2.11	13.35	0.00	10.53
26	D	0.53	0.00	0.41	3.72	0.00	2.88
27	A	0.00	0.00	0.00	0.00	0.00	0.00
28	A	4.70	8.06	5.94	4.70	8.06	5.94
29	C	2.61	2.34	2.53	11.73	17.91	13.55
30	A	0.00	0.00	0.00	0.00	0.00	0.00
31	B	0.00	0.00	0.00	11.68	0.00	8.68
32	A	0.00	0.00	0.00	4.73	12.25	6.82
33	C	0.61	0.00	0.54	0.61	0.00	0.54
34	A	0.00	0.00	0.00	27.89	0.00	20.49
35	A	0.00	0.00	0.00	0.00	0.00	0.00
36	B	0.00	0.00	0.00	3.16	0.00	2.91
37	D	1.18	0.00	1.08	3.36	1.00	3.16

Co	Banding	Offshore LTIFR	Onshore LTIFR	Overall LTIFR	Offshore TRIR	Onshore TRIR	Overall TRIR
38	A	0.00	0.00	0.00	57.08	0.00	38.23
39	A	0.00	0.00	0.00	4.28	0.00	4.03
40	A	0.00	0.00	0.00	57.81	25.62	40.74
41	D	0.68		0.68	2.74		2.74
42	C	2.52		2.52	5.54		5.54
43	D	2.31	0.00	1.91	8.67	2.04	7.51
44	B	1.89	4.68	2.70	20.83	4.68	16.17
45	B	7.32	4.65	6.41	12.21	4.65	9.61
46	C	1.44	0.00	1.29	12.27	0.00	10.94
47	D	1.37	0.19	0.54	4.12	2.13	2.72
48	C	0.30	0.00	0.29	0.30	0.00	0.29
49	C	0.76		0.76	1.13		1.13
50	D	0.92	0.50	0.85	4.17	1.51	3.73
51	D	0.92	0.73	0.83	7.18	1.46	4.58
52	A	7.64	4.81	6.39	38.20	4.81	23.43
53	A	11.39	21.92	13.56	31.32	21.92	29.38
54	A	3.17	0.00	2.59	3.17	0.00	2.59
55	A	0.00	0.00	0.00	0.00	5.35	2.45
56	A	0.00	0.00	0.00	0.00	0.00	0.00
57	C	0.00	0.00	0.00	0.54	0.00	0.48
58	A	0.00	0.00	0.00	0.00	0.00	0.00
59	D	1.92	0.36	1.44	8.18	0.72	5.88
60	C	8.33	0.00	7.84	12.49	0.00	11.76
61	B	2.16	0.00	1.75	36.71	0.00	29.74
62	A	0.00	0.00	0.00	0.00	0.00	0.00
63	C	1.03	0.00	0.88	3.10	0.00	2.63
64	B	0.00	0.00	0.00	1.35	0.00	1.10
65	A	0.00	0.00	0.00	0.00	0.00	0.00
66	A	0.00	0.00	0.00	0.00	0.00	0.00
67	A	0.00	0.00	0.00	0.00	0.00	0.00
68	C	2.05	0.92	1.64	5.13	1.83	3.95
69	A	0.00	0.00	0.00	0.00	10.61	4.96
70	C	0.00		0.00	5.29		5.29
71	D	0.74		0.74	3.63		3.63
72	A	12.49	122.68	22.67	24.98	245.37	45.34
73	A	0.00	0.00	0.00	8.33	0.00	7.32
74	D	0.23	0.35	0.26	0.23	3.55	1.05
IMCA		1.06	0.86	1.02	4.35	3.06	4.14

Table 7 – Individual company LTIFR and TRIR statistics 2006

4 Hours Worked Banding

In order for members to identify how their company compares to others of like size, contributing contracting companies have been divided into four bands, according to their annual number of overall working hours. In the 2005 exercise, published as information note IMCA SEL 12/06, the definition of the bands was adjusted. This was considered necessary because of the increase in the number of larger (band D) companies contributing to the exercise, and because fewer companies fell into bands B and C. The adjustment – the threshold of band C was raised such that it now includes companies working more than five million man-hours – caused a redistribution of companies between bands B and C.

A 'pareto' or '80-20' analysis of the contributed man-hours tells us that 15 of the 74 companies taking part in the exercise – a fifth – contribute 70% of the man-hours. Eight of the largest contributors worked half of all the contributed man-hours.

There may be a case for further changes to the bands to recognise the existence of these very large organisations working more than ten million man-hours per year. Seven contributors worked more than ten million man-hours each.

Band	New banding Hours worked	Companies in NEW band			
		2003	2004	2005	2006
A	<500,000	11	15	17	27
B	500,000-1,000,000	4	3	9	13
C	1,000,000-5,000,000	9	11	16	21
D	>5,000,000	7	7	9	13

Table 8 – No. of companies in each band

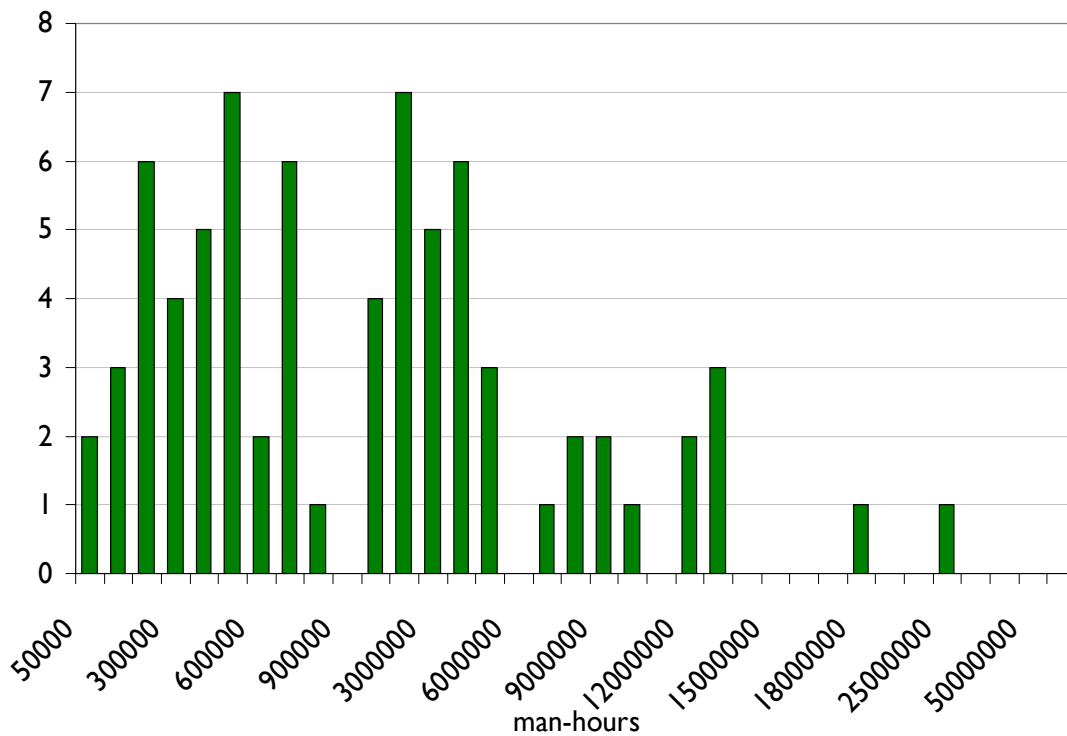


Figure 4 – No. of companies against size (overall man-hours)

Figure 4 shows a distribution of the size of contributing company. There are two major peaks in size of contributing company. Twenty-five contributing companies worked between 200,000 and 800,000 man-hours per year. The other peak consists of another 18 companies who worked between one million and five million man-hours per year.

4.1 Indicators and Statistics by Company Bands

		FAR	LTI	LTIFR	TRI	TRIR	Med trt	RWC	First aid	Near-miss
Offshore	Band A	0.00	14	2.75	59	11.60	40	5	83	130
	Band B	0.00	15	2.02	74	9.98	42	17	177	223
	Band C	1.90	73	1.39	258	4.90	117	67	336	1272
	Band D	4.15	94	0.78	416	3.45	235	82	1176	1440
Onshore	Band A	0.00	5	2.38	14	6.67	8	1	18	31
	Band B	0.00	4	2.00	4	2.00	0	0	14	24
	Band C	0.00	8	1.25	42	6.56	26	8	20	11
	Band D	0.00	13	0.53	47	1.92	24	10	248	176
Overall	Band A	0.00	19	2.64	73	10.16	48	6	101	161
	Band B	0.00	19	2.02	78	8.29	42	17	191	247
	Band C	1.69	81	1.37	300	5.08	143	75	356	1283
	Band D	3.45	107	0.74	463	3.19	259	92	1424	1616

Table 9 – Lagging indicators and statistics by company band 2006

	Safety obs	SOFR	Management visits	MVR	RAL	Safety bulletins	LLR
Band A	4979	138.77	358	4.99	877.25	399	5.56
Band B	4972	106.27	541	5.78	505.49	507	5.42
Band C	70300	248.12	580	1.02	327.45	461	0.81
Band D	93687	129.30	2290	1.58	204.12	492	0.34

Table 10 – Leading indicators and statistics by company band 2006

4.2 LTIFR in Company Bands

Table 11 shows the overall LTIFR of companies within the defined bands of number of hours worked, and for the last two years, TRIR.

		2001	2002	2003	2004	2005	2006
LTIFR	Band A	8.91	5.14	3.88	3.87	2.85	2.64
	Band B	3.13	5.15	0.96	2.71	3.07	2.02
	Band C	4.37	1.75	0.92	1.65	1.59	1.37
	Band D	2.15	1.10	0.87	1.53	0.83	0.74
TRIR	Band A					11.0	10.16
	Band B					11.3	8.29
	Band C					6.02	5.08
	Band D					4.57	3.19

Table 11 – Overall LTIFR and TRIR by company band

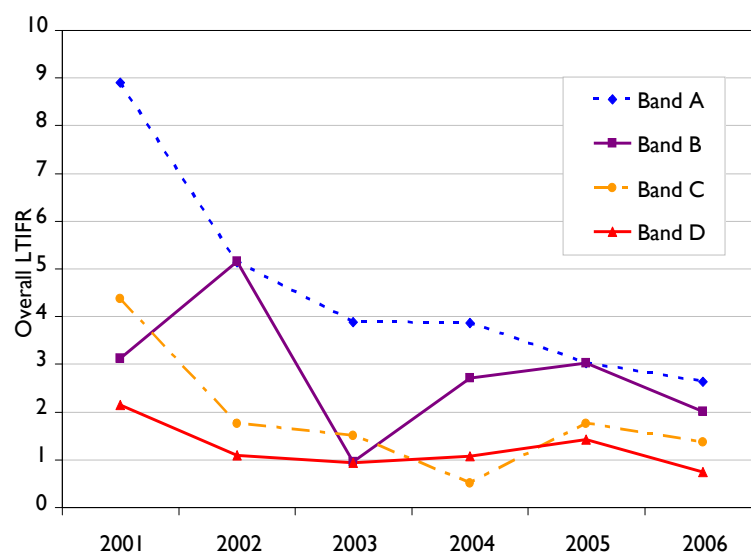


Figure 5 – Overall LTIFR for company bands

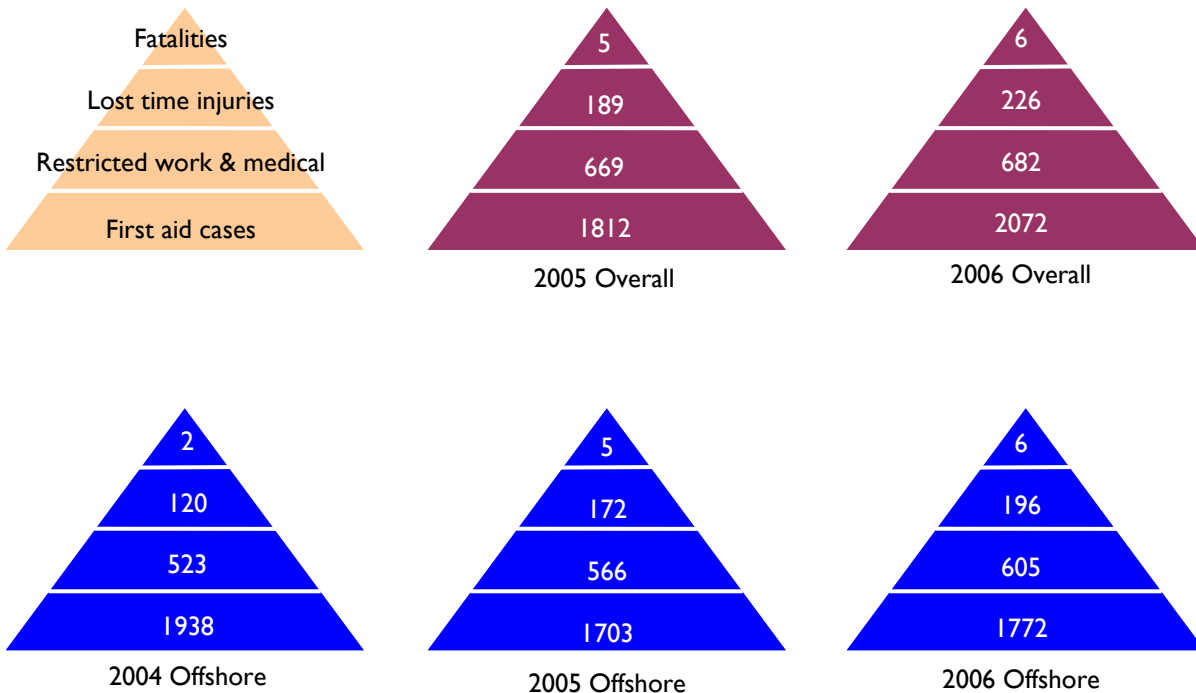
5 Comment and Analysis

5.1 Accident Triangles

Accident triangles can be used to demonstrate the relationship between fatalities and minor accidents.

Year	Overall				Offshore			
	First aid	RWC/ med trt	Lost time injuries	Fatalities	First aid	RWC/ med trt	Lost time injuries	Fatalities
2006	2072	682	226	6	1772	605	196	6
2005	1812	669	189	5	1703	566	172	5
2004			164	3	1938	523	120	2
2003			198	5	3776	466	133	4

Table 12 – Accident triangle data



5.2 Direct Causes of Lost Time Injuries

The SEL committee decided in 2006 that information should be collected on the direct causes of lost time injuries. The intent of this was to look more deeply into these injuries with the hope that members' safety efforts could be directed more closely to the most serious and frequent causes of injuries.

It was decided to employ the six categories for direct causes of LTIs. These are:

- A – Struck by
- B – Slips, trips and falls
- C – Vehicles
- D – Hazardous substances
- E – Caught between
- F – Dropped objects

As contributors sent in their statistics, it became clear that a seventh category would be necessary to record the large number of LTIs that did not fall into the above six categories. Also, it will be seen that there was only one LTI reported as caused by driving or vehicles. The categories will be adjusted for next year to reflect members' needs more closely.

Data from the International Association of Oil & Gas Producers (OGP) 2006 safety statistics shows that amongst OGP members, 'struck by' was the cause of 31% of significant incidents, 'caught between' was the cause of 9% of significant incidents and 'falls' were the cause of 11% of significant incidents.

Data from the International Association of Drilling Contractors (IADC) in 2006 shows that amongst their members, 'struck by' was the common cause of LTI at 27%, followed by 'caught between' at 25% and 'fall' at 12%.

There were 226 lost time injuries recorded by IMCA members this year. 'Slips trips and falls' form 24% of recorded LTIs for IMCA members, followed by 'caught between' at 21% of recorded LTIs and 'struck by' at 19% of LTIs.

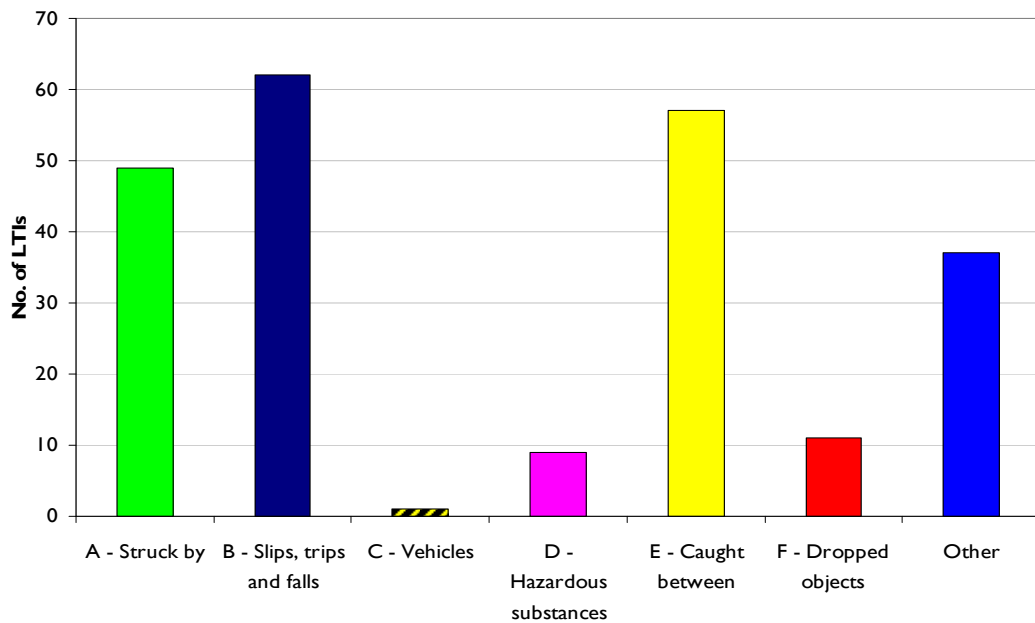


Figure 6 – Direct causes of lost time injuries

	A: Struck by	B: Slips, trips and falls	C: Vehicles	D: Hazardous substances	E: Caught between	F: Dropped objects	Other	Total
Americas	0	6	1	1	6	0	0	14
AP	2	0	0	1	2	1	6	12
EA	27	31	0	3	26	2	11	100
MEI	4	3	0	3	2	2	10	24
ICO	16	22	0	1	21	6	10	76
Total	49	62	1	9	57	11	37	226

Table 13 – Direct causes of LTIs by region

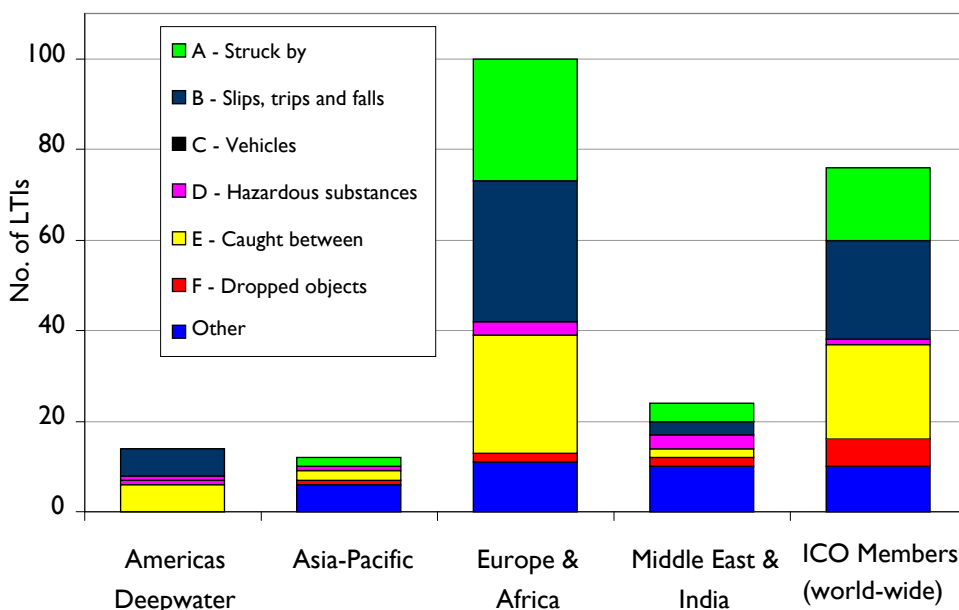


Figure 7 – Direct causes of LTIs by region

5.3 Lost Time Injury Frequency Rates (LTIFR)

The offshore LTIFR for 2006 has fallen 39% from 1.69 in 2005 to 1.02 in 2006. The overall LTIFR has fallen from 1.18 in 2005 to 1.02 in 2006, continuing the general 'flat-line' trend. This should be seen in light of a significant increase in the number of LTIs (from 189 in 2005 to 226 this year), a further increase in the number of contributors and the rise in offshore and overall hours worked. The onshore LTIFR has risen quite sharply to 0.86 from 0.29 in 2005. However, this is against the falling significance of onshore working hours in this study, as reported onshore hours have fallen year on year since IMCA began recording them in 2002.

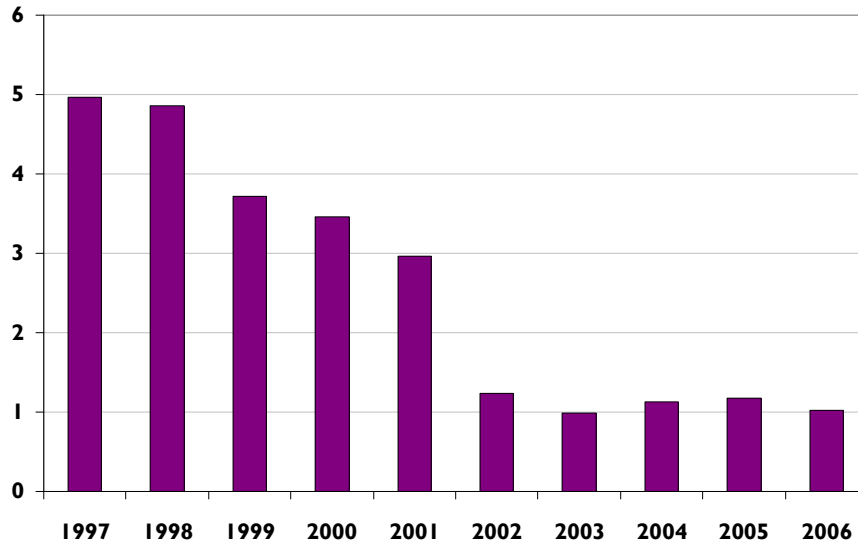


Figure 8 – Overall LTIFR

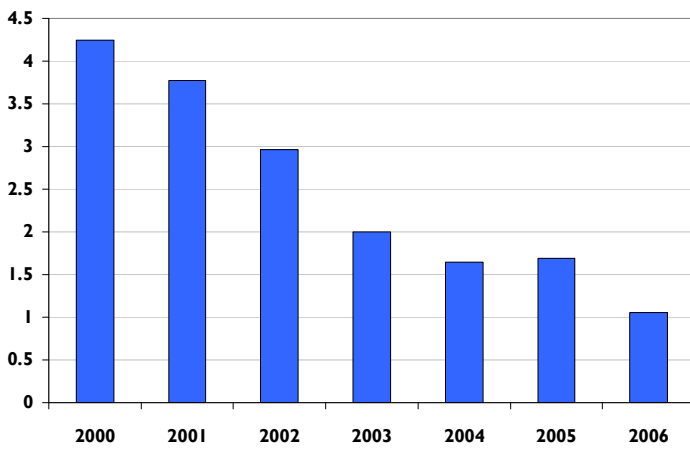


Figure 9 – Offshore LTIFR

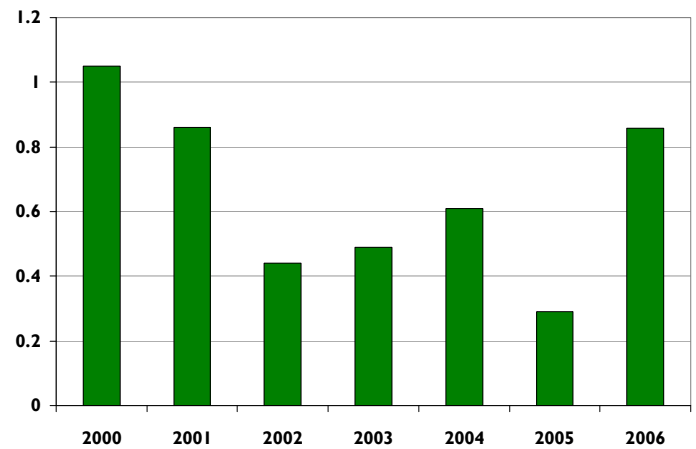


Figure 10 – Onshore LTIFR

5.4 Total Recordable Incident Rates (TRIR)

Members suggested during 2005 that we start to track total recordable incidents as a more reliable pointer to a truer picture of safety in the industry. This process started formally with last year’s statistics, but in fact sufficient data was collected (for leading performance indicators) to enable us to calculate an offshore TRIR figure for 2004.

Year	Overall TRIR	Offshore TRIR	Onshore TRIR
2004		8.87	
2005	5.42	7.29	2.10
2006	4.14	4.35	3.06

Table 14 – Total recordable incident rates (TRIR)

This year, the offshore TRIR was 4.35, a 40% reduction on last year’s figure of 7.29. The onshore TRIR was 3.06, which is an increase over the 2005 figure of 2.10, and the overall TRIR was 4.14, which is a 23% reduction in last year’s figure of 5.41.

The increase in incident and injury rates onshore is of concern, but needs to be seen in light of the falling quantity of onshore man-hours contributed.

There were 434 offshore medical treatment cases reported in 2006, and 58 onshore medical treatment cases reported. This is a fall in numbers from 2005, in which 436 such reports were made offshore, but 58 onshore.

There were 171 offshore restricted work injury reports reported in 2006, compared to 130 in 2005, and 19 onshore restricted work injuries reported in 2006 (18 in 2005.)

There were 1772 offshore first aid cases and 3065 offshore near-miss reports, compared to the 2005 figures of 1703 first aid cases offshore and 3494 near-miss reports offshore,

There were 2072 first aid cases overall and 3307 near-miss reports overall during 2006, compared to 1812 first aid cases overall, and 3716 near-miss reports overall in 2005.

5.5 Fatal Accident Rate (FAR)

There were six fatalities reported during 2006, all of which occurred offshore. It is pleasing to record that for the first time since 2002 there were no fatalities reported from any of our members’ onshore operations. The overall fatal accident rate decreased from 3.13 in 2005 to 2.72 in 2006, a fall of 13%, and the offshore fatal accident rate likewise fell from 3.93 in 2005 to 3.23 in 2006.

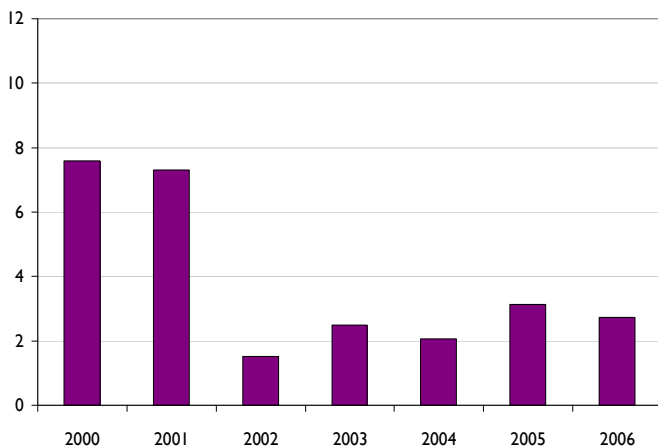


Figure 11 – Overall FAR

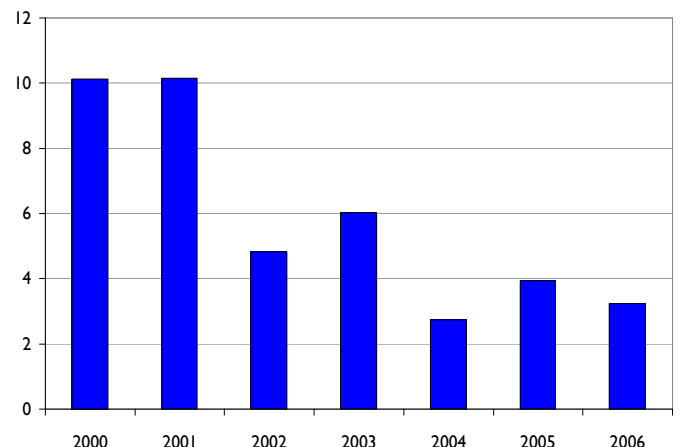


Figure 12 – Offshore FAR

5.5.1 Correction to the 2005 Fatal Accident Statistics

Following publication of the 2005 statistics, members may recall that a change was made to the published fatality statistics. Originally, six fatalities were reported, of which five had occurred offshore. Further investigation of these fatalities revealed that one of them was the result of a heart attack not caused by work-related activity, but recorded as 'natural causes'. After due consideration, it was decided that as this incident was not a work-related fatality, it should not have been included in the 2005 safety statistics. This reduced the number of fatalities reported during 2005 from six to five, four of which occurred offshore.

As a result of this there was a noticeable fall in the reported overall and offshore fatal accident rates (FAR) for 2005, as well as a very small change in the offshore total recordable incident rate (TRIR). These changes were as follows, and were reported in information note IMCA SEL 18/06.

- ◆ Overall fatal accident rate (FAR) fell from 3.76 to 3.13.
- ◆ Offshore fatal accident rate (FAR) fell from 4.91 to 3.93.
- ◆ Offshore total recordable incident rate (TRIR) fell from 7.30 to 7.29
- ◆ Overall total recordable incident rate (TRIR) remained unchanged.

5.5.2 Fatal Accident Information – 2006

The SEL committee has suggested that basic information is collected about each fatality. This was accomplished for this year's statistics with the following results:

- ◆ Person died as result of chest crush injury
- ◆ Person died crushed between two pipes
- ◆ Crew under load being delivered to offshore platform by crane when davit wire broke
- ◆ Diver entangled with manta ray; forced to the surface, lost his life as a result of subsequent decompression
- ◆ Diver completed a surface supplied air dive. Developed symptoms similar to DCI, treatment was unsuccessful, diver progressively worsened, and despite efforts the diver expired
- ◆ Slick line failed when tool string hit sheave causing mandrel and tool string to fall and hit employee who was killed as a result
- ◆ Employee crushed between two pipes

6 Comparison with Other Published Figures

6.1 International Association of Drilling Contractors (IADC) – 2006

IADC represents offshore and onshore drilling contractors. In 2006 IADC members reported 23 fatalities of which six were offshore, 1077 lost time injuries of which 257 were offshore, and 4327 'recordable' injuries (of which 927 were offshore). This equates to an overall LTIFR of 2.98, and a TRIR (based on one million man-hours rather than 200,000) of 2.34.

6.2 International Association of Oil & Gas Producers (OGP) 2006

In 2006 OGP members recorded 15 company and 100 contractor fatalities – a fatal accident rate of 3.9 compared with the 2006 IMCA figure of 2.72. The LTIFR recorded by OGP members was 0.99, and the TRIR, 2.92. This information is based on 2,937 million man-hours worked.

	2002	2003	2004	2005	2006
IMCA	1.24	0.99	1.13	1.18	1.02
OGP	1.09	1.16	1.09	0.97	0.99
IADC	3.27	3.16	3.07	3.03	2.98

Table 15 – Comparison of trade association LTIFR

7 Leading Performance Indicators

7.1 Overall

This is the fourth year for which IMCA has collected leading performance indicator data. This year there has been a good response to this initiative, with nearly all (72 of 74, 97%) of the participating contractors providing full or partial leading indicator data. Of the 72 companies providing some data, 60 provided a full dataset.

In 2005 86% (44 of the 51) participants provided full or partial leading indicator data. Of those 44 companies providing some data, 39 provided a full dataset.

In 2004, 88% (32 of 36) companies provided leading indicator data, of which 18 provided a full dataset. In 2003, 25 of 33 (75%) of companies provided leading performance indicator data.

The table below shows a pleasing year-on-year increase in 'uptake' of the leading performance indicators over the last four years.

	Participating companies	Companies providing some (full or partial) leading performance indicator data	Companies providing full leading performance indicator data
2003	31	25 (80%)	11 (35%)
2004	36	32 (88%)	18 (50%)
2005	51	44 (86%)	39 (76%)
2006	74	72 (97%)	60 (81%)

Table 16 – Companies providing leading indicator statistics

For the second year, members were asked to indicate the origin of their leading performance indicator data, either offshore activity or 'overall' (combined) offshore and onshore activity. This information has been used in the calculation of the leading performance indicators. This means that the IMCA leading performance indicators are calculated using 194 million man-hours, only very slightly less than the total number of man-hours in the dataset (196.5 million man-hours). Nearly all the companies (64 of 74) submitted leading performance indicator data that was referenced to overall – both onshore and offshore – man-hours. In 2004 and 2003, the IMCA leading performance indicators were calculated with respect to offshore working hours.

For the second year the reporting activity level (RAL), management visits ratio (MVR) and lessons learnt ratio (LLR) have been calculated using a simpler formula. For comparative purposes with the 2003 and 2004 results, the Indicators calculated from the old formulae have been included.

The table below shows how the leading performance indicators have performed over the last four years.

	SOFR	RAL		LLR		MVR	
		Old	New	Old	New	Old	New
2003	160.95	397.95	117.49	2.72	0.55	0.0254	3.40
2004	160.44	344.96	199.10	3.96	0.66	0.0352	4.26
2005	190.19	280.11	350.70	9.14	1.14	0.0195	3.66
2006	161.6	249.93	258.80	8.32	0.86	0.008	1.75

Table 17 – Leading performance indicators 2003-2006

7.2 Safety Observation Frequency Rate (SOFR)

Ninety-four per cent (70 of 74) companies provided data on safety observations. In 2005 78% (40 of 51) companies contributed. Safety observations are defined as reports identifying at-risk behaviour, unsafe conditions or similar, e.g. STOP cards. Note that this is not the same as actual injury reporting. The wide variation in reporting levels and in the safety observation frequency rate calculated suggests that there may be different interpretations of the definition of 'safety observation'. It is a rate that should rise – whilst working to create an accident-free and injury-free workplace, there will always be room for improvement and subsequent reporting of that improvement. It is this positive and proactive reporting that needs to be encouraged.

Company	Safety observations	SOFR	Company	Safety observations	SOFR
1	17	2.0	38	38	290.5
2	831	42.2	39	210	84.7
3	16	16.8	40	35	47.5
4	2003	142.3	41	1211	33.1
5	5781	311.8	42	2242	226.0
6	102	32.8	43	41624	992.1
7	53	1.2	44	20	5.4
8	50	105.7	45		
9	1999	150.3	46	866	111.5
10	555	179.7	47	957	26.1
11	3	3.8	48	419	24.3
12			49	602	45.5
13	846	183.2	50	5530	93.7
14	346	209.5	51	6944	115.5
15	384	72.2	52	346	147.4
16	15243	149.4	53	117	52.9
17	577	180.9	54		
18	240	51.9	55	2590	1271.6
19	370	26.9	56	30	124.1
20	115	72.5	57	25076	2399.3
21	2714	85.0	58	22	76.4
22	739	8.3	59	959	21.3
23	114	6.9	60	188	36.9
24	183	71.5	61	7	2.4
25	859	181.0	62	235	330.8
26	26257	1078.7	63	946	195.4
27	60	42.5	64	16	3.5
28	25	14.9	65	76	40.5
29	1233	56.6	66	56	22.9
30	3	5.0	67	14	9.5
31	970	280.6	68	529	54.3
32	6	4.1	69	66	65.5
33	63	7.7	70	380	19.1
34	242	110.2	71	12252	201.9
35	12	18.0	72	1	2.3
36	597	188.7	73	265	129.3
37			74	5461	95.9
			IMCA	173938	159.79

Table 18 – Safety observation frequency rate (SOFR) 2006

7.3 Reporting Activity Level (RAL)

Formerly, this was calculated thus:

$$\text{Old RAL} = \frac{(5 \times \text{FNMR}) + (20 \times \text{MTR}) + (100 \times \text{RWIR})}{(1 + \text{Number of Lost Time Injuries})}$$

The RAL has been re-calculated as a straightforward rate. The number of hours over which it is normalised remains one million. The definitions of FNMR, MTR and RWIR can be found in Appendix I.

$$\text{New RAL} = ((5 \times \text{FNMR}) + (20 \times \text{MTR}) + (100 \times \text{RWIR})) \text{ per million man-hours}$$

All but two companies contributed data enabling us to calculate a reporting activity level. In 2005, 92% (47 of 51) of companies provided data, and in 2004, 88% (32 of 36) of companies provided data.

Comp.	Med trt	RWC	First Aid	Near-miss	New RAL	Old RAL	Comp.	Med trt	RWC	First Aid	Near-miss	New RAL	Old RAL
1	0	0	1	1	5.87	10.00	38	1	0	1	0	955.66	25.00
2	2	0	6	120	169.96	111.67	39	2	0	3	0	110.88	55.00
3	1	0	1	2	184.04	35.00	40	6	0	4	2	1018.57	150.00
4	1	2	51	63	280.53	158.00	41	13	2	41	22	106.04	129.17
5	16	5	0	110	369.48	685.00	42	5	1	63	292	995.39	329.17
6	2	0	11	6	201.12	62.50	43	37	7	236	161	408.17	201.47
7	17	11	116	366	437.08	275.00	44	10	0	4	55	667.22	165.00
8	2	0	2	0	528.32	50.00	45	2	0	10	17	280.24	35.00
9	1	1	35	85	270.71	55.38	46	14	1	6	56	444.20	230.00
10	3	3	5	15	744.54	153.33	47	8	8	37	73	205.52	302.00
11	1	1	5	9	1204.97	95.00	48	0	0	3	7	14.51	25.00
12	12	23	73	419	1186.24	333.33	49	1	0	0	0	7.56	6.67
13	2	1	32	44	563.16	173.33	50	23	11	136	561	427.25	458.64
14	1	0	2	2	121.09	20.00	51	28	17	107	108	277.45	303.18
15	4	25	25	46	2758.00	1467.50	52	6	2	10	17	969.16	113.75
16	46	15	219	95	195.59	399.00	53	7	0	9	0	418.07	26.43
17	1	0	58	4	517.38	330.00	54	0	0	4	0	51.76	10.00
18	0	2	22	17	426.83	131.67	55	0	1	0	12	392.77	160.00
19	4	0	8	0	43.58	40.00	56	0	0	0	0	0.00	0.00
20	6	0	11	19	851.26	67.50	57	1	0	5	15	57.41	120.00
21	0	0	1	0	0.78	2.50	58						
22	1	0	37	15	15.64	140.00	59	34	5	118	78	239.72	154.29
23	5	1	5	20	97.70	162.50	60	4	0	6	9	151.96	17.22
24	0	0	9	2	107.50	13.75	61	8	8	1	7	1749.30	500.00
25	8	0	9	0	215.97	68.33	62	0	0	0	7	246.34	35.00
26	11	1	1	1	67.79	110.00	63	2	0	4	2	72.29	35.00
27	0	0	3	5	141.76	40.00	64	1	0	5	10	104.61	95.00
28	0	0	0	10	148.53	16.67	65	0	0	10	5	199.86	75.00
29	47	0	0	0	215.92	78.33	66	0	0	6	36	430.21	210.00
30	0	0	2	1	124.85	15.00	67	0	0	1	2	50.92	15.00
31	3	3	8	9	643.64	445.00	68	4	3	38	29	367.12	143.00
32	2	0	3	6	289.87	85.00	69	1	0	8	3	372.23	75.00
33							70	9	12	26	8	390.34	1550.00
34	7	2	8	5	922.25	405.00	71	29	6	177	50	190.79	231.50
35	0	0	1	6	261.98	35.00	72	2	0	0	0	453.44	13.33
36	2	0	17	61	679.43	430.00	73	3	0	7	12	378.05	155.00
37	15	9	35	0	114.44	98.21	74	8	1	164	87	133.05	378.75
IMCA	492	190	2072	3307	255.53	249.93							

Table 19 – Reporting activity level (RAL) 2006

7.4 Management Visit Ratio (MVR)

Formerly this has been calculated using this formula:

$$\text{Old MVR} = \text{Number of managerial visits per 100,000 man-hours per (1 + number of lost time injuries)}$$

$$= \text{MV} \times 100,000 / ((1 + \text{LTI}) \times \text{man-hours})$$

As with the RAL, a new formula has been employed without the LTI clause.

$$\text{New MVR} = \text{Number of managerial visits per 100,000 man-hours}$$

Sixty-four of 74 or 86% of contributing companies provided data on management visits. In 2005 76% (39 of 51) of contributing companies provided data, and in 2004 69% (25 of 36) of companies provided data.

Company	Management visits	New MVR	Old MVR	Company	Management visits	New MVR	Old MVR
1				38	1	3.82	3.82
2	115	2.92	0.49	39	6	1.21	1.21
3	25	13.15	13.15	40	6	4.07	4.07
4	20	0.71	0.14	41			
5	50	1.35	0.67	42	41	2.07	0.34
6	48	7.72	3.86	43	1055	12.57	0.74
7	245	2.78	0.20	44	20	2.70	0.90
8	8	8.45	8.45	45	2	0.32	0.06
9	84	3.16	0.24	46	44	2.83	0.94
10	151	24.44	8.15	47	51	0.69	0.14
11	59	37.42	18.71	48	10	0.29	0.15
12				49			
13	138	14.95	4.98	50	135	1.14	0.10
14	8	2.42	1.21	51	118	0.98	0.09
15	48	4.51	2.26	52	9	1.92	0.48
16	490	2.40	0.24	53			
17	4	0.63	0.63	54	4	1.04	0.52
18				55	26	6.38	6.38
19	2	0.07	0.02	56	9	18.62	18.62
20	3	0.95	0.24	57	20	0.96	0.96
21	9	0.14	0.07	58	14	24.31	24.31
22	75	0.42	0.21	59	47	0.52	0.04
23	53	1.59	0.80	60	4	0.39	0.04
24	4	0.78	0.20	61	7	0.70	0.35
25				62	20	14.08	14.08
26	42	0.86	0.29	63	21	2.17	1.08
27	3	1.06	1.06	64	133	14.64	14.64
28	50	14.85	4.95	65	55	14.66	14.66
29		0.00	0.00	66	2	0.41	0.41
30	10	8.32	8.32	67	3	1.02	1.02
31	10	1.45	1.45	68	7	0.36	0.07
32				69	6	2.98	2.98
33	7	0.43	0.21	70	12	0.30	0.30
34	16	3.64	3.64	71	33	0.27	0.03
35	10	7.49	7.49	72	1	1.13	0.38
36	27	4.27	4.27	73	4	0.98	0.98
37				74	32	0.28	0.07
IMCA					3769	1.73	0.008

Table 20 – Management visit ratio (MVR) data 2006

7.5 Lessons Learnt Ratio (LLR)

$$\text{Old LLR} = \frac{\text{Number of bulletins issued}}{(1 + \text{Number of LTIs})}$$

New LLR = Number of bulletins issued per 100,000 man-hours

Sixty of 74 or 81% of contributing companies provided data on safety bulletins. In 2005 58% (29 of 50) of contributing companies provided data. In 2004, 64% (23 of 36) of companies provided data.

Company	Safety bulletins	New LLR	Old LLR	Company	Safety bulletins	New LLR	Old LLR
1	17	1.00	17.00	38		0.00	0.00
2	55	1.40	9.17	39	28	5.64	28.00
3	114	59.94	114.00	40	50	33.95	50.00
4	4	0.14	0.80	41			
5	3	0.08	1.50	42	12	0.60	2.00
6	34	5.47	17.00	43	62	0.74	3.65
7	33	0.37	2.36	44	4	0.54	1.33
8	4	4.23	4.00	45	2	0.32	0.40
9	34	1.28	2.62	46	34	2.19	11.33
10	45	7.28	15.00	47		0.00	0.00
11	14	8.88	7.00	48	27	0.78	13.50
12				49			
13	76	8.23	25.33	50	15	0.13	1.36
14	5	1.51	2.50	51	27	0.22	2.45
15	72	6.77	36.00	52	5	1.07	1.25
16	29	0.14	2.90	53			
17		0.00	0.00	54	14	3.62	7.00
18	27	2.92	9.00	55	22	5.40	22.00
19		0.00	0.00	56		0.00	0.00
20	49	15.45	12.25	57	20	0.96	20.00
21		0.00	0.00	58	5	8.68	5.00
22	74	0.41	37.00	59	24	0.27	1.71
23	11	0.33	5.50	60	24	2.35	2.67
24	10	1.95	2.50	61	4	1.22	3.50
25				62	25	17.60	25.00
26	22	0.45	7.33	63	14	1.45	7.00
27	14	4.96	14.00	64	65	7.16	65.00
28	5	1.49	1.67	65	3	0.80	3.00
29	6	0.14	0.50	66		0.00	0.00
30	1	0.83	1.00	67	11	3.73	11.00
31	219	31.68	219.00	68			
32	7	2.39	7.00	69	2	0.99	2.00
33	6	0.37	3.00	70	100	2.52	100.00
34	17	3.87	17.00	71	192	1.58	19.20
35	2	1.50	2.00	72	2	2.27	0.67
36	18	2.84	18.00	73			
37				74	36	0.32	9.00
IMCA					1859	0.85	8.34

Table 21: Lessons learnt ratio (LLR) data 2006

Definitions

In order to compile meaningful statistics, it is important that standard, consistent, well defined terms are used. For the purposes of compiling the IMCA statistics the following definitions are used:

Lagging Safety Statistics

Hours worked	for offshore operations – the ‘actual hours worked’, based on a 12-hour day for onshore operations – the actual hours worked, including overtime hours
Number of fatalities	the total number of employees and others who died as a result of an accident
Fatal accident rate (FAR)	number of fatalities per 100,000,000 hours worked
Number of lost time injuries (LTIs)	all accidental injuries (including fatalities and lost work day cases but excluding restricted work day cases) where: <ul style="list-style-type: none"> ◆ A lost work day case is any work-related accidental injury other than a fatal injury which results in a person being unfit for work on the next shift/day; and ◆ A restricted workday case is any work-related injury other than a fatality or lost work day case which results in a person being unfit for full performance of a regular job on the shift/day after the injury. Work might be: <ul style="list-style-type: none"> – an assignment to a temporary job; – working in the regular job but not performing all the usual duties of the job <p>Where no meaningful restricted work is being performed, the incident should be recorded as a lost work day case.</p>
Lost time injury frequency rate (LTIFR)	$\frac{\text{Lost time injuries} \times 1,000,000}{\text{hours worked}}$
Total recordable incident rate (TRIR)	the number of injuries and/or illnesses per million hours worked = $\frac{\text{total number of recordable incidents} \times 1,000,000}{\text{total hours worked}}$

NB OSHA (the US Occupational Safety & Health Administration) uses an alternative definition for TRIR. The primary difference is that IMCA follows the practice of referencing recordable injuries against one million man-hours rather than the OSHA definition which references against 200,000 man-hours (a base for 100 full-time equivalent workers working 40 hours per week, 50 weeks per year).

Recordable incidents

from the American Bureau of Labor Statistics
www.bls.gov/iif/oshdef.htm

Work-related injuries and illnesses – events or exposures in the work environment that caused or contributed to the condition or significantly aggravated a pre-existing condition.

Recordable cases – include work-related injuries and illnesses that result in:

- ◆ Death
- ◆ Loss of consciousness
- ◆ Days away from work
- ◆ Restricted work activity or job transfer
- ◆ Medical treatment (beyond first aid)
- ◆ Significant work related injuries or illnesses that are diagnosed by a physician or other licensed health care professional. These include any work related case involving cancer, chronic irreversible disease, a fracture or cracked bone, or a punctured eardrum.
- ◆ Additional criteria that can result in a recordable case include:
 - Any needlestick injury or cut from a sharp object that is contaminated with another person's blood or other potentially infectious material.
 - Any case requiring an employee to be medically removed under the requirements of an OSHA health standard.
 - Tuberculosis infection as evidenced by a positive skin test or diagnosis by a physician or other licensed health care professional after exposure to a known case of active tuberculosis.
- ◆ Days away from work, days of restricted work activity or job transfer
- ◆ Days away from work, days of restricted work activity or job transfer are cases that involve days away from work, or days of restricted work activity or job transfer, or both.
- ◆ Cases involving days away from work are cases requiring at least one day away from work with or without days of job transfer or restriction.

Job transfer or restriction cases occur when, as a result of a work-related injury or illness, an employer or health care professional keeps, or recommends keeping an employee from doing the routine functions of his or her job or from working the full workday that the employee would have been scheduled to work before the injury or illness occurred.

Leading Safety Statistics

The SEL core committee is currently reviewing the definitions of these leading performance indicators. This work has progressed, leading to an initial conclusion that lagging indicators such as LTIFR should not be used in the formulae for calculating the leading performance indicators. Therefore, reporting activity level (RAL), management visits ratio (MVR) and lessons learnt ratio (LLR) have been calculated using simpler definitions. For completeness, the previous definitions (as set out in information note IMCA SEL 05/03) are included here as well.

Safety observations frequency rating (SOFR)

Number of safety observation per 200,000 man hours:
=
$$\frac{\text{Number of safety observations} \times 200,000}{\text{Total man-hours}}$$

Injury events reporting level

Old definition:
$$\frac{(5 \times \text{FNMR}) + (20 \times \text{MTR}) + (100 \times \text{RWIR})}{(1 + \text{no. of lost time injuries})}$$

New definition:
(5 x FNMR) + (20 x MTR) + (100 x RWIR)) per million man-hours

Line management visits rating (MVR)

Old definition:
No. of managerial visits per 100,000 man-hours per (1 + No. of lost time injuries)
=
$$\frac{\text{MV} \times 100,000}{(1 + \text{LTI}) \times \text{man-hours}}$$

New definition:
No. of managerial visits per 100,000 man-hours

Lessons learnt rating (LLR)

Old definition:
$$\frac{\text{No. of bulletins issued}}{(1 + \text{no. of LTIs})}$$

New definition:
No. of bulletins issued per 100,000 man-hours

Input definitions:

First aid injury

A one time treatment for the purpose of dealing with minor scratches, cuts, burns, splinters etc which do not ordinarily require medical care

FNMR

Number of first aid injuries and personal near-miss reports

Lost time injury (LTI)

A work related injury which causes the injured person to be absent from work for at least one normal shift* after the event because he is unfit to perform any duties. * This should take into account travel time in attending the doctor to assess the injury

Managerial visit (MV)

Managerial visits may be counted if the managers meet the criteria provided below. The visits should be made offshore during operational activities and be of at least 24 hours duration. (Management visits during port visits are seen as routine). The visit must include a safety briefing or presentation to the majority of the offshore people. It may also involve the manager making a safety performance check of the site with the people who manage or supervise the activities.

- ◆ The manager has commercial or production responsibility for the company (e.g. Managing Director);
- ◆ The manager has responsibility for health, safety and environmental processes or other key process within the company;
- ◆ The manager is directly responsible for the operational or service support activities of the particular offshore barge or ship (e.g. Operations Manager);
- ◆ The manager is directly responsible for the conduct of the project (e.g. Project Manager).

Man-hours

- ◆ for onshore operations – ‘actual’ hours worked, including overtime hours
- ◆ for offshore operations – the hours worked, based on a 12-hour exposure day

Medical treatment injury

Is work related injury, which requires attention from a medical practitioner (not necessarily a doctor) but does not result in either a lost time injury or a restricted work injury

MTR

Number of medical treatment reports

RAL

Reporting activity level

Restricted work injury

A work-related injury which causes the injured person to be assigned to another job on a temporary basis or to work at his normal job less than full time or not necessarily undertaking all of the normal duties

RWIR

Number of restricted work injury reports

Safety observation

Report identifying at-risk behaviour, or an unsafe condition to prevent loss or harm e.g. ‘stop’ card

All Statistics

Offshore statistics

	LTI	LTIFR	Med trt	RWP	First Aid	Near-miss	TRI	TRIR
1	0	0.00	0	0	1	1	0	0.00
2	5	1.27	2	0	6	120	7	1.78
3	0	0.00	1	0	1	2	1	7.03
4	3	1.49	0	2	47	61	5	2.48
5	1	0.27	16	5		110	22	5.93
6	1	1.68	2	0	11	6	3	5.04
7	8	1.50	14	10	105	364	32	6.01
8	0	0.00	2	0	2	0	2	31.93
9	12	4.64	1	1	35	85	14	5.42
10	2	3.56	3	3	5	15	8	14.24
11	1	6.34	1	1	5	9	3	19.03
12	14	3.32	12	23	73	419	49	11.63
13	0	0.00	2	1	24	27	3	4.52
14	1	4.53	1	0	2	2	2	9.06
15	1	0.94	1	17	17	44	19	17.85
16	9	0.44	46	15	219	95	70	3.43
17	0	0.00	1	0	58	4	1	1.82
18	2	3.04	0	2	22	14	4	6.08
19	2	0.75	4	0	8	0	6	2.24
20	3	12.72	3	0	9	15	6	25.44
21	1	0.16	0	0	1	0	1	0.16
22	1	0.06	1	0	37	15	2	0.11
23	1	0.32	4	1	3	16	6	1.90
24	3	8.69	0	0	7	2	3	8.69
25	2	2.67	8	0	9	0	10	13.35
26	2	0.53	11	1	1	1	14	3.72
27	0	0.00	0	0	3	2	0	0.00
28	1	4.70				10	1	4.70
29	8	2.61	27	0			36	11.73
30	0	0.00	0	0	2	1	0	0.00
31	0	0.00	3	3	7	7	6	11.68
32	0	0.00	1	0	1	4	1	4.73
33	1	0.61	0	0	0	0	1	0.61
34	0	0.00	7	2	7	4	9	27.89
35	0	0.00	0	0	1	5	0	0.00
36	0	0.00	2	0	17	59	2	3.16
37	13	1.18	15	8	35	0	37	3.36

	LTI	LTIFR	Med trt	RWP	First Aid	Near-miss	TRI	TRIR
38	0	0.00	1	0	1	0	1	57.08
39	0	0.00	2	0	3	0	2	4.28
40	0	0.00	4	0	4	2	4	57.81
41	5	0.68	13	2	41	22	20	2.74
42	5	2.52	5	1	63	292	11	5.54
43	16	2.31	34	7	234	161	60	8.67
44	1	1.89	10	0	4	55	11	20.83
45	3	7.32	2	0	8	17	5	12.21
46	2	1.44	14	1	6	56	17	12.27
47	3	1.37	4	2	11	24	9	4.12
48	1	0.30	0	0	3	7	1	0.30
49	2	0.76	1	0			3	1.13
50	9	0.92	22	10	120	516	41	4.17
51	6	0.92	24	17	80	86	47	7.18
52	2	7.64	6	2	10	15	10	38.20
53	4	11.39	7	0	9	0	11	31.32
54	1	3.17	0	0	3	0	1	3.17
55	0	0.00	0	0	0	10	0	0.00
56	0	0.00	0	0	0	0	0	0.00
57	0	0.00	1	0	5	15	1	0.54
58	0	0.00	0	0	0	0	0	0.00
59	12	1.92	33	5	89	68	51	8.18
60	8	8.33	4	0	6	9	12	12.49
61	1	2.16	8	8	1	7	17	36.71
62	0	0.00	0	0	0	5	0	0.00
63	1	1.03	2	0	4	2	3	3.10
64	0	0.00	1	0	4	10	1	1.35
65	0	0.00	0	0	6	5	0	0.00
66	0	0.00	0	0	3	22	0	0.00
67	0	0.00	0	0	1	2	0	0.00
68	4	2.05	3	3	32	26	10	5.13
69	0	0.00	0	0	3	3	0	0.00
70	0	0.00	9	12	26	8	21	5.29
71	9	0.74	29	6	177	50	44	3.63
72	1	12.49	1	0	0	0	2	24.98
73	0	0.00	3	0	7	12	3	8.33
74	2	0.23	0	0	27	39	2	0.23

IMCA	196	1.06	434	171	1772	3065	807	4.35
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Onshore Statistics

	LTI	LTIFR	Med trt	RWP	First Aid	Near-miss	TRI	TRIR
1								
2								
3	0	0.00	0	0	0	0	0	0.00
4	1	1.26	1	0	4	2	2	2.51
5								
6	0	0.00	0	0	0	0	0	0.00
7	5	1.43	3	1	11	2	9	2.58
8	0	0.00	0	0	0	0	0	0.00
9	0	0.00	0	0	0	0	0	0.00
10	0	0.00	0	0	0	0	0	0.00
11	0	0.00	0	0	0	0	0	0.00
12								
13	2	7.70	0	0	8	17	2	7.70
14	0	0.00	0	0	0	0	0	0.00
15	3	3.45	3	8	8	2	14	16.11
16								
17	0	0.00	0	0	0	0	0	0.00
18	0	0.00	0	0	0	3	0	0.00
19	0	0.00	0	0	0	0	0	0.00
20	0	0.00	3	0	2	4	3	36.90
21	0	0.00	0	0	0	0	0	0.00
22	0	0.00	0	0	0	0	0	0.00
23	0	0.00	1	0	2	4	1	6.20
24	0	0.00	0	0	2	0	0	0.00
25	0	0.00	0	0	0	0	0	0.00
26	0	0.00	0	0	0	0	0	0.00
27	0	0.00	0	0	0	3	0	0.00
28	1	8.06					1	8.06
29	3	2.34	20	0			23	17.91
30	0	0.00	0	0	0	0	0	0.00
31	0	0.00	0	0	1	2	0	0.00
32	0	0.00	1	0	2	2	1	12.25
33	0	0.00	0	0	0	0	0	0.00
34	0	0.00	0	0	1	1	0	0.00
35	0	0.00	0	0	0	1	0	0.00
36	0	0.00	0	0	0	2	0	0.00
37	0	0.00	0	1	0	0	1	1.00

	LTI	LTIFR	Med trt	RWP	First Aid	Near-miss	TRI	TRIR
38	0	0.00	0	0	0	0	0	0.00
39	0	0.00	0	0	0	0	0	0.00
40	0	0.00	2	0	0	0	2	25.62
41								
42								
43	0	0.00	3	0	2	0	3	2.04
44	1	4.68	0	0	0	0	1	4.68
45	1	4.65	0	0	2	0	1	4.65
46	0	0.00	0	0	0	0	0	0.00
47	1	0.19	4	6	26	49	11	2.13
48	0	0.00	0	0	0	0	0	0.00
49								
50	1	0.50	1	1	16	45	3	1.51
51	4	0.73	4	0	27	22	8	1.46
52	1	4.81	0	0	0	2	1	4.81
53	2	21.92	0	0	0	0	2	21.92
54	0	0.00	0	0	1	0	0	0.00
55	0	0.00	0	1	0	2	1	5.35
56	0	0.00	0	0	0	0	0	0.00
57	0	0.00	0	0	0	0	0	0.00
58	0	0.00	0	0	0	0	0	0.00
59	1	0.36	1	0	29	10	2	0.72
60	0	0.00	0	0	0	0	0	0.00
61	0	0.00	0	0	0	0	0	0.00
62	0	0.00	0	0	0	2	0	0.00
63	0	0.00	0	0	0	0	0	0.00
64	0	0.00	0	0	1	0	0	0.00
65	0	0.00	0	0	4	0	0	0.00
66	0	0.00	0	0	3	14	0	0.00
67	0	0.00	0	0	0	0	0	0.00
68	1	0.92	1	0	6	3	2	1.83
69	0	0.00	1	0	5	0	1	10.61
70								
71								
72	1	122.68	1	0	0	0	2	245.37
73	0	0.00	0	0	0	0	0	0.00
74	1	0.35	8	1	137	48	10	3.55
IMCA	30	0.86	58	19	300	242	107	3.06

Overall statistics

	LTI	LTIFR	Med trt	RWP	First Aid	Near-miss	TRI	TRIR
1	0	0.00	0	0	1	1	0	0.00
2	5	1.27	2	0	6	120	7	1.78
3	0	0.00	1	0	1	2	1	5.26
4	4	1.42	1	2	51	63	7	2.49
5	1	0.27	16	5	0	110	22	5.93
6	1	1.61	2	0	11	6	3	4.83
7	13	1.48	17	11	116	366	41	4.65
8	0	0.00	2	0	2	0	2	21.13
9	12	4.51	1	1	35	85	14	5.26
10	2	3.24	3	3	5	15	8	12.95
11	1	5.91	1	1	5	9	3	17.73
12	14	3.32	12	23	73	419	49	11.63
13	2	2.17	2	1	32	44	5	5.41
14	1	3.03	1	0	2	2	2	6.05
15	4	2.07	4	25	25	46	33	17.07
16	9	0.44	46	15	219	95	70	3.43
17	0	0.00	1	0	58	4	1	1.57
18	2	2.16	0	2	22	17	4	4.32
19	2	0.73	4	0	8	0	6	2.18
20	3	9.46	6	0	11	19	9	28.38
21	1	0.16	0	0	1	0	1	0.16
22	1	0.06	1	0	37	15	2	0.11
23	1	0.30	5	1	5	20	7	2.10
24	3	5.86	0	0	9	2	3	5.86
25	2	2.11	8	0	9	0	10	10.53
26	2	0.41	11	1	1	1	14	2.88
27	0	0.00	0	0	3	5	0	0.00
28	2	5.94	0	0	0	10	2	5.94
29	11	2.53	47	0	0	0	59	13.55
30	0	0.00	0	0	2	1	0	0.00
31	0	0.00	3	3	8	9	6	8.68
32	0	0.00	2	0	3	6	2	6.82
33	1	0.54	0	0	0	0	1	0.54
34	0	0.00	7	2	8	5	9	20.49
35	0	0.00	0	0	1	6	0	0.00
36	0	0.00	2	0	17	61	2	2.91
37	13	1.08	15	9	35	0	38	3.16

	LTI	LTIFR	Med trt	RWP	First Aid	Near-miss	TRI	TRIR
38	0	0.00	1	0	1	0	1	38.23
39	0	0.00	2	0	3	0	2	4.03
40	0	0.00	6	0	4	2	6	40.74
41	5	0.68	13	2	41	22	20	2.74
42	5	2.52	5	1	63	292	11	5.54
43	16	1.91	37	7	236	161	63	7.51
44	2	2.70	10	0	4	55	12	16.17
45	4	6.41	2	0	10	17	6	9.61
46	2	1.29	14	1	6	56	17	10.94
47	4	0.54	8	8	37	73	20	2.72
48	1	0.29	0	0	3	7	1	0.29
49	2	0.76	1	0	0	0	3	1.13
50	10	0.85	23	11	136	561	44	3.73
51	10	0.83	28	17	107	108	55	4.58
52	3	6.39	6	2	10	17	11	23.43
53	6	13.56	7	0	9	0	13	29.38
54	1	2.59	0	0	4	0	1	2.59
55	0	0.00	0	1	0	12	1	2.45
56	0	0.00	0	0	0	0	0	0.00
57	0	0.00	1	0	5	15	1	0.48
58	0	0.00	0	0	0	0	0	0.00
59	13	1.44	34	5	118	78	53	5.88
60	8	7.84	4	0	6	9	12	11.76
61	1	1.75	8	8	1	7	17	29.74
62	0	0.00	0	0	0	7	0	0.00
63	1	0.88	2	0	4	2	3	2.63
64	0	0.00	1	0	5	10	1	1.10
65	0	0.00	0	0	10	5	0	0.00
66	0	0.00	0	0	6	36	0	0.00
67	0	0.00	0	0	1	2	0	0.00
68	5	1.64	4	3	38	29	12	3.95
69	0	0.00	1	0	8	3	1	4.96
70	0	0.00	9	12	26	8	21	5.29
71	9	0.74	29	6	177	50	44	3.63
72	2	22.67	2	0	0	0	4	45.34
73	0	0.00	3	0	7	12	3	7.32
74	3	0.26	8	1	164	87	12	1.05

IMCA	226	1.02	492	190	2072	3307	914	4.14
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