

## Lost Time Injury Frequency Rate (LTIFR):

Total amount of accountable occupational injuries that result in lost time per million hours of exposure. The occupational injuries occurring with direct and outsourced employees in controlled activities are considered that result in lost time.

**Consolidated**

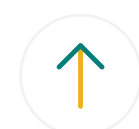
**Direct**

**Outsourced**

<b>Vale (consolidated)</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Argentina	0.00	0.00	0.00	0.00	0.0
Australia	0.00	0.00	0.00	0.00	0.0
Austria	0.00	0.00	0.00	0.00	0.0
Brazil	0.42	0.56	0.41	0.36	0.3
Canada	1.39	1.46	2.28	0.62	0.7
Chile	0.00	0.00	0.00	11.43	0.0
China	0.00	0.00	2.22	0.00	0.0
France	0.00	0.00	0.00	0.00	0.0
India	0.00	0.00	0.00	0.00	0.0
Indonesia	0.05	0.09	0.06	0.19	0.0
Japan	0.00	0.00	0.00	0.00	0.1
Malaysia	0.96	2.30	0.48	0.36	5.17
Mozambique	0.31	0.05	0.47	0.28	0.4
Netherlands	0.00	0.00	0.00	0.00	0.0
New Caledonia	5.60	13.32	10.8	4.22	0.0
Oman	0.23	0.22	0.23	0.21	0.00
Paraguay	1.84	0.00	1.71	0.00	0.00
Peru	0.00	0.00	0.00	0.00	0.0
Singapore	0.00	0.00	0.00	0.00	0.0
Switzerland	0.00	0.00	0.00	0.00	0.0
UAE	0.00	0.00	0.00	0.00	0.0
UEA	0.00	0.00	0.00	0.00	0.0
United Kingdom	2.30	0.00	0.00	2.42	0.0
United States	0.00	0.00	0.00	0.00	0.0
Uruguay	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.56</b>	<b>0.81</b>	<b>0.69</b>	<b>0.38</b>	<b>0.27</b>



<b>Direct</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Argentina	0.00	0.00	0.00	0.00	0.0
Australia	0.00	0.00	0.00	0.00	0.0
Austria	0.00	0.00	0.00	0.00	0.0
Brazil	0.45	0.57	0.42	0.31	0.27
Canada	1.55	1.56	3.04	0.72	0.74
Chile	0.00	0.00	0.00	0.00	0.0
China	0.00	0.00	0.00	0.00	0.0
France	0.00	0.00	0.00	0.00	0.0
India	0.00	0.00	0.00	0.00	0.0
Indonesia	0.15	0.30	0.00	0.00	0.0
Japan	0.00	0.00	0.00	0.00	0.00
Malaysia	1.21	5.65	1.18	1.16	5.97
Mozambique	0.31	0.14	0.26	0.12	0.00
Netherlands	2.07	0.00	2.08	0.00	0.0
New Caledonia	5.87	17.69	8.90	4.65	0.0
Oman	0.00	0.00	0.00	0.00	0.0
Paraguay	0.00	0.00	0.00	0.00	0.0
Peru	0.00	0.00	0.00	0.00	0.0
Singapore	0.00	0.00	0.00	0.00	0.0
Switzerland	0.00	0.00	0.00	0.00	0.0
UAE	0.00	0.00	0.00	0.00	0.0
United Kingdom	3.52	0.00	0.00	2.24	0.0
United States	0.00	0.00	0.00	0.00	0.0
Uruguay	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.65</b>	<b>0.95</b>	<b>0.77</b>	<b>0.35</b>	<b>0.3</b>



<b>Outsourced</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Argentina	0.00	0.00	0.00	0.00	0.0
Australia	0.00	0.00	0.00	0.00	0.25
Brazil	0.39	0.54	0.41	0.39	0.66
Canada	1.05	1.31	1.35	0.50	0.0
Chile	0.00	0.00	0.00	13.40	0.0
China	0.00	0.00	23.97	0.00	0.13
Indonesia	0.00	0.00	0.11	0.27	0.00
Japan	0.00	0.00	0.00	0.00	0.47
Malaysia	0.79	0.00	0.00	0.00	0.0
Mozambique	0.38	0.00	0.59	0.35	0.0
New Caledonia	5.28	9.54	12.81	3.30	0.0
Oman	0.35	0.33	0.35	0.3	0.0
Paraguay	0.00	0.00	0.00	0.00	0.0
Peru	0.00	0.00	0.00	0.00	0.0
United Kingdom	0.00	0.00	0.00	2.64	0.0
United States	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.47</b>	<b>0.67</b>	<b>0.63</b>	<b>0.39</b>	<b>0.26</b>



## Total Recordable Injury Frequency Rate (TRIFR):

Total amount of occupational injuries per million hours of exposure.

The occupational injuries occurring with direct and outsourced employees in controlled activities are considered that result in fatality, lost time, restriction of work, or medical treatment (not including first aid).

**Consolidated**

**Direct**

**Outsourced**

<b>Vale</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Argentina	0.00	0.00	0.00	0.00	0.0
Australia	0.00	0.00	0.00	0.00	0.0
Austria	0.00	0.00	0.00	0.00	0.0
Brazil	1.39	2.63	1.22	1.13	0.9
Canada	12.71	10.29	7.54	6.60	4.9
Chile	0.00	0.00	0.00	28.57	4.08
China	0.00	0.00	2.22	0.00	0.0
France	0.00	0.00	0.00	0.00	0.0
India	0.00	0.00	0.00	0.00	0.0
Indonesia	0.55	0.52	0.57	0.71	0.0
Japan	0.00	5.35	0.00	0.00	0.7
Malaysia	1.44	3.22	0.48	0.36	5.17
Mozambique	0.98	0.65	1.09	0.96	0.6
Netherlands	0.00	0.00	0.00	0.00	0.0
New caledonia	9.90	27.88	24.90	12.66	0.0
Oman	0.46	1.11	0.70	0.64	0.6
Paraguay	3.68	3.36	1.71	0.00	0.0
Peru	5.74	0.00	0.00	0.00	0.0
Singapore	0.00	0.00	0.00	0.00	0.0
Switzerland	0.00	0.00	0.00	0.00	1.4
UAE	0.00	0.00	0.00	0.00	0.0
United kingdom	2.30	0.00	1.22	4.84	0.0
United states	0.00	0.00	0.00	0.00	0.0
Uruguay	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>2.25</b>	<b>3.46</b>	<b>1.98</b>	<b>1.41</b>	<b>1.12</b>



<b>Direct</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Argentina	0.00	0.00	0.00	0.00	0.0
Australia	0.00	0.00	0.00	0.00	0.0
Australia	0.00	0.00	0.00	0.00	0.0
Brazil	1.35	2.50	1.06	0.97	0.89
Canada	13.22	14.03	8.20	6.63	5.16
Chile	0.00	0.00	0.00	0.00	0.00
China	0.00	0.00	0.00	0.00	0.0
France	0.00	0.00	0.00	0.00	0.0
India	0.00	0.00	0.00	0.00	0.0
Indonesia	0.15	0.45	0.45	0.00	0.0
Japan	0.00	0.00	0.00	0.00	0.15
Malaysia	1.21	7.90	1.18	1.16	5.97
Mozambique	0.52	0.87	0.92	0.73	0.00
Netherlands	0.00	0.00	0.00	0.00	0.0
New caledonia	7.95	31.38	20.66	13.95	0.0
Oman	0.00	0.00	0.00	1.46	0.00
Paraguay	4.14	3.75	2.08	0.00	0.0
Peru	0.00	0.00	0.00	0.00	0.0
Singapore	0.00	0.00	0.00	0.00	0.0
Switzerland	0.00	0.00	0.00	0.00	0.00
UAE	0.00	0.00	0.00	0.00	0.0
UEA	0.00	0.00	0.00	0.00	0.0
United kingdom	3.52	0.00	0.00	4.48	0.0
United states	0.00	0.00	0.00	0.00	0.0
Uruguay	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>2.47</b>	<b>3.05</b>	<b>1.97</b>	<b>1.43</b>	<b>1.25</b>



<b>Outsourced</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Argentina	0.00	0.00	0.00	0.00	0.00
Australia	0.00	0.00	0.00	0.00	0.00
Brazil	1.43	2.78	1.34	0.39	0.91
Canada	11.69	8.00	6.74	6.56	4.68
Chile	0.00	0.00	0.00	33.49	4.55
China	0.00	0.00	23.97	0.00	0.00
Indonesia	0.76	0.55	0.66	0.19	0.00
Japan	0.00	47.89	0.00	0.00	0.8
Malaysia	1.59	0.00	0.00	0.00	0.00
Mozambique	1.23	0.55	1.19	1.05	0.70
New caledonia	12.19	24.85	29.38	9.91	0.00
Oman	0.71	1.66	1.06	0.30	0.00
Paraguay	0.00	0.00	0.00	0.00	0.66
Peru	9.58	0.00	0.00	0.00	0.00
United kingdom	0.00	0.00	2.86	5.27	0.00
United states	0.00	0.00	0.00	0.00	2.08
<b>Total</b>	<b>2.02</b>	<b>2.34</b>	<b>1.98</b>	<b>1.40</b>	<b>1.06</b>

