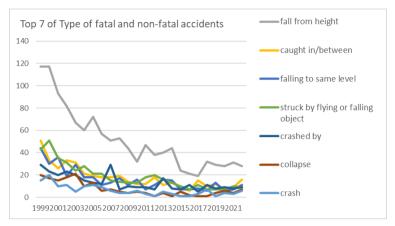
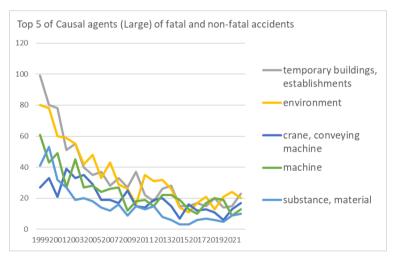
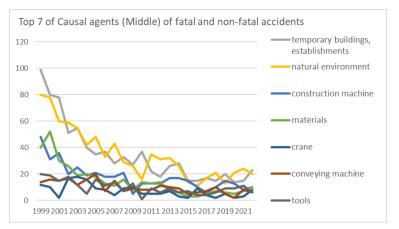
Transition of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)



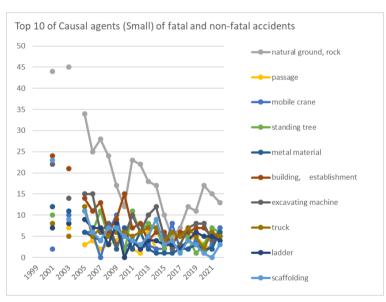
Transition of Top 7 of Type of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)



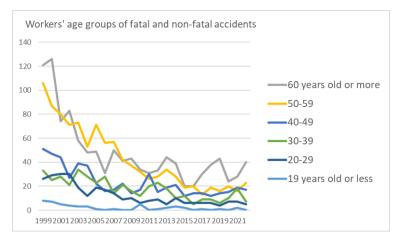
Transition of Top 5 of Causal agents (Large) of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)



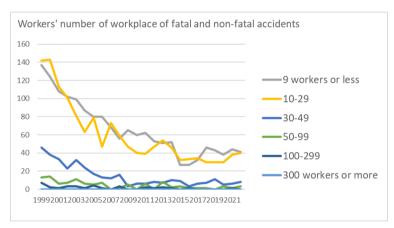
Transition of Top 7 of Causal agents (Middle) of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)



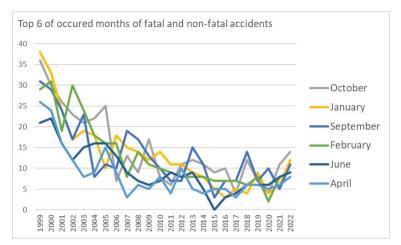
Transition of Top 10 of Causal agents (Small) of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)



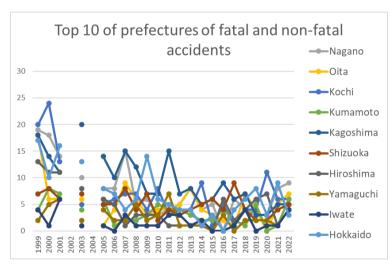
Transition of workers' age groups of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)



Transition of workers' number of workplace of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)



Transition of Top 6 of occured months of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)



Transition of Top 10 of prefectures of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)

Transition of Type of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)

| Type of accidents | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | total | Type of accidents    |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----------------------|
| fall from height  | 117  | 117  | 93   | 82   | 67   | 60   | 72   | 57   | 51   | 53   | 44   | 32   | 47   | 38   | 40   | 44   | 24   | 21   | 19   | 32   | 29   | 28   | 31   | 28   | 1,226 | fall from height     |
| caught in/between | 51   | 33   | 26   | 33   | 31   | 21   | 19   | 18   | 18   | 19   | 14   | 12   | 12   | 18   | 11   | 13   | 9    | 6    | 15   | 10   | 12   | 7    | 9    | 16   | 433   | caught<br>in/between |

| falling to same level                    | 44 | 30 | 36 | 19 | 29 | 18 | 18 | 11 | 13 | 17 | 11 | 16 | 7  | 11 | 16 | 15 | 7  | 7  | 8  | 6  | 13 | 6 | 7  | 11 | 376 | falling to same                       |
|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|-----|---------------------------------------|
| struck by flying or falling object       | 43 | 51 | 35 | 31 | 24 | 28 | 21 | 21 | 15 | 14 | 13 | 13 | 18 | 20 | 16 | 13 | 10 | 7  | 11 | 7  | 7  | 7 | 10 | 9  | 444 | struck by flying<br>or falling object |
| crashed by                               | 29 | 23 | 20 | 23 | 20 | 15 | 13 | 12 | 29 | 7  | 10 | 9  | 9  | 7  | 17 | 8  | 7  | 11 | 5  | 11 | 8  | 9 | 8  | 9  | 319 | crashed by                            |
| collapse                                 | 20 | 17 | 15 | 18 | 21 | 10 | 13 | 6  | 7  | 5  | 4  | 5  | 4  | 1  | 4  | 1  | 5  | 2  | 1  | 1  | 4  | 6 | 4  | 7  | 181 | collapse                              |
| crash                                    | 15 | 20 | 10 | 11 | 5  | 10 | 11 | 9  | 6  | 4  | 4  | 6  | 3  | 1  | 5  | 3  | 1  | 1  | 3  | 7  | 1  | 4 | 3  | 6  | 149 | crash                                 |
| cut                                      | 12 | 10 | 10 | 3  | 17 | 8  | 6  | 4  | 5  | 5  | 7  | 4  | 4  | 3  | 4  | 7  | 2  | 3  | 4  | 4  | 4  | 5 | 1  | 2  | 134 | cut                                   |
| traffic accident (public                 | 2  | 7  | 7  | 6  | 1  | 4  | 4  | 5  | 4  | 4  | 7  | 2  | 3  | 7  | 2  | 5  | 1  | 5  | 3  | 2  | 1  | 2 | 5  | 2  | 91  | traffic accident<br>(public road)     |
| reaction to<br>motion/improper<br>motion | 7  | 7  | 2  | 8  | 6  | 6  | 4  | 3  | 1  | 3  | 1  | 4  | 4  |    | 2  | 1  | 3  | 2  | 2  | 2  | 4  | 1 | 2  | 2  | 77  | reaction to motion/improper motion    |
| others                                   | 1  | 3  | 3  |    | 1  |    | 3  | 1  | 1  |    | 2  |    | 1  | 1  |    |    |    |    |    | 1  |    |   | 5  |    | 23  | others                                |
| contact to high/low-<br>temperature      | 2  | 1  | 1  |    | 2  | 1  |    |    | 1  |    | 1  | 2  |    | 1  | 3  |    |    |    | 1  | 1  | 1  | 1 | 1  |    | 20  | contact to high/low- temperature      |
| contact to harmful substance             |    | 1  | 1  | 1  |    |    |    | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  |    |    |    |    |    |   | 3  |    | 16  | contact to harmful substance          |
| injury to the sole of<br>the foot        | 1  | 1  | 2  |    | 1  |    | 1  |    |    | 2  |    |    | 1  |    |    |    |    |    |    |    |    |   | 1  |    | 10  | injury to the sole                    |
| fire                                     |    |    |    |    |    |    |    |    |    |    |    |    | 1  |    |    |    | 1  |    | 1  |    |    |   |    |    | 3   | fire                                  |
| unclassifiable                           |    |    |    |    | 1  |    |    |    | 1  |    |    |    |    |    |    |    | 1  |    |    |    |    |   |    |    | 3   | unclassifiable                        |
| traffic accident                         |    |    |    | 1  |    |    |    |    |    |    |    |    |    |    | 1  |    |    |    |    |    |    |   |    |    | 2   | traffic accident                      |

| (others)       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |       | (others)       |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|-------|----------------|
| explosion      | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    | 1     | explosion      |
| burst          |     |     |     |     |     |     |     |     |     |     | 1   |     |     |     |     |     |    |    |    |    |    |    |    |    | 1     | burst          |
| drown          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |       | drown          |
| electric shock |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |       | electric shock |
| total          | 345 | 321 | 261 | 236 | 226 | 181 | 185 | 148 | 153 | 135 | 120 | 106 | 115 | 109 | 122 | 111 | 71 | 65 | 73 | 84 | 84 | 76 | 90 | 92 | 3,509 | total          |

Transition of Causal agents (Large) of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)

| Causal (L) agents                      | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | total | Causal (L)                                |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|---|
| temporary buildings,<br>establishments | 99   | 80   | 78   | 51   | 55   | 40   | 35   | 37   | 28   | 33   | 27   | 37   | 22   | 18   | 26   | 28   | 15   | 15   | 17   | 15   | 20   | 14   | 15   | 23   |       | temporary<br>buildings,<br>establishments |
| environment                            | 80   | 78   | 60   | 59   | 55   | 42   | 48   | 33   | 43   | 29   | 26   | 16   | 35   | 31   | 32   | 26   | 14   | 11   | 17   | 21   | 13   | 21   | 24   | 20   | 834   | environment                               |
| crane, conveying<br>machine            | 27   | 33   | 21   | 39   | 33   | 35   | 29   | 19   | 19   | 17   | 25   | 15   | 14   | 19   | 20   | 15   | 7    | 16   | 12   | 13   | 11   | 6    | 13   | 17   | 475   | crane,<br>conveying<br>machine            |
| machine                                | 61   | 43   | 49   | 27   | 45   | 27   | 28   | 24   | 26   | 27   | 12   | 18   | 19   | 15   | 22   | 22   | 19   | 13   | 10   | 17   | 20   | 19   | 9    | 13   | 585   | machine                                   |
| substance, material                    | 41   | 53   | 32   | 27   | 19   | 20   | 18   | 14   | 12   | 16   | 9    | 15   | 13   | 15   | 8    | 6    | 3    | 3    | 6    | 7    | 6    | 5    | 9    | 10   | 367   | substance,<br>material                    |
| other equipment                        | 31   | 28   | 19   | 25   | 16   | 12   | 21   | 18   | 21   | 7    | 16   | 4    | 10   | 9    | 12   | 12   | 9    | 6    | 8    | 9    | 10   | 9    | 13   | 9    | 334   | other<br>equipment                        |
| load                                   | 2    | 2    | 2    | 5    | 2    | 3    | 4    | 2    | 2    | 5    | 4    |      | 1    | 1    | 1    | 2    | 1    | 1    | 2    | 1    | 2    | 1    | 1    |      | 47    | load                                      |
| others                                 | 4    | 4    |      | 3    | 1    | 2    | 2    | 1    | 2    | 1    | 1    | 1    | 1    | 1    | 1    |      | 3    |      | 1    | 1    | 2    | 1    | 6    |      | 39    | others                                    |
| total                                  | 345  | 321  | 261  | 236  | 226  | 181  | 185  | 148  | 153  | 135  | 120  | 106  | 115  | 109  | 122  | 111  | 71   | 65   | 73   | 84   | 84   | 76   | 90   | 92   | 3,509 | total                                     |

## Transition of Causal agents (Middle) of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)

| Causal (M) agents                      | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |     | Causal (M)                                |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|---|
| temporary buildings,<br>establishments | 99   | 80   | 78   | 51   | 55   | 40   | 35   | 37   | 28   | 33   | 27   | 37   | 22   | 18   | 26   | 28   | 15   | 15   | 17   | 15   | 20   | 14   | 15   | 23   | 828 | temporary<br>buildings,<br>establishments |
| natural environment                    | 80   | 78   | 60   | 59   | 55   | 42   | 48   | 33   | 43   | 29   | 26   | 16   | 35   | 31   | 32   | 26   | 14   | 11   | 17   | 21   | 13   | 21   | 24   | 20   | 834 | natural<br>environment                    |
| construction machine                   | 48   | 31   | 36   | 20   | 25   | 19   | 21   | 18   | 18   | 21   | 5    | 13   | 13   | 13   | 17   | 17   | 15   | 10   | 6    | 10   | 15   | 13   | 8    | 10   | 422 | construction<br>machine                   |
| materials                              | 40   | 52   | 30   | 26   | 19   | 20   | 18   | 13   | 11   | 16   | 8    | 14   | 13   | 14   | 7    | 6    | 3    | 3    | 5    | 7    | 6    | 5    | 7    | 10   | 353 | materials                                 |
| crane                                  | 12   | 10   | 2    | 17   | 18   | 16   | 9    | 8    | 4    | 9    | 10   | 5    | 5    | 5    | 7    | 3    | 2    | 9    | 4    | 2    | 5    | 2    | 3    | 8    | 175 | crane                                     |
| conveying machine                      | 14   | 16   | 15   | 17   | 12   | 16   | 20   | 7    | 15   | 7    | 9    | 8    | 8    | 11   | 10   | 9    | 5    | 6    | 7    | 10   | 5    | 2    | 8    | 6    | 243 | conveying<br>machine                      |
| tools                                  | 20   | 19   | 15   | 18   | 12   | 5    | 16   | 11   | 14   | 7    | 13   | 1    | 9    | 6    | 9    | 6    | 7    | 4    | 4    | 6    | 9    | 9    | 11   | 6    | 237 | tools                                     |
| vehicle                                | 1    | 7    | 4    | 5    | 3    | 3    |      | 4    |      | 1    | 6    | 2    | 1    | 3    | 3    | 3    |      | 1    | 1    | 1    | 1    | 2    | 2    | 3    | 57  | vehicle                                   |
| human power machine,                   | 8    | 6    | 4    | 6    | 4    | 6    | 5    | 5    | 4    |      | 3    | 3    | 1    | 2    | 2    | 5    | 2    |      | 4    | 1    |      |      | 1    | 2    | 74  | human power<br>machine, tools             |
| general machine                        | 5    | 4    | 7    | 3    | 6    | 4    | 5    | 2    | 3    | 1    | 2    | 3    | 2    | 1    | 4    | 1    | 3    |      | 1    | 2    | 1    | 3    | 1    | 2    | 66  | general<br>machine                        |
| other equipments,                      | 2    | 3    |      | 1    |      | 1    |      | 2    | 3    |      |      |      |      | 1    |      | 1    |      | 2    |      | 2    | 1    |      | 1    | 1    | 21  | other<br>equipments,<br>facilities        |
|  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     | power                                     |

| power transmission<br>mechanism | 1 |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   | 1 |    | transmission<br>mechanism         |
|---------------------------------|---|---|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----------------------------------|
| woodworking machine             | 7 | 6 | 6 | 3 | 11 | 4 | 2 | 4 | 3 | 4 | 4 | 1 | 3 | 1 | 1 | 4 |   | 2 | 3 |   | 4 | 1 |   |   | 74 | woodworking<br>machine            |
| load                            | 2 | 2 | 2 | 5 | 2  | 3 | 4 | 2 | 2 | 5 | 4 |   | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 1 |   | 47 | load                              |
| no causal agent                 | 3 | 4 |   | 3 | 1  | 2 | 2 | 1 | 1 |   |   | 1 |   |   | 1 |   | 2 |   | 1 | 1 | 2 |   | 1 |   | 26 | no causal<br>agent                |
| metal manufacturing<br>machine  |   | 2 |   | 1 | 3  |   |   |   | 2 | 1 | 1 | 1 | 1 |   |   |   | 1 | 1 |   | 3 |   | 1 |   |   |    | metal<br>manufacturing<br>machine |
| hazards, harmful<br>substances  | 1 | 1 | 2 | 1 |    |   |   | 1 | 1 |   | 1 | 1 |   | 1 | 1 |   |   |   | 1 |   |   |   | 2 |   | 14 | hazards,<br>harmful<br>substances |
| other causal agent              |   |   |   |   |    |   |   |   |   | 1 | 1 |   | 1 |   |   |   |   |   |   |   |   | 1 | 5 |   | 9  | other causal<br>agent             |
| unclassifiable                  | 1 |   |   |   |    |   |   |   | 1 |   |   |   |   | 1 |   |   | 1 |   |   |   |   |   |   |   | 4  | unclassifiable                    |
| mobile silviculture<br>machine  |   |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   | 1 |   |   | 2  | mobile<br>silviculture<br>machine |
| pressure vessel                 | 1 |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  | pressure vessel                   |
| electric equipment              |   |   |   |   |    |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   | 1  | electric<br>equipment             |
| engine                          |   |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | engine                            |
| chemical facilities             |   |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | chemical<br>facilities            |

| wolding aguinment |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |       | welding       |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|-------|---------------|
| welding equipment |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |       | equipment     |
| kiln, caldron     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |       | kiln, caldron |
| total             | 345 | 321 | 261 | 236 | 226 | 181 | 185 | 148 | 153 | 135 | 120 | 106 | 115 | 109 | 122 | 111 | 71 | 65 | 73 | 84 | 84 | 76 | 90 | 92 | 3,509 | total         |

Transition of Causal agents (Small) of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)

| Causal (S) agents                               | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | total | Causal (S) agents                               |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|---|
| natural ground,                                 |      |      | 44   |      | 45   |      | 34   | 25   | 28   | 24   | 17   | 12   | 23   | 22   | 18   | 17   | 10   | 5    | 7    | 12   | 11   | 17   | 15   | 13   | 399   | natural ground,                                 |
| passage   |      |      | 12   |      | 7    |      | 3    | 4    | 2    | 3    | 4    | 7    | 2    | 1    | 6    | 2    | 2    | 4    | 6    | 4    | 5    | 3    | 2    | 7    | 86    | passage   |
| mobile crane                                    |      |      | 2    |      | 10   |      | 6    | 6    |      | 6    | 10   | 2    | 4    | 2    | 3    | 2    | 2    | 8    | 2    | 2    | 4    | 1    | 3    | 7    | 82    | mobile crane                                    |
| standing tree                                   |      |      | 10   |      | 8    |      | 11   | 6    | 11   | 5    | 7    | 1    | 11   | 6    | 8    | 7    | 2    | 6    | 5    | 5    | 1    | 3    | 7    | 6    | 126   | standing tree                                   |
| metal material                                  |      |      | 12   |      | 11   |      | 6    | 5    | 4    | 7    | 2    | 7    | 2    | 6    | 2    | 1    | 1    | 1    | 2    | 2    | 3    | 2    | 2    | 6    | 84    | metal material                                  |
| building,<br>establishment                      |      |      | 24   |      | 21   |      | 14   | 11   | 13   | 6    | 9    | 15   | 7    | 8    | 4    | 6    | 6    | 3    | 6    | 6    | 7    | 7    | 5    | 5    | 183   | building,<br>establishment                      |
| excavating machine                              |      |      | 22   |      | 14   |      | 15   | 15   | 6    | 8    | 3    | 5    | 10   | 6    | 10   | 12   | 5    | 2    | 3    | 7    | 8    | 8    | 4    | 5    | 168   | excavating machine                              |
| truck   |      |      | 8    |      | 5    |      | 12   | 5    | 7    | 5    | 6    | 6    | 5    | 6    | 7    | 7    | 4    | 6    | 5    | 7    | 5    | 2    | 6    | 5    | 119   | truck   |
| ladder  |      |      | 7    |      | 8    |      | 9    | 7    | 7    | 3    | 8    |      | 4    | 2    | 4    | 4    | 3    | 3    | 2    | 4    | 6    | 5    | 5    | 4    | 95    | ladder  |
| scaffolding                                     |      |      | 23   |      | 9    |      | 11   | 6    | 4    | 7    | 7    | 5    | 4    | 3    | 5    | 9    | 3    | 4    | 1    | 4    | 3    | 1    |      | 3    | 112   | scaffolding                                     |
| other temporary<br>buildings,<br>establishments |      |      | 3    |      | 3    |      | 1    | 6    | 3    | 4    | 1    | 5    | 6    | 4    | 7    | 4    | 1    | 2    | 3    |      | 1    | 1    | 4    | 3    |       | other temporary<br>buildings,<br>establishments |
| cars, bus,<br>motorcycle                        |      |      | 4    |      | 3    |      |      | 4    |      | 1    | 6    | 2    | 1    | 3    | 3    | 3    |      | 1    | 1    | 1    | 1    | 2    | 2    | 3    | 41    | cars, bus,<br>motorcycle                        |

| other construction machines                     |  | 9 | 6 | 2 |   | 2 | 5 | 2 | 1 | 2 | 2 | 5 | 3 | 6 | 3 | 1 | 2 | 3 | 3 | 2 | 2 | 61 | other construction machines                     |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| other general power machines                    |  | 7 | 5 | 5 | 2 | 3 | 1 | 2 | 1 | 2 | 1 | 4 | 1 | 3 |   | 1 | 2 | 1 | 3 | 1 | 2 | 47 | other general power machines                    |
| stone, sand,<br>substance                       |  | 9 | 3 | 6 | 3 | 1 | 2 | 4 | 4 | 2 |   | 2 | 3 | 2 |   | 1 | 1 | 2 |   |   | 2 | 47 | stone, sand,<br>substance                       |
| hand tool                                       |  | 4 | 4 | 5 | 5 | 3 |   | 3 | 3 | 1 | 2 | 1 | 5 | 2 |   | 3 | 1 |   |   | 1 | 2 | 45 | hand tool                                       |
| stairs, landing stage                           |  | 3 | 5 | 2 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | 4 | 3 | 1 |   |   | 1 | 2 | 1 | 1 | 2 | 36 | stairs, landing stage                           |
| timbering                                       |  | 6 | 3 | 2 | 2 | 2 | 3 | 1 | 1 | 1 |   |   |   |   |   |   |   | 1 |   |   | 2 | 24 | timbering                                       |
| other tools                                     |  | 6 | 2 | 6 | 4 | 5 | 3 | 3 | 1 | 5 | 3 | 4 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 3 | 1 | 57 | other tools                                     |
| leveling,<br>transporting or<br>loading machine |  | 5 | 3 | 3 | 3 | 8 | 4 |   | 4 | 1 | 3 | 2 | 1 | 3 | 3 | 1 | 1 | 4 |   | 1 | 1 | 51 | leveling,<br>transporting or<br>loading machine |
| lumber, bamboo                                  |  | 5 | 2 | 5 | 2 | 4 | 3 | 1 | 3 | 4 | 3 | 3 |   |   | 1 |   | 3 |   | 2 | 3 | 1 | 45 | lumber, bamboo                                  |
| working platform,<br>boot board                 |  | 7 | 7 | 2 | 4 | 1 | 6 | 3 | 2 | 1 |   |   | 4 |   | 1 | 1 |   |   | 1 | 3 | 1 | 44 | working platform,<br>boot board                 |
| other materials                                 |  | 4 | 3 | 1 | 3 | 2 | 4 | 1 |   | 5 | 5 |   | 2 |   | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 39 | other materials                                 |
| other environments                              |  | 4 | 2 | 3 | 1 | 3 |   |   | 1 | 1 | 1 | 3 | 2 | 2 |   | 4 | 2 | 1 |   | 1 | 1 | 32 | other environments                              |
| crane   |  |   | 8 | 2 |   | 2 | 3 |   | 2 |   | 2 | 4 | 1 |   |   | 1 |   | 1 | 1 |   | 1 | 28 | crane   |
| slinging tool                                   |  | 2 | 2 | 1 |   | 2 | 1 | 2 |   |   | 1 | 1 |   | 3 |   |   | 1 | 1 | 2 | 3 | 1 | 23 | slinging tool                                   |
| rough terrain hauler                            |  | 2 | 3 | 1 | 1 |   |   | 1 |   | 2 | 1 | 1 | 1 |   |   | 1 |   |   |   |   | 1 | 15 | rough terrain hauler                            |
| other equipment,                                |  |   |   |   | 2 | 3 |   |   |   |   | 1 |   | 1 |   | 2 |   | 2 | 1 |   | 1 | 1 | 14 | other equipment,                                |
| demolition machine                              |  |   | 1 |   |   | 1 | 3 |   | 1 |   |   |   |   |   |   | 1 |   |   | 1 |   | 1 | 9  | demolition machine                              |
| power transmission                              |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | power transmission                              |

| mechanism   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   | 1 | 2  | mechanism   |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| vehicle for high lift<br>work                       |  |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   | 1 | 2  | vehicle for high lift<br>work                       |
| chain saw   |  | 3 | 8 |   | 3 |   | 2 | 3 | 1 | 1 |   | 1 | 2 |   | 2 | 2 |   | 2 | 1 |   |   | 31 | chain saw   |
| other powered conveying machines                    |  | 5 | 2 | 6 | 1 | 6 |   | 2 | 1 | 1 | 3 | 1 | 1 |   |   | 1 | 1 |   |   |   |   | 31 | other powered conveying machines                    |
| load  |  | 2 | 2 | 3 | 2 | 2 | 4 | 4 |   | 1 | 1 | 1 | 2 | 1 |   | 2 | 1 | 2 | 1 |   |   | 31 | load  |
| circular sawing                                     |  | 3 | 3 | 2 |   | 3 | 1 | 1 |   | 2 | 1 |   | 2 |   |   | 1 |   | 1 |   |   |   | 20 | circular sawing<br>machine                          |
| no causal agent                                     |  |   | 1 | 2 | 1 | 1 |   |   | 1 |   |   | 1 |   | 2 |   | 1 | 1 | 2 |   | 1 |   | 14 | no causal agent                                     |
| high/cold<br>temperature<br>environment             |  | 1 |   |   | 1 | 1 |   | 1 | 1 |   | 1 | 3 |   |   |   | 1 | 1 |   | 1 | 1 |   | 13 | high/cold<br>temperature<br>environment             |
| grinding machine,<br>buffing machine                |  |   | 1 |   |   | 1 | 1 | 1 |   | 1 |   |   |   | 1 | 1 |   | 2 |   | 1 |   |   | 10 | grinding machine,<br>buffing machine                |
| other causal agent                                  |  |   |   |   |   |   | 1 | 1 |   | 1 |   |   |   |   |   |   |   |   | 1 | 5 |   | 9  | other causal agent                                  |
| foundation work                                     |  |   | 1 | 1 |   |   | 1 |   |   |   | 2 |   |   | 1 |   |   |   |   | 1 | 1 |   | 8  | foundation work                                     |
| roof, beam, haze,<br>crossbeam,<br>principal rafter |  |   |   |   | 3 |   | 1 |   | 1 |   |   |   |   | 1 | 1 |   |   |   |   |   |   | 7  | roof, beam, haze,<br>crossbeam,<br>principal rafter |
| railway equipment                                   |  |   |   |   |   | 1 | 1 |   | 1 |   |   |   |   |   |   |   | 1 |   |   | 2 |   | 6  | railway equipment                                   |
| hardening machine                                   |  |   |   |   |   | 1 |   |   | 2 |   |   |   |   |   | 2 |   |   |   |   |   |   | 5  | hardening machine                                   |
| other metal<br>manufacturing                        |  |   | 2 |   |   | 1 |   |   | 1 |   |   |   |   |   |   |   | 1 |   |   |   |   | 5  | other metal<br>manufacturing                        |

| machines                               |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | machines                                     |
|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| lumberyard equipment, logging cableway |  |   |   | 1 | 1 | 1 |   |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   | lumberyard<br>equipment, logging<br>cableway |
| other powered crane                    |  |   |   |   | 1 | 1 |   |   |   | 1 |   |   |   | 1 | 1 |   |   |   |   | 5 | other powered crane                          |
| conveyor                               |  |   | 1 | 1 |   | 1 |   |   |   |   | 1 |   |   |   |   | 1 |   |   |   | 5 | conveyor                                     |
| harmful substance                      |  | 1 |   |   |   |   |   | 1 |   |   | 1 |   |   |   |   |   |   |   | 2 | 5 | harmful substance                            |
| water                                  |  | 1 |   |   |   |   |   | 1 | 1 |   | 1 |   |   |   |   | 1 |   |   |   | 5 | water  |
| opening                                |  |   |   |   |   |   |   | 1 |   |   | 1 |   | 1 |   |   |   | 1 |   |   | 4 | opening                                      |
| other hazards,<br>harmful substances   |  | 1 |   |   |   | 1 |   |   | 1 |   |   | 1 |   |   |   |   |   |   |   | 4 | other hazards,<br>harmful substances         |
| machine/equipment as load              |  |   |   | 1 |   |   | 1 |   |   |   |   |   |   | 1 |   |   |   |   | 1 | 4 | machine/equipment<br>as load                 |
| other woodworking machines             |  |   |   |   | 1 |   | 1 |   |   |   |   |   |   |   |   |   | 1 |   |   | 3 | other woodworking machines                   |
| mixer, grinder                         |  |   | 1 |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   | 3 | mixer, grinder                               |
| loader                                 |  |   | 1 |   |   |   | 1 |   |   |   |   | 1 |   |   |   |   |   |   |   | 3 | loader                                       |
| human power<br>machine                 |  |   |   |   |   | 1 |   |   |   |   |   | 1 |   |   | 1 |   |   |   |   | 3 | human power<br>machine                       |
| unclassifiable                         |  |   |   |   |   | 1 |   |   |   |   | 1 |   | 1 |   |   |   |   |   |   | 3 | unclassifiable                               |
| felling machine                        |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   | 1 |   | 2 | felling machine                              |
| inflammable<br>substance               |  |   |   |   | 1 |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   | 2 | inflammable<br>substance                     |

| forklift             |  |  |  |  |  |  |  |   | 1 |  |  |  | 1 | forklift             |
|----------------------|--|--|--|--|--|--|--|---|---|--|--|--|---|----------------------|
| transmission         |  |  |  |  |  |  |  | 1 |   |  |  |  | 1 | transmission         |
| engine               |  |  |  |  |  |  |  |   |   |  |  |  |   | engine               |
| band sawing          |  |  |  |  |  |  |  |   |   |  |  |  |   | band sawing          |
| machine              |  |  |  |  |  |  |  |   |   |  |  |  |   | machine              |
| wood planer          |  |  |  |  |  |  |  |   |   |  |  |  |   | wood planer          |
| machine              |  |  |  |  |  |  |  |   |   |  |  |  |   | machine              |
| hollow chisel        |  |  |  |  |  |  |  |   |   |  |  |  |   | hollow chisel        |
| mortiser, wood       |  |  |  |  |  |  |  |   |   |  |  |  |   | mortiser, wood       |
| borer                |  |  |  |  |  |  |  |   |   |  |  |  |   | borer                |
| chamfering           |  |  |  |  |  |  |  |   |   |  |  |  |   | chamfering           |
| machine, router,     |  |  |  |  |  |  |  |   |   |  |  |  |   | machine, router,     |
| woodworking          |  |  |  |  |  |  |  |   |   |  |  |  |   | woodworking          |
| milling machine      |  |  |  |  |  |  |  |   |   |  |  |  |   | milling machine      |
| lathe                |  |  |  |  |  |  |  |   |   |  |  |  |   | lathe                |
| drill press, milling |  |  |  |  |  |  |  |   |   |  |  |  |   | drill press, milling |
| machine              |  |  |  |  |  |  |  |   |   |  |  |  |   | machine              |
| power press          |  |  |  |  |  |  |  |   |   |  |  |  |   | power press          |
| forging pressure     |  |  |  |  |  |  |  |   |   |  |  |  |   | forging pressure     |
| hammer               |  |  |  |  |  |  |  |   |   |  |  |  |   | hammer               |
| shearing machine     |  |  |  |  |  |  |  |   |   |  |  |  |   | shearing machine     |
| centrifugal machine  |  |  |  |  |  |  |  |   |   |  |  |  |   | centrifugal machine  |
| roll machine (except |  |  |  |  |  |  |  |   |   |  |  |  |   | roll machine (except |
| printingroll         |  |  |  |  |  |  |  |   |   |  |  |  |   | printingroll         |
| machine)             |  |  |  |  |  |  |  |   |   |  |  |  |   | machine)             |

| injection molding                   | injection molding    |
|-------------------------------------|----------------------|
| machine                             | machine              |
| food manufacturing                  | food manufacturing   |
| machine                             | machine              |
| printing machine printing machine   | printing machine     |
| industrial robot                    | industrial robot     |
| mobile logging                      | mobile logging       |
| machine                             | machine              |
| skyline yarding                     | skyline yarding      |
| machine                             | machine              |
| other mobile other mobile           | other mobile         |
| silviculture machine                | silviculture machine |
| derrick crane                       | derrick crane        |
| elevator, lift                      | elevator, lift       |
| cargo lifting                       | cargo lifting        |
| appliance appliance                 | appliance            |
| gondola                             | gondola              |
| simple skyline                      | simple skyline       |
| yarding equipment yarding equipment | yarding equipment    |
| straddle carrier                    | straddle carrier     |
| railway vehicle                     | railway vehicle      |
| other vehicles                      | other vehicles       |
| boiler                              | boiler               |
| pressure vessel                     | pressure vessel      |
| other pressure                      | other pressure       |

| vessels             |  |          |         |  |  |  |  |  |  |  |  |  | , | vessels             |
|---------------------|--|----------|---------|--|--|--|--|--|--|--|--|--|---|---------------------|
| chemical facilities |  |          |         |  |  |  |  |  |  |  |  |  |   | chemical facilities |
| gas welding         |  |          |         |  |  |  |  |  |  |  |  |  |   | gas welding         |
| equipment           |  | <u> </u> | <u></u> |  |  |  |  |  |  |  |  |  |   | equipment           |
| arc welding         |  |          |         |  |  |  |  |  |  |  |  |  |   | arc welding         |
| equipment           |  |          |         |  |  |  |  |  |  |  |  |  |   | equipment           |
| other welding       |  |          |         |  |  |  |  |  |  |  |  |  |   | other welding       |
| equipment           |  |          |         |  |  |  |  |  |  |  |  |  |   | equipment           |
| kiln, caldron       |  |          |         |  |  |  |  |  |  |  |  |  |   | kiln, caldron       |
| industrial dryer    |  |          |         |  |  |  |  |  |  |  |  |  |   | industrial dryer    |
| other kiln, caldron |  |          |         |  |  |  |  |  |  |  |  |  |   | other kiln, caldron |
| electric power      |  |          |         |  |  |  |  |  |  |  |  |  |   | electric power      |
| facilities          |  |          |         |  |  |  |  |  |  |  |  |  |   | facilities          |
| other electrical    |  |          |         |  |  |  |  |  |  |  |  |  |   | other electrical    |
| equipment           |  |          |         |  |  |  |  |  |  |  |  |  |   | equipment           |
| human power         |  |          |         |  |  |  |  |  |  |  |  |  |   | human power         |
| cranes              |  |          |         |  |  |  |  |  |  |  |  |  |   | cranes              |
| human power         |  |          |         |  |  |  |  |  |  |  |  |  |   | human power         |
| hauling equipment   |  |          |         |  |  |  |  |  |  |  |  |  |   | hauling equipment   |
| explosive substance |  |          |         |  |  |  |  |  |  |  |  |  |   | explosive substance |
| inflammable gas     |  |          |         |  |  |  |  |  |  |  |  |  |   | inflammable gas     |
| radiation           |  |          |         |  |  |  |  |  |  |  |  |  |   | radiation           |
| abnormal            |  |          |         |  |  |  |  |  |  |  |  |  |   | abnormal            |
| environment         |  |          |         |  |  |  |  |  |  |  |  |  |   | environment         |
|                     |  |          |         |  |  |  |  |  |  |  |  |  |   |                     |

| total | 3- | 45 | 321 | 261 | 236 | 226 | 181 | 185 | 148 | 153 | 135 | 120 | 106 | 115 | 109 | 122 | 111 | 71 | 65   | 73   | 84   | 84   | 76 | 90  | 92 | 3,509 | total | I |   |
|-------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|------|------|------|------|----|-----|----|-------|-------|---|---|
| 11    | -  |    | -   | 11  |     | 1   |     |     |     |     |     |     |     |     |     |     |     | ll | 11 - | 11 - | 11 - | 11 - | 11 | 11. | 11 | -,    |       |   | i |

Transition of workers' age groups of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)

| Age                  | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | total | Age                  |
|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----------------------|
| 60 years old or      | 121  | 126  | 74   | 83   | 58   | 48   | 49   | 31   | 50   | 41   | 43   | 34   | 31   | 33   | 44   | 39   | 20   | 20   | 30   | 38   | 43   | 24   | 28   | 40   | 1,148 | 60 years old or      |
| more                 |      | 120  |      |      |      |      |      |      |      |      | 13   |      |      |      |      |      |      |      |      |      | 13   |      |      |      | 1,140 | more                 |
| 50-59                | 106  | 87   | 80   | 71   | 73   | 53   | 71   | 56   | 57   | 42   | 37   | 32   | 26   | 28   | 34   | 28   | 19   | 20   | 13   | 19   | 16   | 20   | 16   | 23   | 1,027 | 50-59                |
| 40-49                | 51   | 47   | 44   | 27   | 39   | 37   | 22   | 16   | 17   | 22   | 14   | 17   | 30   | 15   | 19   | 21   | 12   | 14   | 14   | 12   | 14   | 15   | 19   | 17   | 555   | 40-49                |
| 30-39                | 33   | 25   | 28   | 21   | 34   | 28   | 23   | 28   | 14   | 21   | 16   | 12   | 20   | 23   | 18   | 10   | 12   | 5    | 9    | 9    | 6    | 10   | 18   | 7    | 430   | 30-39                |
| 20-29                | 26   | 29   | 30   | 30   | 19   | 12   | 19   | 17   | 14   | 9    | 10   | 6    | 8    | 9    | 5    | 10   | 6    | 6    | 6    | 6    | 4    | 7    | 7    | 5    | 300   | 20-29                |
| 19 years old or less | 8    | 7    | 5    | 4    | 3    | 3    | 1    |      | 1    |      |      | 5    |      | 1    | 2    | 3    | 2    |      | 1    |      | 1    |      | 2    |      | 49    | 19 years old or less |
| total                | 345  | 321  | 261  | 236  | 226  | 181  | 185  | 148  | 153  | 135  | 120  | 106  | 115  | 109  | 122  | 111  | 71   | 65   | 73   | 84   | 84   | 76   | 90   | 92   | 3,509 | total                |

Transition of workers' number of workplace of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)

| Workers scale     | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | total | Workers scale     |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------------------|
| 9 workers or less | 137  | 124  | 108  | 102  | 99   | 87   | 80   | 80   | 68   | 56   | 65   | 60   | 62   | 53   | 51   | 52   | 27   | 27   | 32   | 46   | 43   | 38   | 44   | 41   | 1,582 | 9 workers or less |
| 10-29             | 142  | 143  | 113  | 101  | 81   | 63   | 79   | 47   | 73   | 59   | 47   | 40   | 39   | 47   | 54   | 46   | 32   | 33   | 34   | 30   | 30   | 30   | 38   | 40   | 1,441 | 10-29             |
| 30-49             | 46   | 38   | 33   | 23   | 32   | 24   | 17   | 13   | 12   | 16   | 3    | 6    | 6    | 8    | 7    | 10   | 9    | 3    | 6    | 7    | 11   | 5    | 6    | 8    | 349   | 30-49             |
| 50-99             | 13   | 14   | 6    | 7    | 11   | 6    | 5    | 7    |      | 1    | 5    |      | 6    |      | 8    | 2    | 3    | 1    | 1    | 1    |      | 3    | 1    | 3    | 104   | 50-99             |
| 100-299           | 7    | 2    | 1    | 3    | 3    | 1    | 4    | 1    |      | 3    |      |      | 2    | 1    | 2    | 1    |      | 1    |      |      |      |      | 1    |      | 33    | 100-299           |
| 300 workers or    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       | 300 workers or    |
| more              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       | more              |
| total             | 345  | 321  | 261  | 236  | 226  | 181  | 185  | 148  | 153  | 135  | 120  | 106  | 115  | 109  | 122  | 111  | 71   | 65   | 73   | 84   | 84   | 76   | 90   | 92   | 3,509 | total             |

## Transition of occured months of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)

| Month     | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | total | Month     |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-----------|
| October   | 36   | 30   | 26   | 23   | 21   | 22   | 25   | 7    | 13   | 9    | 17   | 8    | 6    | 11   | 12   | 11   | 9    | 10   | 4    | 12   | 7    | 4    | 11   | 14   | 348   | October   |
| January   | 38   | 33   | 24   | 17   | 19   | 18   | 10   | 18   | 15   | 14   | 12   | 14   | 11   | 11   | 9    | 8    | 5    | 3    | 5    | 4    | 9    | 4    | 6    | 12   | 319   | January   |
| September | 31   | 29   | 24   | 17   | 23   | 8    | 11   | 10   | 19   | 17   | 13   | 10   | 7    | 7    | 15   | 11   | 3    | 7    | 7    | 14   | 7    | 10   | 5    | 11   | 316   | September |
| February  | 29   | 31   | 19   | 30   | 24   | 18   | 16   | 16   | 8    | 14   | 11   | 10   | 9    | 8    | 8    | 8    | 7    | 7    | 7    | 6    | 8    | 2    | 8    | 9    | 313   | February  |
| June      | 21   | 22   | 16   | 12   | 15   | 16   | 16   | 13   | 9    | 7    | 6    | 7    | 9    | 8    | 9    | 5    |      | 3    | 4    | 6    | 6    | 6    | 8    | 9    | 233   | June      |
| April     | 26   | 24   | 16   | 12   | 8    | 9    | 15   | 9    | 3    | 6    | 5    | 8    | 4    | 10   | 5    | 4    | 5    | 5    | 3    | 6    | 6    | 5    | 6    | 8    | 208   | April     |
| March     | 25   | 23   | 29   | 19   | 23   | 21   | 11   | 10   | 19   | 10   | 6    | 7    | 14   | 8    | 12   | 8    | 11   | 5    | 6    | 5    | 4    | 7    | 4    | 6    | 293   | March     |
| November  | 41   | 24   | 26   | 23   | 23   | 17   | 24   | 13   | 10   | 16   | 13   | 9    | 13   | 9    | 10   | 17   | 7    | 5    | 9    | 5    | 10   | 8    | 9    | 5    | 346   | November  |
| July      | 28   | 29   | 27   | 26   | 16   | 15   | 18   | 12   | 9    | 12   | 9    | 6    | 10   | 16   | 18   | 14   | 9    | 3    | 6    | 11   | 6    | 5    | 10   | 5    | 320   | July      |
| August    | 23   | 26   | 17   | 17   | 16   | 14   | 13   | 21   | 14   | 6    | 6    | 10   | 8    | 7    | 14   | 9    | 9    | 8    | 8    | 5    | 8    | 7    | 9    | 5    | 280   | August    |
| December  | 21   | 31   | 21   | 19   | 22   | 9    | 15   | 9    | 23   | 16   | 12   | 4    | 8    | 6    | 7    | 8    | 1    | 3    | 5    | 10   | 6    | 10   | 8    | 5    | 279   | December  |
| May       | 26   | 19   | 16   | 21   | 16   | 14   | 11   | 10   | 11   | 8    | 10   | 13   | 16   | 8    | 3    | 8    | 5    | 6    | 9    |      | 7    | 8    | 6    | 3    | 254   | May       |
| total     | 345  | 321  | 261  | 236  | 226  | 181  | 185  | 148  | 153  | 135  | 120  | 106  | 115  | 109  | 122  | 111  | 71   | 65   | 73   | 84   | 84   | 76   | 90   | 92   | 3,509 | total     |

## Transition of prefectures of fatal and non-fatal accidents in 030108 sand collapse prevention civil engineering work in Japan (1999-2022)

| Prefecture | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | total | Prefecture |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------------|
| Nagano     | 19   | 18   | 14   |      | 10   |      | 8    | 8    | 15   | 5    | 6    | 3    | 4    | 5    | 8    | 4    | 5    |      | 6    | 4    | 3    | 3    | 8    | 9    | 165   | Nagano     |
| Oita       | 18   | 6    | 6    |      | 6    |      | 1    | 4    | 9    | 6    | 3    | 4    | 4    | 5    | 8    | 4    | 3    | 2    | 1    | 7    | 4    |      | 5    | 7    | 113   | Oita       |
| Kochi      | 20   | 24   | 13   |      | 5    |      | 5    | 6    | 7    | 7    | 4    | 8    | 3    | 4    | 4    | 9    | 1    | 5    | 1    | 4    | 4    | 11   | 6    | 6    | 157   | Kochi      |
| Kumamoto   | 4    | 8    | 7    |      | 4    |      | 6    | 1    | 2    | 2    | 3    | 5    | 4    | 4    | 3    | 2    | 2    | 4    | 2    | 1    | 5    |      | 1    | 6    | 76    | Kumamoto   |
| Kagoshima  | 18   | 14   | 11   |      | 20   |      | 14   | 10   | 15   | 12   | 7    | 7    | 15   | 7    | 8    | 5    | 6    | 9    | 6    | 7    | 3    | 3    | 5    | 5    | 207   | Kagoshima  |
| Shizuoka   | 7    | 8    | 6    |      | 7    |      | 5    | 5    | 8    | 4    | 7    | 2    | 4    | 3    | 4    | 5    | 6    | 4    | 9    | 4    | 2    | 2    | 4    | 5    | 111   | Shizuoka   |

| i======   |    | -  | == | <br>==: | <br> | _  |   | _ | _  | - | _ | _  | - | - |   | - |   |    | - |   | _ | - | -   |           |
|-----------|----|----|----|---------|------|----|---|---|----|---|---|----|---|---|---|---|---|----|---|---|---|---|-----|-----------|
| Hiroshima | 13 | 11 | 11 | 8       | 6    | 5  | 1 | 3 | 3  | 3 | 1 | 1  | 1 | 2 |   | 6 | 2 | 4  | 6 | 7 | 1 | 4 | 99  | Hiroshima |
| Yamaguchi | 2  | 5  | 6  | 2       | 4    | 2  | 2 | 5 | 2  | 3 | 7 | 1  | 1 | 1 |   | 3 |   | 2  | 2 | 2 | 1 | 4 | 57  | Yamaguchi |
| lwate     | 4  | 1  | 6  | 1       | 1    |    | 3 | 1 | 1  | 1 | 3 | 3  | 1 | 2 |   |   | 1 | 4  |   | 1 | 1 | 4 | 39  | lwate     |
| Hokkaido  | 17 | 10 | 16 | 13      | 8    | 7  | 4 | 6 | 14 | 6 | 5 | 4  | 4 | 1 | 3 |   | 4 | 6  | 8 | 3 | 9 | 3 | 151 | Hokkaido  |
| Ehime     | 13 | 12 | 9  | 9       | 9    | 3  | 4 | 4 | 3  | 3 | 6 | 11 | 7 | 4 | 3 | 5 | 6 | 10 | 4 | 6 |   | 3 | 134 | Ehime     |
| Hyogo     | 2  | 9  | 7  | 8       | 8    | 10 | 6 | 7 | 3  | 4 | 2 | 3  | 6 | 4 |   | 3 |   | 2  | 5 | 1 | 2 | 3 | 95  | Hyogo     |
| Wakayama  | 8  | 6  | 12 | 4       | 2    | 1  |   | 2 |    | 4 | 5 | 5  | 4 | 2 |   |   | 1 | 1  |   | 1 |   | 3 | 61  | Wakayama  |
| Akita     | 5  | 8  | 5  | 7       | 2    | 1  | 2 | 1 | 1  | 2 |   |    | 3 | 1 | 1 |   |   |    |   | 3 | 1 | 3 | 46  | Akita     |
| Gifu      | 25 | 27 | 10 | 11      | 5    | 7  | 5 | 6 | 2  | 2 | 6 | 6  | 5 | 2 | 5 |   | 2 |    | 1 | 2 | 4 | 2 | 135 | Gifu      |
| Fukuoka   | 6  | 7  | 3  | 3       | 4    | 6  | 4 | 3 | 5  | 6 | 2 | 1  | 5 | 5 | 4 | 1 | 3 | 6  | 5 |   | 4 | 2 | 85  | Fukuoka   |
| Nara      | 7  | 7  | 1  | 5       | 1    | 2  | 3 |   | 3  | 4 |   | 1  | 4 | 3 |   | 1 |   |    | 1 | 2 |   | 2 | 47  | Nara      |
| Nagasaki  | 7  | 1  | 2  | 3       | 2    | 2  | 1 |   | 1  | 4 | 1 | 1  |   | 5 | 1 |   | 2 | 2  |   | 2 |   | 2 | 39  | Nagasaki  |
| Fukushima | 5  | 6  | 1  | 4       | 1    |    | 2 |   |    |   | 1 | 3  | 1 | 2 |   |   |   |    |   | 3 |   | 2 | 31  | Fukushima |
| Tokushima | 6  | 13 | 17 | 10      | 10   | 13 | 9 | 7 | 3  | 5 | 1 | 6  | 2 | 6 | 3 | 2 | 1 | 3  | 1 | 1 |   | 1 | 120 | Tokushima |
| Fukui     | 21 | 17 | 7  | 11      | 8    | 7  | 4 | 4 | 3  | 2 | 1 | 2  | 2 | 2 |   | 1 |   | 1  | 3 |   | 2 | 1 | 99  | Fukui     |
| Gunma     | 7  | 12 | 15 | 7       | 5    | 4  | 3 | 4 | 4  | 4 | 2 |    | 5 | 2 | 4 | 1 | 2 | 2  | 6 | 1 | 6 | 1 | 97  | Gunma     |
| Kanagawa  | 10 | 5  | 5  | 12      | 7    |    | 1 | 1 | 4  | 2 | 4 | 2  | 1 | 2 | 3 |   | 2 |    |   | 3 | 1 | 1 | 66  | Kanagawa  |
| Mie       | 12 | 13 | 2  | 4       | 5    | 5  | 4 | 4 | 2  | 1 | 1 | 2  | 1 | 1 |   | 1 | 1 |    | 3 | 1 | 1 | 1 | 65  | Mie       |
| Okayama   | 8  | 8  | 5  | 6       | 3    | 2  |   | 2 |    | 1 | 1 | 1  | 2 | 1 |   |   | 3 | 1  | 3 | 2 | 2 | 1 | 52  | Okayama   |
| Tokyo     | 1  |    | 6  | 3       | 8    | 2  | 2 | 1 | 2  |   | 1 | 2  | 2 | 3 | 4 | 3 | 5 |    | 1 | 1 | 2 | 1 | 50  | Tokyo     |
| Shimane   | 7  | 6  | 4  | 3       | 1    |    |   | 1 |    | 1 | 3 | 6  | 4 | 4 |   | 1 | 1 | 1  | 1 |   | 1 | 1 | 46  | Shimane   |
| Ishikawa  | 3  | 1  | 4  | 2       | 3    | 1  | 3 | 5 | 3  | 2 | 2 |    | 1 | 2 | 1 |   |   |    |   | 2 | 3 | 1 | 39  | Ishikawa  |
| Tottori   | 1  | 1  | 4  |         | 1    | 2  | 4 | 3 | 3  | 1 | 2 | 3  |   | 3 | 1 | 1 | 1 |    |   |   | 3 | 1 | 35  | Tottori   |
|           |    |    |    |         |      |    |   |   |    |   |   |    |   |   |   | i |   |    |   |   |   |   |     |           |

| Tochigi   | 3   | 3   | 3   |     | 2   |     | 3   | 3   | 1   | 1   | 3   | 2   | 4   | 2   |     | 1   |    | 1  |    |    | 1  |    |    | 1  | 34    | Tochigi   |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|-------|-----------|
| Miyazaki  | 5   | 4   | 5   |     | 2   |     | 1   |     | 2   |     | 1   | 1   | 2   | 2   | 1   | 1   |    | 1  |    |    |    | 2  |    | 1  | 31    | Miyazaki  |
| Miyagi    | 3   |     |     |     | 1   |     |     |     |     | 2   | 3   | 1   | 1   |     | 2   | 3   | 2  |    |    |    | 1  |    | 1  | 1  | 21    | Miyagi    |
| Yamagata  | 1   | 4   | 2   |     | 2   |     |     |     |     | 1   |     | 1   | 1   |     | 1   | 2   | 2  |    |    |    |    |    | 2  | 1  | 20    | Yamagata  |
| Kagawa    | 1   | 1   | 2   |     |     |     | 4   |     |     | 1   |     |     | 1   | 1   | 1   | 2   | 1  |    | 1  |    | 1  |    | 1  | 1  | 19    | Kagawa    |
| Chiba     |     | 3   |     |     |     |     | 2   | 2   | 1   |     |     |     | 1   |     |     | 1   |    | 1  |    |    | 1  |    |    | 1  | 13    | Chiba     |
| Saitama   | 1   |     |     |     | 4   |     | 2   |     |     |     |     |     |     |     |     |     |    |    |    |    |    | 1  | 2  | 1  | 11    | Saitama   |
| Niigata   | 12  | 10  | 7   |     | 7   |     | 8   | 13  | 4   | 8   | 3   | 3   | 1   | 2   | 2   | 6   | 1  | 4  | 1  | 2  | 2  |    | 2  |    | 98    | Niigata   |
| Yamanashi | 6   | 8   | 7   |     | 6   |     | 4   | 5   | 6   | 11  | 4   | 1   | 6   |     | 5   | 3   | 3  | 2  | 3  | 2  | 2  | 4  |    |    | 88    | Yamanashi |
| Toyama    | 13  | 7   | 5   |     | 6   |     | 4   | 1   | 6   | 1   | 2   | 2   | 2   | 6   | 4   | 1   |    |    | 3  | 2  | 1  |    | 5  |    | 71    | Toyama    |
| Aichi     | 9   | 8   | 4   |     | 4   |     | 5   | 2   | 2   | 2   | 3   | 2   | 1   |     | 1   | 2   |    | 1  |    |    | 1  | 1  |    |    | 48    | Aichi     |
| Aomori    | 3   | 2   | 5   |     | 3   |     | 4   | 2   | 4   | 1   | 3   | 1   | 2   | 1   | 1   |     | 3  | 1  | 1  | 1  | 2  | 2  |    |    | 42    | Aomori    |
| Kyoto     | 5   | 1   | 1   |     |     |     | 1   | 2   | 3   |     |     |     | 1   | 1   |     |     | 1  | 1  | 1  |    |    | 2  | 3  |    | 23    | Kyoto     |
| Shiga     | 2   | 4   | 2   |     | 1   |     | 1   | 2   |     | 1   | 3   | 1   |     |     | 1   |     |    |    |    | 1  | 1  |    | 1  |    | 21    | Shiga     |
| Saga      | 1   | 1   | 2   |     |     |     | 1   |     |     |     | 1   | 1   | 1   |     | 3   |     | 1  |    |    | 3  |    | 1  |    |    | 16    | Saga      |
| Osaka     | 2   |     |     |     |     |     | 1   |     | 1   |     | 1   |     |     |     | 1   |     |    |    | 1  | 1  |    |    |    |    | 8     | Osaka     |
| Ibaraki   | 2   | 1   | 1   |     |     |     |     |     |     |     | 1   |     |     |     | 1   |     | 1  |    |    |    |    |    |    |    | 7     | lbaraki   |
| Okinawa   |     |     |     |     |     |     | 1   |     |     |     |     |     |     | 2   | 1   |     |    |    |    |    |    |    |    |    | 4     | Okinawa   |
| total     | 345 | 321 | 261 | 236 | 226 | 181 | 185 | 148 | 153 | 135 | 120 | 106 | 115 | 109 | 122 | 111 | 71 | 65 | 73 | 84 | 84 | 76 | 90 | 92 | 3,509 | total     |

Data Source: <a href="https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.html">https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.html</a> MHLW, Jaan

Return to https://www.jisha.or.jp/english/statistics/202312\_05.html