

Fatal and non-fatal accidents in river civil engineering work in Japan in 1999-2021

river civil engineering work industry Code No.030107

Type of accidents in river civil engineering work in 1999-2021

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	total	Type of accidents
fall from height	115	111	101	75	62	65	75	56	67	44	40	50	44	40	58	55	50	44	36	47	45	53	56	1,389	fall from height
falling to same level	63	51	44	35	33	25	35	31	22	21	21	14	17	26	25	25	25	18	24	14	20	29	30	648	falling to same level
crash	29	9	19	12	12	9	9	8	6	7	9	4	8	10	9	10	9	5	6	7	5	4	13	219	crash
struck by flying or falling object	69	72	48	46	40	30	43	40	41	29	31	23	22	25	21	30	18	16	18	23	21	19	24	749	struck by flying or falling object
collapse	31	15	28	19	10	16	20	21	12	14	14	11	9	9	6	11	10	12	6	8	7	12	13	314	collapse
crashed by	57	62	40	33	36	38	41	28	29	23	17	26	18	23	22	24	24	10	13	17	20	21	23	645	crashed by
caught in/between	87	88	88	57	67	55	46	34	29	42	39	40	35	48	43	44	42	18	40	24	29	33	32	1,060	caught in/between
cut	31	24	19	13	14	11	12	15	7	13	7	12	8	5	13	11	15	7	8	10	13	18	13	299	cut
injury to the sole of the foot	1	2	1	1	1			1		1	1		1			1	1		1	1			1	15	injury to the sole of the foot
drown	1		1	2	1	2		2	1	2	1	1	3	1		3	1	1	2	1	1	1	2	30	drown
contact to high/low-temperature	1	2	3	4	2	4	1	2	4		1	3	4	1	1	2	2		3	6	5	3	5	59	contact to high/low-temperature

engine										1					1										2	engine
power transmission mechanism								1							2	1		1							5	power transmission mechanism
circular sawing machine			7		8		5	7	3	5	4	5	2	1	6	1	3	2	1	2	2	9		73	circular sawing machine	
band sawing machine																									band sawing machine	
wood planer machine																									wood planer machine	
hollow chisel mortiser, wood borer																									hollow chisel mortiser, wood borer	
chamfering machine, router, woodworking milling machine																								1	chamfering machine, router, woodworking milling machine	
chain saw			2		2			3		2		3	3	5	1	5	3	1	1	4	1	3	2	41	chain saw	
other woodworking machines			1		1					1	1				4				2		1	2	2	16	other woodworking machines	
leveling, transporting or loading machine			6		6			13	12	9	4	5	9	3	5	8	2	5	6	4	2	7	7	3	116	leveling, transporting or loading machine
excavating machine			47		32			33	13	22	22	24	23	21	31	22	28	17	9	13	18	17	25	21	438	excavating machine
foundation work machine			8		2			5	6	3	1		1		1	1	4	5		1	3	1		1	43	foundation work machine

machine																									machine
food manufacturing machine																									food manufacturing machine
printing machine																									printing machine
industrial robot																									industrial robot
other general power machines			6	7	7	6	5	6	5	6	9	6	2	6	10	5	5	6	8	8	5	118		other general power machines	
felling machine																1				1	1	3		felling machine	
mobile logging machine																				1		1		mobile logging machine	
skyline yarding machine																								skyline yarding machine	
other mobile silviculture machine																			1			1		other mobile silviculture machine	
crane			3	1	1	2		2	3	1	1	2		1	1			1	2		1	22		crane	
mobile crane			20	22	13	9	8	15	6	10	12	13	11	18	12	11	13	9	7	14	15	238		mobile crane	
derrick crane																								derrick crane	
elevator, lift																								elevator, lift	
cargo lifting appliance																								cargo lifting appliance	
gondola				1																		1		gondola	
lumberyard equipment, logging cableway							1															1		lumberyard equipment, logging cableway	

facilities			4		2		4	2	4		1	2	2	1	3		1	1			1	4	32	facilities	
scaffolding			11		6		6	7	8	2	4	3	2	4	3	2	2	3	1	1	3	1		69	scaffolding
timbering			6		3		3	5	1	2	2	2	2		1	2	2	1	1	1		1	1	36	timbering
stairs, landing stage			3				2	3	3	2	1	2	1	3		6	3	3	1	1	5	1	3	43	stairs, landing stage
opening			5						2				1		1	1		1	2	3		2	3	21	opening
roof, beam, haze, crossbeam, principal rafter			2				1		1	1												1	1	7	roof, beam, haze, crossbeam, principal rafter
working platform, boot board			3		9		7	7	4	7	7		2	2	6	4	8	2	2	5	3	2	11	91	working platform, boot board
passage			14		8		15	15	8	9	8	7	5	1	6	10	8	6	9	11	6	6	11	163	passage
building, establishment			42		19		17	22	19	17	13	12	13	16	19	13	9	10	15	11	15	11	14	307	building, establishment
other temporary buildings, establishments			8		5		9	8	4	6	4	3	11	4	12	6	7	6	10	6	2	8	9	128	other temporary buildings, establishments
explosive substance																									explosive substance
inflammable substance			1							1									1					3	inflammable substance
inflammable gas																			1					1	inflammable gas
harmful substance																1				1				2	harmful substance
radiation																									radiation
other hazards, harmful substances										1									1	1			1	4	other hazards, harmful substances

metal material			19		16		16	13	13	11	17	7	11	9	5	10	10	5	4	7	6	8	6	193	metal material
lumber, bamboo			9		3		3	4	3	5	3			3	3	2	1	3		1	3		4	50	lumber, bamboo
stone, sand, substance			25		14		17	8	7	6	4	3	7	3	2	12	9	2	7	5	3	6	6	146	stone, sand, substance
other materials			26		10		7	7	8	6	4	6	1	6	4	6	4	4	3	3	4	3	5	117	other materials
load			2		6		4	4	5	2	3	6	1	6	4	2	3	2	8	7	4	3	8	80	load
machine/equipment as load			1		2		2	1		1	1				1		1				3	1		14	machine/equipment as load
natural ground, rock			33		22		36	17	30	17	11	17	8	14	15	16	15	13	13	12	10	20	14	333	natural ground, rock
standing tree			9		7		9	4	4	4	4	8	1	3	2	6	5	8	1	8	4	5	4	96	standing tree
water			1		2				1	1	1	1	3	1		3		2	2	1	1	1	1	22	water
abnormal environment					1																			1	abnormal environment
high/cold temperature environment			3		1			2	3			3	4	1	1	1	2		2	6	4	2	4	39	high/cold temperature environment
other environments			11		3		5	3	1	4	2	3	2	5	4	2	4	7	6	6	5	2	5	80	other environments
other causal agent			2					1					3	1		1	2		3			2	10	25	other causal agent
no causal agent			4		2		3	1	6	2	5	1	3		2		2	2	3	3	6	5	5	55	no causal agent
unclassifiable					1			1			1													3	unclassifiable
total			426		303		305	257	242	214	205	204	180	200	210	225	209	146	180	182	184	215	239	4,326	total

Workers age of fatal and non-fatal accidents in river civil engineering work in 1999-2021

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Age
19 years old or less	13	8	9	8	3	7	5	2	4	1	2	1	2	3	4	3	4	3	1	2	2	2	1	90	19 years old or less
20-29	50	52	75	46	35	34	33	26	24	12	22	24	15	15	13	17	11	10	14	23	15	16	24	606	20-29
30-39	46	44	38	34	37	37	34	42	35	31	29	30	29	26	37	33	23	24	18	19	21	25	34	726	30-39
40-49	102	78	59	50	58	45	45	37	37	41	36	39	34	48	38	38	54	22	40	32	39	29	36	1,037	40-49
50-59	149	140	104	92	97	82	100	88	75	58	61	41	52	51	58	54	48	31	47	39	29	45	55	1,596	50-59
60 years old or more	180	146	141	105	73	60	88	62	67	71	55	69	48	57	60	80	69	56	60	67	78	98	89	1,879	60 years old or more
total	540	468	426	335	303	265	305	257	242	214	205	204	180	200	210	225	209	146	180	182	184	215	239	5,934	total

Workers' number of workplace of fatal and non-fatal accidents in river civil engineering work in 1999-2021

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	total	Workers scale	
9 workers or less	232	208	201	156	143	122	171	128	125	118	105	113	89	100	119	107	109	82	96	87	105	85	109	2,910	9 workers or less	
10-29	231	195	173	140	134	109	103	102	89	73	79	72	68	75	73	83	73	43	53	62	59	99	97	2,285	10-29	
30-49	55	41	31	26	16	24	18	19	19	19	16	16	15	17	9	24	18	15	26	21	12	21	15	493	30-49	
50-99	15	19	17	9	10	9	10	7	8	3	4	3	7	7	9	9	7	4	4	11	5	6	8	191	50-99	
100-299	7	5	4	4		1	3	1	1	1	1		1	1		2	2	2	1	1	3	4	10	55	100-299	
300 workers or more																										300 workers or more
total	540	468	426	335	303	265	305	257	242	214	205	204	180	200	210	225	209	146	180	182	184	215	239	5,934	total	

Month of fatal and non-fatal accidents in river civil engineering work in 1999-2021

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Month
January	46	49	44	49	36	40	24	31	27	36	30	31	20	18	28	23	22	15	21	26	20	20	23	679	January
February	66	56	52	61	46	42	47	44	39	32	28	20	14	29	24	26	24	14	29	18	23	23	37	794	February
March	55	76	54	26	45	46	30	38	28	30	28	34	18	27	29	20	31	24	18	21	23	23	22	746	March
April	48	37	40	24	21	16	20	18	20	18	12	14	12	19	15	14	13	8	11	13	14	20	8	435	April
May	41	31	30	19	24	12	31	28	14	14	11	15	10	15	14	22	12	13	7	10	10	12	17	412	May
June	45	35	26	16	10	13	22	11	18	18	6	12	11	15	10	14	12	9	9	11	9	12	13	357	June
July	40	32	23	18	23	19	15	12	22	11	9	10	11	9	12	15	7	11	18	16	7	14	29	383	July
August	36	33	23	21	15	10	18	13	17	8	7	11	21	15	15	13	14	12	13	14	7	20	23	379	August
September	28	19	18	16	13	16	20	10	13	6	17	9	9	7	11	16	14	9	7	15	13	12	14	312	September
October	43	30	34	19	15	12	30	13	11	16	11	11	13	20	16	16	20	8	11	10	18	16	15	408	October
November	48	40	39	30	20	16	29	21	19	11	28	16	16	13	20	26	20	9	14	17	17	18	22	509	November
December	44	30	43	36	35	23	19	18	14	14	18	21	25	13	16	20	20	14	22	11	23	25	16	520	December
total	540	468	426	335	303	265	305	257	242	214	205	204	180	200	210	225	209	146	180	182	184	215	239	5,934	total

Prefecture of fatal and non-fatal accidents in river civil engineering work in 1999-2021

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Prefecture
Hokkaido	49	30	23		34		23	20	12	19	21	19	8	9	12	16	14	8	15	17	13	20	16	398	Hokkaido
Aomori	8	5	11		2		2	5	1	3	3		8	8		2	2	4	3	2	2	1	2	74	Aomori
Iwate	6	15	6		13		8	2	3	2	3	6	4	5	3	9	4	4	10	13	9	7	7	139	Iwate

Miyagi	2	7	1		13		4	4	7	5	4	1	6	3	9	7		10	16	6	9	4	9	127	Miyagi
Akita	10		13		3		5	6	1	4	6	9	2	7	7	3	9		3	5	5	5	2	105	Akita
Yamagata	6	6	6		6		5	2	3	3	1	1	1	2	4	2	4	4	2	7	3	6	8	82	Yamagata
Fukushima	15	10	2		6		4		2	6	2	4	2	9	5	5	12	5	3	5	5	7	11	120	Fukushima
Ibaraki	8	5	3		6		5	1	3	1	2		5	5		3	6	3	2	4		1	3	66	Ibaraki
Tochigi	9	10	7		4		2		2	1	2	4	2	6	2	1			1	3		5	4	65	Tochigi
Gunma	16	4	9		7		2	2	1	5	3	3	3		3	2	4	1	2	4	4	3	4	82	Gunma
Saitama	8	6	8		4		6	6	2	6	12	8	9	1	5	11	8	2	7	2	2	5	3	121	Saitama
Chiba	5	8	8		7		3	9	6	5	4	4	1	3	4	4	3		4	4	2	2	1	87	Chiba
Tokyo	9	7	7		7		8	10	7	5	10	6	4	4	5	3	2	4	5	6	3	7	10	129	Tokyo
Kanagawa	9	8	11		3		5	8	3	4	5	5	2	8		3	5	4	2	4	1	2	6	98	Kanagawa
Niigata	24	15	12		9		22	14	6	8	8	4	6	11	4	14	8	5	2	7	3	4	3	189	Niigata
Toyama	7	11	7		4		8	5	5	8	9	6	1	2	6	7	3	3		2	2	3	4	103	Toyama
Ishikawa	2	2	2		7		3	1	1	5	3	2	3		2	1	5	3	1	2	1	1	1	48	Ishikawa
Fukui	6	12	10		7		3	6	3		5	2	8	4	3	1	5	1	2	2	4			84	Fukui
Yamanashi	5	8	8		2		2	1	2	3		3	3	2	4	3	1		1		2	1	1	52	Yamanashi
Nagano	22	15	16		6		9	11	5	11	2	6	2	4	2	4	8	4	7	6	5	11	17	173	Nagano
Gifu	11	23	22		8		9	6	9	6	6	9	5	7	5	5	9	1		4	3	4	5	157	Gifu
Shizuoka	24	18	10		11		7	7	4	6	8	1	5	8	6	8	2	7	7	2	4	7	8	160	Shizuoka
Aichi	12	24	17		5		9	5	8	13	11	6	6	7	4	6	3	5	4	9	5	5	11	175	Aichi
Mie	11	9	10		9		5	5	7		4	5	1	3	7	5	6	1	4	6	5	3	3	109	Mie
Shiga	5	3	6		8			5	3	1	2		2		1	2	1	2	1		1	2	2	47	Shiga
Kyoto	17	6	9		3		8	10	6	3	2	5	1	3	1	6	8	4	3	5	6	3	3	112	Kyoto

Osaka	4	5	10		7		4	3	11	6	3		1	1	2	2	3	1	1	4	2	2	2	74	Osaka
Hyogo	19	21	10		6		19	11	14	8	5	13	5	9	6	3	3	2	5	1	11	2	5	178	Hyogo
Nara	6	5	3		3		1	3	2	1	1	4	3	1	7	3		1	2	4	3	2	1	56	Nara
Wakayama	13	7	9		6		4	3	5	1	6	3	1	10	7	6	9	4	2		3		1	100	Wakayama
Tottori	7	2	3		5		1	3	3		1	2	2	4	2	3	1	2	4		1	3		49	Tottori
Shimane	4	7	8		6		2	2	4	3	1	6	1	1	1	2	4	2		1	2		4	61	Shimane
Okayama	23	23	8		7		10	4	7	1	2	4	2	5	6	7	2			5	3	7	4	130	Okayama
Hiroshima	21	27	15		6		3	14	9	4	3	6	10	5	3	5	2	2	1	3	8	11	8	166	Hiroshima
Yamaguchi	4	11	13		6		6	7	5	2	2	6	6	3	6	5	4	2	5		8	4	8	113	Yamaguchi
Tokushima	10	7	6		5		17	3	6	5	5	5			2	3	5	2	4	1		2	4	92	Tokushima
Kagawa	2	3			1		5	1		1	4	1	2	4	4	2	3	6	2	4	4	1	1	51	Kagawa
Ehime	18	10	19		6		11	6	4	3	3	1	3	4		5	1		3	1	5	4	1	108	Ehime
Kochi	23	18	12		11		13	5	10	4	2	2	4		8	8	6	9	5	2	7	7	6	162	Kochi
Fukuoka	14	14	21		14		13	15	15	9	8	7	15	7	16	10	13	8	8	9	10	17	18	261	Fukuoka
Saga	5	5	5		4		6	5	6	4	3	6	4	3	10	6	7	2	5	4	4	5	4	103	Saga
Nagasaki	8	13	5				4	2		2	3	2	2	3	1	6		1	1	1			2	56	Nagasaki
Kumamoto	11	5	17		3		2	3	9	5	3	7	7	6	1	6	5	5	6	4	3	8	7	123	Kumamoto
Oita	19	4	8		3		9	5	2	7	2	1	1	1	20	8	4	4	2	4	4	3	4	115	Oita
Miyazaki	6	3	2		1		4	3	4	5		2	4	2		1	3	4	5	3	2	4	4	62	Miyazaki
Kagoshima	16	10	8		8		4	8	14	8	10	7	7	9	4	1	1	4	11	4	5	14	10	163	Kagoshima
Okinawa	1	1			1					2				1			1		1				1	9	Okinawa
total	540	468	426		303		305	257	242	214	205	204	180	200	210	225	209	146	180	182	184	215	239	5,334	total

Fatal and non-fatal accidents mean fatal and non-fatal injuries and occupational diseases with work absence of 4 days and more. Data of 2011 year include fatal and non-fatal accidents caused by Great East Japan Earthquake in 2011.

Data sources: <https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.htm> (MHLW, Japan)

Return to https://www.jisha.or.jp/english/statistics/2021e_industry.html

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 Fatal accidents in river civil engineering work in Japan in 1999-2021

river civil engineering work industry Code No.030107

Type of fatal accidents in river civil engineering work in 1999-2021

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	total	Type of accidents
fall from height	7	1	4	3	5	4	5	1	5	1	3	3	1	2	2	2	2	2	2	1	2	2	1	61	fall from height
falling to same level	2					1	1							1		1	1						3	10	falling to same level
crash											2				1									3	crash
struck by flying or falling object	3	1	2	1	1		2	2	1		1	1			1			1		2	2	1		22	struck by flying or falling object
collapse	6	1	1			3	1			4	2	2	1	2		1	1	2		3			1	31	collapse
crashed by	4	3	2	1	1	5	3		1	2		1	3	2		1	2	1			3	1	1	37	crashed by
caught in/between	3	5	2	4	5	4	4	2			1	2	3	4	1	3	4	1	2	1		1	1	53	caught in/between
cut																				1	1			2	cut

injury to the sole of the foot																										injury to the sole of the foot
drown		1	1	2	1	2		1	1	2	2	1	3		1	1	1	1	1		1		2	25	drown	
contact to high/low-temperature			1																					1	contact to high/low-temperature	
contact to harmful substance									1														1	2	contact to harmful substance	
electric shock							1																	1	electric shock	
explosion																									explosion	
burst										1														1	burst	
fire																									fire	
traffic accident (public road)	3	4	1	5		1		3	1		2	3				1			2			2		28	traffic accident (public road)	
traffic accident (others)				2										1							1	1		5	traffic accident (others)	
reaction to motion/improper motion																									reaction to motion/improper motion	
others		1														1					1			3	others	
unclassifiable																									unclassifiable	
total	28	17	14	18	13	20	17	9	10	10	13	13	11	12	6	10	12	8	7	8	11	8	10	285	total	

no causal agent																	1							1																2	no causal agent					
unclassifiable																																														unclassifiable
total	28	17	14	18	13	20	17	9	10	10	13	13	11	12	6	10	12	8	7	8	11	8	10	285	total																					

Workers age of fatal accidents in river civil engineering work in 1999-2021

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Age
19 years old or less		1																1						2	19 years old or less
20-29	1	1		3	3	2	2		1			1		1		1				1	3			20	20-29
30-39	2		4		1		1	1	2	2	1	3		1			2	1		1				22	30-39
40-49	3	1	2	4	2	4	3			1	1	2	4	1			1	1	3		2	3	1	39	40-49
50-59	10	5	4	4	5	9	5	4	2	4	4	4	2	6	2	3	1	2	1	4		2	6	89	50-59
60 years old or more	12	9	4	7	2	5	6	4	5	3	7	3	5	3	4	6	8	3	3	2	6	3	3	113	60 years old or more
total	28	17	14	18	13	20	17	9	10	10	13	13	11	12	6	10	12	8	7	8	11	8	10	285	total

Workers' number of workplace of fatal accidents in river civil engineering work in 1999-2021

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	total	Workers scale
9 workers or less	6	6	5	5	5	4	9	5	6	2	4	4	5	3	4	3	4	3	3	3	5	3	3	100	9 workers or less
10-29	15	7	6	10	7	11	4	4	3	5	7	7	6	9	2	4	5	3	3	2	4	5	5	134	10-29
30-49	6	2	2	3		3	3				1					2	2	2	1	1	2		1	31	30-49
50-99		2	1		1	2	1		1	3	1	2				1	1			1				17	50-99

100-299	1																			1			1	3	100-299	
300 workers or more																										300 workers or more
total	28	17	14	18	13	20	17	9	10	10	13	13	11	12	6	10	12	8	7	8	11	8	10	285	total	

Month of fatal accidents in river civil engineering work in 1999-2021

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Month
January	6	1		6		2	1	1	1	2	2	3	1				1			1	1	3		32	January
February	3	1	2	3		3	1	3	5	1		1	1	2	1	4	1		3	1	3	2	3	44	February
March	1	4	2	2	1	3	2	3	1	1	2	1	3	1	1		3	3		2	1		1	38	March
April	1	2	1	2	1		2	1			1	2		2		1							1	17	April
May	2			1	5		4		2			1			1		1	2				1		20	May
June	2	1	1			2		1						1		1	1		1		2		1	14	June
July			3		3	2				2		3	1	2		2		1	1	1		1		22	July
August	3	2			1	2	3			1	1		1		1		1		1					17	August
September	2	2				1					1		1	1			2	1	1	1			1	14	September
October	1	2	3	1		2	1			2	1	1		1			1			1	1			18	October
November	2	2	1		1	1	2			1	2	1					1			1	1	1	2	19	November
December	5		1	3	1	2	1		1		3		3	2	2	2		1			2		1	30	December
total	28	17	14	18	13	20	17	9	10	10	13	13	11	12	6	10	12	8	7	8	11	8	10	285	total

Prefecture of fatal accidents in river civil engineering work in 1999-2021

Miyazaki	1		1																			1		3	Miyazaki
Kagoshima			1								3		1			1								6	Kagoshima
Okinawa																									Okinawa
total	28	17	14	18	13	20	17	9	10	10	13	13	11	12	6	10	12	8	7	8	11	8	10	285	total

Data sources: <https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.htm> (MHLW, Japan)

Return to https://www.jisha.or.jp/english/statistics/2021e_industry.html