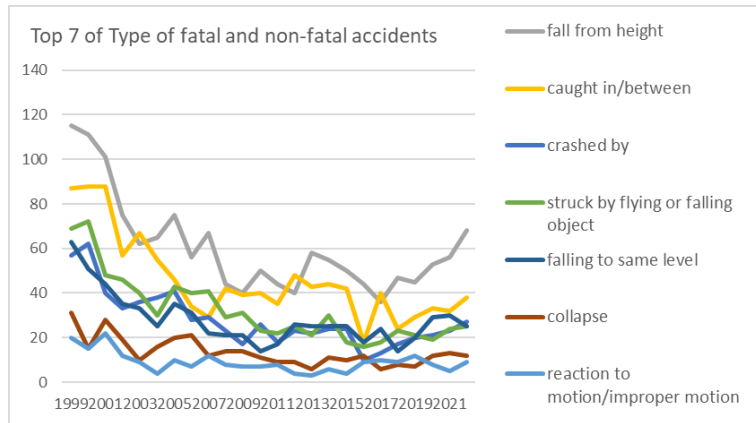
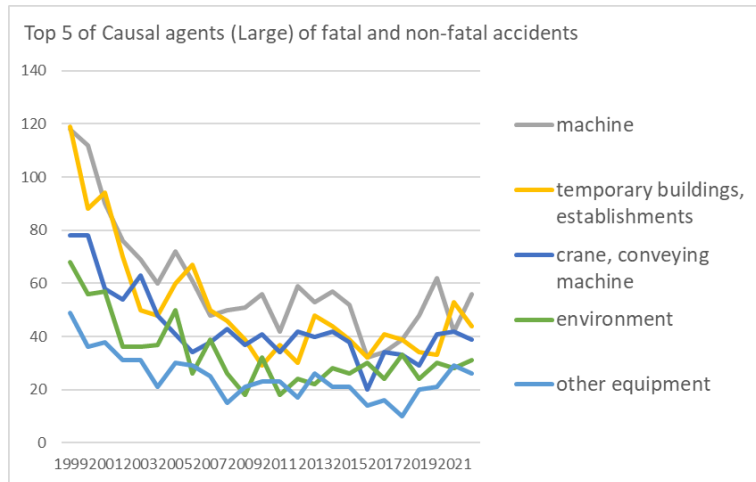


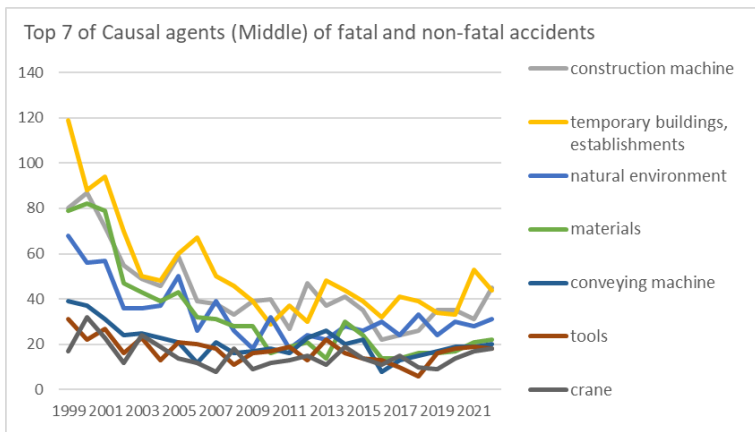
Transition of fatal and non-fatal accidents in 030107 river civil engineering work in Japan (1999-2022)



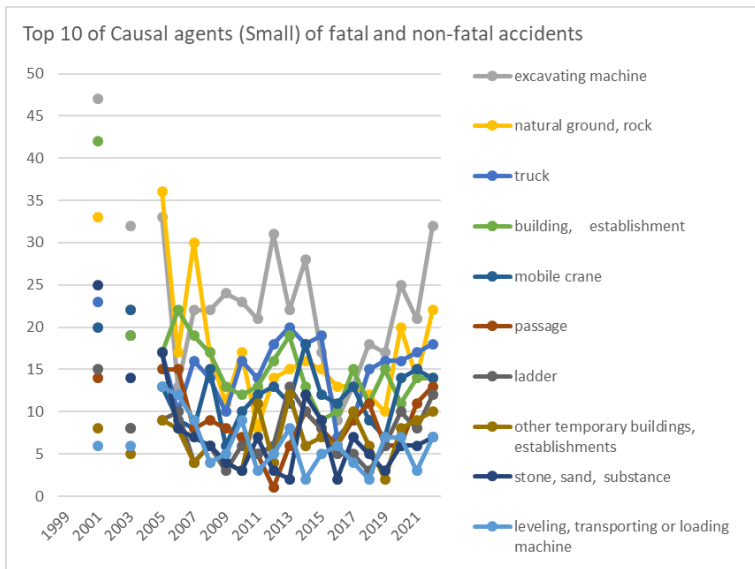
Transition of Top 7 of Type of fatal and non-fatal accidents in 030107 river civil engineering work in Japan (1999-2022)



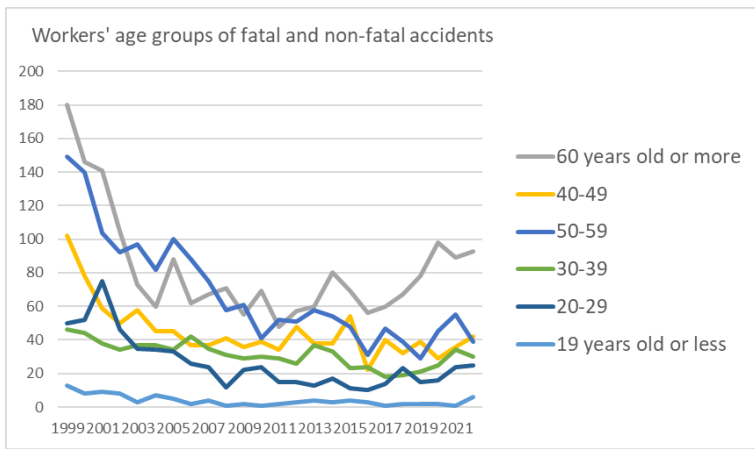
Transition of Top 5 of Causal agents (Large) of fatal and non-fatal accidents in 030107 river civil engineering work in Japan (1999-2022)



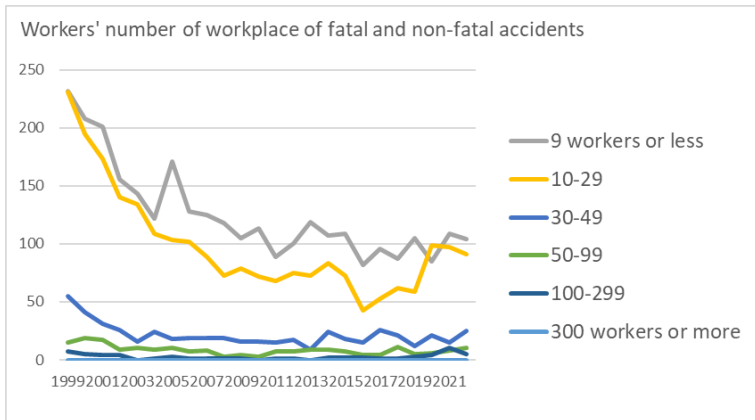
Transition of Top 7 of Causal agents (Middle) of fatal and non-fatal accidents in 030107 river civil engineering work in Japan (1999-2022)



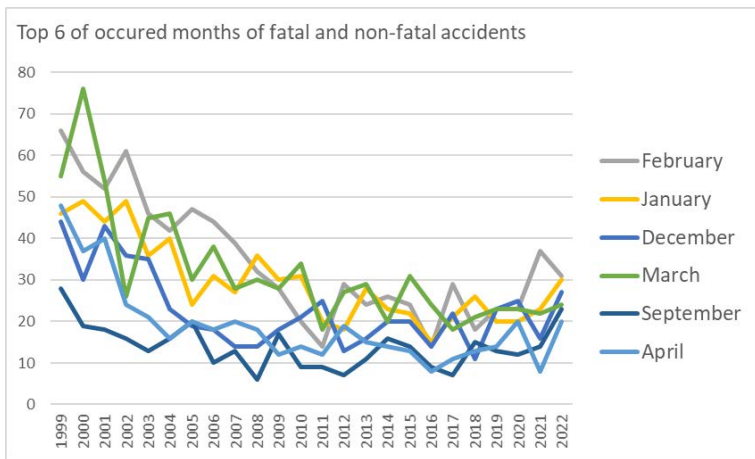
Transition of Top 10 of Causal agents (Small) of fatal and non-fatal accidents in 030107 river civil engineering work in Japan (1999-2022)



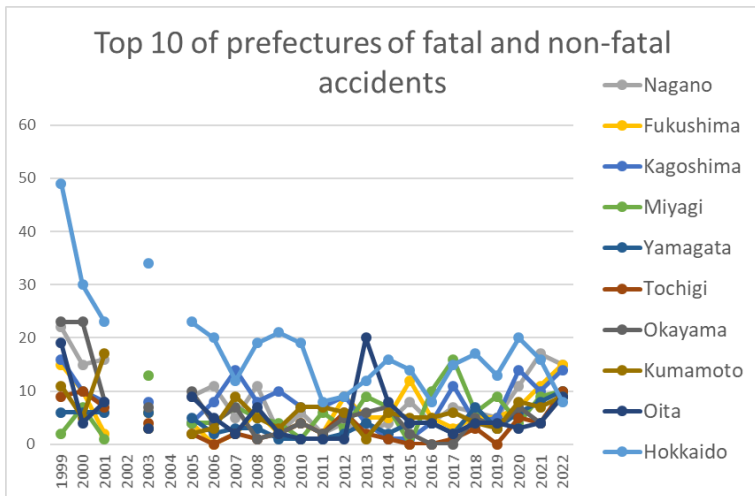
Transition of workers' age groups of fatal and non-fatal accidents in 030107 river civil engineering work in Japan (1999-2022)



Transition of workers' number of workplace of fatal and non-fatal accidents in 030107 river civil engineering work in Japan (1999-2022)



Transition of Top 6 of occurred months of fatal and non-fatal accidents in 030107 river civil engineering work in Japan (1999-2022)



Transition of Top 10 of prefectures of fatal and non-fatal accidents in 030107 river civil engineering work in Japan (1999-2022)

Transition of Type of fatal and non-fatal accidents in 030107 river 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	115	111	101	75	62	65	75	56	67	44	40	50	44	40	58	55	50	44	36	47	45	53	56	68	1,457	fall from height
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	38	1,098	caught in/between

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	27	672	crashed by
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	25	774	struck by flying or falling object
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	25	673	falling to same level
collapse	31	15	28	19	10	16	20	21	12	14	14	11	9	9	6	11	10	12	6	8	7	12	13	12	326	collapse
reaction to motion/improper motion	20	15	22	12	9	4	10	7	12	8	7	7	8	4	3	6	4	9	10	9	12	8	5	9	220	reaction to motion/improper motion
cut	31	24	19	13	14	11	12	15	7	13	7	12	8	5	13	11	15	7	8	10	13	18	13	8	307	cut
traffic accident (public road)	27	14	8	19	16	6	10	11	10	9	12	11	3	4	7	3	4	3	9	8	4	10	5	7	220	traffic accident (public road)
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	6	65	contact to high/low-temperature
crash	29	9	19	12	12	9	9	8	6	7	9	4	8	10	9	10	9	5	6	7	5	4	13	4	223	crash
others	3	1	1	1			2				3	1		2			2	3	2	1	1	1	16	3	43	others
contact to harmful substance	3		1	1				1	1		1				1		1		1	4			1	3	19	contact to harmful substance
drown	1		1	2	1	2		2	1	2	1	1	3	1		3	1	1	2	1	1	1	2		30	drown
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
traffic accident (others)	2		1	1										2							1	2			9	traffic accident (others)

electric shock			1	2			1		1			1							1						7	electric shock			
unclassifiable		2									1				1										1		5	unclassifiable	
burst				1															1							1		3	burst
fire				1																								2	fire
explosion											1																	1	explosion
total	540	468	426	335	303	265	305	257	242	214	205	204	180	200	210	225	209	146	180	182	184	215	239	235	6,169	total			

Transition of Causal agents (Large) of fatal and non-fatal accidents in 030107 river 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) agents
machine	118	112	90	76	69	60	72	61	48	50	51	56	42	59	53	57	52	32	34	39	48	62	42	56	1,439	machine
temporary buildings, establishments	119	88	94	70	50	48	60	67	50	46	39	29	37	30	48	44	39	32	41	39	34	33	53	44	1,234	temporary buildings, establishments
crane, conveying machine	78	78	58	54	63	48	41	34	38	43	37	41	34	42	40	42	38	20	34	33	29	41	42	39	1,047	crane, conveying machine
environment	68	56	57	36	36	37	50	26	39	26	18	32	18	24	22	28	26	30	24	33	24	30	28	31	799	environment
other equipment	49	36	38	31	31	21	30	29	25	15	21	23	23	17	26	21	21	14	16	10	20	21	29	26	593	other equipment
substance, material	82	84	80	49	43	40	43	32	31	29	29	16	19	21	14	30	25	14	17	18	16	17	22	25	796	substance, material
load	16	7	3	12	8	10	6	5	5	3	4	6	1	6	5	2	4	2	8	7	7	4	8	7	146	load
others	10	7	6	7	3	1	3	3	6	2	6	1	6	1	2	1	4	2	6	3	6	7	15	7	115	others
total	540	468	426	335	303	265	305	257	242	214	205	204	180	200	210	225	209	146	180	182	184	215	239	235	6,169	total

Transition of Causal agents (Middle) of fatal and non-fatal accidents in 030107 river 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	total	Causal (M) agents
construction machine	80	87	72	55	49	46	59	39	38	33	39	40	27	47	37	41	35	22	24	26	35	35	31	45	1,042	construction machine
temporary buildings, establishments	119	88	94	70	50	48	60	67	50	46	39	29	37	30	48	44	39	32	41	39	34	33	53	44	1,234	temporary buildings, establishments
natural environment	68	56	57	36	36	37	50	26	39	26	18	32	18	24	22	28	26	30	24	33	24	30	28	31	799	natural environment
materials	79	82	79	47	43	39	43	32	31	28	28	16	19	21	14	30	24	14	14	16	16	17	21	22	775	materials
conveying machine	39	37	31	24	25	23	21	12	21	16	17	18	16	23	26	20	22	8	13	15	17	19	19	20	502	conveying machine
tools	31	22	27	16	23	13	21	20	18	11	16	17	19	13	22	16	14	13	10	6	16	18	19	18	419	tools
crane	17	32	23	12	24	19	14	12	8	18	9	12	13	15	11	19	14	11	15	10	9	14	17	18	366	crane
load	16	7	3	12	8	10	6	5	5	3	4	6	1	6	5	2	4	2	8	7	7	4	8	7	146	load
human power machine, tools	14	10	7	12	6	6	4	7	3	3	4	4	2	3	1	4	6		6	4	3	2	6	7	124	human power machine, tools
woodworking machine	16	16	10	11	11	6	5	12	3	8	5	8	5	6	11	6	6	3	4	6	4	14	4	6	186	woodworking machine
no causal agent	9	2	4	5	2	1	3	1	6	2	5	1	3		2		2	2	3	3	6	5	5	5	77	no causal agent
general machine	14	5	6	7	7	7	7	7	6	6	6	6	9	6	2	6	10	5	5	6	8	9	5	4	159	general machine

hazards, harmful substances	3	2	1	2		1				1	1						1		3	2			1	3	21	hazards, harmful substances
other causal agent	1	1	2	1				1					3	1		1	2		3			2	10	2	30	other causal agent
vehicle	22	9	4	18	14	6	6	10	9	9	11	11	5	4	3	3	2	1	6	8	3	8	6	1	179	vehicle
other equipments, facilities	2	4	4	1	2	1	4	2	4		1	2	2	1	3		1	1				1	4	1	41	other equipments, facilities
metal manufacturing machine	5	4	2	3	2		1	2	1	3		2	1			3	1		1	1		2	1	1	36	metal manufacturing machine
unclassifiable		4		1	1			1			1														8	unclassifiable
power transmission mechanism	1					1		1							2	1		1							7	power transmission mechanism
mobile silviculture machine																		1			1	2	1		5	mobile silviculture machine
electric equipment	2					1				1											1				5	electric equipment
engine	2										1				1										4	engine
pressure vessel				2																					2	pressure vessel
welding equipment							1									1									2	welding equipment





metal material			19		16		16	13	13	11	17	7	11	9	5	10	10	5	4	7	6	8	6	6	199	metal material	
other materials			26		10		7	7	8	6	4	6	1	6	4	6	4	4	3	3	4	3	5	6	123	other materials	
hand tool			7		5		4	7	3	2	4	2	2	2	1	4	5		5	4	2	2	4	6	71	hand tool	
no causal agent			4		2		3	1	6	2	5	1	3		2		2	2	3	3	6	5	5	5	60	no causal agent	
high/cold temperature environment			3		1			2	3				3	4	1	1	1	2		2	6	4	2	4	5	44	high/cold temperature environment
other general power machines			6		7		7	6	5	6	5	6	9	6	2	6	10	5	5	6	8	8	5	4	122	other general power machines	
chain saw			2		2			3		2		3	3	5	1	5	3	1	1	4	1	3	2	4	45	chain saw	
crane			3		1		1	2		2	3	1	1	2		1	1			1	2		1	4	26	crane	
slinging tool			4		7		8	8	9	2	8	8	10	5	6	5	4	5	2	3	6	6	4	3	113	slinging tool	
working platform, boot board			3		9		7	7	4	7	7		2	2	6	4	8	2	2	5	3	2	11	3	94	working platform, boot board	
other tools			8		8		4	2	5	3	5	3	4	2	3	1	2	3	3		4	2	7	3	72	other tools	
lumber, bamboo			9		3		3	4	3	5	3			3	3	2	1	3		1	3		4	3	53	lumber, bamboo	
other environments			11		3		5	3	1	4	2	3	2	5	4	2	4	7	6	6	5	2	5	2	82	other environments	
other construction machines			4		6		1	5		6	9	4	3	7	5	4	2	4	3	2	2	3	2	2	74	other construction machines	
scaffolding			11		6		6	7	8	2	4	3	2	4	3	2	2	3	1	1	3	1		2	71	scaffolding	
rough terrain hauler			5		3		1	2	4	1	4	1		2	1	1	2		2		1	1	1	2	34	rough terrain hauler	
hardening machine			4		2		1	3	2		1	3		1		1	3	2			5		2	2	32	hardening machine	
demolition machine			3		1		6		1					2	1	2	3	1	3		2		2	2	29	demolition machine	
other causal agent			2					1					3	1		1	2		3			2	10	2	27	other causal agent	

other hazards, harmful substances										1								1	1			1	2	6	other hazards, harmful substances	
cars, bus, motorcycle			3		12		6	9	9	8	9	10	4	3	3	3	2	1	6	7	2	6	4	1	108	cars, bus, motorcycle
standing tree			9		7		9	4	4	4	4	8	1	3	2	6	5	8	1	8	4	5	4	1	97	standing tree
circular sawing machine			7		8		5	7	3	5	4	5	2	1	6	1	3	2	1	2	2	9		1	74	circular sawing machine
stairs, landing stage			3				2	3	3	2	1	2	1	3		6	3	3	1	1	5	1	3	1	44	stairs, landing stage
other equipment, facilities			4		2		4	2	4		1	2	2	1	3		1	1				1	4	1	33	other equipment, facilities
water			1		2				1	1	1	1	3	1		3		2	2	1	1	1	1	1	23	water
grinding machine, buffing machine			2		1		1	2	1	2		1	1			3	1		1			1	1	1	19	grinding machine, buffing machine
other woodworking machines			1		1			1		1	1				4				2		1	2	2	1	17	other woodworking machines
human power hauling equipment					1							1		1			1		1		1		1	1	8	human power hauling equipment
roof, beam, haze, crossbeam, principal rafter			2				1		1	1												1	1	1	8	roof, beam, haze, crossbeam, principal rafter
inflammable gas																		1					1	2	inflammable gas	
foundation work machine			8		2		5	6	3	1		1		1	1	4	5		1	3	1		1	43	foundation work machine	
timbering			6		3		3	5	1	2	2	2	2		1	2	2	1	1	1		1	1	36	timbering	
opening			5						2				1		1	1		1	2	3		2	3	21	opening	



equipment									1										1					2	equipment	
human power machine											1											1			2	human power machine
harmful substance															1									2	harmful substance	
chamfering machine, router, woodworking milling machine																								1	chamfering machine, router, woodworking milling machine	
drill press, milling machine																								1	drill press, milling machine	
mobile logging machine																								1	mobile logging machine	
other mobile silviculture machine																								1	other mobile silviculture machine	
gondola																								1	gondola	
lumberyard equipment, logging cableway																								1	lumberyard equipment, logging cableway	
railway vehicle																								1	railway vehicle	
gas welding equipment																								1	gas welding equipment	
arc welding equipment																								1	arc welding equipment	
human power cranes																								1	human power cranes	



machine																										machine	
derrick crane																											derrick crane
elevator, lift																											elevator, lift
cargo lifting appliance																											cargo lifting appliance
simple skyline yarding equipment																											simple skyline yarding equipment
straddle carrier																											straddle carrier
boiler																											boiler
pressure vessel																											pressure vessel
other pressure vessels																											other pressure vessels
chemical facilities																											chemical facilities
other welding equipment																											other welding equipment
kiln, caldron																											kiln, caldron
industrial dryer																											industrial dryer
other kiln, caldron																											other kiln, caldron
transmission																											transmission
electric power facilities																											electric power facilities
explosive substance																											explosive substance
radiation																											radiation
total	540	468	426	335	303	265	305	257	242	214	205	204	180	200	210	225	209	146	180	182	184	215	239	235	6,169	total	





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
February	66	56	52	61	46	42	47	44	39	32	28	20	14	29	24	26	24	14	29	18	23	23	37	31	825	February
January	46	49	44	49	36	40	24	31	27	36	30	31	20	18	28	23	22	15	21	26	20	20	23	30	709	January
December	44	30	43	36	35	23	19	18	14	14	18	21	25	13	16	20	20	14	22	11	23	25	16	27	547	December
March	55	76	54	26	45	46	30	38	28	30	28	34	18	27	29	20	31	24	18	21	23	23	22	24	770	March
September	28	19	18	16	13	16	20	10	13	6	17	9	9	7	11	16	14	9	7	15	13	12	14	23	335	September
April	48	37	40	24	21	16	20	18	20	18	12	14	12	19	15	14	13	8	11	13	14	20	8	20	455	April
June	45	35	26	16	10	13	22	11	18	18	6	12	11	15	10	14	12	9	9	11	9	12	13	18	375	June
November	48	40	39	30	20	16	29	21	19	11	28	16	16	13	20	26	20	9	14	17	17	18	22	17	526	November
May	41	31	30	19	24	12	31	28	14	14	11	15	10	15	14	22	12	13	7	10	10	12	17	13	425	May
October	43	30	34	19	15	12	30	13	11	16	11	11	13	20	16	16	20	8	11	10	18	16	15	12	420	October
July	40	32	23	18	23	19	15	12	22	11	9	10	11	9	12	15	7	11	18	16	7	14	29	10	393	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	10	389	August
total	540	468	426	335	303	265	305	257	242	214	205	204	180	200	210	225	209	146	180	182	184	215	239	235	6,169	total

Transition of prefectures of fatal and non-fatal accidents in 030107 river 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	22	15	16		6		9	11	5	11	2	6	2	4	2	4	8	4	7	6	5	11	17	15	188	Nagano
Fukushima	15	10	2		6		4		2	6	2	4	2	9	5	5	12	5	3	5	5	7	11	15	135	Fukushima
Kagoshima	16	10	8		8		4	8	14	8	10	7	7	9	4	1	1	4	11	4	5	14	10	14	177	Kagoshima
Miyagi	2	7	1		13		4	4	7	5	4	1	6	3	9	7		10	16	6	9	4	9	10	137	Miyagi
Yamagata	6	6	6		6		5	2	3	3	1	1	1	2	4	2	4	4	2	7	3	6	8	10	92	Yamagata
Tochigi	9	10	7		4		2		2	1	2	4	2	6	2	1			1	3		5	4	10	75	Tochigi
Okayama	23	23	8		7		10	4	7	1	2	4	2	5	6	7	2			5	3	7	4	9	139	Okayama



Osaka	4	5	10		7		4	3	11	6	3		1	1	2	2	3	1	1	4	2	2	2	3	77	Osaka
Nara	6	5	3		3		1	3	2	1	1	4	3	1	7	3		1	2	4	3	2	1	3	59	Nara
Tottori	7	2	3		5		1	3	3		1	2	2	4	2	3	1	2	4		1	3		3	52	Tottori
Shiga	5	3	6		8			5	3	1	2		2		1	2	1	2	1		1	2	2	3	50	Shiga
Yamaguchi	4	11	13		6		6	7	5	2	2	6	6	3	6	5	4	2	5		8	4	8	2	115	Yamaguchi
Kyoto	17	6	9		3		8	10	6	3	2	5	1	3	1	6	8	4	3	5	6	3	3	2	114	Kyoto
Mie	11	9	10		9		5	5	7		4	5	1	3	7	5	6	1	4	6	5	3	3	2	111	Mie
Chiba	5	8	8		7		3	9	6	5	4	4	1	3	4	4	3		4	4	2	2	1	2	89	Chiba
Miyazaki	6	3	2		1		4	3	4	5		2	4	2		1	3	4	5	3	2	4	4	2	64	Miyazaki
Shimane	4	7	8		6		2	2	4	3	1	6	1	1	1	2	4	2		1	2		4	2	63	Shimane
Tokyo	9	7	7		7		8	10	7	5	10	6	4	4	5	3	2	4	5	6	3	7	10	1	130	Tokyo
Kanagawa	9	8	11		3		5	8	3	4	5	5	2	8		3	5	4	2	4	1	2	6	1	99	Kanagawa
Tokushima	10	7	6		5		17	3	6	5	5	5			2	3	5	2	4	1		2	4	1	93	Tokushima
Gunma	16	4	9		7		2	2	1	5	3	3	3		3	2	4	1	2	4	4	3	4	1	83	Gunma
Aomori	8	5	11		2		2	5	1	3	3		8	8		2	2	4	3	2	2	1	2	1	75	Aomori
Nagasaki	8	13	5				4	2		2	3	2	2	3	1	6		1	1	1			2	1	57	Nagasaki
Okinawa	1	1			1					2				1			1		1				1		9	Okinawa
total	540	468	426	335	303	265	305	257	242	214	205	204	180	200	210	225	209	146	180	182	184	215	239	235	6,169	total

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

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