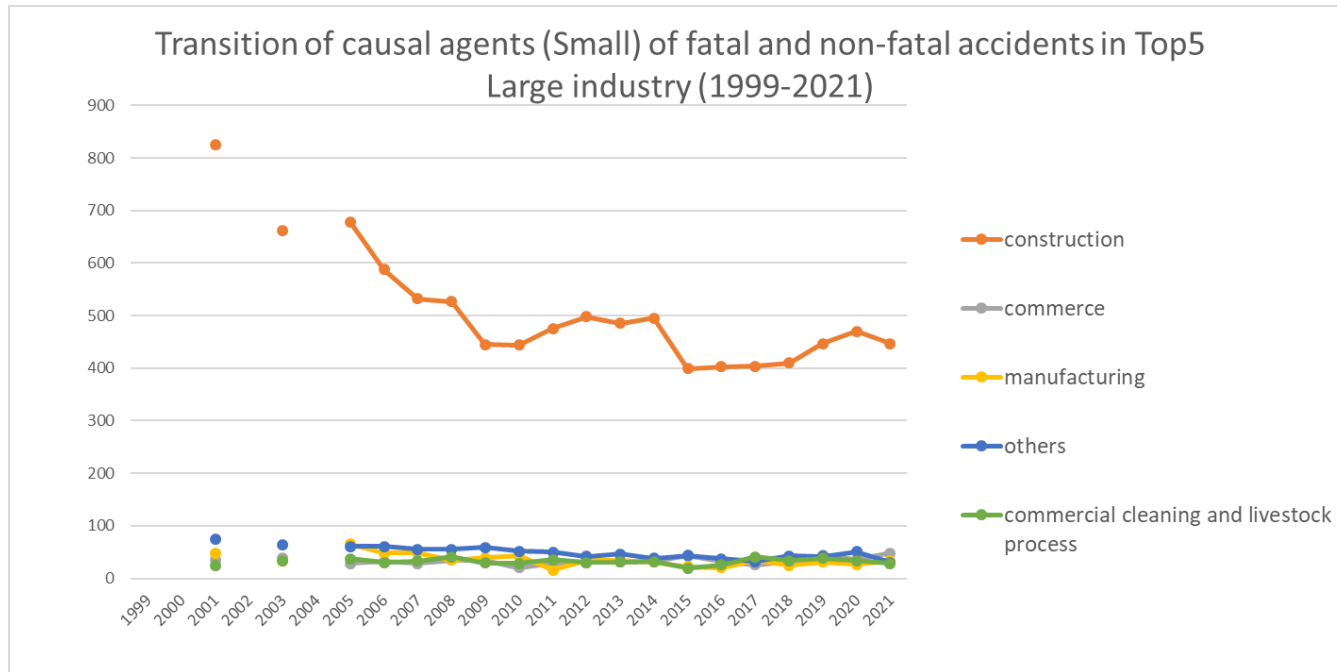
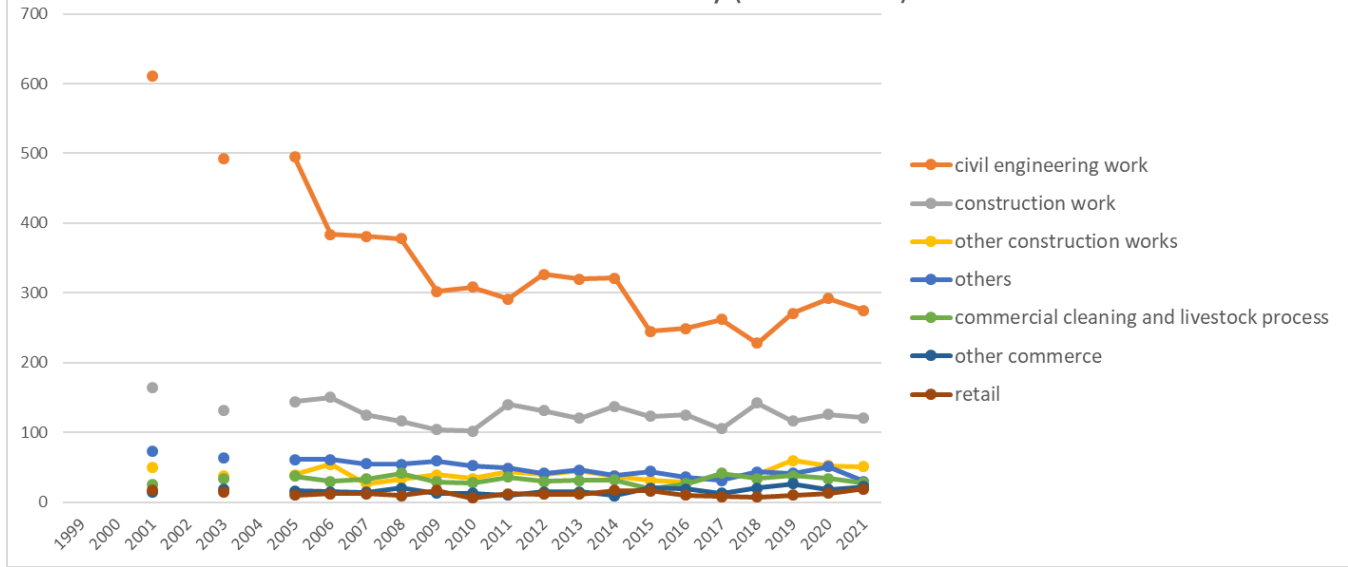


Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 142 excavating machine (1999-2021)



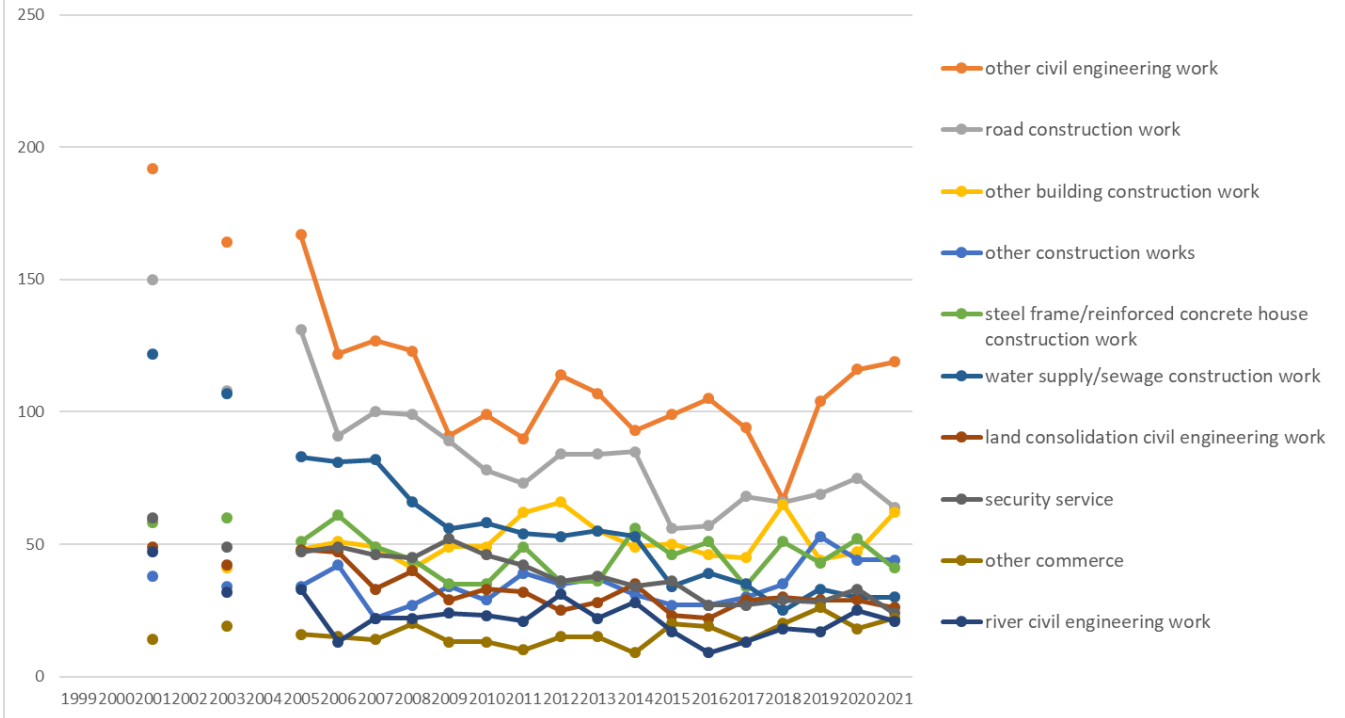
Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 142 excavating machine in Large industry (1999-2021)

### Transition of causal agents (Small) of fatal and non-fatal accidents in Top7 Middle industry (1999-2021)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 142 excavating machine in Middle Industry (1999-2021)

Transition of causal agents (Small) of fatal and non-fatal accidents in Top10 Small industry (1999-2021)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 142 excavating machine in Small Industry (1999-2021)

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 142 excavating machine in Large industry (1999-2021)

code	Large industry	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Large industry
03	construction			825		661		678	588	532	527	445	444	475	498	485	495	399	403	404	410	447	470	447	9,633	construction
08	commerce			36		39		28	32	28	35	34	20	29	30	31	33	43	32	26	32	44	36	48	636	commerce
01	manufacturing			48		34		65	48	49	35	39	43	16	35	34	31	22	20	35	25	31	27	33	670	manufacturing
17	others			75		64		61	61	55	55	59	52	50	42	46	38	44	37	32	43	42	51	30	937	others
15	commercial cleaning and livestock process			25		34		37	30	33	41	29	28	36	30	31	32	19	26	41	34	38	34	28	606	commercial cleaning and livestock process
06	agriculture			19		21		20	17	13	14	17	11	18	18	18	12	17	14	10	10	18	15	26	308	agriculture
04	transportation service			34		29		20	21	14	18	17	20	25	18	14	23	10	17	15	20	9	14	15	353	transportation service

02	mining			36		20		20	15	18	13	15	17	9	15	15	15	14	9	9	11	12	10	12	285	mining
05	cargo handling service			5		3		1	4	2	4	1	3	6	4	2	4		2	2	3	4	3	5	58	cargo handling service
14	hotel/restaurant/amusement service			4		5		6	3	5	7	6	6	3	4	3	2	3	5	4	2	2	6	4	80	hotel/restaurant/amusement service
07	livestock/fishery			1				4	4	1		1	1	3	2		2	2	1	8	2	4	4	2	42	livestock/fishery
13	health and hygiene service							1		1				1		1	1				1	1			7	health and hygiene service
09	financial business/advertisement					1											1					1	1		4	financial business/advertisement
11	telecommunication service					1		1			1						1								4	telecommunication service
12	education/research service					1					1					1									3	education/research service
16	public office										1								1				1		3	public office
10	movie/play service									1															1	movie/play service
	total			1,108		913		942	823	752	752	663	645	671	696	681	690	573	567	586	593	653	672	650	13,630	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 142 excavating machine in Middle industry (1999-2021)

code	Middle industry	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Middle industry
0301	civil engineering work			611		493		495	384	381	378	302	308	291	327	320	321	245	249	262	228	271	292	275	6,433	civil engineering work
0302	construction work			164		131		144	150	125	116	104	102	140	131	120	137	123	125	105	142	116	126	121	2,422	construction work
0303	other construction works			50		37		39	54	26	33	39	34	44	40	45	37	31	29	37	40	60	52	51	778	other construction works
1702	others			73		64		61	61	55	54	59	52	49	41	46	38	44	36	31	43	41	51	30	929	others
1501	commercial cleaning and livestock process			25		34		37	30	33	41	29	28	36	30	31	32	19	26	41	34	38	34	28	606	commercial cleaning and livestock process
0804	other commerce			14		19		16	15	14	20	13	13	10	15	15	9	20	19	13	20	26	18	22	311	other commerce
0802	retail			17		14		10	12	12	9	17	6	12	11	11	17	16	10	8	7	10	13	19	231	retail
0403	road cargo transportation service			34		28		19	20	14	18	17	20	25	17	13	20	10	16	14	20	9	14	15	343	road cargo

																									transportation service	
0602	forestry			15		19		11	13	10	11	10	9	14	9	13	7	8	12	5	7	10	9	14	206	forestry
0601	agriculture			4		2		9	4	3	3	7	2	4	9	5	5	9	2	5	3	8	6	12	102	agriculture
0202	quarrying			34		18		20	15	16	13	15	17	9	15	15	15	14	8	8	11	12	10	11	276	quarrying
0117	other manufacturing			16		6		27	15	13	15	16	10	5	12	10	14	11	10	14	5	7	8	10	224	other manufacturing
0109	sand and stone products			16		12		16	15	15	6	8	10	3	11	8	5	5	2	9	10	10	6	8	175	sand and stone products
0801	wholesale			5		6		2	5	2	6	4	1	7	4	5	7	7	3	5	5	8	5	7	94	wholesale
0112	metal products			6		4		7	4	6	5	2	4		2	6	2	2	3	4	3	3	2	4	69	metal products
0502	harbor transportation service			3		2			2	1	3	1	2	4	2	1	4		2	2	2	3	2	4	40	harbor transportation service
1403	other amusement service			4		3		5	2	5	6	4	5	2	3	2	1	2	4	4	1	2	4	3	62	other amusement service
0116	electric/gas/water service			2		1		1		1	1	1	1											3	11	electric/gas/water service
0701	livestock			1				3	4	1		1	1	3	2		2	2	1	7	2	4	4	2	40	livestock
0104	wood products			1		1		1		3			2	1	2	2	1			1	3	3	1	2	24	wood products
0115	transport equipment products					1		1	1	2	1	2	1	1	1	1			1			3	2	2	20	transport equipment products
0113	machine products			4		2		4	6	5	2	3	6	3	4	4	3	2	3	4	3	2	2	1	63	machine products
0110	steel making			1		2		4	2	2	3	4	5	1			1	1	1		1		2	1	31	steel making
0108	chemical products			1		5			2	1	2		1	1		2	5					1	3	1	25	chemical products
0501	land cargo handling service			2		1		1	2	1	1		1	2	2	1					1	1	1	1	18	land cargo handling service
1401	hotel					2		1	1		1	1		1	1	1	1	1	1		1		2	1	16	hotel
0203	other mining			2		2				1									1	1				1	8	other mining
0101	food products			1				1	1											2		1		1	7	food products





150102	industrial waste management service			21	22	25	21	24	24	15	20	28	21	22	23	15	20	34	27	29	27	20	438	industrial waste management service
030202	wooden house construction work			30	22	28	25	17	21	14	16	20	18	22	23	13	17	19	22	23	16	12	378	wooden house construction work
060101	agriculture			4	2	9	4	3	3	7	2	4	9	5	5	9	2	5	3	8	6	12	102	agriculture
080209	other retails			7	9	3	8	6	4	10	3	6	7	5	9	11	6	5	2	3	6	11	121	other retails
040301	general truck transportation service			27	21	14	18	12	14	16	18	22	16	10	18	10	15	10	15	8	11	10	285	general truck transportation service
060201	lumbering			12	10	6	9	7	8	9	6	8	4	8	4	4	6	3	4	8	7	10	133	lumbering
080204	fuel retail			8	3	6	3	6	4	4	3	5	4	5	6	4	4	3	5	6	7	7	93	fuel retail
020201	quarrying			24	9	13	10	9	9	12	13	1	12	10	10	10	4	6	8	8	8	6	182	quarrying
170209	others			13	15	14	12	9	9	7	6	7	5	8	4	8	9	4	14	13	18	6	181	others
030203	building facility construction work			17	8	17	13	10	10	6	2	9	11	7	9	14	11	7	4	6	11	6	178	building facility construction work
080109	other wholesale			3	6	2	5	2	6	4	1	6	3	5	6	7	3	5	5	8	5	6	88	other wholesale
011702	machine repair			12	4	12	7	7	6	10	5	2	6	7	8	7	7	9	2	6	6	5	128	machine repair
150103	other waste disposal service			3	9	6	5	7	7	8	8	6	5	4	4	1	3	1	4	6	1	5	93	other waste disposal service
030301	electricity/telecommunication work			6	3	2	8	1	2	3	3	4	4	4	3	2		3	4	4	7	5	68	electricity/telecommunication work
030108	sand collapse prevention civil engineering work			22	14	15	15	6	8	3	5	10	6	10	12	5	2	3	7	8	8	4	163	sand collapse prevention civil engineering work
030105	bridge construction work			6	11	4	5	3	7	3	4	4	7	1	4	2	6	7	5	4	3	4	90	bridge construction work
060209	other forestry			3	9	5	4	3	3	1	3	6	5	5	3	4	6	2	3	2	2	4	73	other forestry
011209	other metal products			6	4	7	4	6	5	2	4		2	6	2	2	3	4	3	3	2	4	69	other metal products
050202	port cargo handling service			3	1		2	1	1		2	1		1	4		2		2	1	1	4	26	port cargo handling service
010909	other sand and stone products			6	8	4	6	4	3	5	4	2	6	2	2	1		5	5	2	2	3	70	other sand and stone products



030111	port/seaside construction work			6		6		6	1	5	5	2	2	2	3	7	2	1	4	6	3	2		3	66	port/seaside construction work
011701	auto mobile servicing			3		1		11	8	4	2	5	4	1	2	1	3	3	2	3	3		2	3	61	auto mobile servicing
020209	other quarrying			3		1		2	3	3	2	1	2	1		2	1	2	2		1		1	3	30	other quarrying
010905	other ceramic products			2		1		1	1	1	1									1			3	11	other ceramic products	
010901	cement products			8		3		11	8	9	2	3	6	1	5	6	3	4	2	4	4	8	4	2	93	cement products
030102	tunnel construction work			12		4		6	5	1	6	2		3	3	5	4	6		2	5	3	1	2	70	tunnel construction work
020202	gravel digging			7		8		5	2	4	2	2	2	7	3	3	4	2	2	2	2	4	1	2	64	gravel digging
150109	other cleaning and livestock process service					3		3	4	1	9	5		1	3	5	5	2	3	5	2	3	4	2	60	other cleaning and livestock process service
140301	golf course			2		3		5	2	4	4	4	5	2	3	2	1	2	3	1		2	2	2	49	golf course
030302	machinery/apparatus setting work			6				3	4	3	4	2	2	1	1	4	3	2	2	4	1	3	1	2	48	machinery/apparatus setting work
070101	livestock			1				3	4	1		1	1	3	2		2	2	1	7	2	4	4	2	40	livestock
030104	railway construction work			2		2		1	4	1	1		2	1	1	1	3	2	2	4	2	2	3	2	36	railway construction work
011709	other manufacturing			1		1		4		2	7	1	1	2	4	2	3	1	1	2		1		2	35	other manufacturing
040309	other land cargo transportation service			3		6		2		1	3	1			1	1	1		1	2	5	1		2	30	other land cargo transportation service
040302	specific truck transportation service			4				3	2	1	1		2	3		2	1			2			3	2	26	specific truck transportation service
011602	city gas service			1		1						1	1											2	6	city gas service
011301	machine products			4		2		4	6	4	2	3	5	3	3	4	3	2	3	4	3	2	2	1	60	machine products
011009	other steel products					1		2	2	1	1	3	3				1	1			1		1	1	18	other steel products
050101	land cargo handling service			2		1		1	2	1	1		1	2	2	1					1	1	1	1	18	land cargo handling service
140101	hotel					2		1	1		1	1		1	1	1	1	1		1			2	1	16	hotel
150101	building maintenance service			1				3		1	1	1		1	1			1		1	1		2	1	15	building maintenance service
010401	lumbering					1				2			1		2	2					1	1	1	1	12	lumbering

010804	petroleum/coal products					2			1			1							3	1	12	petroleum/coal products	
011509	other transport equipment products								1		1		1			1		1	2	1	9	other transport equipment products	
020309	other mining			2		2			1							1	1				1	8	other mining
080201	all kinds of retail			1		1			1		2		1		1						1	8	all kinds of retail
140309	other amusement service			2					1	1								1		2	1	8	other amusement service
010109	other foods								1								2		1		1	5	other foods
011501	ship building								1			1		1					1		1	5	ship building
011603	city water service			1					1	1											1	4	city water service
010402	plywood												1								1	2	plywood
040303	cargo/ light automobile transportation service					1															1	2	cargo/ light automobile transportation service
080102	furniture/fittings wholesale			1																	1	2	furniture/fittings wholesale
030101	hydroelectric plant construction work			2		2		1		1	3	2	1			2		2	1			17	hydroelectric plant construction work
011001	steel/iron/rolling products					1		2		1	2	1	2	1			1				1	12	steel/iron/rolling products
050201	general harbor transportation service					1				2	1		3	1				2		1	1	12	general harbor transportation service
010409	other lumber and wood products			1				1		1			1			1		1	2	2		10	other lumber and wood products
011101	nonferrous metals/rolling products							1		1		2	2	1	1	1			1			10	nonferrous metals/rolling products
030103	subway construction work			1		1				1			2				1				2	8	subway construction work
170101	dispatch service			2						1			1	1			1	1		1		8	dispatch service
010899	other chemical products			1		1			1	1	1		1									6	other chemical products
011502	auto mobile products					1		1	1		1	1							1			6	auto mobile products
080202	auto mobile retail									1	1					2	1					5	auto mobile retail

140302	park and amusement park								1												5	park and amusement park	
080101	all kinds of wholesale		1								1	1		1								4	all kinds of wholesale
110101	telecommunication service			1	1				1					1								4	telecommunication service
010806	rubber products								1					2								3	rubber products
011305	other precision machine products								1		1	1										3	other precision machine products
040201	taxi service			1											1	1						3	taxi service
080203	furniture/fitings retail		1			1														1		3	furniture/fitings retail
090209	other advertisement and mediator			1										1							1	3	other advertisement and mediator
120109	other education/research service			1					1					1								3	other education/research service
130201	social welfare facility										1		1	1								3	social welfare facility
130309	other health and hygiene service					1		1												1		3	other health and hygiene service
160101	public office								1							1					1	3	public office
010609	other pulp/paper processing products					1	1															2	other pulp/paper processing products
010801	non organic or organic chemical products			1																1		2	non organic or organic chemical products
011109	other nonferrous metal products											1			1							2	other nonferrous metal products
011409	other electrical equipment					1			1													2	other electrical equipment
040202	bus service											1		1								2	bus service
040409	other transportation service												1	1								2	other transportation service
050209	other harbor transportation service											1								1		2	other harbor transportation service
140201	general restaurant								1	1												2	general restaurant

010103	agricultural food products						1														1	agricultural food products		
010105	alcoholic drinks			1																		1	alcoholic drinks	
010209	other textile products													1								1	other textile products	
010601	pulp/paper											1										1	pulp/paper	
010805	plastics products					1																1	plastics products	
010809	chemical fertilizer products																				1	1	chemical fertilizer products	
010902	glass products																					1	glass products	
011002	casting products			1																		1	casting products	
011102	nonferrous metals casting products																					1	1	nonferrous metals casting products
011402	electrical appliance																					1	1	electrical appliance
011403	electronics equipment and telecommunications apparatus																						1	electronics equipment and telecommunications apparatus
011601	electric utility service																						1	electric utility service
020109	other coal mining																						1	other coal mining
040101	railroad service																						1	railroad service
040102	water transportation service																						1	water transportation service
040209	other passenger transport service																						1	other passenger transport service
070201	fishery																						1	fishery
070209	other fishery																						1	other fishery
080205	newspaper retail																						1	newspaper retail
090103	insurance business																						1	insurance business
100109	other movie/play service																						1	other movie/play service
130109	other medical treatment service																						1	other medical treatment service





100102	movie theatre																							movie theatre	
120101	auto mobile practical training																							auto mobile practical training	
120102	software service																							software service	
130101	hospital																							hospital	
130102	general clinic																							general clinic	
130301	bathhouse																							bathhouse	
140209	other restaurants																							other restaurants	
150104	cremation service																							cremation service	
150105	livestock process service																							livestock process service	
170202	information processing service																							information processing service	
	total			1,108	913		942	823	752	752	663	645	671	696	681	690	573	567	586	593	653	672	650	13,630	total

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

[https://www.jisha.or.jp/english/statistics/202212\\_03.html](https://www.jisha.or.jp/english/statistics/202212_03.html)