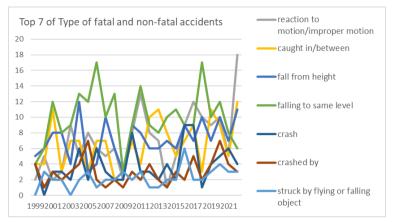
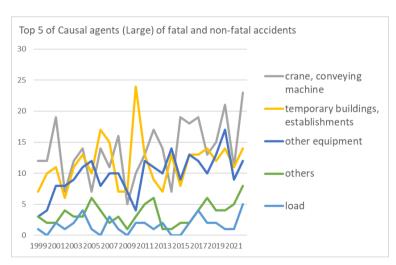
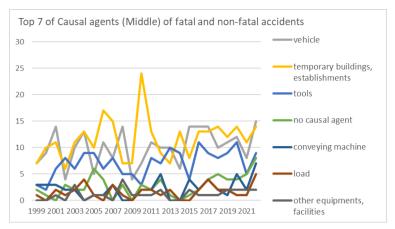
Transition of fatal and non-fatal accidents in 040102 water transportation service in Japan (1999-2022)



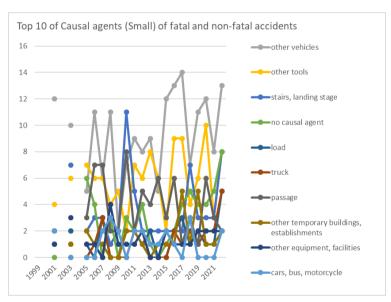
Transition of Top 7 of Type of fatal and non-fatal accidents in 040102 water transportation service in Japan (1999-2022)



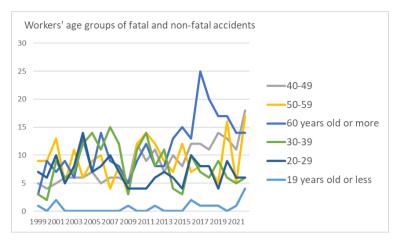
Transition of Top 5 of Causal agents (Large) of fatal and non-fatal accidents in 040102 water transportation service in Japan (1999-2022)



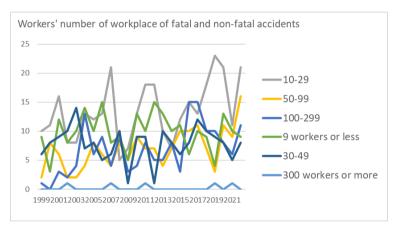
Transition of Top 7 of Causal agents (Middle) of fatal and non-fatal accidents in 040102 water transportation service in Japan (1999-2022)



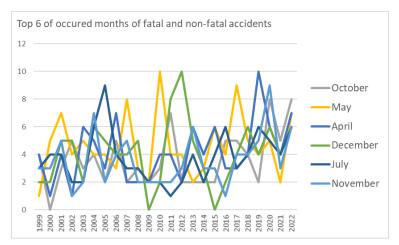
Transition of Top 10 of Causal agents (Small) of fatal and non-fatal accidents in 040102 water transportation service in Japan (1999-2022)



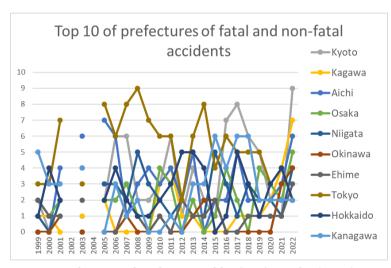
Transition of workers' age groups of fatal and non-fatal accidents in 040102 water transportation service in Japan (1999-2022)



Transition of workers' number of workplace of fatal and non-fatal accidents in 040102 water transportation service in Japan (1999-2022)



Transition of Top 6 of occured months of fatal and non-fatal accidents in 040102 water transportation service in Japan (1999-2022)



Transition of Top 10 of prefectures of fatal and non-fatal accidents in 040102 water transportation service in Japan (1999-2022)

Transition of Type of fatal and non-fatal accidents in 040102 water transportation service 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
reaction to																										reaction to
motion/improper	2	5	2	3	9	5	8	6	5	6	2	8	13	8	7	1	5	9	12	10	9	10	5	18	168	motion/improper
motion																										motion

caught in/between	4	4	11	3	7	7	3	7	7	2	3	7	4	10	11	8	5	7	9	3	11	9	5	12	159	caught in/between
fall from height	5	6	8	8	4	12	3	4	10	6	3	9	8	6	6	7	6	9	7	10	7	10	7	11	172	fall from height
falling to same level	4	6	12	8	9	13	12	17	10	13	3	9	14	9	8	10	11	9	9	17	10	12	8	6	239	falling to same level
crash	4		3	3	2	6	2	6	3	2	2	8	3	3	2	4	2	9	9	1	4	5	6	4	93	crash
crashed by	4	1	3	2	3	4	7	2	1	2	1	3	2	4	2	1	3	2	5	2	4	7	4	3	72	crashed by
struck by flying or falling object		3	2	2		2	3	1	2	2	3	2	3	1	1	2	2	6	2	2	3	4	3	3	54	struck by flying or falling object
traffic accident (public road)	1	1						1	2	3	1		2	1		1	2			3		1		3	22	traffic accident (public road)
contact to high/low- temperature	1	1	1	1	1	1		2		2				1	1	2	2	1	2	2		1	1	2	25	contact to high/low- temperature
cut	2	1	1		2		2	1	1	2	1			2	1	3	2	1	2	1	1	2	1	1	30	cut
collapse			1	1			1		2	1	1				1				1					1	10	collapse
traffic accident (others)		1	2		1							1							1					1	7	traffic accident (others)
drown	1	1					1						4	1	1	1	2		2	2			1		17	drown
others						1		1			1	1								1	1				6	others
contact to harmful substance							2								1								1		4	contact to harmful substance
electric shock																		1							1	electric shock
unclassifiable									1																1	unclassifiable

injury to the sole of																										injury to the sole
the foot																										of the foot
explosion																										explosion
burst																										burst
fire																										fire
total	28	30	46	31	38	51	44	48	44	41	21	48	53	46	42	40	42	54	61	54	50	61	42	65	1,080	total

Transition of Causal agents (Large) of fatal and non-fatal accidents in 040102 water transportation service 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
crane, conveying machine	12	12	19	7	12	14	7	14	11	16	5	10	13	17	14	7	19	18	19	13	15	21	11	23	329	crane, conveying machine
temporary buildings, establishments	7	10	11	6	11	13	10	17	15	7	7	24	13	9	7	13	8	13	13	14	12	14	11	14	279	temporary buildings, establishments
other equipment	3	4	8	8	9	11	12	8	10	10	7	4	12	11	10	14	9	13	12	10	13	17	9	12	236	other equipment
others	3	2	2	4	3	3	6	4	2	3	1	3	5	6	1	1	2	2	4	6	4	4	5	8	84	others
load	1		2	1	2	4	1		3	1		2	2	1	2			2	4	2	2	1	1	5	39	load
machine		1	1		1		1			2	1	1	2	1	2	2	2	1	3	2	1	2	2	3	31	machine
environment		1	3	3		4	3	2	2			1	4		3	1		3	4	6	2	1	1		44	environment
substance, material	2			2		2	4	3	1	2		3	2	1	3	2	2	2	2	1	1	1	2		38	substance, material
total	28	30	46	31	38	51	44	48	44	41	21	48	53	46	42	40	42	54	61	54	50	61	42	65	1,080	total

Transition of Causal agents (Middle) of fatal and non-fatal accidents in 040102 water transportation service 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)
vehicle	7	9	14	4	10	13	5	11	8	14	4	7	11	10	10	6	14	14	14	10	11	12	8	15	241	vehicle
temporary buildings, establishments	7	10	11	6	11	13	10	17	15	7	7	24	13	9	7	13	8	13	13	14	12	14	11	14	279	temporary buildings, establishments
tools	3	2	6	8	6	9	9	6	8	5	5	3	8	7	10	9	4	11	9	8	9	11	5	9	170	tools
no causal agent	2	1		3	2	2	6	4		3		3	2	4	1		1	2	4	5	4	4	5	8	66	no causal agent
conveying machine	3	3	3	2	2		1	1	3			2	2	5			4	2	4	2	1	5	2	7	54	conveying machine
load	1		2	1	2	4	1		3	1		2	2	1	2			2	4	2	2	1	1	5	39	load
other equipments,			1		3		1	1		4	1	1	1	2			2	1	1	1	2	2	2	2	28	other equipments, facilities
crane	2		2	1		1	1	2		2	1	1		2	4	1	1	2	1	1	3	4	1	1	34	crane
human power machine,		1	1			2	2	1	2	1	1		3	2		3	3	1	1	1	2	4	2	1	34	human power
metal manufacturing machine			1							1								1	1	1	1	1	1	1	9	metal manufacturing machine
engine										1							1			1				1	4	engine
																										power

power transmission												1	1											1	3	transmission
mechanism																										mechanism
natural environment		1	3	3		4	3	2	2			1	4		3	1		3	4	6	2	1	1		44	natural
natural chynolinene												•										Ľ				environment
materials	2			2		2	2	2	1	2		3	1		2	2	2	2	2	1	1	1	1		31	materials
other causal agent	1		2	1	1	1			1		1		3	2		1				1					15	other causal
other causar agent																				<u> </u>						agent
general machine		1					1				1					1	1		1				1		7	general
general machine											<u> </u>					<u> </u>			ľ							machine
hazards, harmful																										hazards,
substances							2	1					1	1	1								1		7	harmful
																										substances
woodworking machine					1								1	1	1				1						5	woodworking
3																										machine
construction machine															1	1						1			3	construction
																										machine
welding equipment		1														1			1						3	welding
3.4.7																										equipment
unclassifiable		1							1								1								3	unclassifiable
pressure vessel																1									1	pressure vessel
mobile silviculture																										mobile
machine																										silviculture
THACHINE																										machine
chemical facilities																										chemical
Chemical facilities																										facilities

kiln, caldron																										kiln, caldron
oloctric aquipment																										electric
electric equipment																										equipment
total	28	30	46	31	38	51	44	48	44	41	21	48	53	46	42	40	42	54	61	54	50	61	42	65	1,080	total

Transition of Causal agents (Small) of fatal and non-fatal accidents in 040102 water transportation service in Japan (1999-2022)

Transition of causara			1										1			1			1	1						
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
other vehicles			12		10		5	11	6	11	2	7	9	8	9	5	12	13	14	7	11	12	8	13	185	other vehicles
other tools			4		6		7	6	6	4	5	2	7	6	8	6	2	9	9	4	6	10	3	8	118	other tools
stairs, landing stage			2		7		2	3	3	1	2	11	5	2	2	2	2	2	2	7	3	3	3	8	72	stairs, landing stage
no causal agent					2		6	4		3		3	2	4	1		1	2	4	5	4	4	5	8	58	no causal agent
load			1		2		1		3			2	2	1	2			2	3	1	2	1	1	5	29	load
truck			2		1			1	3				2	2				2	1	2	1	2	2	5	26	truck
passage			2				3	7	7	2	2	8	2	5	4	6	3	6	1	3	1	6	3	2	73	passage
other temporary buildings, establishments			2		1		2	1	1			2	2	1		1	1	1	5	1	5	1	1	2	30	other temporary buildings, establishments
other equipment, facilities			1		3		1	1		4	1	1	1	2			2	1	1	1	2	2	2	2	28	other equipment,
cars, bus, motorcycle			2						2	3	2		2	2	1	1	2	1		3				2	23	cars, bus, motorcycle
forklift			1		1							2		1			3		2			3		2	15	forklift
ladder			1				1		2			1	1	1	2	3	2	2		3	2	1	1	1	24	ladder
working platform,			1		1		3	2	1	3	1			1	1	1	1			2			1	1	20	working platform,

boot board																							boot board
hand tool		1		1	1	2	1				1		1	1	1			1	1	2	1	15	hand tool
grinding machine, buffing machine		1														1	1	1	1		1	6	grinding machine, buffing machine
crane												1							3	1	1	6	crane
opening		1						1		1			1							1	1	6	opening
engine							1							1			1				1	4	engine
power transmission mechanism									1	1											1	3	power transmission mechanism
building, establishment		3	1		4	3	1	1	3	2			1	1	3	4	1	3	4	2		37	building, establishment
human power hauling equipment				1				1		2	1		2	2		1		1	3			14	human power hauling equipment
other powered crane				1	1			1	1		2	1	1		1	1	1	1	1			13	other powered crane
metal material				1	1	1			2	1				2	2	1		1	1			13	metal material
other environments		1		2	1				1						1	1	3	2		1		13	other environments
other causal agent		2	1			1		1		3	2		1				1					12	other causal agent
natural ground,				1		2						2	1		2	1						∥9	natural ground,
water		1								4		1				2	1					9	water
mobile crane		2			1		2					1			1							7	mobile crane
other materials				1			2					1	2				1					7	other materials
slinging tool		1		1			1										1	1		1		6	slinging tool

scaffolding			1						1			1		1	1					5	scaffolding
lumber, bamboo					1			1			1				1				1	5	lumber, bamboo
machine/equipment		1				1									1	1				4	machine/equipment as load
high/cold temperature environment		1			1											1		1		4	high/cold temperature environment
other general power machines				1			1												1	3	other general power machines
cargo lifting appliance											1		1				1			3	cargo lifting appliance
conveyor										2					1					3	conveyor
other hazards, harmful substances										1	1								1	3	other hazards,
circular sawing			1												1					2	circular sawing
chain saw									1		1									2	chain saw
other construction machines											1							1		2	other construction machines
food manufacturing													1		1					2	food manufacturing
other powered conveying machines				1									1							2	other powered conveying machines
human power									1							1				2	human power

harmful substance				2														2	harmful substance
unclassifiable						1						1						2	unclassifiable
wood planer machine										1								1	wood planer machine
excavating machine											1							1	excavating machine
lathe							1											1	lathe
drill press, milling machine																	1	1	drill press, milling machine
other metal manufacturing machines													1					1	other metal manufacturing machines
mixer, grinder											1							1	mixer, grinder
lumberyard equipment, logging cableway																1		1	lumberyard equipment, logging cableway
other pressure vessels											1							1	other pressure vessels
gas welding equipment														1				1	gas welding equipment
arc welding equipment											1							1	arc welding equipment
inflammable substance									1									1	inflammable substance
inflammable gas					1													1	inflammable gas
standing tree															1			1	standing tree

band sawing													ŀ	band sawing
machine													1	machine
hollow chisel													ŀ	hollow chisel
mortiser, wood													r	mortiser, wood
borer													ŀ	borer
chamfering														chamfering
machine, router,													ı	machine, router,
woodworking														woodworking
milling machine													1	milling machine
other woodworking														other woodworking
machines													i	machines
leveling,													I	leveling,
transporting or													t	transporting or
loading machine													l	loading machine
foundation work													f	foundation work
machine													1	machine
hardening machine													ŀ	hardening machine
demolition machine													(demolition machine
vehicle for high lift													\	vehicle for high lift
work													\	work
power press													i	power press
forging pressure													f	forging pressure
hammer													ŀ	hammer
shearing machine													5	shearing machine
centrifugal machine														centrifugal machine
		i												

roll machine (except													roll machine (exce
printingroll													printingroll
machine)													machine)
injection molding													injection molding
machine													machine
printing machine													printing machine
industrial robot													industrial robot
felling machine													felling machine
mobile logging													mobile logging
machine													machine
skyline yarding													skyline yarding
machine													machine
other mobile													other mobile
silviculture machine													silviculture machi
derrick crane													derrick crane
elevator, lift													elevator, lift
gondola													gondola
simple skyline													simple skyline
yarding equipment													yarding equipme
railway equipment													railway equipmer
loader													loader
straddle carrier													straddle carrier
rough terrain hauler													rough terrain hau
railway vehicle													railway vehicle
boiler													boiler

	 <u></u>	<u> </u>	 	 <u> </u>			 	 		 	 		
pressure vessel													pressure vessel
chemical facilities													chemical facilities
other welding													other welding
equipment													equipment
kiln, caldron													kiln, caldron
industrial dryer													industrial dryer
other kiln, caldron													other kiln, caldron
transmission													transmission
electric power													electric power
facilities													facilities
other electrical													other electrical
equipment													equipment
human power													human power
machine													machine
timbering													timbering
roof, beam, haze,													roof, beam, haze,
crossbeam,													crossbeam,
principal rafter													principal rafter
explosive substance													explosive substance
radiation													radiation
stone, sand,													stone, sand,
substance													substance
abnormal													abnormal
environment													environment

tot	al	28	30	46	31	38	51	44	48	44	41	21	48	53	46	42	40	42	54	61	54	50	61	42	65	1,080	total	
ll.		II			II	II	ll l	ll l		II	II		ll .	II	ll .		II	II		II	II		II	II.	II	'		ll.

Transition of workers' age groups of fatal and non-fatal accidents in 040102 water transportation service 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
40-49	5	4	5	6	6	6	7	5	6	6	5	12	9	11	7	10	8	12	12	11	14	13	11	18	209	40-49
50-59	9	9	13	5	11	6	9	10	4	8	3	12	14	12	9	7	12	7	8	8	5	16	5	17	219	50-59
60 years old or	3	9	7	9	6	13	7	14	9	8	5	9	12	8	8	13	15	13	25	20	17	17	14	14	275	60 years old or
more																					.,				2,3	more
30-39	3	2	9	6	7	12	14	11	15	12	3	11	14	8	11	4	3	10	7	6	9	6	5	6	194	30-39
20-29	7	6	10	5	8	14	7	8	10	7	4	4	4	6	7	6	4	10	8	8	4	9	6	6	168	20-29
19 years old or less	1		2								1			1				2	1	1	1		1	4	15	19 years old or less
total	28	30	46	31	38	51	44	48	44	41	21	48	53	46	42	40	42	54	61	54	50	61	42	65	1,080	total

Transition of workers' number of workplace of fatal and non-fatal accidents in 040102 water transportation service 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
10-29	10	11	16	8	8	13	12	13	21	5	7	13	18	18	10	7	12	15	13	18	23	21	11	21	324	10-29
50-99	2	8	6	2	2	4	8	6	4	8	5	9	7	7	4	7	10	10	11	7	3	11	9	16	166	50-99
100-299	1		3	2	4	13	6	9	4	9	3	4	8	5	5	8	3	15	15	10	10	8	6	11	162	100-299
9 workers or less	9	3	12	8	10	14	10	15	8	9	5	13	10	15	13	10	11	6	10	9	4	13	10	9	236	9 workers or less
30-49	6	8	9	10	14	7	8	5	6	10	1	9	9	1	10	8	6	8	12	10	9	8	5	8	187	30-49
300 workers or				1					1				1								1		1		5	300 workers or
more				•																						more
total	28	30	46	31	38	51	44	48	44	41	21	48	53	46	42	40	42	54	61	54	50	61	42	65	1,080	total

Transition of occured months of fatal and non-fatal accidents in 040102 water transportation service 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	4		3	5	3	4	2	5	2	3	2	3	7	2	2	2	2	5	5	4	2	8	5	8	88	October
May	1	5	7	4	5	4	4	3	8	3	2	10	4	4	2	3	6	4	9	5	4	5	2	7	111	May
April	4	1	4	1	6	5	3	7	2	2	2	4	4	2	6	4	6	3	3	4	10	6	4	7	100	April
December	2	2	5	5	2	6	5	4	4	5		2	8	10	5	3		2	4	6	4	6	4	6	100	December
July	3	4	4	2	2	6	9	4	3	3	2	2	1	2	4	2	4	6	3	4	6	5	4	6	91	July
November	3	3	5	1	2	7	2	4	5	2	2	2	2	3	6	3	3	1	4	4	5	9	3	6	87	November
August	2	5	4		3	6	5	6	4	8	2	6	2	6	3	2	2	6	7	5	6	1	6	5	102	August
March	2	1	3	2	4	3	4	4	2	2	2	3	7	2	2	1	4	7	6	6	7	3	1	5	83	March
June	1	2	2	2	1	2	3	1	3	1	1	5	2	2	3	1	3	12	7	5	3	2	2	5	71	June
January	3	4	4	1	5	2	4	5	1	4	3	4	4	4	2	7	6	4	5	6	1	7	2	4	92	January
February	1	1	3	6	1	4	3	2	6	7	1	4	8	6		4	3	2	4	3		6	6	3	84	February
September	2	2	2	2	4	2		3	4	1	2	3	4	3	7	8	3	2	4	2	2	3	3	3	71	September
total	28	30	46	31	38	51	44	48	44	41	21	48	53	46	42	40	42	54	61	54	50	61	42	65	1,080	total

Transition of prefectures of fatal and non-fatal accidents in 040102 water transportation service 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
Kyoto	2		2		1		2	6	6	2	2	3	6	1	4	2	1	7	8	6	5	2	1	9	78	Kyoto
Kagawa	1	1			1		2					3	4	1	1				1	1	1	2	4	7	30	Kagawa
Aichi			4		6		7	6	1	3	4	3	4	2	5		2	2	5	2	2	2	3	6	69	Aichi
Osaka	2	1	2				2	2	3	1		4	3		2		1	4	2		4	3	2	5	43	Osaka
Niigata	1		2				3	3	2	5	3	2	1	2	1	1	5	3	1	3	2	2	1	4	47	Niigata
Okinawa			1						1			1			1	2	2						3	4	15	Okinawa

						 																		-	
Ehime	2	1	1	2	2			2	1		1		2	1	1	2			1	1	1	1	3	23	Ehime
Tokyo	3	3	7	3	3	8	6	8	9	7	6	6	2	6	8	4	6	5	5	5	3	4	2	116	Tokyo
Hokkaido	1	4	2		4	2	4	2	1	1	2	3	5	5	4		1	5	3	1	3	4	2	59	Hokkaido
Kanagawa	5	3	3		4		3	1	2			1		3	3	6	4	6	6	2	2	2	2	58	Kanagawa
Hiroshima	4		2	3	3			3	3	1	3	3	3	1	2	2	1	2	2	5	5	1	2	48	Hiroshima
Hyogo		3	3		1		2	5	1		5		3		4	2		4		3	6	1	2	45	Hyogo
Fukuoka	2	1	3	2	2	1	1		2		1	3	2		1	1	7	4	3		3	3	2	42	Fukuoka
Shizuoka	3	1	2		1		1	1				4	1	1		3	3	3	1	1	5		2	33	Shizuoka
Kumamoto		3	2			3	1		2		3	1	3	2							2	1	2	25	Kumamoto
Mie					2	1	1	2	3	1	1	1	1		1	1			2		2	1	2	22	Mie
lwate			1			1													1		1		2	6	lwate
Fukui								1															2	3	Fukui
Nagasaki	1				2	1	2	1	1		1	2	1	2	1	3		3	4	3	3	2	1	34	Nagasaki
Okayama		4			2	1	4	2	1		1			2	1	3	1	1		1	4	1	1	30	Okayama
Yamaguchi		1			1				1		1			1	1		2	1					1	10	Yamaguchi
Yamagata		1				1	1							2					3				1	9	Yamagata
Fukushima																			1			1	1	3	Fukushima
Chiba			2				1	1		1	4	1	2		1		3	1		2	1			20	Chiba
Wakayama			1				1					1	1		3		1	1		5	2			16	Wakayama
Kagoshima	1		1			1		1		1						1	3	1	1	1	1	1		14	Kagoshima
Shiga													3			1	2	3		1	2			12	Shiga
Gifu					1	1						1					2	2	2	2				11	Gifu
Oita						3	1		1			1	2		2				1					11	Oita

Miyagi					1		2		1			1	3		1				1						10	Miyagi
Nagano					1					1			1					1		2			2		8	Nagano
Tokushima			1				2								1			1		1	1		1		8	Tokushima
Shimane													2	1					1			1	2		7	Shimane
Miyazaki												1	1	2		1				1	1				7	Miyazaki
Aomori		2	2					1													1				6	Aomori
Tottori			1											2								2			5	Tottori
Ibaraki			1									1		1								1			4	Ibaraki
Toyama		1						1									1								3	Toyama
Kochi														1		1				1					3	Kochi
Yamanashi														1			1								2	Yamanashi
Saga														1						1					2	Saga
Akita										1															1	Akita
Tochigi																										Tochigi
Gunma																										Gunma
Saitama																										Saitama
Ishikawa																										Ishikawa
Nara																										Nara
total	28	30	46	31	38	51	44	48	44	41	21	48	53	46	42	40	42	54	61	54	50	61	42	65	1,080	total

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