

**WCO
General Session**

JAPAN

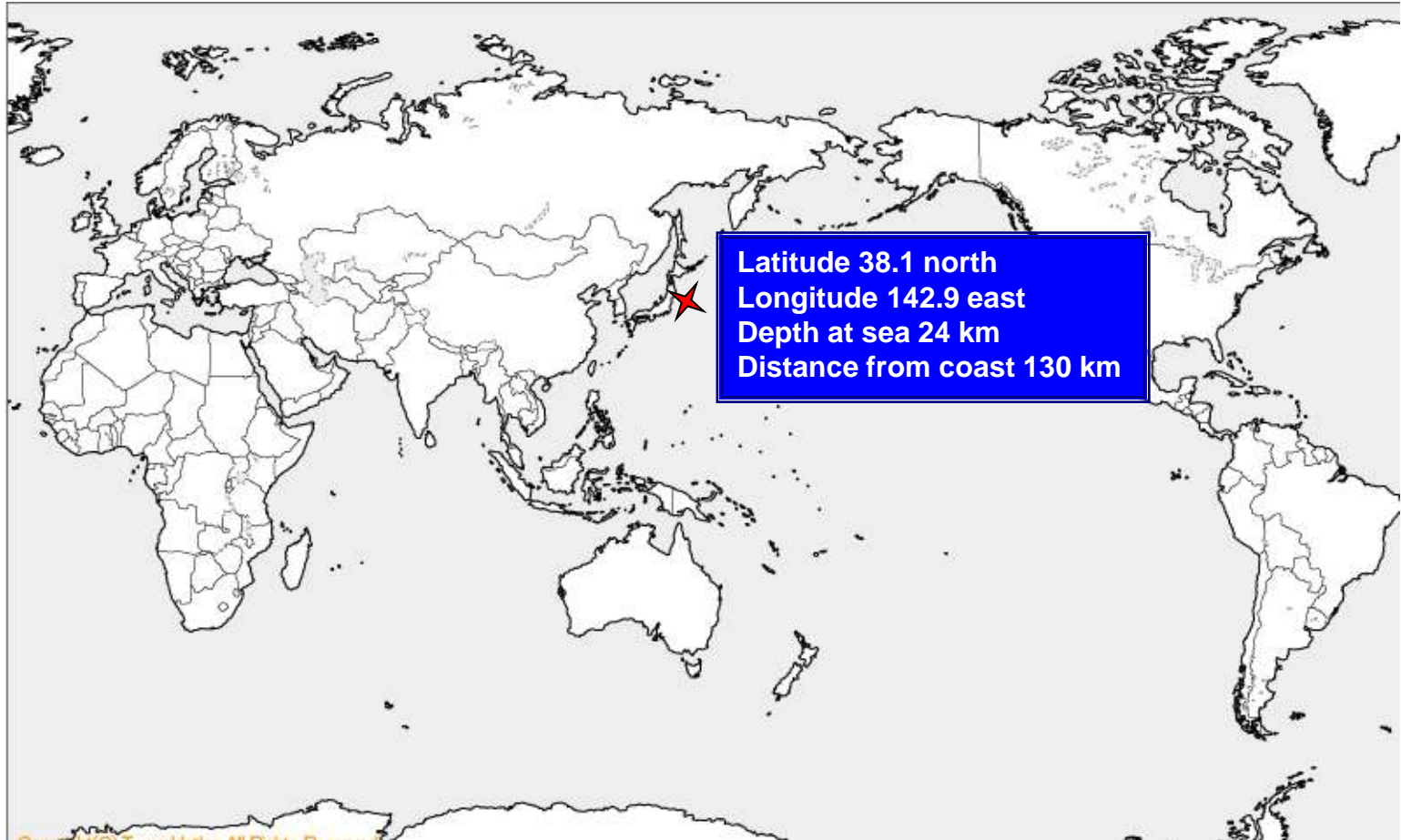
**Rengo Co., Ltd.
May 23, 2011 / Montreal**



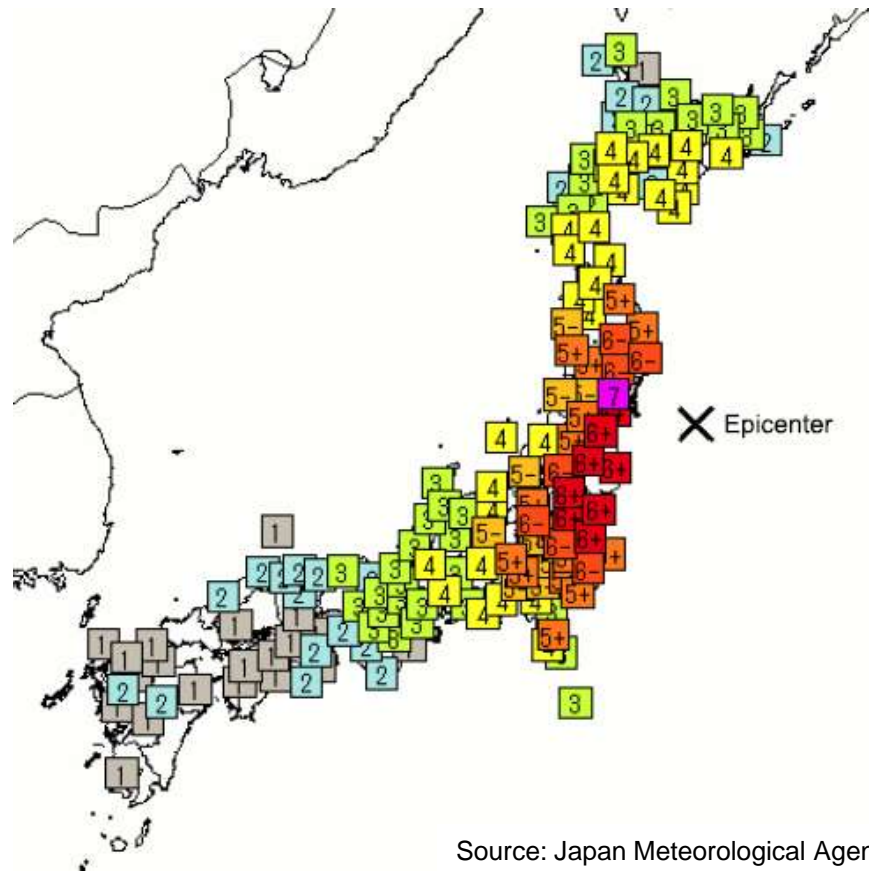
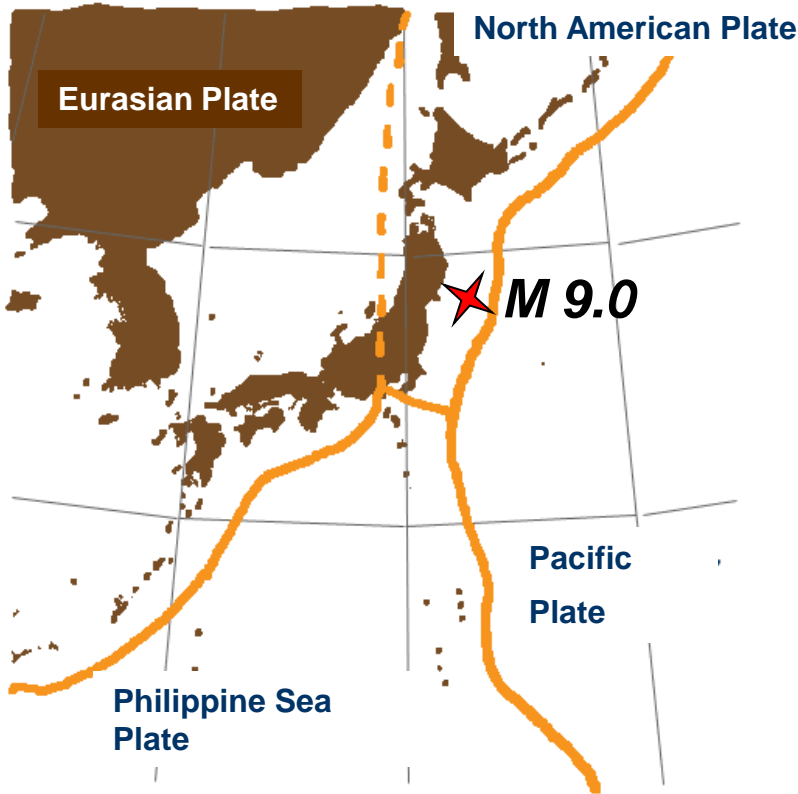
3.11 the Great East Japan Earthquake -- earthquake, tsunami and Fukushima Nuclear Accident



3.11 the Great East Japan Earthquake



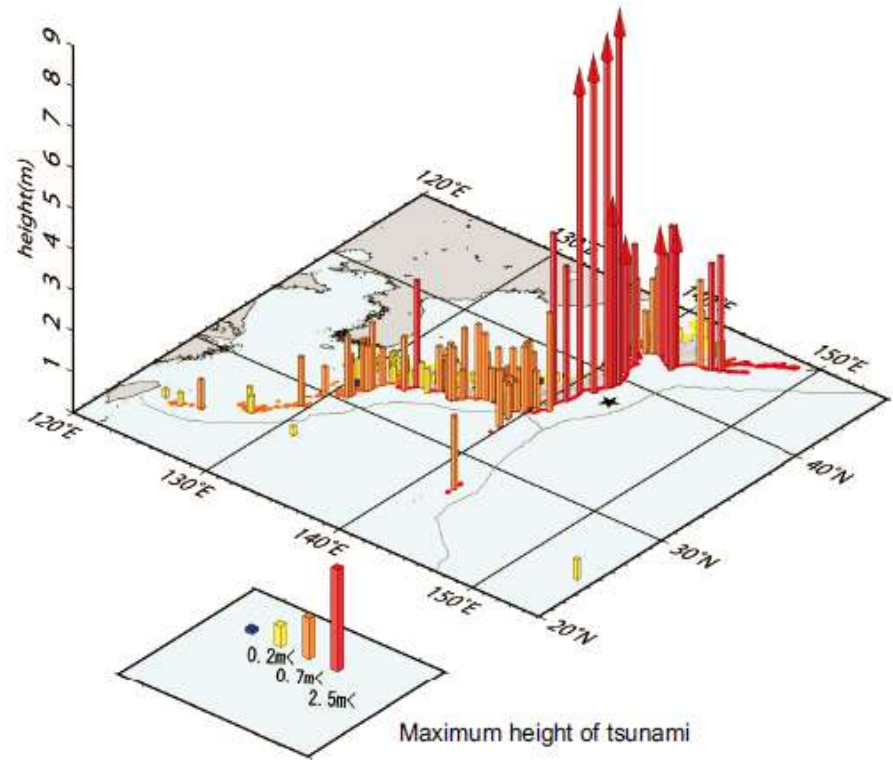
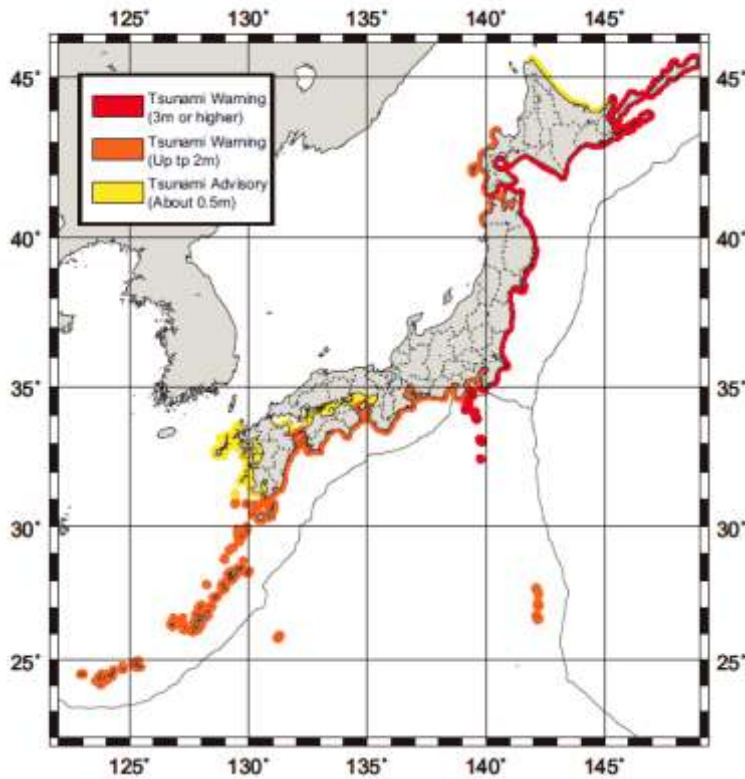
14:46, March 11, 2011



Tsunami

Tsunamis Observed off the Pacific Coast, Great East Japan Earthquake 2011

Issued : 15:33 JST, 11 March



Maximum height of tsunami

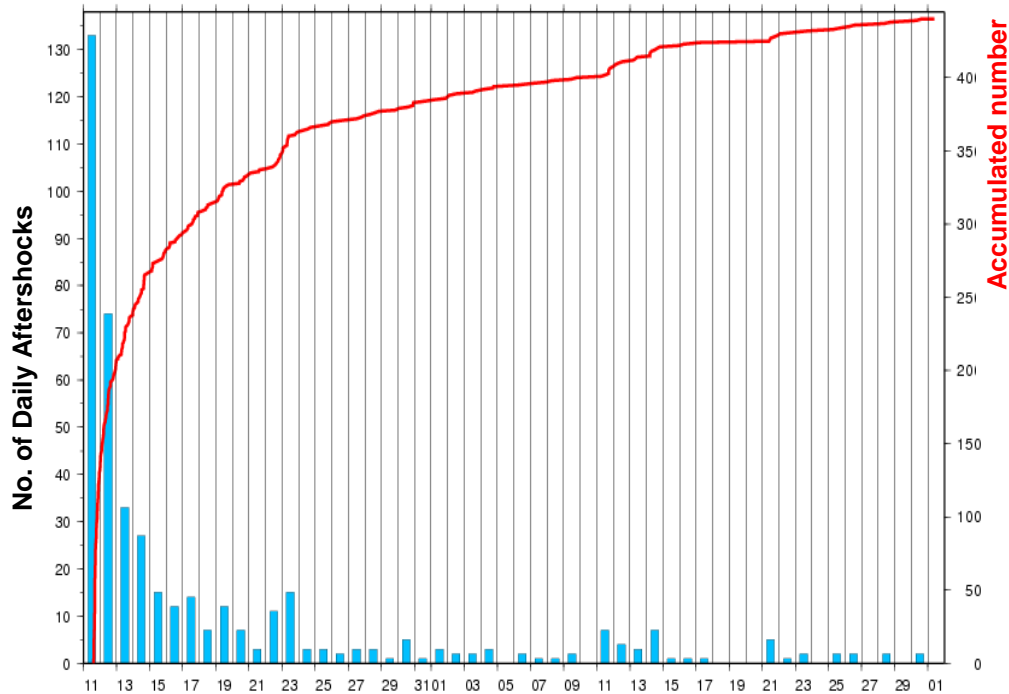
Source: Japan Meteorological Agency



Aftershocks

Frequency of Aftershocks (Magnitude ≥ 5.0)

2011/03/11 14:46 ~ 2011/05/01 08:00



Number of Daily Aftershocks (excluding main shock)

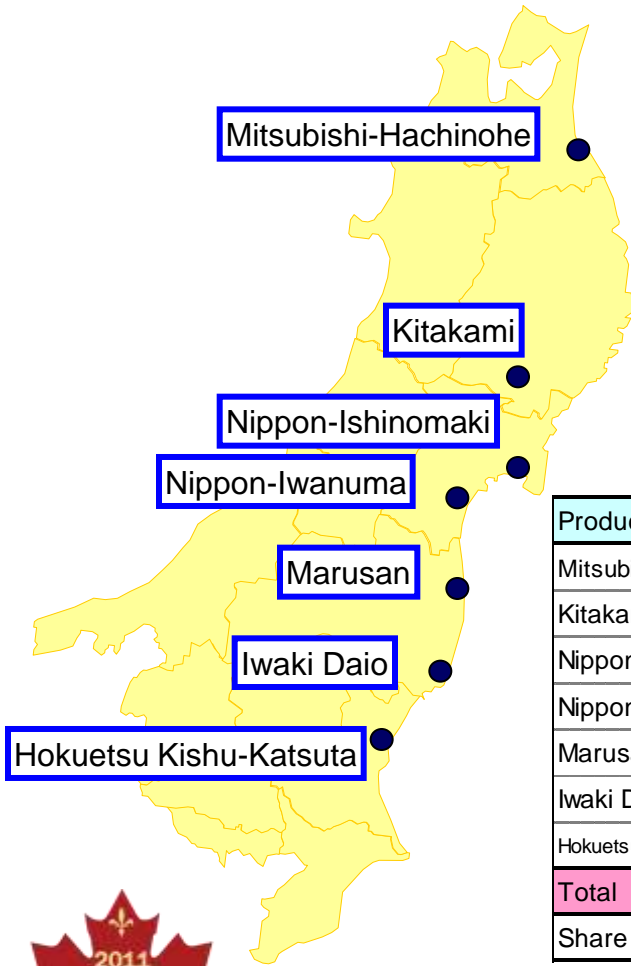
*2011/03/11 14:46~ 2011/04/28 15:00

	3/11	3/12	3/13	3/14	3/15	3/16	3/17	3/18	3/19	3/20	
M \geq 5.0	132	74	33	27	15	12	14	7	12	7	
M \geq 6.0	32	9	5	2	2	2	0	0	2	0	
M \geq 7.0	3	0	0	0	0	0	0	0	0	0	
	3/21	3/22	3/23	3/24	3/25	3/26	3/27	3/28	3/29	3/30	3/31
M \geq 5.0	3	11	15	3	3	2	3	3	1	5	1
M \geq 6.0	0	4	1	1	1	0	0	1	1	1	1
M \geq 7.0	0	0	0	0	0	0	0	0	0	0	0
	4/1	4/2	4/3	4/4	4/5	4/6	4/7	4/8	4/9	4/10	
M \geq 5.0	3	2	2	3	0	2	1	1	2	0	
M \geq 6.0	1	0	0	0	0	0	1	0	0	0	
M \geq 7.0	0	0	0	0	0	0	1	0	0	0	
	4/11	4/12	4/13	4/14	4/15	4/16	4/17	4/18	4/19	4/20	
M \geq 5.0	7	4	3	7	1	1	1	0	0	0	
M \geq 6.0	1	2	0	2	0	0	0	0	0	0	
M \geq 7.0	1	0	0	0	0	0	0	0	0	0	
	4/21	4/22	4/23	4/24	4/25	4/26	4/27	4/28	Total		
M \geq 5.0	5	0	2	0	2	2	0	1	435		
M \geq 6.0	2	0	1	0	0	0	0	0	75		
M \geq 7.0	0	0	0	0	0	0	0	0	5		

Source: Japan Meteorological Agency



Paper and Paperboard Mills that Suffered Extensive Damage



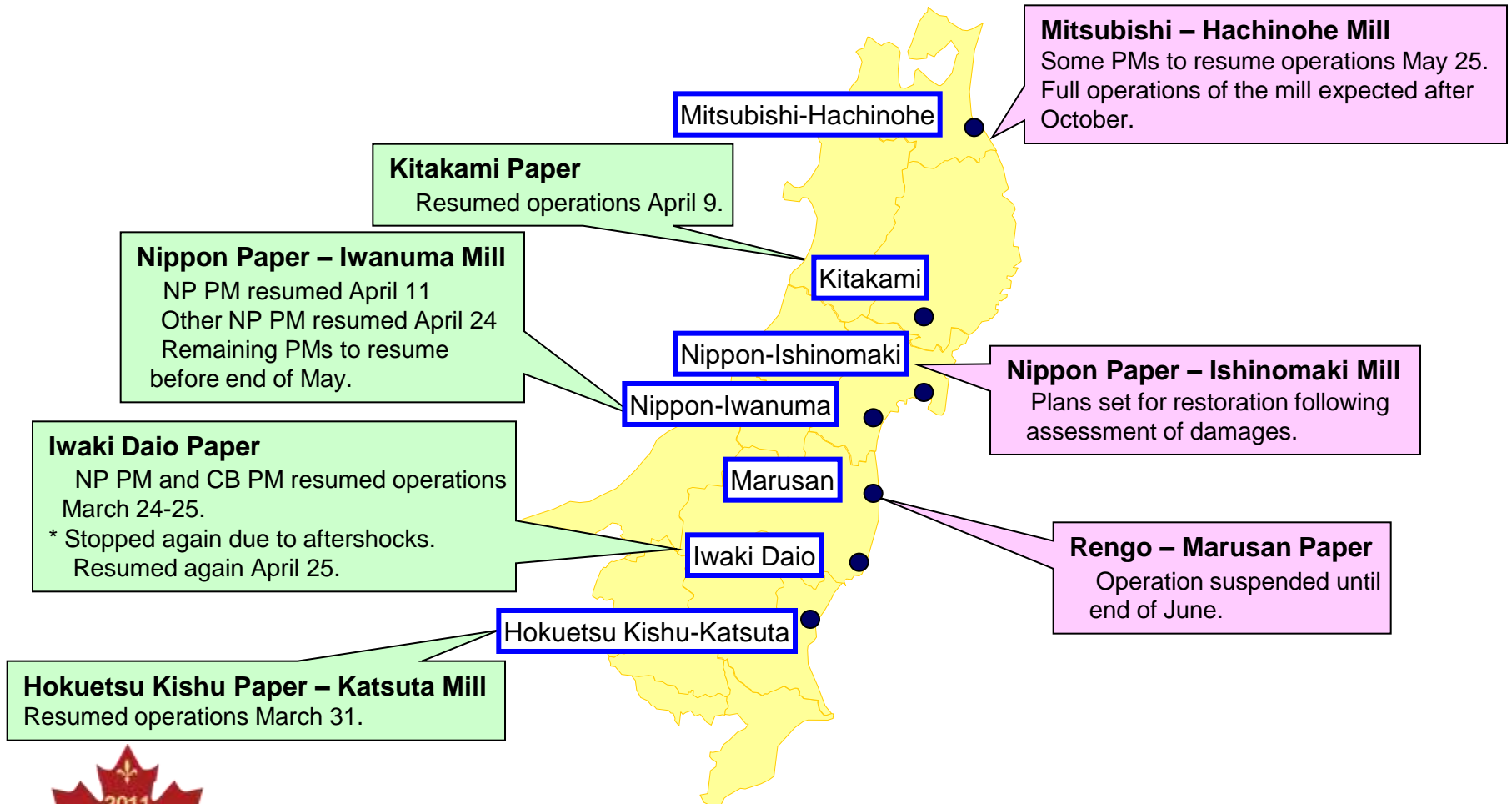
Annual production in 2010 (1,000 tons)

	Liner	Medium	CB Total	Boxboard	Newsprint	Pr/Wr Paper	Other	Total
Production	5,183	3,464	8,647	1,517	3,349	9,547	4,303	27,363
Mitsubishi-Hachinohe				47		712		759
Kitakami	83		83		10	3	15	111
Nippon-Ishinomaki					11	954		965
Nippon-Iwanuma					454	111		565
Marusan	78	165	243					243
Iwaki Daio	284	28	312		98	7		417
Hokuetsu Kishu-Katsuta				109		4	2	115
Total	445	193	638	156	573	1,791	17	3,175
Share	8.6%	5.6%	7.4%	10.3%	17.1%	18.8%	0.4%	11.6%

Source: JPA

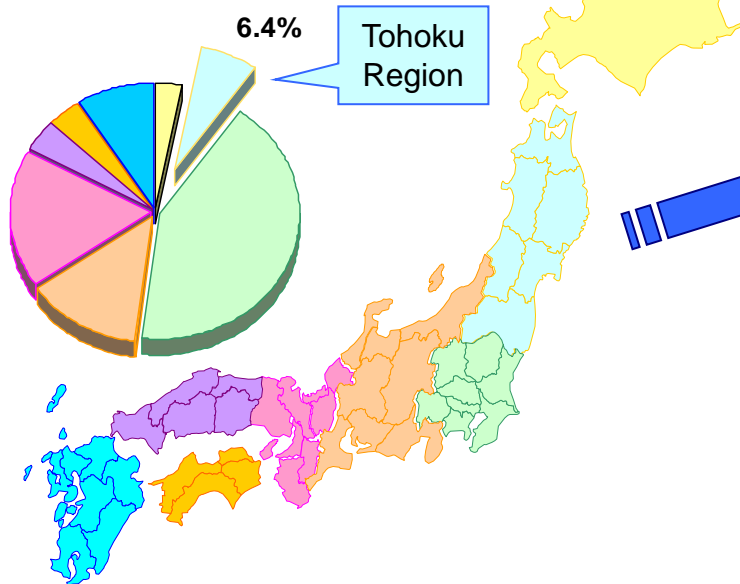


Paper and Paperboard Mills that Suffered Extensive Damage



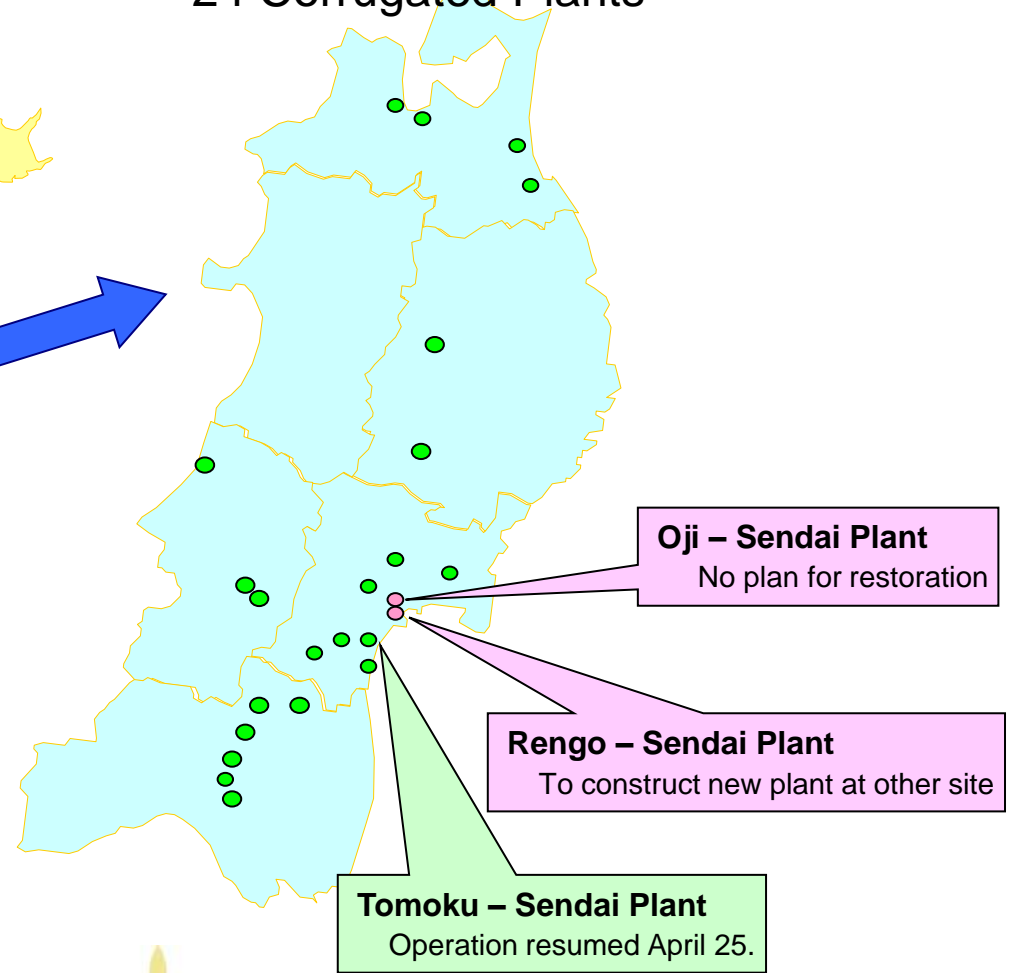
Corrugated Plants in Tohoku Region

Corrugated board production by region in 2010

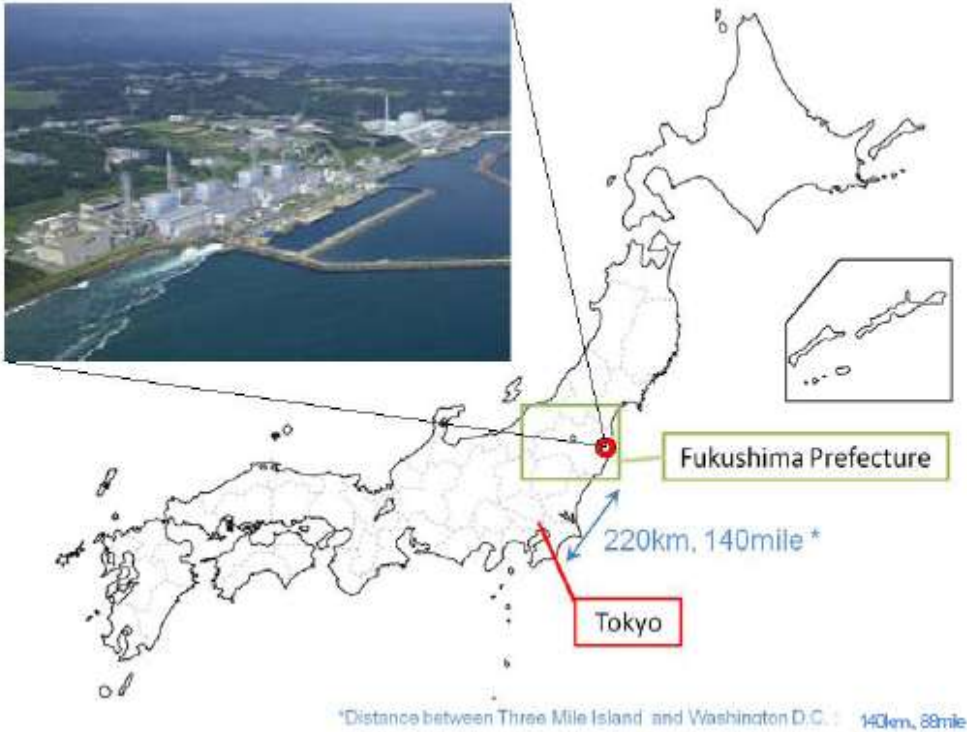


Source: METI

24 Corrugated Plants



Fukushima Nuclear Accident



	Estimated Radiation Dose at Fukushima Daiichi NPS*	Radiation Dose at Chernobyl
Iodine 131 (a)	1.5×10^{17} Bq	1.8×10^{18} Bq
Cesium 137	1.2×10^{16} Bq	8.5×10^{16} Bq
(Iodine equivalent value) (b)	4.8×10^{17} Bq	3.4×10^{18} Bq
(a) + (b)	6.3×10^{17} Bq	5.2×10^{18} Bq

Source: METI

* Announced by the Nuclear Safety Commission of Japan



Baseless Rumor

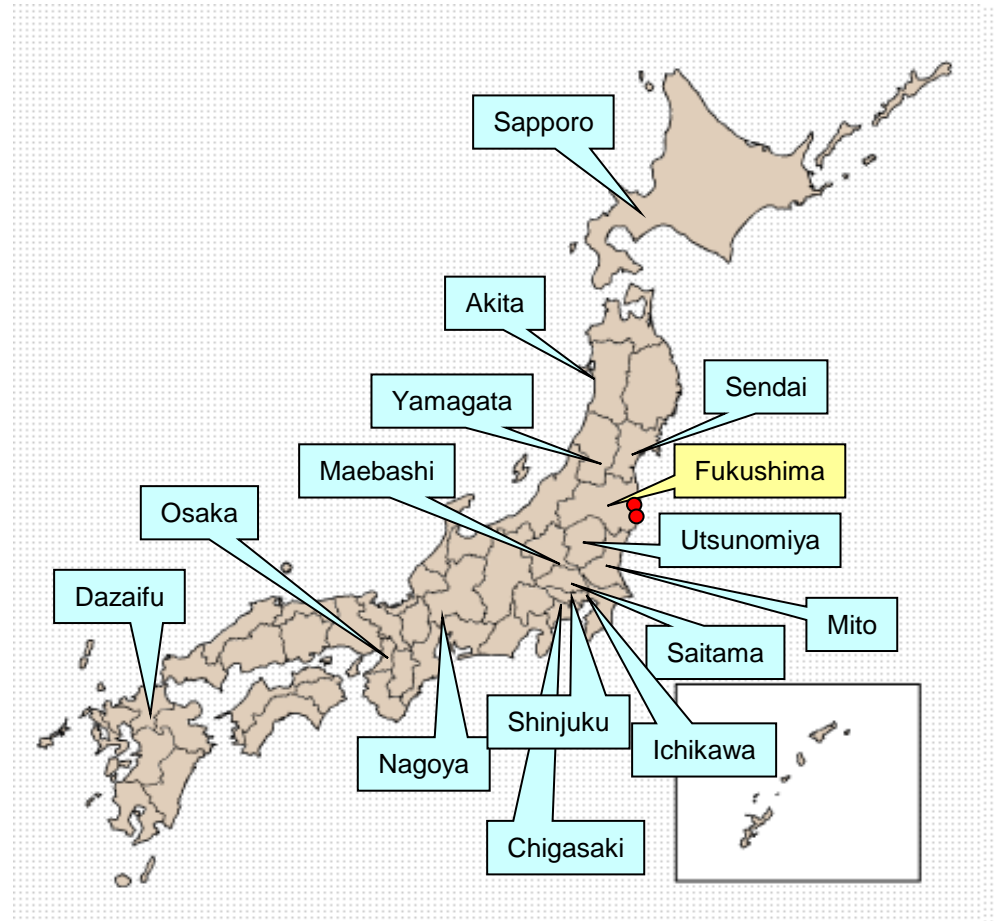
Maximum Radiation Dose

(Unit: micro SV per hour)

Observed from 5:00 pm, May 9 to 5:00 pm, May 10

Observation site		Normal level
Sapporo-shi	0.033	0.020 ~ 0.105
Sendai-shi	0.087	0.017 ~ 0.051
Akita-shi	0.054	0.022 ~ 0.086
Yamagata-shi	0.054	0.025 ~ 0.082
Fukushima-shi	1.700	0.037 ~ 0.046
Mito-shi	0.104	0.036 ~ 0.056
Utsunomiya-shi	0.065	0.030 ~ 0.067
Maebashi-shi	0.037	0.017 ~ 0.049
Saitama-shi	0.058	0.031 ~ 0.060
Ichihara-shi, Chiba	0.048	0.022 ~ 0.044
Shinjuku-ku, Tokyo	0.067	0.028 ~ 0.079
Chigasaki-shi, Kanagawa	0.057	0.035 ~ 0.069
Nagoya-shi	0.044	0.035 ~ 0.074
Osaka-shi	0.043	0.042 ~ 0.061
Dazaifu-shi, Fukuoka	0.039	0.034 ~ 0.079

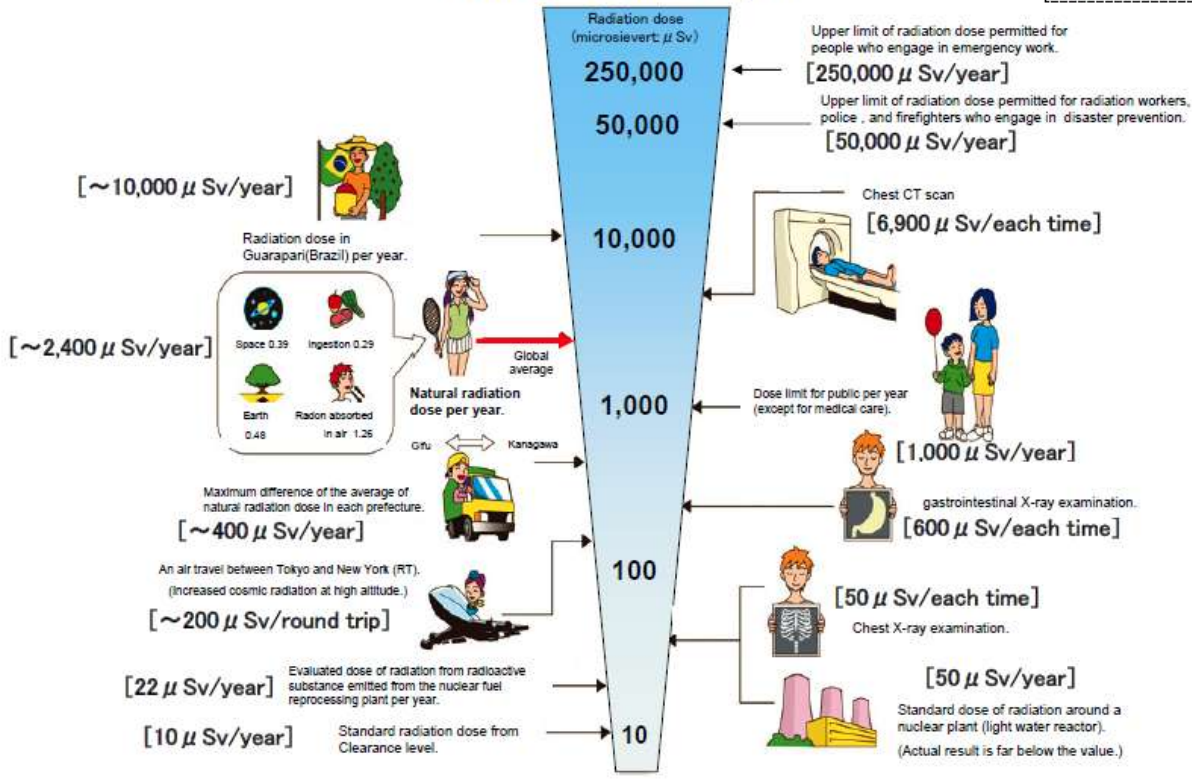
<Nihon Keizai Shimbun>



Radiation Exposure

Radiation in Daily-life

※Unit : μSv



(Ref) Average dose rate at the monitoring post of Tokyo (3/17 9:00~3/18 9:00, March) : $0.050 \mu\text{Sv/h} = 438 \mu\text{Sv/y}$

Source: Ministry of Education, Culture, Sports, Science & Technology in Japan

Note: Radiation units Sievert (Sv)

The sievert is a unit used to measure the degree of impact on a human body exposed to radiation. As an example, the maximum radiation exposure during a round trip s. One thousand micro-sieverts is called a millisievert.

Becquerel (Bq)

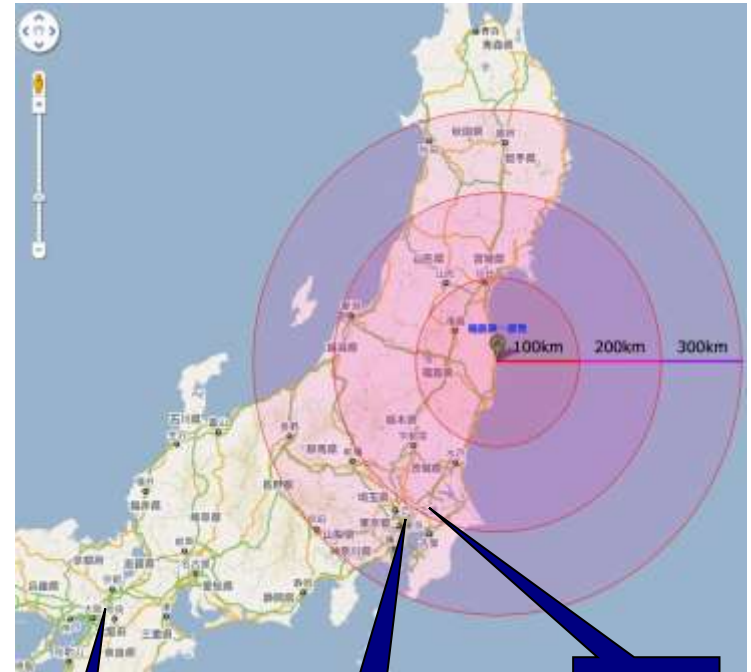
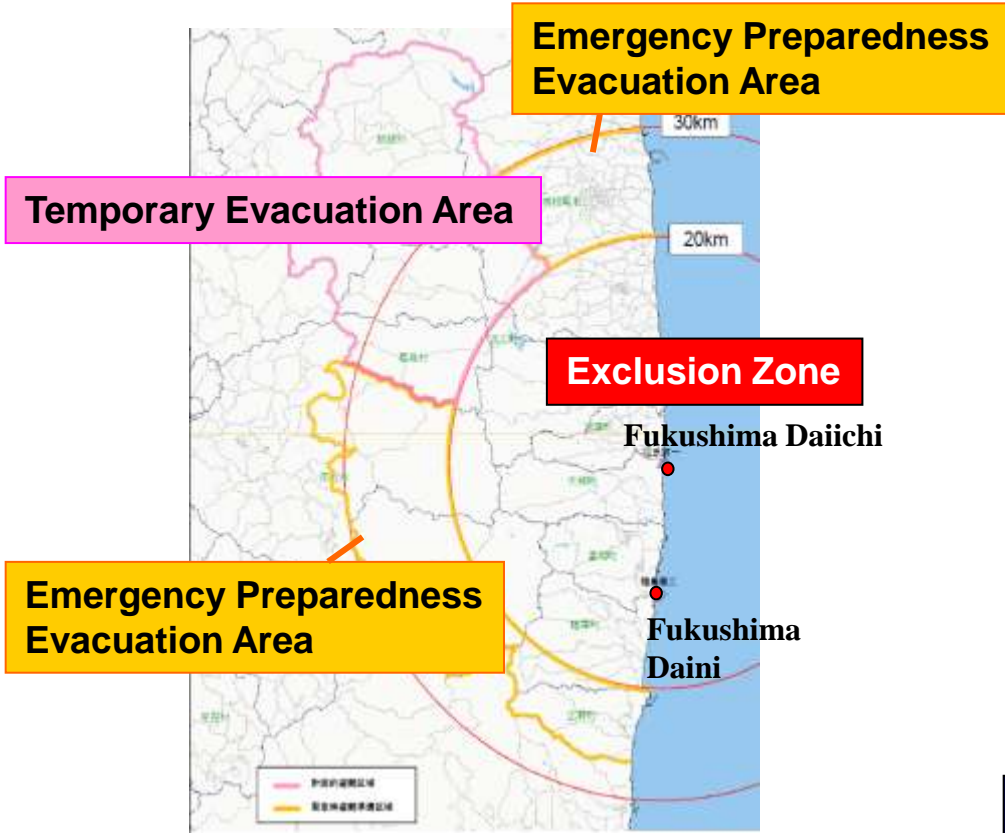
This unit expresses radiation strength. In ordinary usage, it indicates the amount of radiation.

Gray (Gy)

A Gray is a unit that indicates the amount of radiation energy absorbed by a substance when exposed to radiation. One Gray equals the absorption of one joule of energy per kilogram of material.



Evacuation



Source: METI



Impact on Japanese Economy



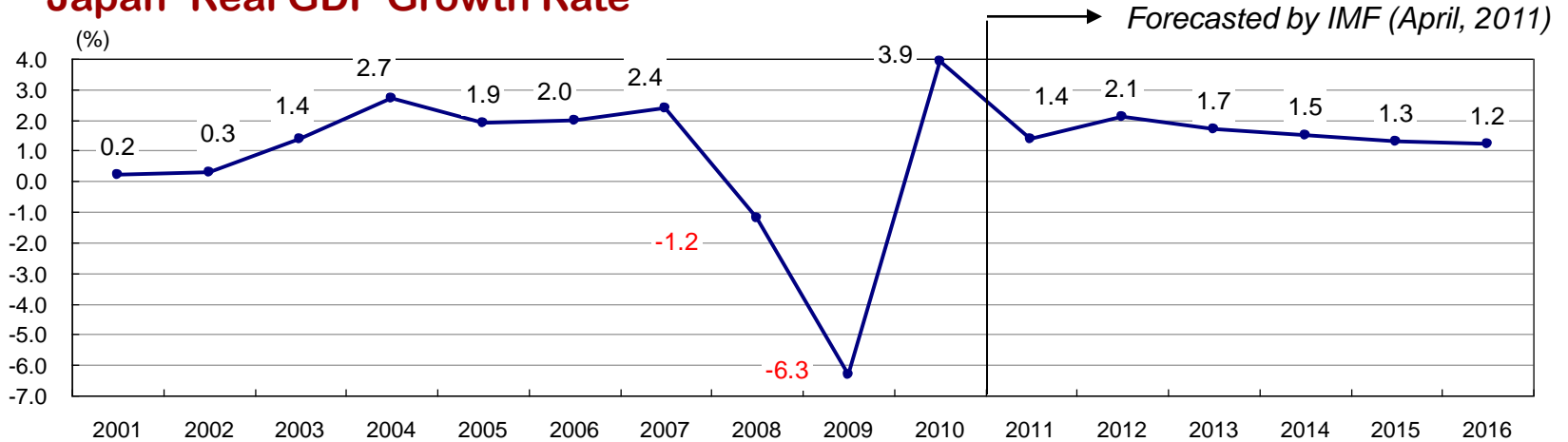
Closing Price of the Nikkei Stock Average

Closing Exchange Rate to the Dollar

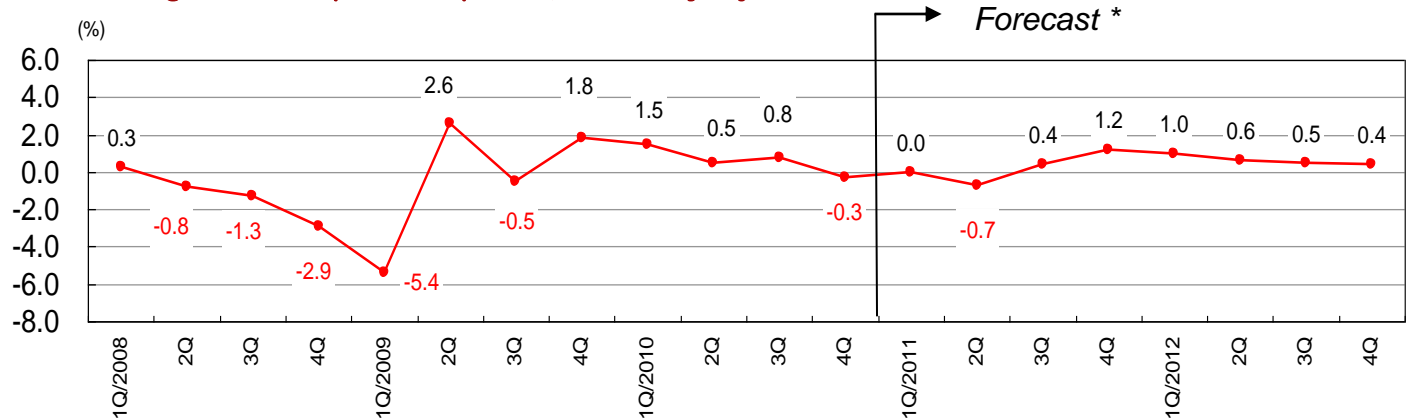


Japan – Overall Economy

Japan' Real GDP Growth Rate



Changes from the previous quarter, seasonally adjusted



Source: Cabinet Office

* Average as forecast by 12 Japanese think tanks, April 2011





Thank you for your attention!

*May 23, 2011
Rengo Co., Ltd.*

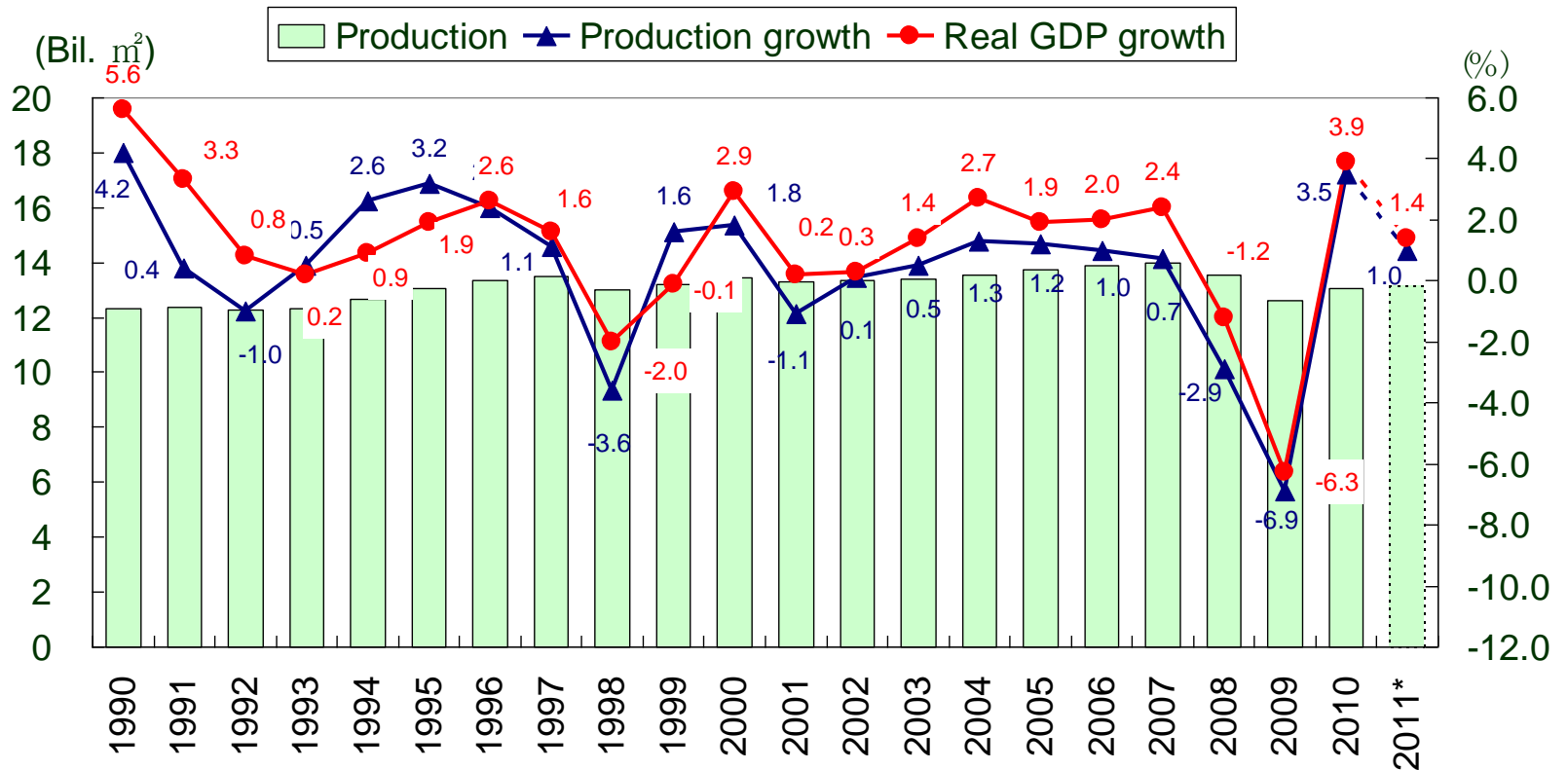


Containerboard and Corrugated Industry in Japan

Rengo Co., Ltd.
May 23, 2011 / Montreal



Japan – Corrugated Production and Real GDP Growth

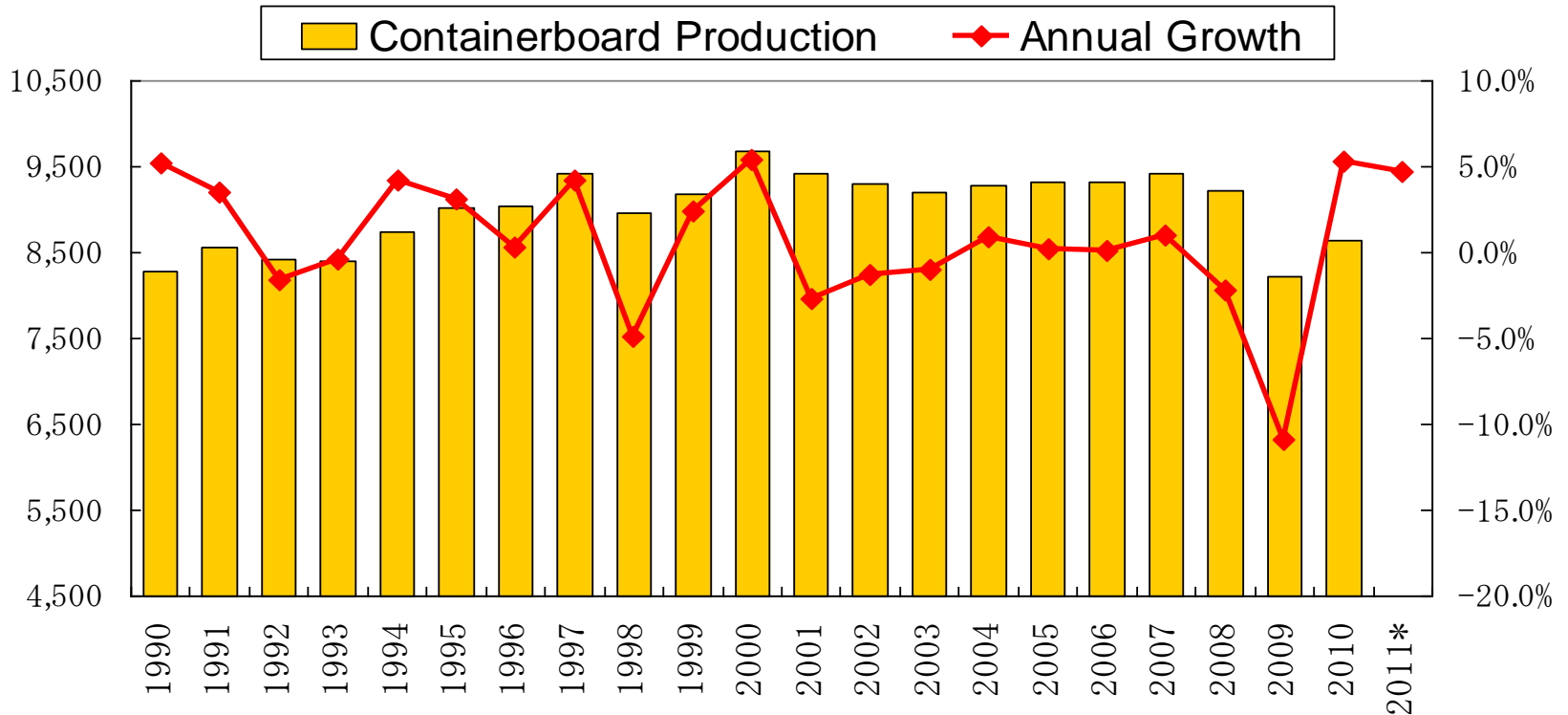


*Corrugated production and growth rate: JCCA forecast (Dec., 2010)
Real GDP growth rate: IMF, April 2011

Source: METI, Cabinet Office



JAPAN – Containerboard Production



Operating Rate	92	91	93	87	90	92	90	90	90	92	91	90	90	87	80	85
-----------------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

$$\text{Operating Rate} = \frac{\text{Annual Production}}{\text{Daily Production Capacity} \times 332 \text{ days}} \quad (\text{333 days for leap year})$$

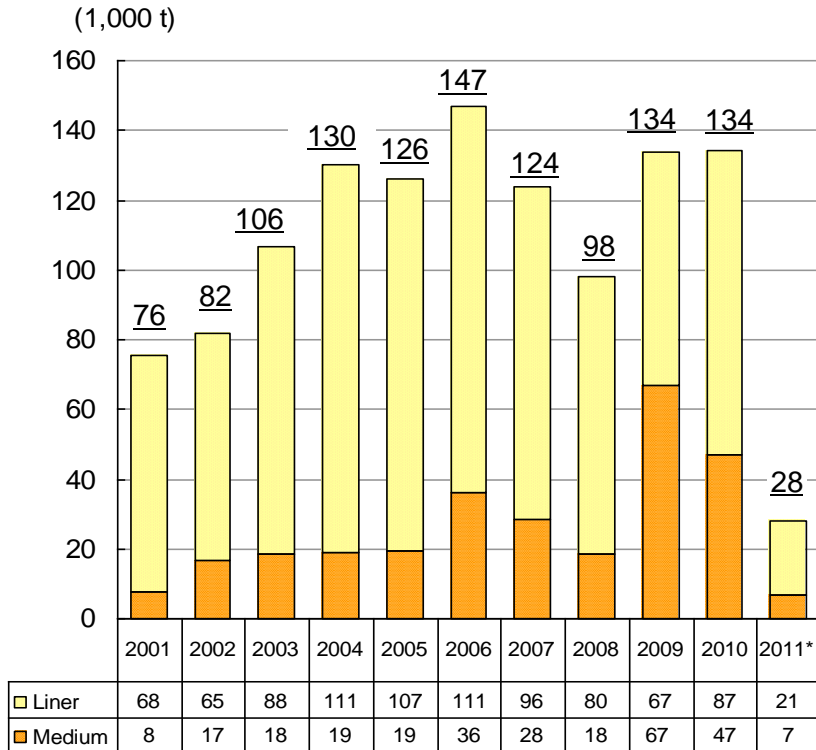
* January – March

Source: METI, Japan Paper Association

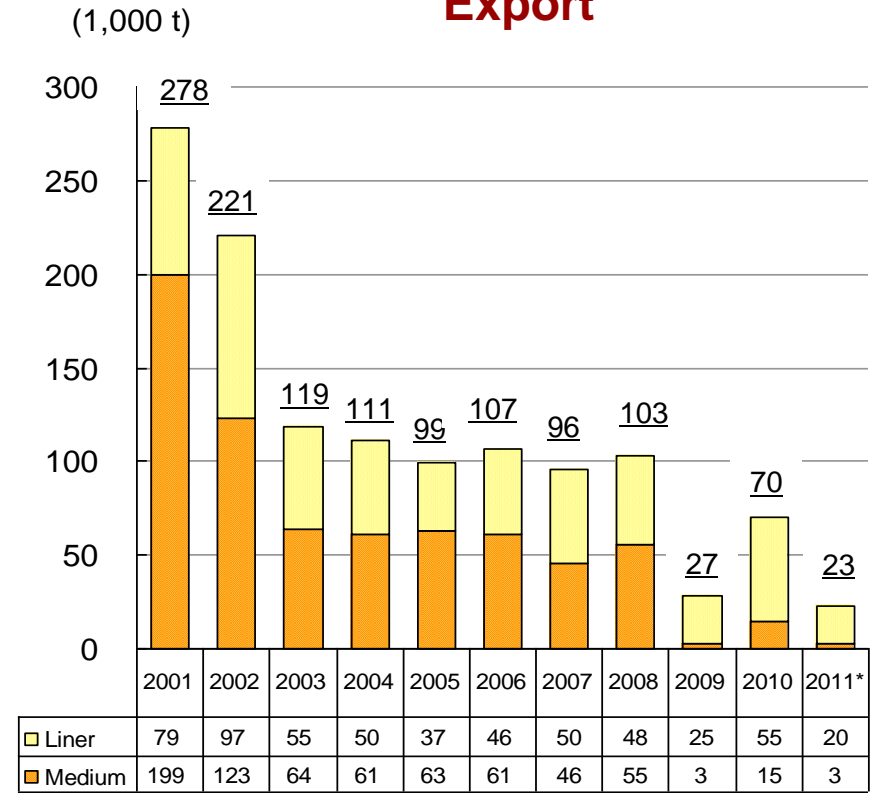


Japan – Containerboard International Trade

Import



Export



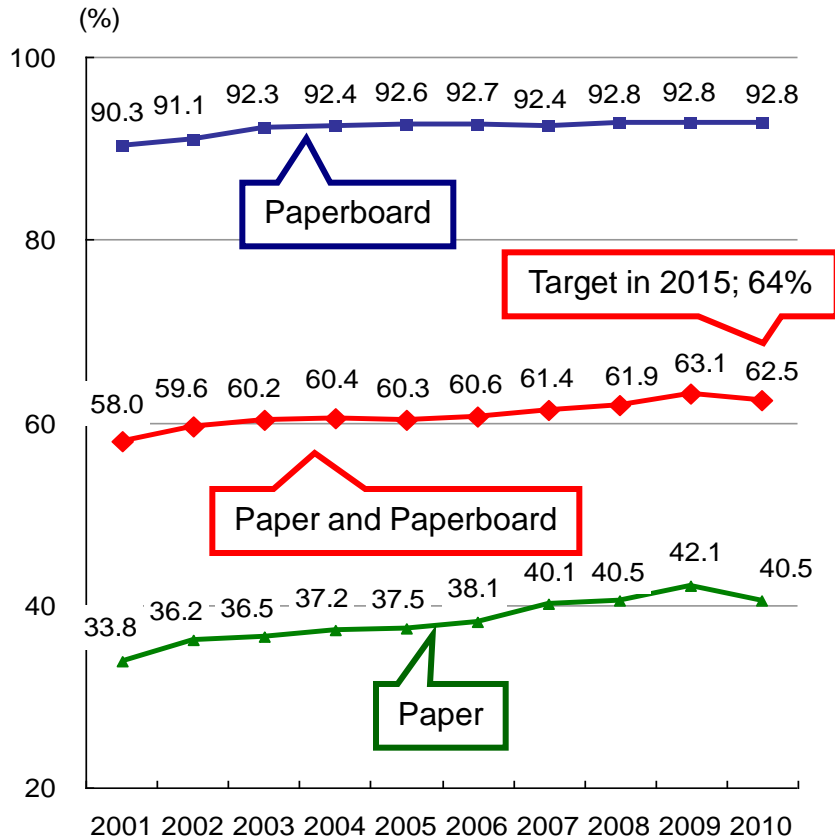
* January – March

Source: Trade Statistics

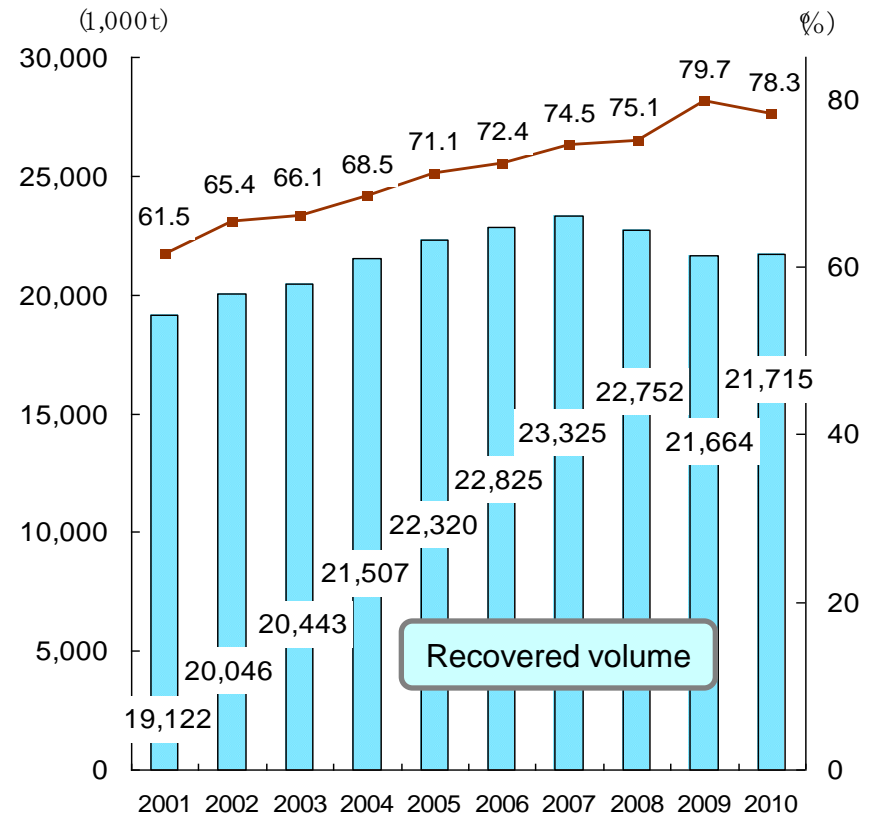


Japan – Utilization rate and Recovery rate

Utilization Rate



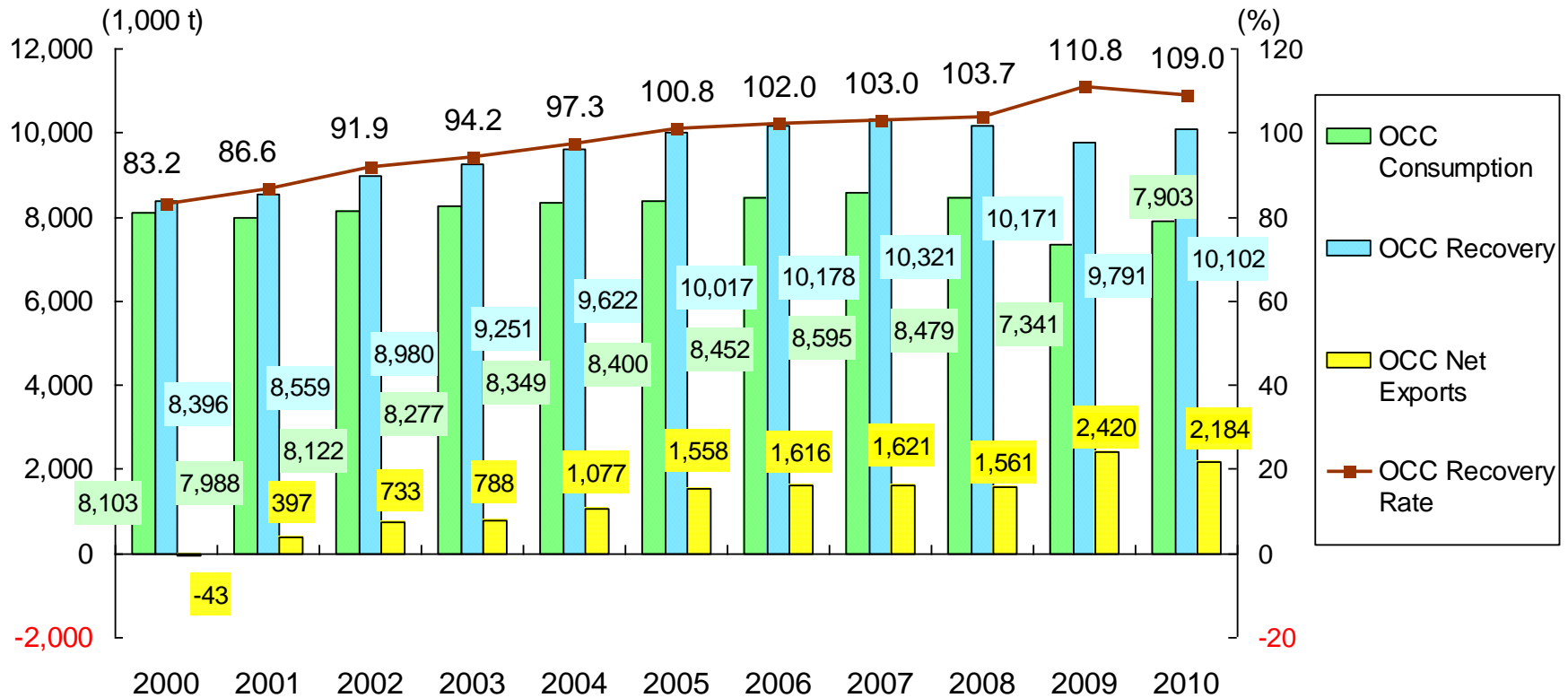
Recovery and Recovery rate



Source: Paper Recycling Promotion Center



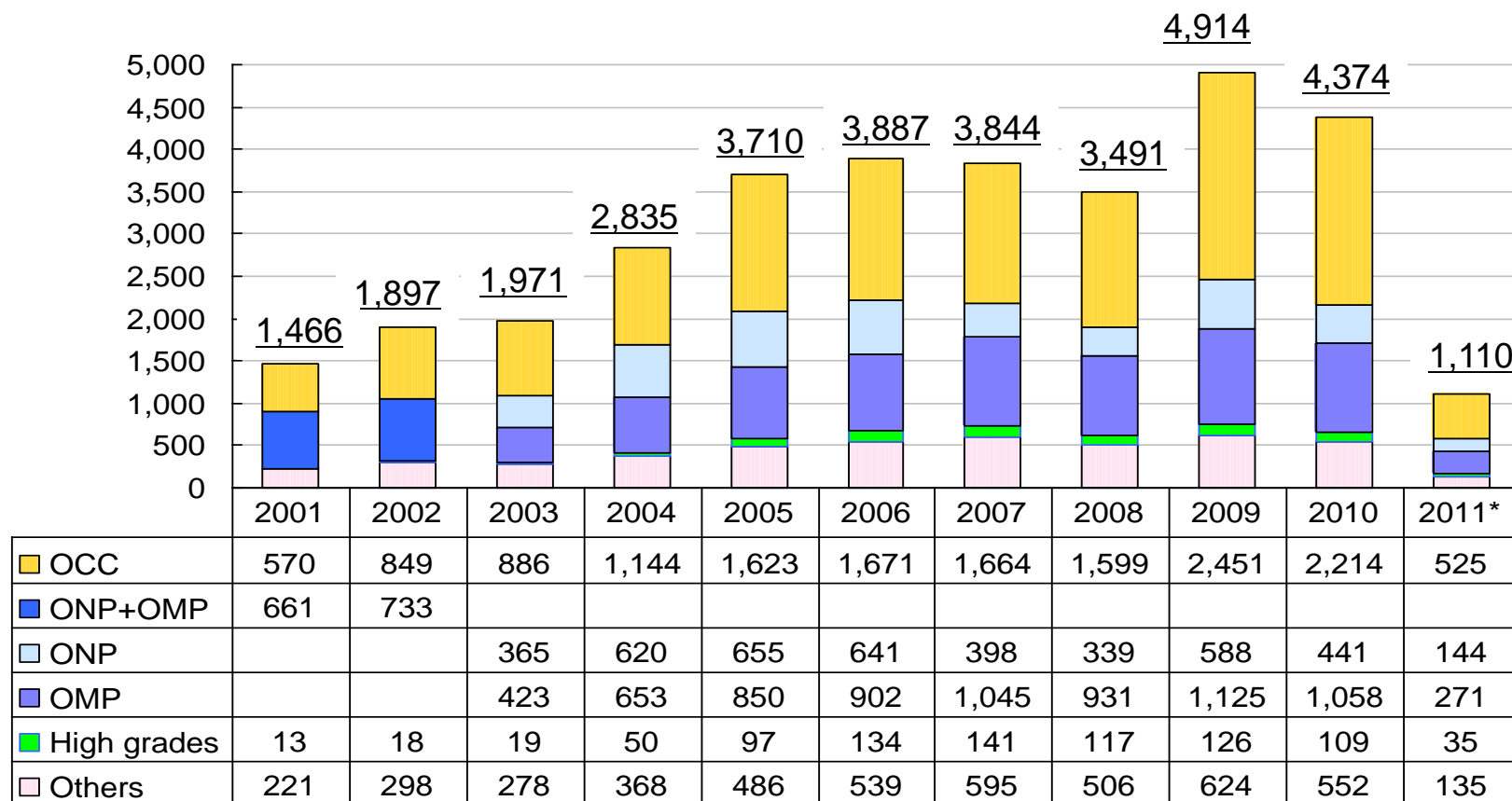
Japan – OCC Consumption, Recovery, Net-export



Source: METI, Trade Statistics, Paper Recycling Promotion Center



Japan – Recovered Paper Export



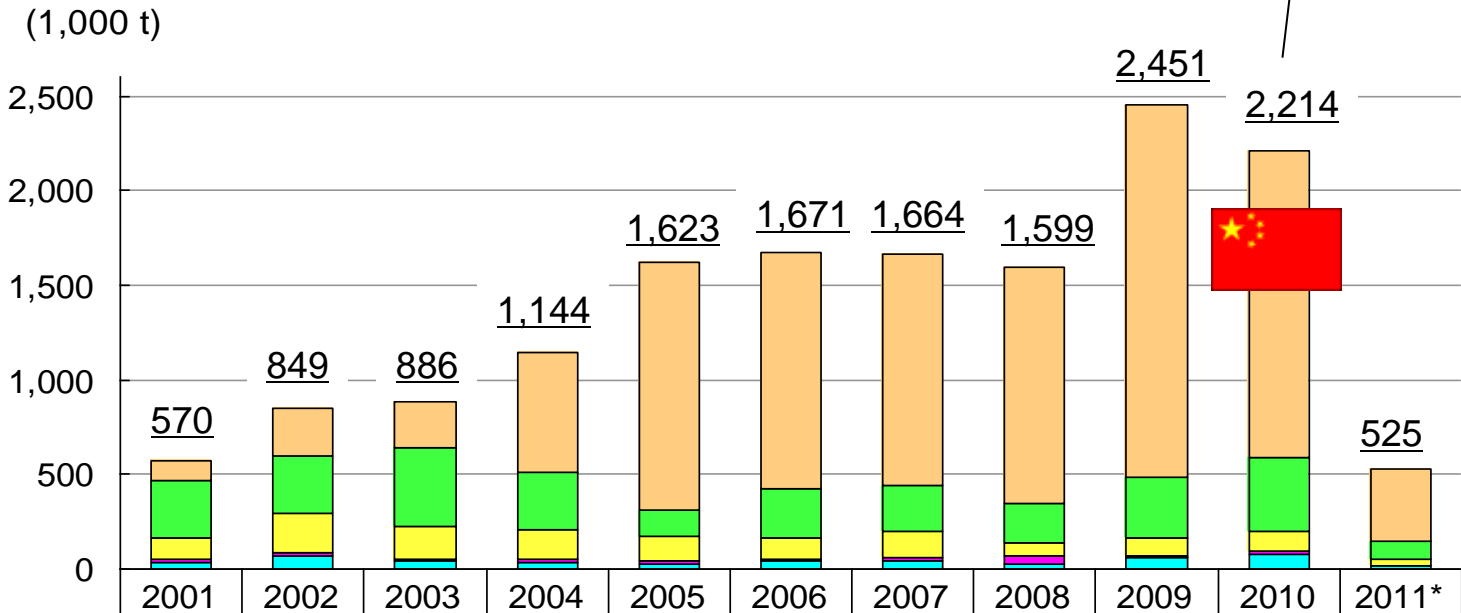
*January – March

Source: Trade Statistics



Japan – OCC Export

China has 73% share



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*
China	102	253	244	634	1,310	1,249	1,221	1,251	1,968	1,623	381
Thailand	300	301	417	301	141	255	245	205	319	394	93
Taiwan	119	207	172	158	127	113	135	72	97	103	32
S.Korea	12	18	12	19	23	9	17	45	3	16	4
Others	37	70	40	32	22	44	46	26	64	79	15

* January - March

Source: Trade Statistics



Japan – Summary

2011
Forecast
(Japan)

<i>Real GDP Growth Rate</i>	+1.4%
<i>Corrugated Production</i>	+1.0%
<i>Containerboard Domestic Demand</i>	+0.8%
<i>Containerboard International Trade</i>	up and down
<i>OCC Recovery</i>	no big change
<i>OCC Export</i>	decrease





May 23, 2011
Rengo Co., Ltd.