

Environmental Accounting

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Nippon Kayaku has been calculating the costs associated with its environmental protection initiatives and releasing the information to the public since FY2000. We have also been calculating the effects of our environmental protection initiatives since FY2003. Calculation of environmental costs and economic effects are made according to the Environmental Accounting Guidelines (2005 version) published by the Ministry of the Environment of Japan and the Environmental Accounting Guidelines for Chemical Companies published by the Japan Chemical Industry Association.

Environmental Accounting

Category	Scope	Unit	FY2017		FY2018		FY2019		FY2020		FY2021			
			Investment	Expenses	Investment	Expenses	Investment	Expenses	Investment	Expenses	Investment	Expenses		
Inside business areas	Pollution prevention	Air pollution prevention	Non-consolidated	Million yen	98.4	116.2	85.9	98.3	40.2	83.9	20.9	97.0	37.1	124.2
		Water pollution prevention	Non-consolidated	Million yen	24.7	239.2	40.6	223.9	70.5	148.0	109.7	174.8	266.9	178.9
		Underground seepage prevention	Non-consolidated	Million yen	5.9	13.2	52.0	6.0	13.4	10.0	5.5	3.7	4.9	5.6
		Noise and vibration prevention	Non-consolidated	Million yen	0.0	0.2	4.3	6.1	2.4	1.8	17.2	6.2	6.0	0.0
		Other	Non-consolidated	Million yen	-	160.6	-	190.6	-	386.0	-	435.0	-	394.7
	Global environment protection	Non-consolidated	Million yen	152.9	41.1	102.9	8.1	40.3	20.1	172.6	100.4	244.6	92.3	
Resource recycling	Non-consolidated	Million yen	66.1	500.1	3.9	565.3	30.9	576.7	106.6	709.8	111.2	772.2		
Upstream & downstream	Container and packaging recycling outsourcing	Non-consolidated	Million yen	-	0.4	-	1.0	-	1.0	-	0.4	-	0.3	
	Sewage processing	Non-consolidated	Million yen	-	81.7	-	90.9	-	90.3	-	78.7	-	75.2	
Management activity	System development and operation	Non-consolidated	Million yen	-	93.4	-	100.4	-	87.4	-	105.3	-	174.9	
	Environmental impact monitoring	Non-consolidated	Million yen	-	51.7	-	41.8	-	38.5	-	42.5	-	38.3	
	Information disclosure	Non-consolidated	Million yen	-	9.5	-	8.7	-	5.6	-	6.3	-	6.3	
	Education, training, and other	Non-consolidated	Million yen	-	88.9	-	88.6	-	80.1	-	59.4	-	59.3	
	Greening	Non-consolidated	Million yen	-	163.0	-	97.5	1.0	58.0	-	70.0	0.5	43.9	
R&D	Non-consolidated	Million yen	-	316.3	-	178.1	-	81.7	-	57.2	-	39.2		
Social activity	Non-consolidated	Million yen	-	9.0	-	8.7	-	9.7	-	8.9	-	9.0		
Environmental damage	Non-consolidated	Million yen	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0		
Total*	Non-consolidated	Million yen	348.0	1,884.6	289.6	1,712.0	198.7	1,678.9	432.5	1,955.5	671.3	2,014.5		

* The total sum may be incongruent due to rounding.

Economic Effects from Environmental Protection Measures

Targets of evaluation of effects		Scope	Unit	FY2017	FY2018	FY2019	FY2020	FY2021	
Inside business areas effects	Pollution control effect	Air pollution prevention	Non-consolidated	Million yen	0.0	0.0	0.0	0.0	0.0
		Water pollution prevention	Non-consolidated	Million yen	0.0	0.0	0.0	0.0	3.5
		Reduction of the amount of imposition on pollution load	Non-consolidated	Million yen	0.4	0.1	0.4	0.4	0.6
		Noise and vibration prevention	Non-consolidated	Million yen	0.0	0.0	0.0	0.0	0.0
	Global environment protection effect	Global warming prevention and energy conservation	Non-consolidated	Million yen	45.6	53.5	55.9	112.8	80.4
		Waste and recycling	Waste reduction	Non-consolidated	Million yen	1.6	2.1	9.5	9.5
	Sales of recycled resources		Non-consolidated	Million yen	13.3	12.8	12.9	10.5	17.3
	Other		Non-consolidated	Million yen	8.6	6.3	0.0	0.0	7.0
Upstream / downstream effects	Containers recycling	Non-consolidated	Million yen	0.0	69.6	62.6	73.6	54.2	
Other		Non-consolidated	Million yen	0.0	0.0	0.0	0.0	0.0	
Total*		Non-consolidated	Million yen	69.4	144.4	141.3	206.8	167.1	

* The total sum may be incongruent due to rounding.

Investments Related to the Environment and to Health and Safety

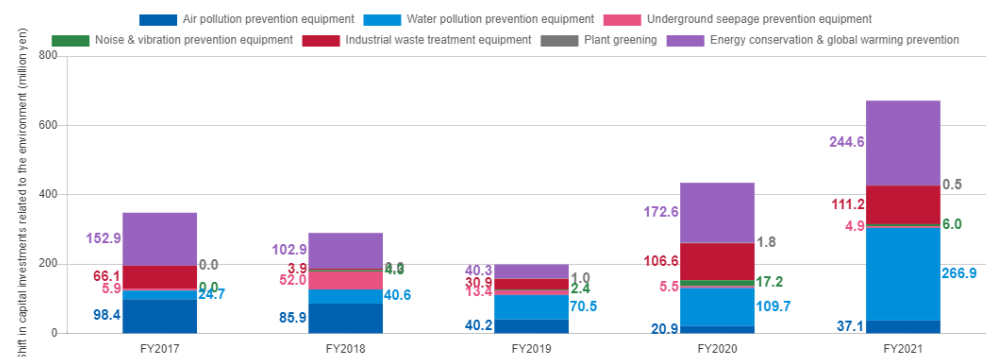
Nippon Kayaku makes well-planned and continual investments in projects related to the environment and safety and health. In FY2021, environment-related capital investment totaled 671.3 million yen, an increase of approximately 55% compared to the previous year. In particular, investments for equipment to prevent water pollution increased from 109.7 million yen to 266.9 million yen (or 2.4-fold), and investments for equipment related to energy saving and for global warming prevention increased from 172.6 million yen to 244.6 million yen (or 1.4-fold). Of the total equipment investment related to the environment, equipment for water pollution prevention amounted to approximately 40%, and that related to energy saving and global warming prevention amounted to approximately 36%. In addition, capital investment related to health and safety totaled 687.1 million yen for FY2021, an increase of about 30% from the previous year. Of that, investments to deal with aging equipment amounted to 490.9 million yen, which was an increase of 68% from the 292.9 million yen of the previous year, accounting for about 70% of the entire capital investment related to health and safety. Investments for dealing with natural disasters such as earthquakes, which increased significantly in the previous year, amounted to 4.4 million yen for this year, which was less than 10% of the capital investment of the previous year, thereby indicating that countermeasures against disasters have reached a certain level of completion.

Environment-related Capital Investments

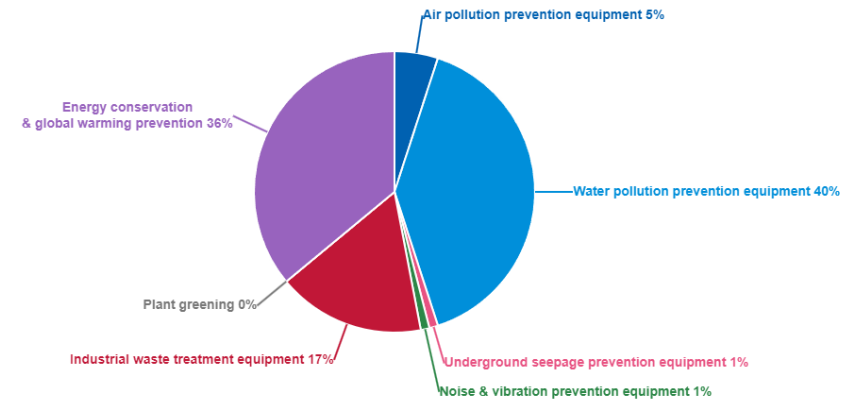
Category	Scope	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Air pollution prevention equipment	Non-consolidated	Million yen	98.4	85.9	40.2	20.9	37.1
Water pollution prevention equipment	Non-consolidated	Million yen	24.7	40.6	70.5	109.7	266.9
Underground seepage prevention equipment	Non-consolidated	Million yen	5.9	52.0	13.4	5.5	4.9
Noise and vibration prevention equipment	Non-consolidated	Million yen	0.0	4.3	2.4	17.2	6.0
Industrial waste processing equipment	Non-consolidated	Million yen	66.1	3.9	30.9	106.6	111.2
Plant greening	Non-consolidated	Million yen	0.0	0.0	1.0	1.8	0.5
Energy conservation and global warming prevention	Non-consolidated	Million yen	152.9	102.9	40.3	172.6	244.6
Total*	Non-consolidated	Million yen	348.0	289.6	198.7	434.3	671.3

* The total sum may be incongruent due to rounding.

◆ Shift in Capital Investments Related to the Environment



◆ Breakdown of Capital Investments Related to the Environment (FY2021)

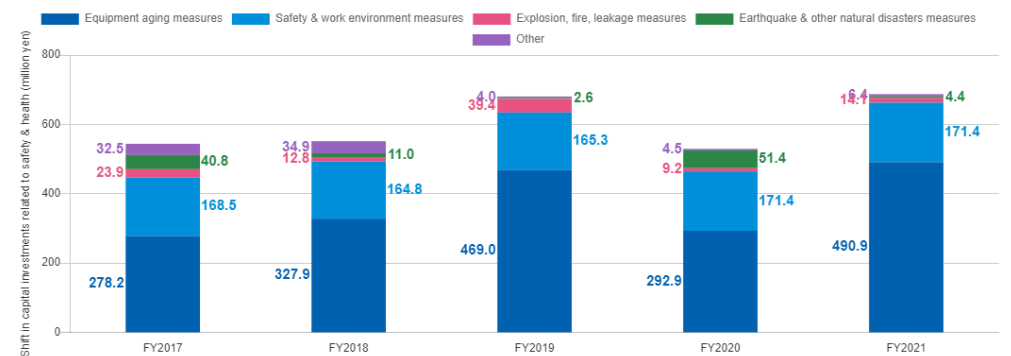


Safety- & Health-related Capital Investments

Category	Scope	Unit	FY2017	FY2018	FY2019	FY2020	FY2021
Equipment aging measures	Non-consolidated	Million yen	278.2	327.9	469.0	292.9	490.9
Safety and work environment measures	Non-consolidated	Million yen	168.5	164.8	165.3	171.4	171.4
Explosion, fire and leakage measures	Non-consolidated	Million yen	23.9	12.8	39.4	9.2	14.1
Earthquake and other natural disasters measures	Non-consolidated	Million yen	40.8	11.0	2.6	51.4	4.4
Other	Non-consolidated	Million yen	32.5	34.9	4.0	4.5	6.4
Total*	Non-consolidated	Million yen	543.9	551.4	680.3	529.4	687.1

* Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

◆ Shift in Capital Investments Related to Safety & Health



◆ Breakdown of Capital Investments Related to Safety & Health (FY2021)

