Breakdown of Japan's Greenhouse Gas Emissions (FY2022)



Japan's Greenhouse Gas Emissions

In Japan, the greenhouse gas emissions in FY2022 were equivalent to 1,135 million tonnes of CO₂. The significant effect of electricity/energy-saving efforts in the industry, commercial and other, and residential sectors due to the reduced energy consumption, contributed to a 2.5% decrease over the previous fiscal year.



Source: Ministry of the Environment

Japan's GHG Emissions

Additional materials provide more details about the Japan's GHG Emissions

Breakdown of CO₂ Emissions by Sector

The sector with the largest CO₂ emissions in indirect emissions in FY 2022 was industries sector, accounting for approximately 34.0% of Japan's total.



Energy-related CO₂ Emissions by Sector (Indirect Emissions)

Plotting energy-related CO₂ emissions by sector reveals that emissions in every sector decreased from FY 2013.



* Excluding statistical discrepancy from power and heat allocation.

Source: Ministry of the Environment

Threatened Species in Japan

With an increasing number of species being put on the Red List, which publicizes threatened species, it is clear that the circumstances of wild fauna and flora in Japan continue to be severe.

									(110	sported in M	101 011 2020)
Taxon		Species Targeted for Evaluation	Extinct			Threatened Species					
				Extinct in the Wild	I	Endangered Class I Endan		Near Threatened	Data Deficient	Total of listed species	Endangered Local Population
			EX	EW	l	Class IA Class IB	vu	NT	DD		LP
Fauna	Mammals	160 (160)	7 (7)	0 (0)		34(33)		17	5	63	26
						25(24) 12(12) 13(12)	9(9)	(18)	(5)	(63)	(23)
	Birds	Approx. 700 (Approx. 700)	15 (15)	0 (0)		98(98)		22 (21)	17 (17)	152 (151)	2
						24(24) 31(31)	43(43)				(2)
	Reptiles	100 (100)	0 (0)	0 (0)		37(37)		17 (17)	3 (4)	57 (58)	5
						5(5) 9(9)	23(23)				(5)
	Amphibians	91 (76)	0 (0)	0 (0)		47(29)		19 (22)	1 (1)	67 (52)	0
						5(4) 20(13)	22(12)				(0)
	Brackish water and freshwater fish	Approx. 400 (Approx. 400)	3 (3)	1 (1)		169(169)	1	35 (35)	37 (37)	245 (245)	15
						125(125) 71(71) 54(54)	44(44)				(15)
	Insects	Approx. 32,000 (Approx. 32,000)	4 (4)	0 (0)		367(363)	1	351 (350)	153 (153)	875 (870)	2
						182(177)	185(186)				(2)
	Shellfish	Approx. 3,200 (Approx. 3,200)	19 (19)	0 (0)		629(616)	629(616)		0.0	1177	
						301(288)	328(328)	(445)	(89)	(1169)	(13)
	Other invertebrates	Approx. 5,300 (Approx. 5,300)	1 (0)	0 (0)		65(65)			44 (44)	152 (151)	
						22(22)	42 (42)	42 (42)			(0)
			//9	1		0(0) 2(2)		943	349	2787	63
	Subtotal of Fauna		(48)	(1)		749(722)	697(688)	(950)	(350)	(2759)	(60)
	Vascular plants	Approx. 7,000 (Approx. 7,000)	28 (28)	11 (11)		1790(1786)		297	37	2163	0
						529(525) 520(520)	741(741)	(297)	(37)	(2159)	(0)
	Bryophytes	yophytes Approx. 1,800		0		240(241)		21	21	282	0
ŋ		(Approx. 1,800) Approx. 3.000	(0)	(U)		<u>137(138)</u> 116(116)	103(103)	(21)	(21)	(283)	(U)
Flora	Algae	(Approx. 3,000)	(4)	(1)		95(95)	21(21)	(41)	(40)	(202)	(0)
	Lichens	Approx. 1,600 (Approx. 1,600)	4 (4)	0 (0)		<u>63(61)</u>	20(20)	41 (41)	46 (46)	154 (152)	0 (0)
	Fungi	Approx. 3,000	25	1		61(62)	20(20)	21	51	159	0
	(Approx. 3,000) Subtotal of Flora		(26) 61 (62)	(1) 13 (13)		37(39)	24(23)	(21)	(50)	(160)	(0)
						1361(1358)	909(908)	421 (421)	(195)	(2956)	(0)
	Total of thirteen taxonomic groups		110	14		3716(3676)		1364	544	5748	63
			(110)	(14)		2110(2080)	1606(1596)	(1371)	(544)	(5715)	(60)

* Numerals within parentheses indicate the respective numbers of species (including subspecies, variety (only for flora) and form (only for algae and fungi)) from the Red List 2019. The numbers in the LP column are the numbers of local population. ** The number of species excluding those that cannot be evaluated by the naked eye.

The categories are considered as follows:

Extinct [EX]: Species that are likely to already be extinct / Extinct in the Wild [EW]: Species that exist only in captivity or as a naturalized population outside its natural habitat / Endangered Class I (Critically Endangered + Endangered) [CR+EN]: Species that are threatened to extinction / Endangered Class I A (Critically Endangered) [CR]: Species that are facing an extremely high risk of extinction in the wild in the near future / Endangered Class I B (Endangered) [EN]: Species that are facing a high risk of extinction in the wild in the near future / Endangered Class I B (Endangered) [EN]: Species that are facing a high risk of extinction in the wild in the near future / Endangered Class I B (Endangered) [EN]: Species that are facing a high risk of extinction in the wild in the near future / Endangered Class I B (Endangered) [EN]: Species that are facing a high risk of extinction in the wild in the near future / Endangered Class I B (Endangered) [EN]: Species that are facing a high risk of extinction in the wild in the near future / Endangered Class I B (Endangered) [EN]: Species that are facing a high risk of extinction in the wild in the near future / Endangered Class I B (Endangered) [EN]: Species that are facing a high risk of extinction in the wild in the near future / Endangered' status with changes in their habitat conditions / Data Deficient [DD]: Species with data insufficient for adequate evaluation / Endangered Local Population [LP]: Species with appulation isolated regionally, and face a high risk of extinction

Source: Red List 2020 by the Ministry of the Environment

Biodiversity

Additional materials provide more details about biodiversity in Japan.

Expanding Distribution of Sika Deer



Estimated Number of Sika Deer in Japan (excluding Hokkaido prefecture*)

Various efforts have increased the number of Sika deer captured, but the estimated population remains high.



*: In FY 2022, estimated number in Hokkaido was approx. 670,000, and number culled was approx. 107,000 (Hokkaido data). Source: Ministry of the Environment

Material Flow in Japan

In order to establish a sound material-cycle society, it is necessary to comprehend material flows (or substance flows) to understand the extent of material extraction, consumption, and disposal in Japan. Japan uses material flows to determine targets for the four indicators of resource productivity, cyclical use rate(resource base), cyclical use rate (waste base), and final disposal amount.



Total Volume of Waste Generation and Waste Volume Per Person Per Day

Total generated waste and waste generated per person per day are declining year by year.



Sound material-cycle society

FY2021

Additional materials provide more information about current efforts to form a sound material-cycle society.

*1 Water content: water contents of wastes (sludge, livestock waste, night soil, waste acid, waste alkali) and sediments dumped in association with the process of economic activities (sludge in mining, construction and in waterworks as well as slag)



Source: Ministry of the Environment

Final Disposal Amount and Final Disposal Amount Per Person

Final disposal amount of waste and final disposal amount per person per day are trending downwards.



Fine particulate matter (PM2.5)

In FY2022, the rate of compliance with ambient air quality standards for fine particulate matter (PM 2.5) was 99.9% for ambient air pollution monitoring stations and 100% for roadside air pollution monitoring stations throughout Japan. The annual average was 8.8 μ g/m³ for ambient air pollution monitoring stations and 9.2 μ g/m³ for roadside air pollution monitoring stations.

	Fiscal year	2017	2018	2019	2020	2021	2022				
No.	No. of vaild stations										
	Ambient	814	818	835	844	858	855				
	Roadside	224	232	238	237	240	236				
No. of vaild stations compliant with ambient air quality standards											
	Ambient	732	765	824	830	858	854				
	Ambient	89.9%	93.5%	98.7%	98.3%	100%	99.9%				
		193	216	234	233	240	236				
	Roadside	86.2%	93.1%	98.3%	98.3%	100%	100%				

Source: Ministry of the Environment



Source: Ministry of the Environment

Photochemical oxidants

Photochemical oxidant concentrations (highest in the region for the 3-year average of the 99th percentile of the highest 8-hour day values) had been trending to decline compared FY 2017 to FY 2019.



Source: Ministry of the Environment

Atmospheric and water environments

Additional materials provide more details about biodiversity in Japan.

Achievement of Environmental Standards (BOD or COD)

An overall level of 87.8% has been achieved for the biochemical oxygen demand (BOD) and chemical oxygen demand (COD) environmental standards relating to the maintenance of living environments. BOD and COD are leading indicators of water quality in respect of organic pollution.



Coverage of Population Served by Wastewater Treatment System

The population coverage of wastewater treatment systems in Japan is 92.9%. Wastewater treatment facilities are being installed to cover the population not yet served by the wastewater treatment systems.



ADDITIONAL MATERIALS ON THE ENVIRONMENT IN JAPAN 2024

FROM THE ANNUAL REPORT

Breakdown of Reported Releases by Industry and Estimated Releases of Chemical Substances in FY 2022



Source: Ministry of Economy, Trade and Industry and Ministry of the Environment

In February 2024, the government compiled data reported from businesses concerned on release and transfer of chemical substances complying with the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Law). Releases that were not subject to reporting were estimated.



The newest 35th National Park, Hidakasanmyaku-Erimo-Tokachi National Park, was born in 2024

The Hidakasanmyaku-Erimo-Tokachi National Park, called" The backbone of Hokkaido" became the 35th designated national park in Japan. This national park located in south-central Hokkaido is the largest one in the land area of Japan, stretching approximately 140 km from north to south along a mountain range. It runs from the Hidaka Mountains, which embrace glacial landforms, alpine flora, and the largest pristine watershed in Japan, through forested areas at the foot of the mountains, then links to coastal areas that feature sheer sea cliffs and marine terraces. The national park is enough to represent outstanding scenery of Japan, in terms of the magnificence of the Hidaka Mountains extending from the inland to the sea and their existence remaining in a pristine natural state.

Environmental risks of chemicals

The following data provides information on action regarding chemical substance emissions into the environment and initiatives for children's environmental health.

The Japan Environment and Children's Study (JECS)

The Japan Environment and Children's Study (JECS), a large-scale, long-term national birth cohort study involving 100,000 mother-child pairs, was launched in FY 2010. The Sub-cohort study, which includes home visits for environmental measurements, medical examinations and children's bio-specimen collection, began in November 2014, involving 5,000 participants selected from the Main Study. In FY2022, a conceptual plan was formulated to conduct the follow-up study on the participants of ages 13 and higher in FY2024.



Source: Ministry of the Environment

Japanese Pika

Annual Report on the Environment, the Sound Material-Cycle Society and Biodiversity in Japan 2024

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