



JAPANESE INDUSTRY AND POLICY NEWS

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Legislation and Policy News

Ministry of the Environment issues bilateral credit for a project in Bangladesh, the first in the country

The Ministry of the Environment announced on March 31 that it has decided to issue credit for the first time in the bilateral credit system (JCM) between Japan and the People's Republic of Bangladesh. The total amount of credits decided to be issued this time is 499 tons, and the Japanese government has acquired 251 tons of credits.

JCM accelerates the dissemination and mitigation activities of excellent decarbonization technologies, products, systems, services and infrastructure to developing countries, etc., and quantitatively evaluates Japan's contribution to the realized reduction and absorption of GHG emissions. At the same time, it will be used to achieve Japan's reduction targets. Currently, Japan is aiming for an international emission reduction / absorption amount of about 100 million tons-CO₂ cumulatively by 2030 through public-private partnership.

For the moment, Japan has 17 partner countries: Mongolia, Bangladesh, Ethiopia, Kenya, Maldives, Vietnam, Laos, Indonesia, Costa Rica, Palau, Cambodia, Mexico, Saudi Arabia, Chile, Myanmar, Thailand and the Philippines.

The Ministry of the Environment will continue to promote JCM in order to reduce greenhouse gas emissions worldwide through excellent decarbonization technology.

MOE website:

<http://www.env.go.jp/en/headline/2596.html>

Credit issuance status between Bangladesh and Japan



Project title	Monitoring period	Notified amount of credits to be issued (tCO2eq)	Amount
			GoJ will acquire
Installation of High Efficiency Centrifugal Chiller for Air Conditioning System in Clothing Tag Factory in Bangladesh	01 Mar 2017 - 31 Jul 2019 (29 months)	144	73
Introduction of PV-diesel Hybrid System at Fastening Manufacturing Plant	01 Jun 2016 - 31 Jul 2019 (38 months)	355	178

From MOE website

Japanese government announces economic sanctions against Russia

On March 25, the Japanese government announced economic sanctions on Russia following the invasion to Ukraine. Specifically, the Ministry of Foreign Affairs has announced 25 individuals in the Russian Federation who are subject to measures such as asset freezes and 81 specific organizations in the Russian Federation which are subject to bans on exports (each individual and group are at the end of the sentence. See the link).

At the same time, on March 29, the Ministry of Finance and the Ministry of Economy, Trade and Industry announced measures based on the Foreign Exchange and Foreign Trade Law associated with the sanctions, which stipulated export bans to Russia. It will come into effect from April 5.

According to the government, in view of the current situation surrounding Ukraine, these measures have been taken based on the contents by major countries in order to contribute to international peace as Japan.

Target luxury goods (export ban based on the Export Trade Control Ordinance):
Liquors, tobacco products, perfumes, cosmetics, leather goods, fur, clothing, footwear, hats, rugs, Jewelry, ceramics, glassware, diving equipment, passenger

cars, bikes, laptops, watches (using precious metals), grand pianos, fine arts, antiques

Target luxury goods (export ban based on Ministry of Finance notification):
Banknotes, gold coins, gold bullions

MOFA website:

Individuals of the Russian Federation subject to measures such as asset freezes regarding the situation in Ukraine

<https://www.mofa.go.jp/mofaj/files/100321307.pdf>

A specific group of the Russian Federation subject to export bans regarding the situation in Ukraine

<https://www.mofa.go.jp/mofaj/files/100321308.pdf>

METI website:

Measures under the Foreign Exchange and Foreign Trade Law concerning the situation in Ukraine

<https://www.meti.go.jp/press/2021/03/20220329007/20220329007.html>

METI decided FIT / FIP purchase price in 2022

On March 25, the Ministry of Economy, Trade and Industry announced the purchase price after 2022 in the Feed-in Tariff system (FIT system) and the market-linked the Feed-in Premium system (FIP system), and the levy paid by consumers according to the amount of electricity used in 2022, were decided.

The purchase price under the FIT system in 2022 is JP¥ 17 / kWh for residential solar power generation (less than 10 kW) that is not subject to bidding, and JP¥ 11 / kWh and 50 kW or more for commercial solar power generation of 10 kW or more and less than 50 kW (already built). (In the case of installing the roof on the building) is JP¥ 10 / kWh. Onshore wind power generation (less than 50kW) is JP¥ 16 / kWh, and 50kW or more will be decided by bidding (upper limit price is JP¥ 16.00).

For geothermal power generation, small and medium-sized hydropower generation, and biomass power generation (not subject to bidding), the prices for

FY2021 have been left unchanged. In addition, for geothermal power generation, small and medium-sized hydropower generation, and biomass power generation of less than 10,000 kW, self-consumption type and community-integrated regional utilization requirements will be set from 2022.

Under the FIT system, the amount obtained by adding tax to these is the procurement price (excluding solar power generation of less than 10 kW), and under the FIP system starting in 2022, a certain premium delivered based on the market price will be added. The premium amount is calculated every month (delivery frequency) based on the amount obtained by subtracting the reference price (income expected from market transactions, etc.) from the standard price (premium unit price) and multiplying the amount of renewable electricity supply.

In case of 50kW or more, the new certification by the FIP system can be selected if the business operator wishes. In addition, even if it has already received FIT certification, it's possible to move to the FIP system.

As a result of calculating the levy based on the purchase price, the levy unit price in 2022 was JP¥ 3.45 / kWh. Looking at the burden on the consumer model with a monthly power consumption of 260kWh, the monthly amount is JP¥ 897 (+JP¥ 24) and the annual amount is JP¥ 10,764 (+ JP¥ 288).

The levy unit price for 2022 will be applied from the electricity rate for the meter reading in May 2022 to the meter reading in April 2023. The purchase price for each power generation type in 2022 is posted on the METI website below.

METI website (in Japanese)

<https://www.meti.go.jp/press/2021/03/20220325006/20220325006.html>



Solar panel in Yamaguchi Pref., Image from TOKYO Gas website

Survey and Business Data

The trade balance in FY2021 was a deficit of JP¥ 5,374.9 billion, the first trade deficit in two years

According to the customs statistics released by the Ministry of Finance on April 20, the trade balance after deducting imports from exports was a deficit of JP¥ 5,374.9 billion, the first trade deficit in two years. This is due to the significant increase in import value by the rise in prices of crude oil.

The import value was JP¥ 91,253.4 billion, an increase of 33.3% from the previous fiscal year. Crude oil imports increased 97.6%, LNG = liquefied natural gas increased 58.8%, and coal more than doubled against the backdrop of rising energy prices. On the other hand, the export value was JP¥ 85,878.6 billion, an increase of 23.6% from the previous fiscal year due to the increase in exports of steel to South Korea and automobiles to the United States.

The trade balance, which is the balance of exports minus imports, was a deficit of JP¥ 5,374.9 billion. It is the first time in two years that the trade balance has been in the red, and the deficit is the fourth largest in the past. However, both the import value and the export value were the largest in the fiscal year since 1979, which is comparable.

Regarding Japan-EU relations, exports from Japan were JP¥ 7,925.8 billion, up 24.5% from the previous fiscal year, the first increase in three years. Steel, scientific optics, and construction and mining machinery increased by 176.7%, 36.2%, and 43.3%, respectively. On the other hand, imports were JP¥ 9,941.7 billion, 26.2% up to the previous fiscal year, the first increase in three years like exports, and it was highest amount ever. Pharmaceuticals, aircraft, and automobiles increased by 60.2%, 106.4%, and 12.7%. The trade balance was minus JP¥ 2.15.9 trillion from the Japanese side and it was the 10th consecutive year of deficit.

MOF website:

https://www.customs.go.jp/toukei/shinbun/trade-st_e/2021/202138ce.xml



Trade between Japan and EU in FY2021

Export of Japan to EU in FY2021	Value (millions of JP¥)	Share	Percent Change	Contribution degree
Grand Total	7,925,814	100	24.5	24.5
1 FOODSTUFF	51,535	0.7	56.7	0.3
2 RAW MATERIALS	77,787	1	32.4	0.3
3 MINERAL FUELS	19,259	0.2	32.5	0.1
4 CHEMICALS	1,027,225	13	24.1	3.1
ORGANIC CHEMICALS	298,374	3.8	16.7	0.7
MEDICAL PRODUCTS	121,209	1.5	24.8	0.4
PLASTIC MATERIALS	224,994	2.8	39.4	1
5 MANUFACTURED GOODS	630,096	7.9	54.7	3.5
IRON AND STEEL PRODUCTS	161,250	2	176.7	1.6
NONFERROUS METALS	75,018	0.9	49.4	0.4
MANUFACTURES OF METALS	118,024	1.5	23.6	0.4
TEXTILE YARN, FABRICS	68,530	0.9	41.9	0.3
NON-METALLIC MINERAL WARE	95,753	1.2	28.3	0.3
RUBBER MANUFACTURED	92,104	1.2	41.3	0.4
PAPER & PAPER MANUFACTURES	18,832	0.2	30.8	0.1
6 MACHINERIES	1,878,447	23.7	32.6	7.3
POWER GENERATING MACHINE	241,480	3	36	1
COMPUTERS AND UNITS	108,337	1.4	7.7	0.1
PARTS OF COMPUTER	203,058	2.6	13.4	0.4
SEMICON MACHINERY ETC	133,377	1.7	106.4	1.1
METALWORKING MACHINERY	131,640	1.7	60.9	0.8
PUMP AND CENTRIFUGES	212,696	2.7	21.4	0.6
CONSTRUCTION MACHINES	246,435	3.1	43.3	1.2
MECHANICAL HANDLING EQUIP	62,671	0.8	16.2	0.1
HEATING OR COOLING MACHINE	65,732	0.8	40.9	0.3
TEXTILE MACHINES	10,917	0.1	81.5	0.1
BALL OR ROLLER BEARINGS	70,211	0.9	37.6	0.3
7 ELECTRICAL MACHINERIES	1,435,281	18.1	19.3	3.7
SEMICONDUCTORS ETC	187,879	2.4	23.5	0.6
(IC)	77,690	1	21.4	0.2



AUDIO & VISUAL APPARATUS	69,974	0.9	9.4	0.1
(VIDEO REC OR REPRO APP)	53,672	0.7	6.8	0.1
(TV RECEIVER)	7,714	0.1	-13.4	0
PARTS OF AUDIO, VISUAL APP.	14,975	0.2	19.7	0
ELECTRICAL POWER MACHINERY	172,681	2.2	34.4	0.7
TELEPHONY, TELEGRAPHY	37,083	0.5	-21.4	-0.2
ELECTRICAL MEASURING	272,496	3.4	19.3	0.7
ELECTRICAL APPARATUS	140,755	1.8	35.5	0.6
BATTERIES AND ACCUMULATORS	79,595	1	23	0.2
8 TRANSPORT EQUIPMENT	1,600,691	20.2	7	1.7
MOTOR VEHICLES	858,470	10.8	-3.6	-0.5
(CAR)	794,041	10	-6.2	-0.8
(BUS&TRUCK)	64,428	0.8	47.3	0.3
PARTS OF MOTOR VEHICLES	442,027	5.6	10.6	0.7
MOTORCYCLES, AUTOCYCLES	131,324	1.7	43.5	0.6
AIRCRAFT	14,558	0.2	12.5	0
SHIPS	32,308	0.4	54.4	0.2
9 OTHERS	1,205,492	15.2	32.2	4.6
SCIENTIFIC, OPTICAL INST	325,799	4.1	36.2	1.4
PHOTOGRAPHIC SUPPLIES	47,952	0.6	18.6	0.1

Import of Japan from EU in FY2021	Value (millions of JP¥)	Share	Percent Change	Contribution degree
Grand Total	9,941,748	100	26.2	26.2
1 FOODSTUFF	1,105,900	11.1	13.4	1.7
FISH AND FISH PREPARATION	54,275	0.5	3.8	0
MEAT AND MEAT PREPARATION	195,436	2	17.1	0.4
CEREALS, CEREAL PREPARATION	52,573	0.5	16	0.1
VEGETABLES	52,410	0.5	14.3	0.1
FRUITS	22,371	0.2	13.9	0
2 RAW MATERIALS	397,707	4	55.2	1.8
WOOD	142,712	1.4	88.6	0.9
ORE OF NONFERROUS	13,349	0.1	48.4	0.1
IRON ORE AND CONCENTRATES	-	-	ZENGEN	0



SOY BEANS	-	-	-	-
3 MINERAL FUELS	82,244	0.8	226.1	0.7
PETROLEUM	-	-	-	-
PETROLEUM PRODUCTS	73,901	0.7	247.7	0.7
(PETROLEUM SPIRITS)	65,251	0.7	321.7	0.6
LNG	5,448	0.1	164.1	0
LPG	42	0	4.8	0
COAL	-	-	-	-
(COAL N.E.S)	-	-	-	-
4 CHEMICALS	3,509,398	35.3	38	12.3
ORGANIC CHEMICALS	378,707	3.8	-20.7	-1.3
MEDICAL PRODUCTS	2,532,154	25.5	60.2	12.1
5 MANUFACTURED GOODS	629,909	6.3	35.7	2.1
IRON AND STEEL PRODUCTS	40,303	0.4	42.6	0.2
NONFERROUS METALS	192,793	1.9	70.7	1
MANUFACTURES OF METALS	99,688	1	17.3	0.2
TEXTILE YARN, FABRICS	47,391	0.5	6.6	0
NON-METALLIC MINERAL WARE	77,286	0.8	19.4	0.2
WOOD & CORK MANUFACTURED	89,637	0.9	62.4	0.4
6 MACHINERIES	809,875	8.1	3.7	0.4
POWER GENERATING MACHINE	158,655	1.6	6.7	0.1
COMPUTERS AND UNITS	52,719	0.5	23.7	0.1
PARTS OF COMPUTER	6,474	0.1	-34.7	0
7 ELECTRICAL MACHINERIES	819,675	8.2	14.5	1.3
SEMICONDUCTORS ETC	141,930	1.4	35.8	0.5
(IC)	116,450	1.2	36.5	0.4
INSULATED WIRE AND CABLE	11,450	0.1	27.6	0
AUDIO AND VISUAL APPARATUS	44,753	0.5	11.7	0.1
ELECTRICAL POWER MACHINERY	73,470	0.7	-6.3	-0.1
TELEPHONY, TELEGRAPHY	77,093	0.8	-2.3	0
(TELEPHONE SETS)	162	0	-47.6	0
ELECTRICAL MEASURING	163,399	1.6	11	0.2
8 TRANSPORT EQUIPMENT	1,361,033	13.7	27.3	3.7
MOTOR VEHICLES	851,828	8.6	12.7	1.2

PARTS OF MOTOR VEHICLES	115,407	1.2	15	0.2
AIRCRAFT	334,354	3.4	106.4	2.2
9 OTHERS	1,226,007	12.3	17.4	2.3
SCIENTIFIC, OPTICAL INST	382,038	3.8	3.7	0.2
CLOTHING AND ACCESSORIES	141,029	1.4	6.4	0.1
FURNITURE	58,412	0.6	18.2	0.1
BAGS	228,232	2.3	23.9	0.6

Data from MOF website

Japan's total population has decreased by 640,000, and Tokyo has also been negative for the first time in 26 years

On April 15, the Ministry of Internal Affairs and Communications announced the estimated total population of Japan (including foreigners) as of October 1, 2021. The number decreased by 644,000 (0.51%) from the previous year to 125,520,000, the largest decrease ever. The decline has been for 11 consecutive years, and the population of Tokyo has turned negative for the first time in 26 years since 1995. By age, the elderly population aged 65 and over was 36,214,000, accounting for 28.9% of the total, the largest ever. On the other hand, the number of people under the age of 15 was 14,784,000, which was a record low of 11.8%, revealing that the declining birthrate and aging population are accelerating.

The working-age (15-64 years old) population, which is the core of workers, was 74,540,000, accounting for 59.4% of the population, the lowest ever. This is 10.4 points lower than the peak of 69.8% in 1992.

The number of babies born was 831,000, a decrease of 40,000 from the previous year. The death toll increased by 68,000 to 1.44 million. The number of "natural declines" in which the number of births falls below the number of deaths has reached a record high of 609,000 for the 15th consecutive year. Furthermore, due to the restrictions on entry and exit from overseas due to the influence of the COVID-19, the number of "social declines" in which the number of departures exceeds the number of arrivals was 35,000, the first negative figure in nine years.

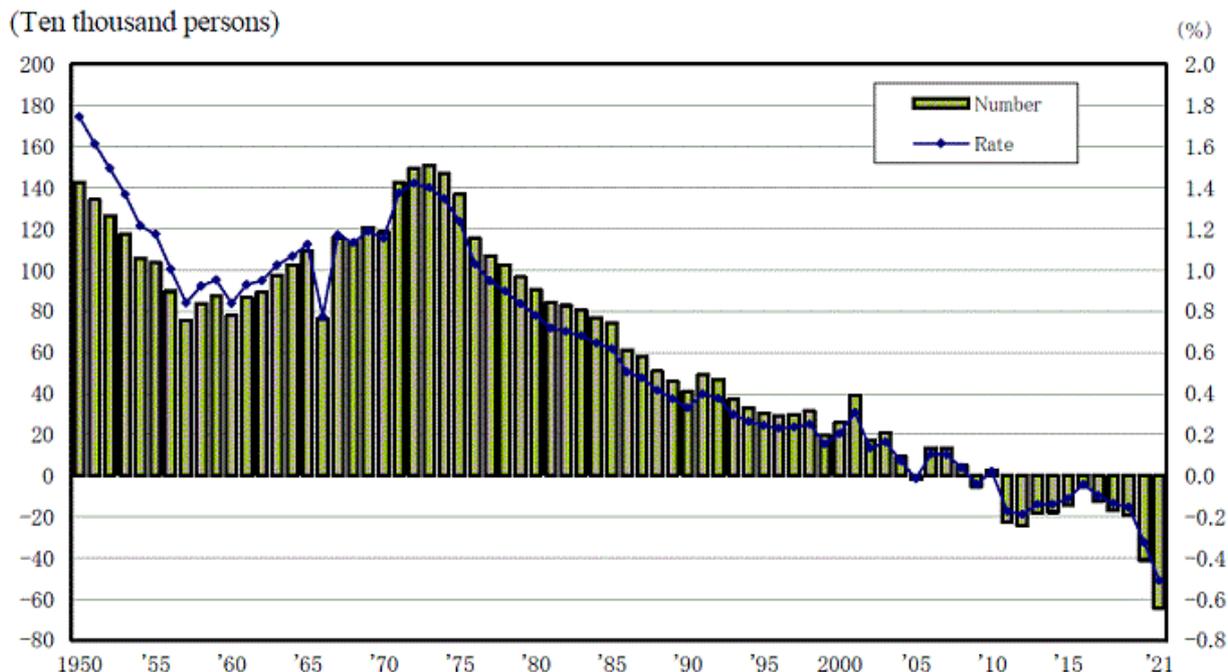
By prefecture, the population decreased in 46 prefectures excluding Okinawa. In particular, the rate of decrease was remarkable in the Tohoku region. Akita Prefecture had the largest population decline rate compared to the previous year

at 1.52%. Aomori prefecture was 1.35% and Yamagata prefecture was 1.23%, down respectively.

Ministry of Internal Affairs and Communications website:

<https://www.stat.go.jp/english/data/jinsui/2021np/index.html>

Number and Rate of Population change



Data source: Ministry of Internal Affairs and Communications

Ministry of the Environment announced confirmed greenhouse gas emission figures for FY2020

On April 15, the Ministry of the Environment and the National Institute for Environmental Studies compiled and announced Japan's greenhouse gas emissions (confirmed figures) for fiscal 2020. Total greenhouse gas emissions in fiscal 2020 were 1.15 billion tons (carbon dioxide (CO₂) equivalent), a decrease of 5.1% from the previous year.

On the other hand, the amount absorbed by measures against sinks such as forests in FY2020 was 44.5 million tons. Subtracting "absorption amount by measures against sinks such as forests" from "total emissions", it is 1,106 million tons (down 60 million tons from the previous year), or 21.5% has decreased to the emissions in 2013 (303.6 million tons).

The emissions compiled this time are based on the annual report values of various statistics, etc. that have become available since the calculation of the preliminary figures for FY2020 (announced on December 10, 2021). Due to further revisions, there is a difference from the preliminary figures for FY2020. Greenhouse gas emissions in 2020 were 1.149 billion tons in the previous breaking news.

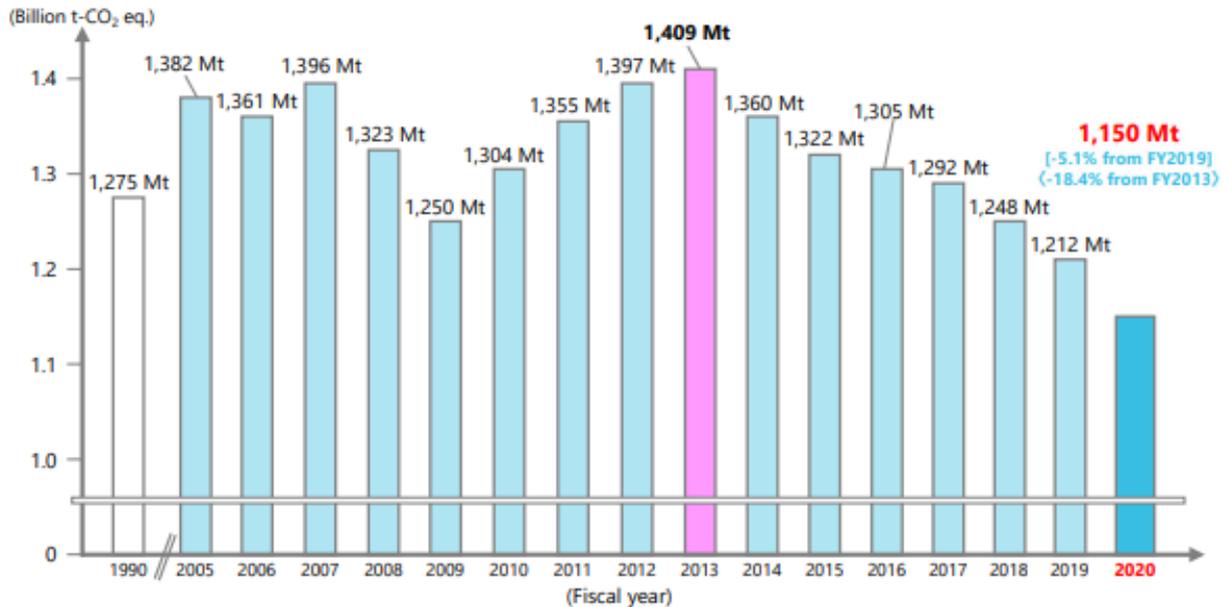
Factors contributing to the decrease from the previous fiscal year include a decrease in production volume in the manufacturing industry due to the spread of the COVID-19, and a decrease in energy consumption due to a decrease in passenger and freight transportation volumes. According to estimates by the Ministry of the Environment, the impact of the spread of the infection has reduced 83 million tons, or 6.8% of the previous year.

Compared to the total emissions in 2013 (1.409 million tons), energy consumption has decreased 18.4% (259 million tons) because of the progress of energy saving, impact of spread of the COVID-19, etc., and low carbonization of electricity (expansion of renewable energy and the restart of the nuclear power plant). On the other hand, the emissions of hydrofluorocarbons (HFCs) associated with the replacement of ozone-depleting substances in refrigerants are increasing year by year.

Based on the United Nations Framework Convention on Climate Change, developed countries, including Japan, are required to prepare a list of greenhouse gas emissions and absorptions and submit it to the Convention Secretariat.

National Institute for Environmental Studies website:

<https://www.nies.go.jp/whatsnew/20210415/20220415-2-e.html>



Japan's total national GHG emissions in FY2020 (final figures)

Domestic new car sales, low level for the first time in 45 years, down 9% in FY 2021 to 4.21 million units

The number of new cars sold in Japan (including mini cars) in FY 2021 (April to March) announced on April 1 by the Japan Automobile Dealers Association and the National Federation of Light Vehicle Associations, was 4,215,826 units, a decrease of 9% from the previous year. It is the third consecutive year that it has fallen below the previous year. The global semiconductor shortage has not been resolved, and it has reached the lowest level in 45 years since 1976.

Production has not kept up with demand, and sales have continued to decline. Regular cars (registered cars, displacement over 660cc) have been negative for 5 years, and light cars have been negative for 3 consecutive years. The level of 4.21 million units is lower than 4.6 million units in 2010, when sales fell due to the end of eco-car subsidies and the Great East Japan Earthquake, and is the second lowest after 4.2 million units in 1976.

In reaction to the sharp drop in sales due to the first emergency declaration of the COVID-19 in 2020, new car sales from April to June 2021 were positive compared to the same month of the previous year, but the supply shortage of parts such as semiconductors continued and it has fallen below the same month of the previous

year for 9 consecutive months. Especially in September, parts procurement by each company was delayed due to the spread of the COVID-19 in Southeast Asia, resulting in a significant drop of 32%. In addition to the prolonged shortage of semiconductors, the supply shortage has not improved due to the fact that domestic factories have been shut down one after another due to the spread of the "Omicron type" of COVID-19.

By brand of the eight major passenger car companies, seven companies excluding Mitsubishi Motors fell below the previous year's level. Toyota Motor (excluding Lexus) decreased by 9% to 1,348,671 units. Mazda's decline was the largest, down 16% to 148,566 units. Mitsubishi Motors increased only due to the reaction of the sluggishness and the effect of new models.

By month, the number of vehicles sold in March at the end of the fiscal year is the highest. However, new car sales in March 2022 were down 16% to 521,862 units. The delivery date of new cars has been extended, and the fact that car registration and delivery were not in time for March affected sales decline. The negative range from the same month of the previous year improved by 1.7 points from February, but double-digit negatives have continued since September.

On the other hand, the demand for new cars is strong, and the backlog of orders is accumulating at each company. Toyota's new car delivery time is usually about one month, but the small car "Aqua" waits for 5 to 6 months, and the large multi-SUV Land Cruiser waits for 4 years.

Japan Automobile Dealers Association website (in Japanese):

<http://www.jada.or.jp/data/month/m-r-hanbai/m-r-type/>

National Federation of Light Vehicle Associations website (in Japanese):

<https://www.zenkeijikyo.or.jp/statistics/4soku-nendo>



Toyota's new Land Cruiser waits 4 years until delivery
Image from Toyota website

General waste in FY 2020 was 41.67 million tons, a 2.5% decrease, but household waste increased

On March 29, the Ministry of the Environment (MOE) announced the results of a survey on the status of waste and treatment of general waste (garbage and human waste) nationwide in FY2020. Total waste emissions were 41.67 million tons (42.74 million tons in the previous fiscal year, down 2.5%), and daily waste emissions per person was 901 grams (918 grams, down 1.9% from the previous fiscal year), both from the previous year. The total amount of waste discharged has been on a downward trend, falling below the base line of 2012, for eight consecutive years.

The final disposal amount was 3.64 million tons (3.8 million tons in the previous fiscal year), a decrease of 4.2%. The recycling rate was 20%, a slight increase from 19.6%. The remaining capacity of the final disposal site was 99.84 million m³ (99.58 million m³ in the previous year), a slight increase from the previous fiscal year, and the remaining years also increased to 22.4 years (21.4 years in the previous year), but the number of final disposal sites is generally decreasing and it is in a difficult situation.

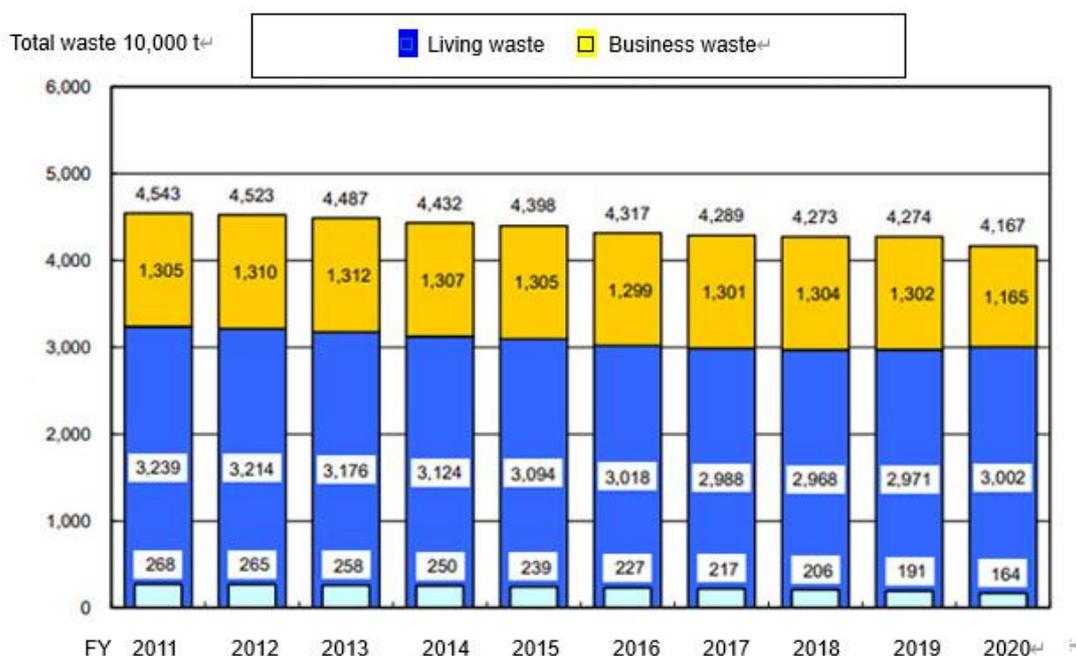
The number of waste incineration facilities was 1,056 (1,070 in the previous year), a decrease of 1.3%. Of these, the number of waste incineration facilities with power generation facilities accounted for 36.6% of the total. In addition, the total amount of electricity generated at the waste incineration facility was 10,153 GWh (equivalent to the annual electricity consumption of about 2.38 million households), an increase of 1.6% from 9,990 GWh in the previous year.

Looking at the amount of waste discharged by type, the amount of "living waste" discharged from households was 30.02 million tons (29.71 million tons in the previous year), an increase of 310,000 tons. While "Business waste" discharged from business establishments decreased by 1.37 million tons from 13.02 million tons in the previous year. Living waste accounted for about 72% (about 70% in the previous year). The waste disposal business cost was JP¥ 2,129 billion, which was JP¥ 16,800 per capita.

MOE website:

<https://www.env.go.jp/en/headline/2595.html>

Total waste by FY in Japan from MOE website⁴⁾



Company & Organization News

Nippon Sheet Glass succeeds in producing float glass with 100% biofuel for the first time in the world

On April 14, Nippon Sheet Glass announced (NSG) announced that it succeeded for the first time in the world in a demonstration experiment of float glass production using 100% biofuel at the Green Gate Plant (St. Helens, UK) of Pilkington UK, a group company of the same company. It has achieved a CO2 emission reduction effect of about 80% compared to natural gas. The experiment was conducted as part of an effort to consider the introduction of a sustainable low-carbon fuel to replace the current main fuel, natural gas and has succeeded in producing 165,000 square feet (about 15,000 square meters) of the float glass.

This attempt is an energy innovation program of the UK Department for Business, Energy and Industrial Strategy, with the aim of verifying whether it is possible to safely operate glass production kilns with low carbon fuel while maintaining product quality. The program is funded by a total of £ 7.1 million in research funding, and the experiments are led by the British research and technology organization Glass Futures, which includes the group.

In August 2021, the company group succeeded in the world's first demonstration experiment of glass production using hydrogen as part of the "Hynet Industrial Fuel Conversion Project" to decarbonize industrial processes throughout northwestern England. On the other hand, various issues remain in the practical use of hydrogen fuel in the medium to long term, such as the production cost of hydrogen itself and the development of supply infrastructure, until the full-scale introduction of zero-carbon energy such as green hydrogen. There was an urgent need to consider low-carbon fuels that could be used during the transition period.

Nippon Sheet Glass website:

<https://www.nsg.com/en/media/ir-updates/announcements-2022/biofuel-trial-by-st-helens>



Councillor Mancyia Uddin, St Helens Borough Council's Climate Change Champion at NSG's Greengate Site, from NSG website

ENEOS and TotalEnergies develop self-consumed solar power for corporations in Asia, collaborate with SAF too

ENEOS and energy giant TotalEnergies (France) announced on April 13 that they have signed a joint venture agreement in Asia to support the introduction of self-consumed solar power generation for corporations. The two companies will invest 50% each in this joint venture to develop distributed solar power generation with a power generation capacity of 2GW over the next five years.

This project targets Japan, India, Thailand, Vietnam, Indonesia, Philippines, Cambodia, Singapore and Malaysia. Although it is premised on the approval of the relevant authorities, it is scheduled to close in the first quarter of FY 2022.

TotalEnergies is a comprehensive energy company that produces and sells energy on a global scale, and owns the power generation capacity of 2GW of distributed power sources from solar power generation, including projects under construction and development. In addition, the goal is to expand the power generation capacity of renewable energy power sources to 100 GW by 2030, and through this project, it intends to further focus on the business in the Asian region,

which is a priority region.

In addition, ENEOS and TotalEnergies announced that they will jointly conduct a commercialization study on the production of sustainable aviation fuel (SAF). The purpose of this project is to procure waste such as waste cooking oil and tallow and surplus as raw materials, and to utilize the manufacturing and receiving / shipping equipment of the ENEOS Negishi Refinery, which is partially idle, for SAF manufacturing. This facility is expected to produce 300,000 tons (400,000 kl) of SAF annually in the future. The two companies are also considering establishing a joint venture for SAF manufacturing. By 2025, they aim to establish a highly competitive SAF mass production supply system in Japan.

The ENEOS Negishi Refinery is located in Japan's largest demand area for aviation fuel, including Narita Airport and Haneda Airport, and ENEOS has a domestic sales network for aviation fuel. In Japan, the Ministry of Land, Infrastructure, Transport and Tourism has set a goal of achieving a SAF mixing ratio of 10% in aviation fuel in 2030.

TotalEnergies website:

<https://totalenergies.com/media/news/press-releases/totalenergies-and-eneos-join-forces-develop-b2b-solar-distributed>

<https://totalenergies.com/media/news/press-releases/japan-totalenergies-and-eneos-study-sustainable-aviation-fuel-production>



Image from TotalEnergies website

Mitsui collaborates with a French company that manufactures green hydrogen

Mitsui & Co., Ltd. announced on April 13 that it has underwritten €10 million (about JP¥ 1.35 billion) of convertible bonds of France's Lhyfe, which manufactures green hydrogen using a local production for local consumption model.

Lhyfe was founded in 2017 by members from the French Alternative Energies and Atomic Energy Agency (CEA) to reduce GHG emissions in green hydrogen production based on their knowledge of renewable energy. It is working to produce green hydrogen that does not emit CO₂ in the manufacturing process by directly using locally available renewable energy sources such as wind power and solar power generation, and in 2021, it launched the first commercial plant for producing green hydrogen by connecting directly to the wind power plant. It is already active in 10 European countries and has more than 90 pipeline projects scheduled to go live between 2022 and 2028 for mobility and industry.

In 2022, at the Green Industrial Energy Park in Denmark, it aims to set up a plant that produces and supplies green hydrogen on-site using solar power and wind power. And respond to rising demand for green hydrogen, the goal is to produce green hydrogen at sea.

As a demonstration plant, it is developing an offshore hydrogen production facility connected to an offshore wind farm off the coast of France. The hydrogen production capacity of this plant is 440 kg per day, and it is decided to verify the hydrogen production technology on the water before assuming a large-scale deployment in 2024.

In March, Mitsui & Co. announced that it would invest approximately JP¥ 77 billion in Mainstream Renewable Power (Ireland), which develops renewable energy business globally. In addition, through investment in Hexagon Composites of Norway, which manufactures and sells high-pressure gas tanks containing hydrogen, and investment in First Element Fuel, a hydrogen station business in the United States, it is working on the hydrogen business including the spread of fuel cell vehicles.



Mitsui website:

https://www.mitsui.com/jp/en/topics/2022/1243214_13410.html



Delivering renewable green hydrogen from Lhyf's plant
Image from Mitsui website

Mitsui participates in 1,300 MW renewable energy business at India

Mitsui & Co., Ltd. announced on April 6. that it will participate in the investment at a large-scale renewable energy business that will newly establish three wind power plants (300 MW x 3) and one solar power plant (400 MW, with a maximum storage system of 100 MWh) in India. The total project cost is about US\$ 1.35 billion (about JP¥ 165 billion). Commercial operation is scheduled to start in August 2023.

The project develops a renewable energy power plant with a total installed capacity of 1,300 MW and is based on a 25-year long-term power sale agreement with the Solar Energy Corporation of India (SECI), a subsidiary of the Ministry of New and Renewable Energy of India. This will be India's first Round-the-Clock scheme-type project that includes stable power supply 24 hours a day from multiple renewable energy power plants, including electricity storage technology, as a contract condition.

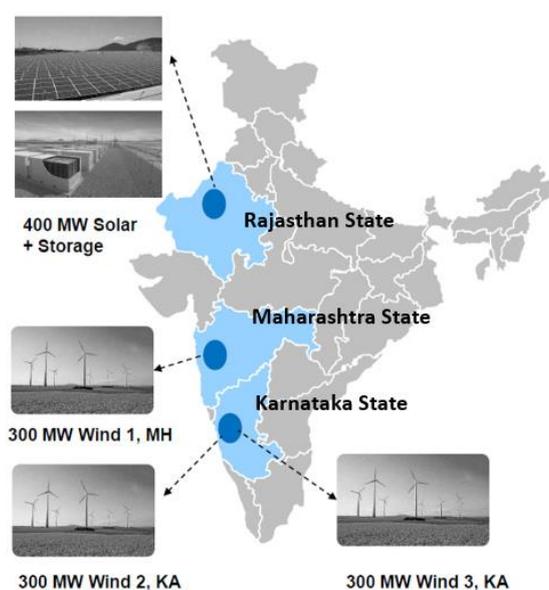
This project is being promoted by ReNew Power, India's largest renewable energy company. Mitsui will invest in this business (ReNew Surya Roshni) through its investment subsidiary, Mitt Power India. The investment composition will be ReNew Power 51% and Mitsui 49%. ReNew Power is one of India's leading re-energy operators, founded in 2011, and currently has a re-energy asset base of over 10 GW, including projects under development.

India is currently the world's third largest greenhouse gas (GHG) emitter. At COP26 held in November 2021, the Government of India announced a net zero GHG emissions by 2070 and announced a policy to increase the power generation capacity of non-fossil fuels to 500 GW by 2030.

The problem with conventional renewable energy projects is that the amount of power generated fluctuates depending on the wind conditions or the amount of sunshine, making it difficult to provide a stable power supply. The promotion of the Round-the-Clock scheme, which enables a stable supply of 100% renewable electricity, is in line with the policy of the Government of India. As currently exceeds more than half of India's total installed capacity of coal, it is expected to play a role in replacing thermal power plants in the future.

Mitsui website:

https://www.mitsui.com/jp/en/release/2022/1243209_13406.html



Projects in India from Mitsui website

Mitsubishi Heavy Industries Engineering examines the applicability of CO2 capture technology in Bahrain

On March 29, Mitsubishi Heavy Industries Engineering, along with Mitsubishi Heavy Industries EMEA, Ltd. (MHI-EMEA / London, UK), which is the headquarters of Mitsubishi Heavy Industries in Europe, the Middle East and Africa, and Aruba a major state-owned aluminum smelting company in Bahrain, announced that they have signed a memorandum of understanding on the applicability of CO2 capture technology.

This memorandum was signed with Aruba with MHI-EMEA as the contracting entity, and MHIENG has developed the CO2 capture technology "KM CDR Process™" jointly with Kansai Electric Power Co., Inc. (Osaka City). It will be provided to the company's plant and the feasibility of the project will be examined.

If realized, it will be the world's first application of CO2 capture technology in the aluminum industry, and it will be a significant initiative for the Mitsubishi Heavy Industries Group in terms of expanding into new industrial fields and improving its presence in the Middle East.

Aruba is the world's leading state-owned aluminum smelting company headquartered in Bahrain. The smelter covered by this memorandum has an annual production of over 1,561,000 tons (2021). In recent years, it has been actively promoting decarbonization, and the company's efforts have played an important role in Bahrain's efforts toward net zero and the achievement of renewable energy targets.

MHI website:

<https://www.mhi.com/news/220328.html>

MHI Group's CO2 Capture Technology by YouTube:

<https://youtu.be/9PtNuRWOQAY>



MOU signing ceremony from MHI website

Other topics

ADB announces growth forecast for emerging Asian regions

The Asian Development Bank (ADB) announced on April 6 the forecast of the real GDP growth in 2022 for emerging countries and regions of Asia to be 5.2% year-on-year and 5.3% in 2023. Under the influence of the spread of the COVID-19, the recovery trend has continued after hitting a negative growth (-0.8%) in 2020, but it is expected to slow down from 6.9% in the previous year (2021). However, due to the progress of vaccination, it was supported by the relaxation of immigration restrictions in each country, the steady export of the region and the recovery of strong domestic demand. It is predicted that the level will exceed that of 2019 (5.0%).

However, the 2022 forecast has been reduced by 0.1 points from the previous announcement in December 2021. ADB points out that there are some downside risks to the region's outlook. Specifically, 1) Increased geopolitical tensions resulting from Russia's invasion to Ukraine could impede trade and production in each country and increase inflationary pressure, 2) Aggressive US monetary tightening may lead to financial instability and depreciation of the currency, 3) Expanding Omicron in China, which adopts the so-called "zero corona policy", may have a negative impact on economic growth and the supply chain, etc. were pointed out. Inflation, in particular, is projected to rise from 2.5% year-on-year in

2021 to 3.7% in 2022 due to continued economic recovery and soaring energy and commodity prices. On the other hand, it is expected to remain at 3.1% in 2023.

Looking at the economic growth rate by country / region, it is predicted that high growth will continue due to the recovery of domestic demand, especially in South Asia, especially in India (2022: 7.5%, 2023: 8.0%). In Southeast Asia, the forecast for the entire region is 4.9% in 2022 and 5.2% in 2023. By country, Vietnam had the highest growth forecasts of 6.5% and 6.7%, respectively, due to the shift to the with-Covid-policy from the fourth quarter of 2021 and the high vaccination rate. The Philippines also forecasts high growth of 6.0% and 6.3%, saying that domestic investment and consumption will drive the economic recovery. Myanmar, where the turmoil continues after the coup data, was minus 0.3% and minus 2.6%, which is an improvement from minus 18.4% in 2020, but it is expected to be sluggish.

(Regional classification)

- East Asia: Hong Kong, Mongolia, China, South Korea, Taiwan
- Southeast Asia: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, East Timor, Vietnam
- South Asia: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka
- Central Asia: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
- Oceania: Cook Islands, Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu

Asian Development Bank website:

<https://www.adb.org/news/developing-asia-economies-set-grow-5-2-year-amid-global-uncertainty>



Real GDP Growth Rate of Emerging Asian Countries / Regions (YoY, %)

	2019	2020	2021	2022	2023
Emerging countries / regions in Asia	5.0	-0.8	6.9	5.2	5.3
East Asia	5.5	1.8	7.6	4.7	4.5
China	6.1	2.2	8.1	5.0	4.8
Taiwan	3.1	3.4	6.4	3.8	3.0
South Korea	2.2	-0.9	4.0	3.0	2.6
Hong Kong	-1.7	-6.5	6.4	2.0	3.7
Southeast Asia	4.7	-3.2	2.9	4.9	5.2
Vietnam	7.0	2.9	2.6	6.5	6.7
Philippines	6.1	-9.6	5.6	6.0	6.3
Malaysia	4.4	-5.6	3.1	6.0	5.4
Cambodia	7.1	-3.1	3.0	5.3	6.5
Indonesia	5.0	-2.1	3.7	5.0	5.2
Singapore	1.1	-4.1	7.6	4.3	3.2
Brunei	3.9	1.1	-1.5	4.2	3.6
Laos	4.7	-0.5	2.3	3.4	3.7
Thailand	2.2	-6.2	1.6	3.0	4.5
East Timor	2.2	-8.6	1.8	2.5	3.1
Myanmar	6.8	3.2	-18.4	-0.3	2.6
South Asia	4.0	-5.2	8.3	7.0	7.4
India	3.7	-6.6	8.9	7.5	8.0
Central Asia	4.7	-2.0	5.6	3.6	4.0
Oceania	3.1	-6.0	-0.6	3.9	5.4

Data from ADB website & JETRO website

China's top import destination is Taiwan for the second consecutive year, semiconductors lead

According to the Japan External Trade Organization (JETRO) report on April 6 about China's imports in 2021, Taiwan ranked first among China's importing countries / regions for the second consecutive year. China has a structural deficit in trade with Taiwan because it imports a large amount of electronic components including semiconductors, and imports increased significantly in 2020 and 2021.

In 2021, China's imports from Taiwan increased 24.5% to \$ 251.465 billion exports increased 30.3% to \$ 78.384 billion, and its trade balance was a deficit of \$ 173.076 billion.

Looking at China's trading partners by country / region, Taiwan ranks 11th in terms of export value, but ranks first in terms of import value. Taiwan reversed South Korea in 2020 to become number one, making it China's largest importer for the second consecutive year.

About imports from Taiwan by item (HS code 4-digit basis), integrated circuits ranked first, rising 24.7% year-on-year to \$ 156.1 billion, accounting for 62.1% of the total. Looking at the import destinations of semiconductors in China, Taiwan is the first (35.9% share of semiconductor imports) and South Korea is the second (20.3%), accounting for 56% of the total semiconductor import value of the two countries / regions.

There are various types of semiconductors, but semiconductors imported from Taiwan are mainly logic ICs used for arithmetic processing, and semiconductors imported from South Korea are mainly memory ICs used for storage processing. Logic ICs are used not only for digital products such as smartphones, PCs, and routers, but also for in-vehicle use, and import growth is remarkable as demand for these products increases.

The United States has imposed sanctions on Chinese semiconductor-related companies, adding Huawei and SMIC, a major semiconductor manufacturer, to the entity list (EL). After September 2020, exporting even foreign-made semiconductors to Huawei is prohibited if those are made by US manufacturing equipment and design software, and as a result, import of Huawei from TSMC of Taiwan is difficult.

Regarding SMIC, in principle, export, re-export, and domestic transfer of US products necessary for manufacturing semiconductors with a circuit line width of 10 nanometers or less to the company are not permitted. Despite these sanctions, semiconductor imports are growing because US regulations primarily target advanced semiconductors. It can be seen that imports of non-regulated general-purpose semiconductors are increasing even among logic ICs whose demand is

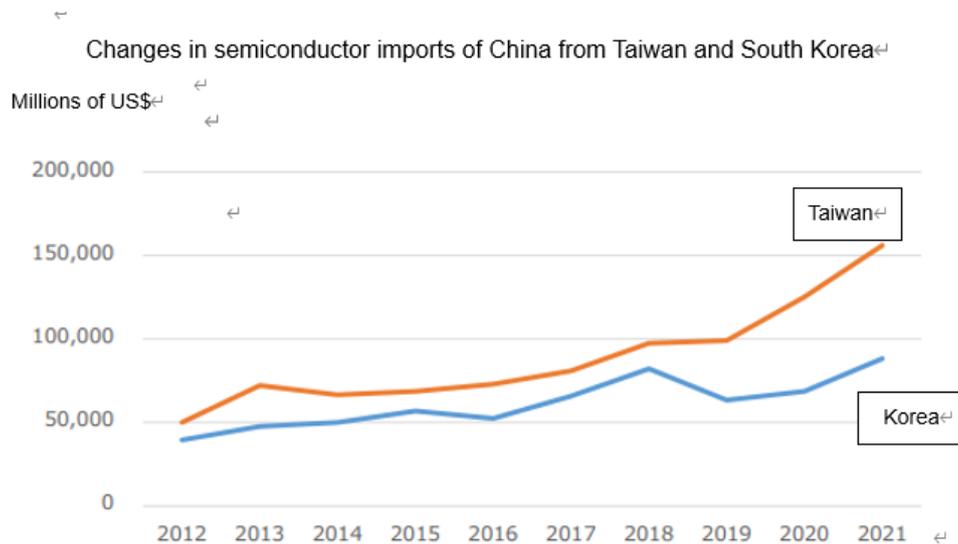


increasing.

According to China's import statistics from January to February 2022, the value of imports from Taiwan increased by 19.8% from the previous year to \$ 40.079 billion, continuing to be the number one import destination for China. Imports of semiconductors from Taiwan are showing high growth to \$ 26.136 billion, up 29.5% from the same period of the previous year. The composition of Taiwan as China's largest import destination, driven by semiconductor imports, is likely to continue for some time.

JETRO website (in Japanese):

<https://www.jetro.go.jp/biznews/2022/04/2dee31d5a82d9125.html>



Data from JETRO website

2020 Dubai International Exposition closes, Japan Pavilion wins "Gold Award" in the exhibition design category

The Dubai International Exposition, which has been held in the United Arab Emirates (UAE) since October last year, closed on March 31. The opening of the Dubai Expo, the first in the Middle East, has been postponed for one year due to the influence of the COVID-19. But, as a result, about 23 million people visited, which is 90% of the goal set by the UAE. Measures such as wearing a mask and presenting a vaccination certificate were taken to achieve both infection control and attracting customers. In order to make up for the decrease in foreign visitors,

it devised ways to invite domestic children and students and hold concerts by well-known artists.

BIE Day was held on March 30, the day before the closing. The award ceremony of the Pavilion Prize hosted by BIE (Bureau International des Expositions) and Dubai Corporation was held, and the Japan Pavilion received the "Gold Award" in the exhibition design category of the large-scale pavilion category. This is the first time in history that the Japan Pavilion has won the "Gold Award" twice in a row at the Registered Expo following the 2015 Milan International Exposition.

The next World Expo will be Expo 2025 Osaka Kansai, which will be held in Osaka city in 2025. The theme is "Designing Future Society for Our Lives" and the event will be held from April 13 to October 13, 2025 for 184 days.

METI website:

<https://www.meti.go.jp/press/2022/04/20220404002/20220404002.html>



The staff who see off the visitors of the Japan Pavilion after closing on March 31
Photo from YOMIURI ONLINE



Expo 2025 Osaka Kansai PR video:

<https://www.expo2025.or.jp/en/overview/movie/>



Expo 2025 Osaka Kansai site plan from Expo 2025 website