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Davos Special

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Clockwise from far left: Aerial view of the congress center in Davos, Switzerland; Participants listen to a special address by U.S. President Donald Trump at the World Economic Forum's annual meeting on Jan. 26, 2018; British Prime Minister Theresa May speaks at the same conference on Jan. 25, 2018. WORLD ECONOMIC FORUM / ANDY METTLER / FARUK PINJO / CHRISTIAN CLAVADTSCHER

A unique space for discussion in the face of uncertainty

Experts stress the necessity of finding solutions to unresolved issues amid tense geopolitical climate

SAYURI DAIMON
STAFF WRITER

The year 2019 is full of uncertainty. The U.S.-China trade war started by U.S. President Donald Trump seems to be accelerating with no signs of abating. Whether Trump will meet North Korean leader Kim Jong Un for a second time remains to be seen. How Brexit will turn out and how populist sentiments across Europe will play out in the European Union's parliamentary election in May will set the future course of the EU. Tensions between Japan and South Korea and efforts to solve the decades-old territorial issues between Japan and Russia are holding the attention of foreign policy experts.

In many ways, major policy issues that were left unsolved in 2018 may have to be carried by world leaders to 2019. Some experts say the World Economic Forum's annual meeting in Davos, Switzerland, that begins Jan. 22, will be the first good opportunity for those issues to be discussed among the world's top political and business leaders.

"It is always hard to predict what bilateral or multilateral issue will capture the most attention in Davos — mainly because we live in such volatile and uncertain times," said Lee Howell, a member of the WEF's Managing Board.

"As the two largest economies in the world, U.S.-China relations will always

warrant close attention in trade, but also technology and climate change policies. Given where the stock markets are now in both countries, I would expect much more attention on trade disputes between the U.S. and China in the new year," Howell said.

Davos conference participants will certainly have a full agenda to discuss. Over 3,000 global leaders from government, society, academia, the arts and media will gather under the theme "Globalization 4.0: Shaping a Global Architecture in the Age of the Fourth Industrial Revolution."

Last year, Trump's participation in the WEF meeting made world headlines, as it was the first for a sitting U.S. president since Bill Clinton attended in 2000. At the annual meeting, Trump told the hall packed with global elites that he would always promote "America first," as he expected other world leaders to do for their own countries. "America first does not mean America alone; when the United States grows, so does the world," he said.

This year, the American president, who is currently mired in a series of issues at home ranging from a border wall with Mexico to intensifying trade wars with many countries over tariffs, said he will not attend the Davos conference. However, if he were to participate at the last minute, his possible remarks would likely capture global media attention.

Prime Minister Shinzo Abe, who was the



Brexit is one of major unknowns that could weigh heavily on the international economy this year. AFP-JJJI

only missing figure among Group of Seven leaders last year, is expected to return to Davos for the first time since 2014.

On the macroeconomic front, the International Monetary Fund and other international institutions expect the global growth rate in 2019 to be somewhat moderate. However, many agree that escalating tension between Washington and Beijing on trade, as well as political challenges such as Brexit, could weigh heavily on the global economy this year.

In what appears to be a good indicator of how closely the American and Chinese economies are linked, stock prices plunged in the U.S. at the start of the new

year after Apple Inc. lowered its revenue expectations due to disappointing iPhone sales in China.

"Generally speaking, the global economy is unlikely to experience significant slowdown this year, but there is always tail risk that might occur in 2019," said Mitsumaru Kumagai, chief economist at Daiwa Institute of Research, referring to the risk of rare events that may have a huge impact on the economy.

For example, if Trump takes an even stronger protectionist approach that results in the depreciation of the dollar against the yen, that could push down Japan's gross domestic product by 0.6 per-

cent. Likewise, if Europe's economy is hit hard by the negative impact of Brexit, it could also lower Japan's GDP by 0.7 percent. Other tail risks include China's further economic slowdown and rising oil prices due to turmoil in the Middle East, he said.

Adding those external factors to domestic risks, such as the scheduled consumption tax hike in October, Kumagai said the country's GDP could drop by as much as 3.9 percent in total.

"In addition, because fiscal conditions of many countries are deteriorating, it is becoming more difficult for governments to implement emergency measures. The very presence of President Trump is also making policy coordination harder among key players in the international community," Kumagai said.

Ian Bremmer, president of the New York-based Eurasia Group that analyzes geopolitical risks for investors, also pointed out the danger of leaving possible risks unsolved.

"The political risk outlook for 2019 is reasonably good," said Bremmer in announcing this year's Top Risks report earlier this month. "But nearly all of the geopolitical developments that matter are now trending in the wrong direction. That's unprecedented in my lifetime. These issues, if left unaddressed, will lead to big trouble down the road."

The report said that the most serious geopolitical risks, such as cyber confrontation with Russia, war with Iran, implosion in Europe and a true U.S.-China trade war, are more plausible than they've been, but none are particularly likely to play out in 2019.

Corporate leaders in Japan and other East Asian countries also appear to be worried about the bellicose approach by Trump and Chinese President Xi Jinping over bilateral trade.

A survey conducted by Japanese business daily Nikkei, the Chinese daily Global Times and South Korea's Maeil Business Newspaper from Nov. 27 to Dec. 13, also shows more than 70 percent of corporate leaders in China, Japan and South Korea expect the trade war to damage their businesses.

About 79 percent of respondents from Japan, 73 percent from China and 81 percent from South Korea said the trade war would deal a blow to their operations, according to the poll of about 100 executives in each country.

With regard to investment plans for this year, 35 percent of Chinese companies said they would reduce investment in the U.S. compared to 2018. Hit by the slowdown of the Chinese economy, only 14 percent of Japanese companies responded that they would increase investment in China from last year.

Experts are concerned about the spread of populism and say that many political leaders have become myopic and cannot think of longer-term strategies. Because of that, Davos' uniqueness can offer a different level of discussions, they say.

"Not all global leaders who will come to Davos are politicians who have to go through elections. So, I hope these leaders (from various public and private sectors) will not only seek their own national interests, but work to create a framework, which will enable international policy coordination," Kumagai said.

Davos Special

Data sharing among ‘Fourth Industrial Revolution’ goals

MINORU MATSUTANI
STAFF WRITER

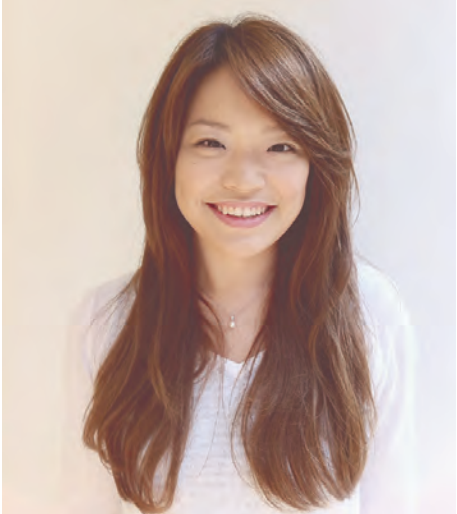
Launched in July with the goal of updating regulations that hinder effective usage of cutting-edge technologies, the Centre for the Fourth Industrial Revolution Japan has been helping the government lay out guidelines for an optimal future society.

The “Fourth Industrial Revolution” is currently being brought about by the practical use of data and digital technologies to improve people’s lives in various ways. It is building on the Third Industrial Revolution, which is represented by the modernization of computers, the spread of the internet and a wide variety of digital devices. The Third Industrial Revolution is generally considered to span from the 1980s to present-day, while the Second Industrial Revolution took place from the late 19th century to the early 20th century, built on mass production enabled by electricity.

The center, an equal, three-way joint venture of the Ministry of Economy, Trade and Industry, the World Economic Forum and the Asia Pacific Initiative, holds discussions on health care, data usage policies, smart cities and other innovations involving related ministries and government agencies to speed up decision making.

The center’s head Chizuru Suga, who is also a METI official with experience in policymaking, is upbeat about her current role because the center can have a “very direct influence” on policy.

“The directness of influence stems from the fact that the center is the first experiment for the government and the WEF to create a joint venture in which both parties are equal partners,” Suga said during a recent interview with The Japan Times. “I am part of the government and part of the



Chizuru Suga, head of the Centre for the Fourth Industrial Revolution Japan THE CENTRE FOR THE FOURTH INDUSTRIAL REVOLUTION JAPAN

WEF. The center can obtain shared information that each entity had previously monopolized.”

She stressed that the government and the WEF are equal partners regarding the center. “In policymaking, the government tends to consider outside opinions as merely petitions from some interest groups. But they listen to us, and when they do, things move very quickly,” she said.

Creating a joint venture with another organization as an equal partner is also a first for the WEF. In October, the WEF partnered with Reliance Industries to create its second such joint venture, the Centre for the Fourth Industrial Revolution India. The other two WEF centers — the centres for the Fourth Industrial Revolution in San Francisco and Beijing — are wholly owned by the WEF.

“The WEF had preferred to be on its own as it places importance on neutrality,” she said, adding that the benefit of partnering with the government outweighs neutrality in Japan.

The joint venture brings together decision-makers for discussions that can directly influence policymaking on innovations in such areas as artificial intelligence, blockchain technology and the “internet of things,” with particular focus on data policy, mobility and health care.

On data policy, the center aims to help the government create regulations to maximize the benefits of data usage.

“We believe data is something we should use as much as possible. With everyone in agreement on that, there still needs to be rules,” she said, implying that preventing the abuse of personal data is also important.

Mobility and health care are fields in which big data can be useful to enhance convenience and quality of life, she added.

For example, detailed large-scale data on people’s health could be very helpful for medical advancements. Obtaining the information of patients with serious diseases is not enough to find a cure for the diseases. Being able to access the data of healthy people could speed the development of cures.

To this end, the center, which counts Takeda Pharmaceutical Co., Santory Holdings Ltd., Hitachi Ltd., NEC Corp. and Mitsubishi Chemical Holdings Corp. among its 14 so-called partner companies, is trying to legalize use of some personal health data.

“We are trying to make some personal health data public property if there is potential of enormous benefit from sharing such data. It would be difficult for doctors to ask all patients for permission, and thus such data should be automatically desig-



The Centre for the Fourth Industrial Revolution Japan is working with the government to create a guideline for future society that includes how to use big data for health care. GETTY IMAGES

nated as public property,” Suga said. “We are helping lawmakers create bills regarding this.”

In another example of the center’s activities, it helped the Ministry of Land, Infrastructure, Transport and Tourism set up a project team to help municipalities create smart cities, which optimize efficiency in maximizing life quality. On Dec. 14, the ministry released a press release announcing that it is collecting information on technologies to realize smart cities, as well as needs for public services.

The government is expected to create presentations on smart cities for various Group of 20-related conferences later this year.

Additionally, the government and municipalities are encouraging discussions on smart cities amid Japan’s aging society and the decreasing population of rural areas.

“Some municipalities use health data wisely and digitize various data to expand resident services. Other municipalities, for example, create roads inaccessible to cars, forcing residents to walk. These will make differences in residents’ health, and we are trying to raise awareness of these things in municipalities,” she said.

“I want the center to initiate the movement of smart cities and Japan to take a leading role,” she said.

To that end, the center holds various symposiums, inviting prominent speakers to share their ideas.

For example, the center held the Healthcare Dialogue Series from Aug. 6 to 10. The series saw the discussion of various medical issues, and was attended by researchers, lawyers, medical technology company executives, medical association executives and Ministry of Health, Labor and Welfare officials.

The center also held the Data Policy Dialogue Series on Sept. 25 and the Mobility Dialogue Series on Oct. 16 and 17.

Many decision-makers, including government officials, attend these meetings, helping important decisions to be made quickly, Suga said.

In addition to the Group of 20 summit in Osaka in June, as well as various G20 ministerial meetings across Japan, there will be many related international conferences held in Japan this year.

For example, Business 20 will be held in Tokyo in March, while the Urban 20 Mayors summit will also take place in Tokyo in May. Suga said she wants the center to contribute to reaching agreements during such gatherings.

“I want the center to be a headquarters where people come to have discussions on any issue at the most advanced level,” she said.

Public-private collaboration key to challenges

SAYURI DAIMON
STAFF WRITER

Are our current institutions and global governance architecture sufficient to solve the new challenges the world is currently facing?

According to Lee Howell, an executive of the Switzerland-based World Economic Forum, the existing institutions and systems around the world, created in the 20th century, are no longer capable of dealing with today’s challenges. These have been triggered by multiple geopolitical, economic and environmental crises, as well as newly emerging issues involving innovative technologies.

That is why it is important to have conferences like Davos, Howell said in a recent interview in Tokyo, referring to the WEF’s annual meeting in Davos, Switzerland. The meeting will see some 3,000 global leaders from politics, business, academia and nongovernmental organizations gather to discuss pressing issues across different sectors.

The meeting, dubbed the Davos conference, will kick off on Jan. 22 with discussions on problems ranging from climate change to trade issues and geopolitics to the “Fourth Industrial Revolution,” in which artificial intelligence (AI) and other technologies are expected to drastically transform how humans work and live.

“Some say Davos is just talking shop, and people say dialogue, dialogue and dialogue. ... But compared to five years ago, we require much more talking (to tackle problems surrounding the world),” Howell, head of the WEF’s Global Programming and member of the Managing Board, told The Japan Times, adding that public-private partnerships are ever more important to come up with new frameworks to tackle myriad problems.

Howell said that the overarching topic of the annual meeting this year will be centered around “Globalization 4.0,” which concerns “recognizing four distinct developments in human history coming together and interacting.”

The four elements of “Globalization 4.0” are the environment and ecological challenges of the anthropocene epoch (climate and biodiversity); a new multipolar world order shaping geopolitics; a new economic narrative recognizing the need for inclusion and equity; and the arrival of the “Fourth Industrial Revolution,” he said.



Lee Howell, a World Economic Forum executive, during a recent interview with The Japan Times. YOSHIKI MIURA

These four elements will transform the world quickly, and the current system, including legal frameworks for cybersecurity and how to regulate drones and other new technologies, are not sufficient to deal with emerging problems in the future, he said.

While drones can fly to deliver goods to remote areas and be useful tools for people, they can also be used as autonomous weapons to target others. Foreseeing such dual uses of technology, Howell feels that new regulations must be instituted globally.

He added that information sharing and attempts to create new platforms are underway among some governments and the private sector. “But someone needs to invite them together (to discuss solutions together).”

Howell stressed that expertise from both the private and public sectors is necessary as the private sector is much more advanced in AI and military technology for example, while the public sector is much better in leading ethics.

Citing an example of a Chinese scientist’s revelation in November last year that he had created the world’s first genetically edited babies — though this kind of gene editing is banned in most countries — Howell said it is difficult for the private sector to prevent such research.

Following the revelation, however, China’s Ministry of Science and Technology ordered research institutes to suspend all scientific projects of Chinese scientist He Jiankui, the creator of the controversial genetically edited babies.

Howell also expressed concerns about the “concentration of market power,” in which many of the financial and technology giants dominating the global market are either American or Chinese corporations, such as Google and Microsoft and Chinese high-tech companies like Alibaba and Huawei.

“Everyone should have a chance to grow,” he said, adding that there is a growing chasm between the haves and have-nots regarding the latest technologies. “The 3,000 leaders who gather at Davos should think about these issues.”

China is rapidly becoming successful in the areas of advanced technology such as AI, drones, quantum computing and genomics, but Howell warned that China needs to recognize its responsibility as a leader in those fields.

“Such success for such a large country also entails global responsibilities as its continued growth relies on international trade and finance, but most importantly peace and security,” he said. “And our future security increasingly is digitally focused and technology-anchored as we need a safe cyberspace as much as sea lanes. It is in these domains that China is no longer seen as a developing country but a major player by the rest of the world.”

Thanks to Prime Minister Shinzo Abe who has entered his sixth year as prime minister and who is expected to attend Davos this year for the first time since 2014, Howell said that Japan, which will be the host for the G20 summit this year, will be able to play a leading role in addressing elements of “Globalization 4.0,” particularly related to more inclusive and shared growth and the impact of technology on financial innovation.

This year’s G20 summit will be held in Osaka on June 28 and 29, and concurrent with it, the finance ministers and central bank governors’ meeting, the foreign ministers’ meeting and other ministerial meetings will also be held in eight different locations across Japan.

“You couldn’t think of it 10 years ago. It was like Italy. ... The prime minister was changing every year,” he said, adding that Abe brought stability and continuity to Japanese policies.

“I also would expect some focus on the longevity revolution taking place globally, and the experience of Japan in caring for an aging society, but also mobilizing all of its talent both young and old,” he said.



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Beyond the Boundaries



Oji Holdings Corporation

Davos Special

Looking toward a digital future for a globalized society

Makiko Eda discusses her vision of creating a platform for the World Economic Forum

MAMI MARUKO
STAFF WRITER

For Makiko Eda, who has been chief representative officer of the World Economic Forum (WEF)'s Japan Office since last April, leaving her previous job as president of Intel Japan was a big challenge, but one she was willing to take on.

"Curiosity is the source of my energy," said Eda. "To keep on making an effort, to keep learning and making new colleagues, and using those resources to do something new is important to me."

Eda had been president and representative director of the U.S. chipmaker for five years when she was offered the role with the WEF, so it was not an easy choice. Although she wavered, she finally decided to take on the new challenge, as she believes she can implement the experience she gained from working in business and technology.

Taking on new challenges has always been a part of Eda's life. She has changed jobs five times, and during her 18 years at Intel, Eda held a number of leadership roles in marketing and sales. She has also served on the Japanese government committee for the promotion of regulatory reform since 2016.

Today, Eda faces a new challenge of tackling the agenda of "Globalization 4.0" in the "Fourth Industrial Revolution" at the upcoming WEF Annual Meeting scheduled from Jan. 22 to 25 in Davos, Switzerland, together with other global leaders.

As a person who delved deeply into technology at Intel, Eda says she would like to see how advancement of technology could be applied to the global society in the future, adding that she looks forward to exchanging ideas with other participants at the meeting.

"I would like to deliver a message to the world as someone representing Japan, and learn from other participants, too, to think about how to create a cooperative platform where public and private sectors, as well as civil society, can collaborate," said Eda.

Explaining that almost 60 percent of

the economy will be cyberspace-based in the future — be it through e-commerce or the cloud — Eda said more and more people should have access to cyberspace, not just a limited group.

"At the moment, there is disparity between those who have access to the digital world and those who don't. We need to design the digital economy so that more people in the world can benefit from it," said Eda.

As the Japan head of a worldwide organization, she says she is keen to be a part of WEF's endeavors to build a sustainable, inclusive and trustworthy digital future.

Another agenda Eda is looking to tackle further is global gender disparity. According to the 2018 Global Gender Gap Report released in December, the WEF's annual review placed Japan 110th out of 149 countries, up four places from the previous year.

However, Japan is still way behind such countries as Iceland, which is ranked first, as well as Norway, Sweden and Finland. Eda says for Japan, she thinks there is "still a long way to go (to lessen the gap), to be honest."

Eda feels this gender gap is due to the fact that in Japan, women are still expected to take care of the family, including children and the elderly, which makes it difficult for women to hold responsibilities career-wise.

Eda compared Japan to other parts of Asia, for example Hong Kong, where she says she saw many women with small children taking the chance to broaden their horizons and thus bringing out their potential to the fullest.

"The women weren't limited in their careers," she said. For instance, they could go on extended business trips with enough support such as nursing care if they had small children.

"There needs to be a proper environment for women to aspire higher in society," said Eda.

One aspect that helped Eda climb the ladder in Japanese society was her experience studying and working abroad.

After graduating from Waseda University, Eda went to the U.S. to obtain a mas-



Chief Representative Officer of the World Economic Forum's Japan Office Makiko Eda has held a number of leadership roles. SATOKO KAWASAKI

ter's degree in sociology from Arkansas State University. It was the situation in Japan at the time that pushed her to study abroad. "I thought that if I stayed in Japan, it would limit my horizons to aspire higher," she said.

Eda says that she had to go and create chances herself. "It doesn't happen automatically; you have to go and get it your-

self," she said.

"I don't want Japanese women to limit themselves and set a low bar. In the future, careers will change dramatically, and not many will get jobs that are related to what they studied. There will be more flexibility in society, so I really would like to ask women not to limit their possibilities," she said with a smile.



It is still difficult today for some women in Japan to aspire higher and take on leadership positions career-wise due to societal expectations and conventions. GETTY IMAGES

Global Gender Gap Index 2018					
1	Iceland	100	Sri Lanka	140	Lebanon
2	Norway	101	Malaysia	141	Saudi Arabia
3	Sweden	102	Hungary	142	Iran, Islamic Rep.
4	Finland	103	China	143	Mali
5	Nicaragua	104	Paraguay	144	Congo, Dem. Rep.
6	Rwanda	105	Nepal	145	Chad
7	New Zealand	106	Fiji	146	Syria
8	Philippines	107	Guatemala	147	Iraq
9	Ireland	108	India	148	Pakistan
10	Namibia	109	Mauritius	149	Yemen
		110	Japan		

Japan	2006 (yr)	2018 (yr)
Global Gender Gap ranking	80	110
Economic participation and opportunity	83	117
Educational attainment	60	65
Health and survival	1	41
Political empowerment	83	125

Source: WEF Global Gender Gap Report 2018

Japanese entrepreneurs among Young Global Leaders

MINORU MATSUTANI
STAFF WRITER

Every year, the World Economic Forum selects 100 of the world's most promising artists, business leaders, public servants, scientists and social entrepreneurs as Young Global Leaders. These people will join a five-year program that will challenge them to think beyond their scope of expertise and be more impactful leaders.

Genequest Inc. CEO Shoko Takahashi was one of two Japanese entrepreneurs named as YGLs. She was chosen for creating a startup company that provides individuals with comprehensive information on their genome.

Her company is the first in Japan to provide genome-wide human genetic testing services for consumers. Takahashi, who established Genequest in June 2013 while researching her doctorate degree on the human genome, runs the company not only as a short-term business, but also as a long-term research vehicle.

There are other companies providing partial information on human genomes in Japan, and companies looking to commercialize genome-analyzing technology tend to start with a partial information approach. These companies limit themselves to, for example, the obesity-related genome, which does not require much investment and is in high demand among the general public.

"I found the significance of using the genome data we collect. We are different from competitors in that we focus on research," she said during an interview with The Japan Times. "Collecting more data speeds up research, which is important in creating medicine for the world." She added that there is so much that is unknown about human genomes and studying them could potentially lead to huge breakthroughs in medicine.

It is fair to say Takahashi, who obtained her Ph.D. from the University of Tokyo in March 2015, is successful in



Genequest Inc. CEO Shoko Takahashi YOSHIKI MIURA

making comprehensive human genome analysis affordable for the general public, as she charges customers just ¥29,800. The price was once ¥50,000, but the rapid pace of technological advancement made it possible to decrease costs, she said.

The comprehensive information tells people their risk of diabetes, hepatitis and other diseases, tendencies on alcohol tolerance and nicotine dependency, as well as other conditions. All people have to do is to purchase an analysis kit online and send a saliva sample to Genequest. Their results come within a few weeks.

Her goal is to expand Genequest's services, and for that she needs to collect more genome data and continue her research, she said.

Japanese have relatively homogenous genes, compared with other nationalities, which makes it easy to research Japanese genomes. As Japan is facing an aging society ahead of the rest of the world, Takahashi believes her research can help countries that may face a similar situation in the future.

The other Japanese YGL named last year was Gojo & Company Inc. founder,



Gojo & Company Inc. founder, Representative Director and CEO Taejin Shin YOSHIKI MIURA

Representative Director and CEO Taejin Shin, who founded the microfinancing company that lends small amounts of money to businesses in developing

countries.

Founded in July 2014, Gojo has lent to about 300,000 individuals and companies in Cambodia, India, Myanmar and



The commercialization of human genome data may accelerate scientific research. GENEQUEST

Sri Lanka. However, Shin's experience in microfinancing dates back to 2007, when he founded non-governmental organization Living in Peace while working at a large international investment bank.

As the head of the NGO, the World Economic Forum named Shin a Global Shaper and invited him to the WEF's meeting in Tianjin, China, dubbed summer Davos, in September 2012, where he realized an individual can create an international organization.

"Someone said the Davos meeting is like the U.N. at the grass-roots level. I fully agreed with that idea. And if the WEF could do it, I thought an individual can perhaps do a similar thing," he said, explaining the attendance of the summer Davos as the prelude to creating Gojo.

He grew his company from scratch to an international entity employing about 1,500 people in five countries, and it is still on the way to his ambitious goal of "becoming the private sector version of the World Bank."

Shin aims to add 67 countries to the

current four as investment destinations, 43 of which are in Africa and the Middle East. His goal through 2030 is to expand to a total of 50 countries with customers numbering 100 million.

"By then, nobody will be able to deny we are the private sector version of the World Bank," he said.

While his ambition is big, the scale of a typical Gojo loan is as small as ¥50,000. However, that amount is a good start for small businesses — it is enough to buy 10 piglets or dozens of chickens in rural areas of developing countries. Typical borrowers are small-scale agriculture, textile and manufacturing operations.

He said he typically finds customers and business partners by asking local leaders to arrange meetings with residents.

Shin has also found being selected a YGL useful, as speaking with other YGLs in the world is very stimulating, adding that he is pleased the employees of Gojo's subsidiaries are happy for his global recognition.



Maxima Microfinance's staff in 2017 at the company's office in Phnom Penh, Cambodia. Maxima Microfinance is a Gojo & Company Inc. subsidiary that provides microfinancing services to small businesses in the Southeast Asian country. GOJO & COMPANY

Davos Special

A taste of Japan’s cuisine, buffet style

STAFF REPORT

Japan Night will return to Davos once again to offer participants of the 2019 World Economic Forum meeting the opportunity to savor some of the finest Japanese cuisine.

The annual event, to be held on Jan. 23 at the Central Sporthotel Davos, is among the most popular side events at the international conference, drawing hundreds of attendees. The evening is arranged by The Japan Night Organization Committee, comprised of representatives of 28 major companies and a university, with special support from the Ministry of Agriculture, Forestry and Fisheries, as well as the National Federation of Agricultural Cooperative Associations.

This year’s buffet features a variety of traditional *washoku* (Japanese cuisine) dishes such as succulent sushi and crisp

vegetable and seafood tempura. Yutaka Ishizuka, the head chef at Japanese restaurant Bimi in Zurich, for example, is scheduled to prepare several dishes ranging from vegetarian sushi to grilled fish and wagyu items.

At the sushi counter, chefs Masayoshi Kazato and Hirotoshi Ogawa from Japan are slated to prepare delicious morsels of yellowtail, tuna, scallops and salmon.

Additionally, the buffet features *chawanmushi* (savory egg custard), *namafu* (soft wheat gluten cake), as well as *ohitashi* (lightly cooked greens) and chicken fried with *shioikôji* (a traditional fermented seasoning using salt), according to the committee.

As for dessert, Takanori Murata, a Paris-based *wagashi* (traditional Japanese confections) master, plans to offer authentic traditional Japanese sweets, including *dorayaki* (pancakes filled with red-bean paste) and *sakura mochi* (sticky rice cake).

On the entertainment front, *shamisen* (a three-stringed banjo-like instrument) player Hibiki Ichikawa is expected to fly from London to perform at the venue. Ichikawa, who started playing the shamisen at the age of 20 and moved to London in April 2010, has performed at numerous venues in Europe.

Last year, some 650 people — govern-



Japan Night organizers toast at the 2018 event. THE JAPAN NIGHT ORGANIZATION COMMITTEE

ment leaders and business executives to academic experts and journalists — attended the event where Japanese chefs from around the world performed cooking demonstrations and offered tradi-

tional cuisine, including a *shabu-shabu* hot pot and grilled wagyu.

The event also featured a bento with delicacies such as rice cooked with various ingredients, wagyu boiled in soy sauce and sugar, as well as a scallop and kelp salad, all served in a specially designed box.

Washoku has been enjoying a global boom in recent years, especially after it was added to the UNESCO Intangible Cultural Heritage list in 2013.

According to agriculture ministry data, the number of Japanese restaurants abroad spiked from about 24,000 in 2006 to around 118,000 in 2017. Ministry data also shows exports of agricultural, fishery and forestry products, along with processed food, also reached a record of ¥807 billion in 2017.



Klaus Schwab, founder and executive chairman of the World Economic Forum, delivers a speech at the 2018 Japan Night reception. THE JAPAN NIGHT ORGANIZATION COMMITTEE



A bento box filled with authentic Japanese delicacies at last year's Japan Night reception. THE JAPAN NIGHT ORGANIZATION COMMITTEE

Guest being served top-quality sake and traditional desserts at the 2018 Japan Night. The event also included a live calligraphy demonstration by France-based calligrapher Maaya Wakasugi. RIN ONOZUKA

Japan Night

2019
DAVOS

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Davos Special

Shifting to a decarbonized society amid climate change

Since the adoption of the Paris agreement in December 2015, the role of non-state players with the aim of realizing a decarbonized society has become more significant than ever. Non-state parties include companies, local governments, non-governmental organizations (NGOs) and others, who have not necessarily been at the center of past climate change discussions.

However, things began to change when the We Are Still In coalition was established in the United States in 2017, committing to the Paris agreement after the announcement by the Trump administration of its intent to withdraw from the agreement. Following this, similar movements to establish cross-sectoral organizations of non-state players have been taking hold in other countries.

Japan is also part of this global trend. In July 2018, the Japan Climate Initiative (JCI), a group of non-governmental parties fighting against climate change, was launched. The JCI was established based on the recognition that a transition to a decarbonized society yields new opportunities for growth and development. It started with the founding members of 105 organizations, including leading companies in fields such as information and communications technology, finance, construction, housing, energy, food and retail, as well as local governments, consumer organizations, think tanks and NGOs.

Despite the establishment of the JCI, it is difficult to say that Japan is currently a leader in global climate action compared to when the 1992 Kyoto Protocol was adopted. However, considering that the Paris agreement requires a progressive increase in reduction targets, it is clear Japan also needs to enhance its actions. The JCI is expected to be a strong driver for this.

Based on the ideas stated in the founding declaration of the JCI, in less than six months, it has grown to a group of 319 members, including 220 companies, 29

local governments and 70 other organizations (as of Dec. 27), showing there are many non-state players that see climate change as an opportunity for growth. For their actions to be recognized and evaluated correctly, the JCI aims to create chances to introduce, both inside and outside Japan, activities of Japanese non-state participants who are seriously engaged in achieving the Paris agreement goals.

This movement of non-state entities in Japan is noteworthy, because many used to believe that taking action on climate change was restricted to businesses and growth, and non-governmental players in Japan have not been necessarily active in the past. This is why the establishment of the JCI is so important for Japan.

JCI's actions focus on four key areas, beginning with the creation of momentum to move the whole nation toward the realization of a decarbonized society. Participating members, including companies, local governments and NGOs, will actively develop their own climate actions and work together to activate efforts within and between sectors.

Secondly, the JCI supports the implementation of members' activities. The founding members of the JCI include five out of seven Japanese RE100 companies (those companies committed to 100 percent renewable energy) and 15 out of 20 companies with approved Science Based Targets (SBT) for their greenhouse gas (GHG) emission targets. The JCI holds seminars and workshops and showcases activities on its website to share experiences of these RE100 and SBT companies, as well as local governments, with a target to achieve zero GHG emissions, and to support activities conducted by other non-state parties.

Thirdly, the JCI has been conducting dialogue with the government to strengthen Japan's climate action. The group has created a discussion channel with ministries in charge of formulating Long-term Low



Japan Climate Action Summit (JCAS) held in Tokyo in October 2018. JAPAN CLIMATE INITIATIVE

Emission Development Strategies, which began last summer, so that these strategies will provide a clear path to a decarbonized society in Japan.

Finally, the JCI facilitates communication of Japanese non-state entities' efforts to the world for international collaboration. The JCI seeks dialogue and collaboration with similar efforts in other countries, including We Are Still In in the United States, and other national multistakeholder coalitions as part of the Alliances for Climate Action.

JCI's activities have already begun. To create momentum, in October, the JCI hosted the Japan Climate Action Summit (JCAS) in Tokyo with the participation of corporate CEOs, leaders of local governments and other representatives of organizations engaged in pioneering efforts. Speakers and panelists held discussions and shared how to work together to pro-



Left: The JCI Launch Press Conference in Tokyo in July 2018. Right: COP21 in Paris in December 2015. JAPAN CLIMATE INITIATIVE

mote efforts within and between sectors. The event was also a great opportunity to promote actions on the ground and communicate them to the world. The JCI will host JCAS 2019.

As part of its actions to seek dialogue and collaboration with similar actions in other countries, the JCI participated in the Global Climate Action Summit in San Francisco in September and the COP24 U.N. Climate Change Conference in Poland in December. The JCI will continue these

efforts and will also take the opportunity of the G20 summit being held in Osaka in June to further expand its actions.

Climate change is also to be discussed at Davos. Under the agenda of "Globalization 4.0: Shaping a Global Architecture in the Age of the Fourth Industrial Revolution," the World Economic Forum's 2019 Annual Meeting in Davos also raises ecological challenges, including climate change as one of the four topics to be discussed. It shows how important the issue of climate

change is in a globalized world.

JCI's journey has only begun, but it is expected that this movement will be a great catalyst for Japan to enhance climate actions.

Any company, financial institution, local government, research institute, NGO and other organization that agrees with the founding declaration is welcome to join the JCI. We look forward to welcoming more members and expanding climate actions and collaboration.



Takejiro Sueyoshi, leading advocate of JCI and special advisor to the United Nations Environment Programme Finance Initiative in the Asia Pacific region, delivers a speech at JCAS. JAPAN CLIMATE INITIATIVE



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Japan’s outlook for G20

Innovative ideas to address global challenges

As a forerunner facing various social challenges, including addressing the aging population, as well as environmental and energy issues, Japan is poised to find solutions and share them with other countries that are also expected to be confronted with these complex problems.

Through hosting the upcoming G20 summit in Osaka in June, the country will promote further cooperation among all relevant stakeholders, both government and non-governmental, toward a future society that realizes both economic growth and solutions for such issues.

The annual meeting of the World Economic Forum (WEF) in Davos, Switzerland, will be a timely occasion for world leaders to address these growing challenges as the conference aims to delve into the topics to “shape a new framework for global cooperation,” preparing for the arrival of “Globalization 4.0” driven by the “Fourth Industrial Revolution.”

Assuming the G20 presidency immediately after the Buenos Aires summit in December, Prime Minister Shinzo Abe stated Japan would seek to realize a “human-centered future society,” promoting discussions in cross-cutting areas.

“Japan is determined to lead global economic growth by promoting free trade and innovation, achieving both economic growth and reduction of disparities, and contributing to the development agenda and other global issues with the SDGs (United Nations Sustainable Development Goals) at its core,” Abe said.

“In addition, we will lead discussions on the supply of global commons for realizing global growth such as quality infrastructure and global health,” he continued. “We will exert strong leadership in discussions aimed toward resolving global issues such as cli-

mate change and ocean plastic waste.”

Japan also seeks to realize a society where all people, including women, the young, the elderly and people with disabilities, are able to actively participate. These undertakings are essential to bring about further growth and prosperity.

As the world economic outlook is increasingly uncertain, it’s essential to get rid of obstacles that could hinder further growth. Keys to overcome those barriers are the four elements of free trade, innovation, empowerment and quality infrastructure.

These key issues highlighted by the prime minister will likely to dominate international discussions throughout 2019.

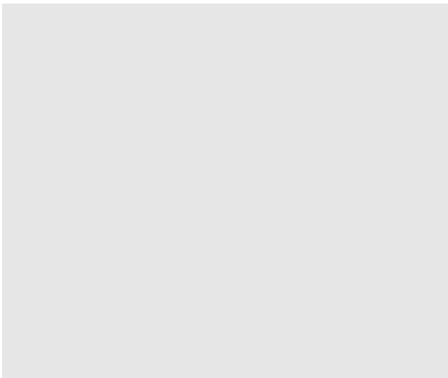
Champion of free trade

As a nation that has enjoyed economic prosperity after World War II under a rules-based, free and open international economic system, Japan has not only been a major beneficiary, but also a consistent supporter of free trade over the years.

In his speech at the U.N. General Assembly in September, the prime minister said: “Should Japan, the country that reaped the greatest benefits of all under this system, ever fail to support maintaining and strengthening that system, who else should we wait for to rise in support of it? Japan’s responsibility is tremendous indeed.”

One recent example showing the country’s commitment to promoting free trade is the Japan-EU Economic Partnership Agreement (EPA).

In July in Tokyo, Japanese and European Union leaders signed the EPA, which is expected to come into force on Feb. 1. The agreement will create a large, free and advanced economic zone with some 640 million people accounting for about 30 percent of the world gross domestic product



and 40 percent of world trade.

Another recent development is the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, also known as TPP11, that Japan and 10 other countries have strived to finalize to further promote liberalization and facilitation of trade.

The pact, entered into force on Dec. 30, represents around 13 percent of global GDP and covers about 500 million people.

Additionally, Japan has intensified its efforts toward the conclusion of the Regional Comprehensive Economic Partnership negotiations with 15 other countries, including the 10 Association of Southeast Asian Nations (ASEAN) members, China and India. If realized, the agreement would create an economic zone covering about half of the world’s population and about 30 percent of global GDP and world trade.

“In order to expand free and fair economic rules befitting to the 21st century into the vast region extending from Asia and the Pacific to the Indian Ocean, the countries that have created the system and reaped the greatest benefits from that system — that is to say, countries like Japan — must lead the effort,” the prime minister noted at the U.N. General Assembly.

Advancing innovation

In addition to promoting free trade, accelerating innovation is a must to pull the global economy along.

In a bid to drive innovation, Japan seeks to create “Society 5.0,” a concept addressed in the country’s 2017 Growth Strategy released in June of the same year. It is a smart society where the innovations of “Industry 4.0” and accumulated big data, cutting-edge technologies such as artificial intelligence and robots — all being Japan’s strengths — are incorporated. This vision would provide solutions with the power of innovation to various social challenges, and also present a model where anybody can live a healthy, long life through innovation.

Serving as co-chair of the WEF’s Global Future Council on Human Enhancement and Longevity, Makoto Suematsu has spearheaded such efforts in the medical field. He



Japan looks to realize “Society 5.0,” a super-smart society where innovations and technologies, making the most of artificial intelligence and robots, are incorporated to create solutions to various issues. GETTY IMAGES

is president of the Japan Agency for Medical Research and Development (AMED).

The WEF council explores how human enhancement could impact society and looks to design innovative governance models to ensure maximized benefits and keep risks under control.

At the council’s November meeting in Dubai, Suematsu raised a number of issues that Japan has been facing, which are expected to be relevant to other countries soon.

Citing an estimated population transition, Suematsu said Japan would have a demographic structure in which two out of three people would be over 50 years old from around 2040. Some other nations are likely to follow Japan’s path in their population structure.

“It’s difficult to imagine only one out of three people being under 50,” Suematsu said. “I asked the council members what a country should do in the event of such a situation. At the same time, we must consider how humans should adjust to a society like this.”

In the coming years, Japan has an important role to showcase to the world “how to deal with the coming super-aging society,” according to Suematsu. Japan could take the lead in realizing “healthy longevity,” in researching and developing necessary medical devices and robotics to assist nursing care personnel, among other things, including global challenges on antimicrobial resistance.



Cyberdyne Inc.’s HAL Lumbar Type for Care Support is designed to mitigate risks of back pain. PROFESSOR SANKAL, UNIVERSITY OF TSUKUBA/CYBERDYNE INC.

Another important idea and effort Suematsu pointed out in relation to enhanced human health in the future is “data sharing” in the global medical community. AMED has seen results in some areas in this regard.

“It’s actually difficult to share all necessary data among stakeholders from a development phase,” Suematsu said, citing competition among researchers and companies as one of the reasons. “But data sharing would achieve results, albeit gradually.”

For example, on dementia — where treatment is essential in terms of living a healthier, longer life — there is no unified system in place to collect basic data, manage and track it when necessary.

He shared a data sharing experience by AMED, launched in 2015 that saw it serve as a center to direct integrated research from basic research to practical application.

Seeking to end what’s called the “diagnostic odyssey” of patients with undiagnosed conditions, AMED has produced results from its Initiative on Rare and Undiagnosed Diseases, with efforts in line with relevant laws enacted in 2015.

Thanks to data shared among medical institutions on such patients, he noted more than 1,000 people, including those who had suffered from undiagnosed conditions for several decades, have been diagnosed and 18 responsible genes were identified over the past two and a half years since the program started.

As one of the reasons behind the spread of data sharing in this particular field, Suematsu explained, “We started this program based on a policy of ‘no share, no budget.’”

Suematsu also noted another significant data sharing example from the international cooperative effort on the Zika virus, which has apparently advanced relevant research and development.

“There are an increasing number of people who think development would actually proceed faster if it’s promoted collectively at an initial stage before the competition phase, as resources are limited,” Suematsu said.

Empowerment

Initiatives led by AMED and other Japanese parties could contribute to empowering citizens, which could be a factor to drive growth.

“If retirement age is set at 60 or 65, (a future super-aging) society would not be able to

support seniors. So, we need to change how seniors work from now so that they can physically train themselves and continue to have social connections,” Suematsu said.

What would be increasingly important in a future world with aging populations and a shrinking labor force is a society in which all people — regardless of age, gender or individual capabilities — are able to take part.

Japan’s Revitalization Strategy announced in 2014 noted the necessity of maximizing the power of women to revitalize society and bring various values.

The number of women who joined the workforce increased by about 2 million from 2012 to 2017, according to a Labour Force Survey by the Ministry of Internal Affairs and Communications.

The Japanese government is keen to collaborate with wide-ranging stakeholders, both domestic and international, to fulfill the goal of women’s empowerment. One instance is the launch of World Assembly for Women (also known as WAW!), held continuously since 2014.

Tsukiko Tsukahara, president of consulting firm Kaleidist K.K., pointed out the importance of seeing the empowerment of women in the economic context, citing an example of Japan’s economic policy that incorporated the idea.

“It’s not always the case that women’s empowerment is promoted in the context of economic growth strategies in other countries,” said Tsuhakara, whose company provides consultancy services on diversity management and inclusive leadership. “But these efforts need to be accelerated further.”

She noted that there are an increasing number of Japanese companies placing more emphasis on diversity, but Tsukahara pointed out that is not enough to boost their business performance.

“The idea of inclusion is also essential. These two elements together will produce innovation and lead to improvement of productivity,” Tsukahara emphasized. “I’d also like those parties promoting women’s empowerment to incorporate the effort into their business strategies and produce results, not just doing it solely for the sake of women.”

Ahead of the G20 conference, this year’s WAW! will be concurrently held with the

Continued on page B7→



Japan Agency for Medical Research and Development President Makoto Suematsu believes Japan can present solutions at the forefront of various issues such as a graying society. SATOKO KAWASAKI



Medical innovation could contribute to the enhancement of human life. GETTY IMAGES



Japan seeks to export its shinkansen technology, which is known for its safety and stability. GETTY IMAGES

(Sponsored content)

Japan's outlook for G20

Ensuring sustainable growth amid demographic change

→ *Continued from page B6*
Women 20 (W20) in March. The W20 is an engagement group with a mission to achieve gender equity, launched in 2015 during the G20 summit in Turkey. This year's W20 theme is Closing the Gender Gap for New Prosperity."

Tsukahara, who also serves as the executive director of the W20 Japan 2019 Steering Committee, said the Japanese organizers of the W20 hope to make a meaningful contribution, building on the discussion that had taken place at the previous W20 meeting in Argentina in October.

A gender mainstreaming strategy was stated in the G20 leaders' declaration document adopted at the Buenos Aires summit. Tsukahara praised this outcome as "significant progress." She argued, however, what has been discussed and accumulated at the W20 meetings over the past several years has not yet been incorporated into each country's policies, nor has it produced results.

"Unless we establish a mechanism to examine how proposals made through the W20 were implemented, and how we can push relevant parties to perform them if not conducted yet, it would be nothing but talk," she said. "Therefore, it's time to build such a framework."

Tsukahara continued: "When thinking about how Japan can contribute in a meaningful way, it would be to strengthen the governance of the W20. We'd like to strengthen its legitimacy."

"We have communicated with our counterparts in each country, and we have received their understanding (on this direction)."

She noted that Japan could fully exercise such an ability to craft a necessary management framework for the W20 as the government has already produced solid, workable plans and administrative programs based on relevant laws and rules.

"I believe we need to establish a feasible system in terms of operation and management, something sustainable, keeping the W20 running," Tsukahara said.

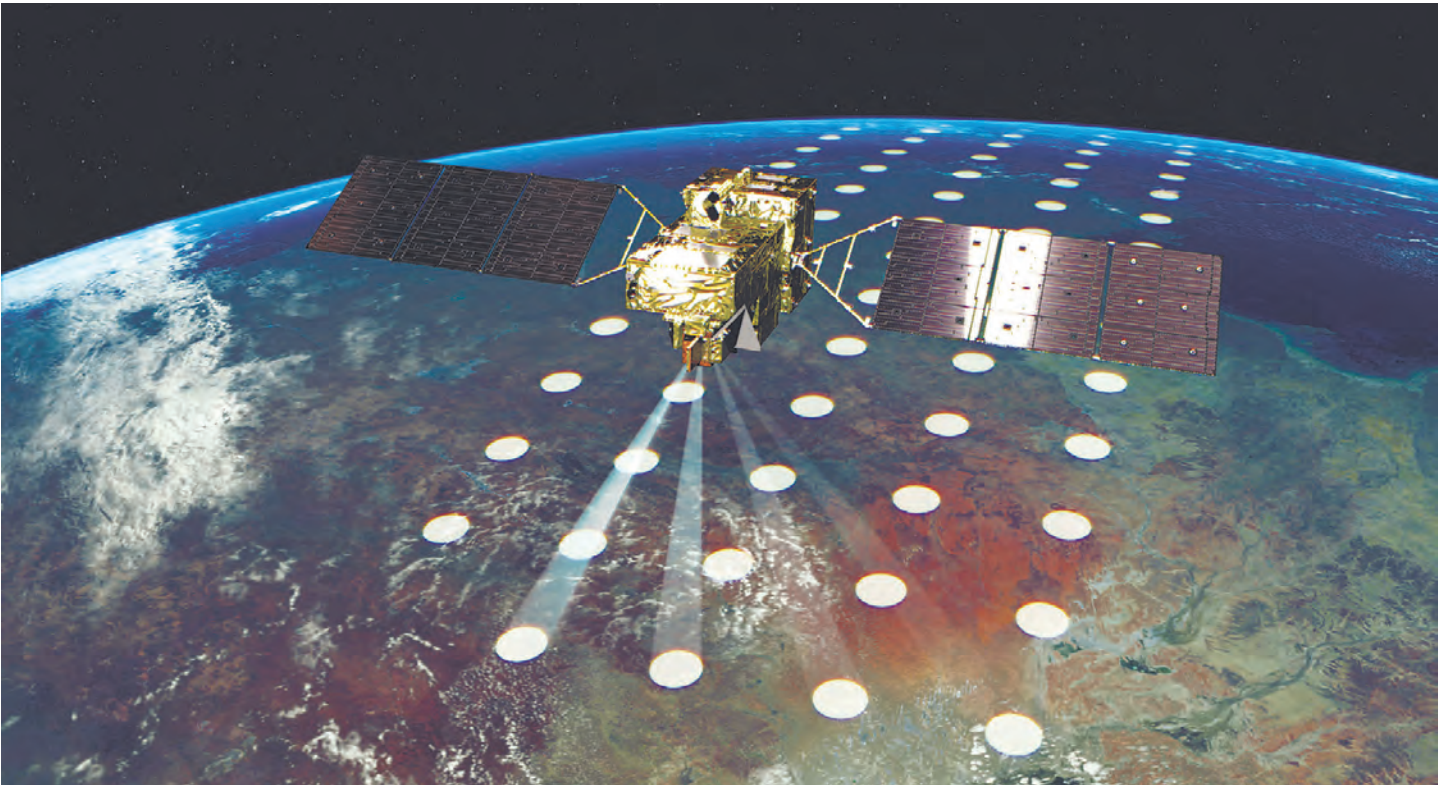
'Quality infrastructure'

Reliable and durable infrastructure is an indispensable social and economic foundation when enhancing connectivity to pursue economic prosperity and stability in any country.

Connectivity will be enhanced through quality infrastructure that is built and operated in accordance with international standards such as open access, transparency, economic efficiency in view of life cycle cost and fiscal soundness.

Under the G20 presidency this year, Japan will continue its efforts to elaborate an international standard of quality infrastructure shared by the G20 countries.

At the G7 Ise-Shima summit held in Mie Prefecture in 2016, leaders agreed to promote "strong, sustainable and balanced growth and to enhance resilience" through promoting



Left: Akiko Suzuki, director of public relations at the Japan Aerospace Exploration Agency, has been active for many years in promoting the full utilization of data obtained by the agency's satellites. Above: Greenhouse Gases Observing Satellite. JAXA

quality infrastructure investment.

Japan, under the "Expanded Partnership for Quality Infrastructure" announced in May that year, pledged to provide financing of approximately \$200 billion for infrastructure projects across the world by 2021.

"Against the backdrop of growing global demand for infrastructure, promoting export of our country's quality infrastructure would serve as an essential element to our economic growth, but at the same time, it would seek to establish win-win relationships with partner countries through contributing to their development," Abe said in announcing the expanded initiative.

In order to enhance connectivity through quality infrastructure, Japan's partnership with other countries covers a wide range of sectors, including those of railways, airports and ports, energy and technical assistance in traffic and disaster management areas, among others.

For instance, the Japan International Cooperation Agency (JICA) has helped infrastructure and economic development in Southeast Asia, through involvement in projects to improve the East-West Economic Corridor and the Southern Economic Corridor. These corridors are meant to encourage development and integration of the region.

The region-wide projects extend to a wide range of infrastructure in both corridors. They include the Hai Van Tunnel on Highway 1 in Vietnam, which is the longest tunnel in the region and part of the East-West Economic Corridor project. In Laos, JICA supported the project for the improvement of National Road No. 9, which is vital for socioeconomic development in the country.

For the betterment of the Southern Economic Corridor, the organization assisted in the Laem Chabang Port construction project in Thailand, which is one of the largest ports in the country. Japan also supported the building of the Tsubasa Bridge ("tsubasa" meaning "wings" in Japanese) over the Mekong River in Cambodia, enabling Vietnam, Cambodia and Thailand to be connected by a single road.

Seeking a virtuous cycle

With the continued pressure for economic and social demand to achieve improved quality of life, all nations regardless of their size or level of development must address global-scale issues in the energy and environmental fields.

Both economic development and environmental protection must be sought in a sustainable manner, with the help of private investment.

"In the field of energy and the environment, it is necessary for us to actively incorporate private investments in these fields and create a virtuous cycle for the environment and growth, rather than seeing it as two choices between environmental conservation and economic growth," the prime minister stressed at the closing of the G20 Buenos Aires summit in December.

"From those perspectives, I would like to hold constructive discussions on the contributions of the G20 on global issues, such as climate change and plastic waste in the oceans," Abe said.

Protecting the environment

Scorching summers, torrential rains and large typhoons — Japan is a country that has been hit by extreme weather in recent years that has brought severe damage. For Japan, climate change is not a distant threat.

To address climate change, the country has promoted efforts to shift to a decarbonized and circular society, while contributing to implement the Paris agreement, an international framework to combat global warming and climate change.

One of Japan's unique contributions is from outer space, thanks to undertakings by the Ministry of the Environment, the National Institute for Environmental Studies and the Japan Aerospace Exploration Agency (JAXA).

In October, Japan launched the second Greenhouse Gases Observing Satellite (GOSAT-2 or Ibuki-2), following the first

GOSAT (Ibuki) launched in January 2009, as the world's first satellite dedicated to monitoring greenhouse gases from outer space.

Precisely monitoring to understand the state of global warming, and observing the concentration, increase and decrease in such gases around the world are essential to promoting global warming countermeasures, according to JAXA.

JAXA explained that the aim of the satellite project is to contribute to the global effort toward prevention of warming, including monitoring greenhouse gas absorption and emissions.

GOSAT excels in collecting data across most of the globe accurately and uniformly as a single sensor takes measurements from outer space. Many countries are supplied with these measurements for free as fundamental data to study the actual state of the planet.

Since the launch of GOSAT in 2009, other countries and regions, including the U.S., Europe and China, launched their own observation satellites.

"Japanese technology keeps evolving through the development of observation satellites that get better at doing this. Going forward, we hope that we can contribute to a better world for all," said Akiko Suzuki, director of public relations at JAXA.

More active measures must be sought in tackling climate change and slow the pace of global warming. Energy conservation would help alleviate environmental burden, and Japanese companies have worked to develop new technologies and relevant products.

For instance, transparent solar panels have been developed that can double as glass while generating electricity so as to reduce energy use in buildings. In the housing sector, some residences are equipped with not only solar power generation facilities, but also lithium-ion batteries and energy storage systems equipped with such batteries provided by Japanese companies like Panasonic Corp. and Eliiy Power Co. to store energy both for daily use and emergencies.

Waste management efforts

Marine plastic waste has become a serious global issue that requires urgent international action. As an island nation, Japan has a direct stake in addressing the pollution.

Waste management also needs to be properly addressed, in terms of not only public health care, but also in preventing refuse



Japan has much to contribute in the environmental arena, including sharing technology related to renewable energy. GETTY IMAGES



An eco-friendly, biodegradable polylactic acid, which is decomposed by microorganisms found in soil, is under development by Japanese researchers. The bottles pictured represent various stages of the plant-based plastic's decomposition. From left — zero weeks, two weeks, four weeks and six weeks. JAPAN BIOPLASTICS ASSOCIATION

from polluting rivers and oceans. Japan has promoted reduce, reuse and recycle, and shared its knowledge and its best practices.

By applying advanced technologies, Japanese firms and research institutions have strengthened their efforts in addressing marine plastic waste. For instance, one company has developed a 100 percent plant-derived bioplastic, which decomposes biologically in seawater.

At the Japan-ASEAN summit held in Singapore in November, the prime minister pledged to strengthen cooperation with leaders from Southeast Asian nations that face similar environmental challenges. Abe said Japan would expand cooperation with ASEAN countries in combating marine plastic debris.

In a bid to help improve waste management, relevant Japanese parties have collaborated with their counterparts in other countries to come up with lasting solutions.

In Sri Lanka, developing sustainable, low-cost technology that effectively tackles the challenges of waste management has been a long-standing issue.

Experts from JICA and Japanese companies have worked to reduce environmental stress through appropriate waste management by creating guidelines — developed by researchers from both countries — for final disposal sites based on pollution control techniques for landfills.

Trial runs of the guidelines are underway under three local authorities. Japanese experts hope the implementation of guidelines will spread nationwide in Sri Lanka.

The Bangladeshi capital of Dhaka has enjoyed rapid economic growth in recent years but also faced serious waste issues due to the dramatic increase in its population. Despite increasing amounts of garbage, the amount of collected waste was very low. JICA and other Japanese parties have sup-

ported local efforts represented by the Clean Dhaka Project.

As a result, the amount of collected waste increased from 1,400 tons a day in 2003 to 3,400 tons a day in 2014, according to JICA. It also helped establish an organization to comprehensively engage in waste management.

In Palestinian territories, waste collection and transport is also a major issue and Japanese experts have been working to address the tasks with local counterparts.

In addition to grant aid projects for the provision of equipment, including garbage collection vehicles and containers, the technical cooperation projects have seen the launch of waste collection and transport services through the Joint Service Councils within the West Bank and Gaza Strip, according to JICA.

G20 summit in Osaka

As the host of the G20 Osaka summit, Japan is well-positioned to bolster international collaborative efforts to solve issues in the world. Despite the economic growth over the last few decades, the growing sense of marginalization from such growth could have an adverse effect toward continued pace of globalization.

As the global economy remains uncertain and challenges for global issues rise, world leaders are expected both at Davos and the G20 Osaka summit to present a viable vision and solutions.

With the world shifting focus toward Japan for its presidency of the G20 summit, the true challenge for the nation is how we can invite other partners — both governmental and non-governmental — to join forces and extend these positive contributions on a global scale.

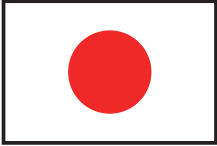
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Kaleidist K.K. President Tsukiko Tsukahara, who is serving as the executive director of the W20 Japan 2019 Steering Committee, stresses the importance of both diversity and inclusion. YOSHIKI MIURA



Known for its history and unique cuisine, Osaka is ready to welcome those coming to the G20 summit in June.



JAPAN GOV
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Davos Special

Bringing out the flavor of dashi: soft water and terrain

MAIKO MURAOKA
CONTRIBUTING WRITER

Beyond sushi and sukiyaki, all kinds of Japanese dishes are being enjoyed around the world more than ever before. From recipes served at the family table to finely crafted delicacies, *washoku*, traditional Japanese cuisine, was registered on UNESCO's Intangible Cultural Heritage list in 2013. As many gastronomes may already know, dashi plays a significant role in many of these dishes. Japanese soup stocks are made of a combination of many dried ingredients such as kelp, shiitake mushrooms, *katsuo-bushi* (dried bonito flakes), sardines and flying fish. Each ingredient has its own

optimum soaking time depending on the temperature of the water and this is factored into the variety and amount of each ingredient used. Individual households and restaurants have their own blends of dashi for different dishes, but before running into too complex a labyrinth of various combinations of ingredients, temperatures and methods, there is one important scientific factor that essential knowledge when making dashi. The characteristics of the water used defines a dashi's umami. Umami is the fifth of the five tastes after sweetness, sourness, bitterness and saltiness. From a scientific standpoint, glutamic acid, inosinic acid and guanylic acid are the three major elements of umami.

Professor Yoshiyuki Tatsumi of the Kobe Ocean-Bottom Exploration Center is not only a renowned magma specialist, but also known for his scientific insights into Japanese food. He writes in his book "Washoku wa Naze Oishii — Nihon Retto no Okurimono" or, "Why is washoku delicious — a gift of the Japanese archipelago," that kelp contains 10 times more glutamic acid than onions or carrots, and *katsuo-bushi* has several times more inosinic acid than chicken, pork or beef. According to Tatsumi, it is soft water that effectively extracts the umami of these ingredients, whereas abundant minerals in hard water seal the surface of the ingredients, trapping the umami inside. On the other hand, the strong

smell of meat and poultry can be better removed when boiled in hard water because fatty acids and proteins that are responsible for the smell bond with calcium, forming scum. Soft water does not contain enough calcium to rid soup of the harshness caused by animal meat. Naturally, Japanese living in a country abundant with soft water and Europeans blessed with hard water use what is available to them when making dashi or soup stock. Tatsumi said in an interview with The Japan Times that even within Japan, the hardness of water differs among regions. Compared to the Kansai region, which is known for its rich food culture, water in Tokyo is harder. "Many good Japanese

restaurants in Tokyo have soft water delivered," he said. According to Tatsumi, terrain is partly responsible for the difference in water hardness. Tokyo is located at the heart of the wide and flat Kanto plain. Rivers on the flatlands flow slowly and smoothly, allowing minerals contained in rocks to dissolve into the water. This explains why Europe, which consists mostly of vast plains, has an abundance of hard water. Tatsumi indicated that another factor involves the types of rocks the minerals reside in. Japan has a lot of granite that contains less minerals than limestone, which is much more abundant in Europe. Why is Japan so mountainous and its rivers so rapid in a land made of

granite? "It is because Japan itself is a mobile belt," Tatsumi said. In the earth directly beneath and near the islands of Japan, four plates are pushing against each other. He explained that upwardly thrust land forms mountains and the subduction of plates creates volcanoes. Magma then cools and forms granite rocks, and rivers flow rapidly along steep mountains and hills to reach the sea before minerals are released into the water. "We benefit from the land of Japan as a mobile belt in the form of wonderful natural ingredients. This also means that we live with the force of nature, through the hardships brought by earthquakes and volcanic activities," said Tatsumi.



Japanese soup stocks are made of a combination of many dried ingredients such as kelp, shiitake mushrooms, *katsuo-bushi* (dried bonito flakes), sardines and flying fish. Each ingredient has its own optimum soaking time depending on the temperature of the water and this is factored into the variety and amount of each ingredient used. GETTY IMAGES

Japan Night reception to serve a selection of Gold Prize-winning sake

Six kinds of Fukushima Prefecture's sake will be served to complete the feast at the annual Japan Night reception during the World Economic Forum Annual Meeting 2019 — one of the events that VIPs from around the world attending the conference look forward to the most. Fukushima, as one of the major rice-producing prefectures in Japan, is known for its flavorful sake, which relies heavily on the stable harvesting of quality rice. At the Annual Japan Sake Awards 2018, one of the most prestigious sake competitions that dates back to 1911, Fukushima had 19 brands of sake take home the Gold Prize. Out of 850 entries submitted from across Japan, 232 were awarded the Gold Prize, and Fukushima, together with Hyogo Prefecture, topped the list of Gold Prizes by prefecture. Fukushima has been the prefecture to win the most Gold Prizes for six consecutive years, marking a record since 1956 when records were first kept. It was also a product of Fukushima, the Okunomatsu Adataro Ginjo 2017 made by Okunomatsu Sake Brewery, a venerable sake manufacturer established in 1716, that was selected as the winner of the Champion Sake Award in the International Wine Challenge (IWC) 2018, out of a record number of 1,639 candidates in the sake category. The Okunomatsu Adataro Ginjo, comprising a clean, fresh and balanced taste that has been highly evaluated internationally, will be served at the Japan Night event. The brewery stands on the premises of about 12,000 square meters, almost as large as a baseball field, at the foot of Mount Adataro. Its sake is made using the mountain's fresh subsoil water. Five other sake brands to be served at the Japan Night include the Gold Ninki

Junmai Daiginjo by Ninki Shuzo; Momo no Namida by Yamatogawa Brewery; Sparkling Toyokuni by Toyokuni Brewery; Issho Seishun Bessen Daiginjo by Akebono Brewery; and Aizu-miyaizumi Junmaishu by Miyaizumi-meijo. The Gold Ninki Junmai Daiginjo has already gained international recognition after being served at the Nobel Night-Cap 2012, the final festivity of the Nobel Week organized by students. Ninki-shuzo, located in Fukushima's city of Nihonmatsu, takes pride in making sake through the traditional method of using wooden tools and Japanese-style pots. The local rice they use is well-suited for making sake because of the wide range of temperatures. Momo no Namida (tears of a peach) is a liqueur made of locally produced peach juice and sake. Fukushima is one of the major peach-producing areas in Japan. Peach orchards that were not able to deliver their peaches to customers across Japan in the spring of 2011 after the nuclear incident following the Great East Japan Earthquake inspired

the liqueur, which overflows with a fresh peach scent. Sparkling Toyokuni is the only sparkling sake to be served at the event. Taking a bronze medal at the 2017 IWC, its bubbly fruitiness is perfect for toasting. Toyokuni Brewery, established in 1862 in the town of Aizubange in the central part of Fukushima, sticks to the traditional *funashibori* (slow pressing) method without using a compressor. Issho Seishun Bessen Daiginjo is one of the brands that won last year's Gold Prize at the Annual Japan Sake Awards. With a name that can be translated as "youth for life," it presents a light and fresh sweetness with a pleasant aroma. Aizu-miyaizumi Junmaishu took first prize among the 456 entries of the Junmaishu category in the Sake Competition 2018, another large-scale sake competition that started in 2012. *Junmaishu* refers to a kind of sake made only with rice, rice *koji* (malted rice) and water with no added alcohol. It is often favored by sake lovers who enjoy the scent and taste of rice in their sake.



A brewer carefully prepares sake at a brewery in Fukushima Prefecture. FUKUNOSAKE



Various sake brands from Fukushima Prefecture have won the Gold Prize at the prestigious Annual Japan Sake Awards 2018. FUKUSHIMA PREFECTURE