We Are *Tomodachi*
New Year 2016

The Government of Japan

We Are *Tomodachi*

New Year 2016

On the cover: Prime Minister Shinzo Abe attended a Trans-Pacific Partnership (TPP) Leaders' Meeting while participating in the Asia-Pacific Economic Cooperation (APEC) Economic Leaders' Meeting in Manila, the Philippines (November 2015).

Prime Minister Abe visited a prenatal and postnatal care center in Wako, Saitama Prefecture, and talked with users, maternal healthcare managers, and others (November 2015).

Hatsu

初 hatsu

The character *hatsu* (初) combines an element meaning "clothing" on the left and one meaning "blade" on the right; together they represent the idea of cutting cloth with scissors. Cutting the fabric to size is the first step in making a piece of clothing, and this character has thus come to express the idea of beginning and of first things.

New Year's is a major holiday in Japan, and the character *hatsu* appears in many contexts as the year begins: *hatsu-hinode* (first sunrise), *hatsu-yume* (first dream), *hatsu-geiko* (first practice), *hatsu-uri* (first sale). These are just a few examples of the terms where the prefix *hatsu* indicates the first occasion of the year. These firsts are considered special, marking a break in the everyday routine—a time to step into the year with renewed resolve.

This is the first issue of *We Are Tomodachi* for 2016. We hope that this magazine will continue to help readers learn more about Japan over the year to come.

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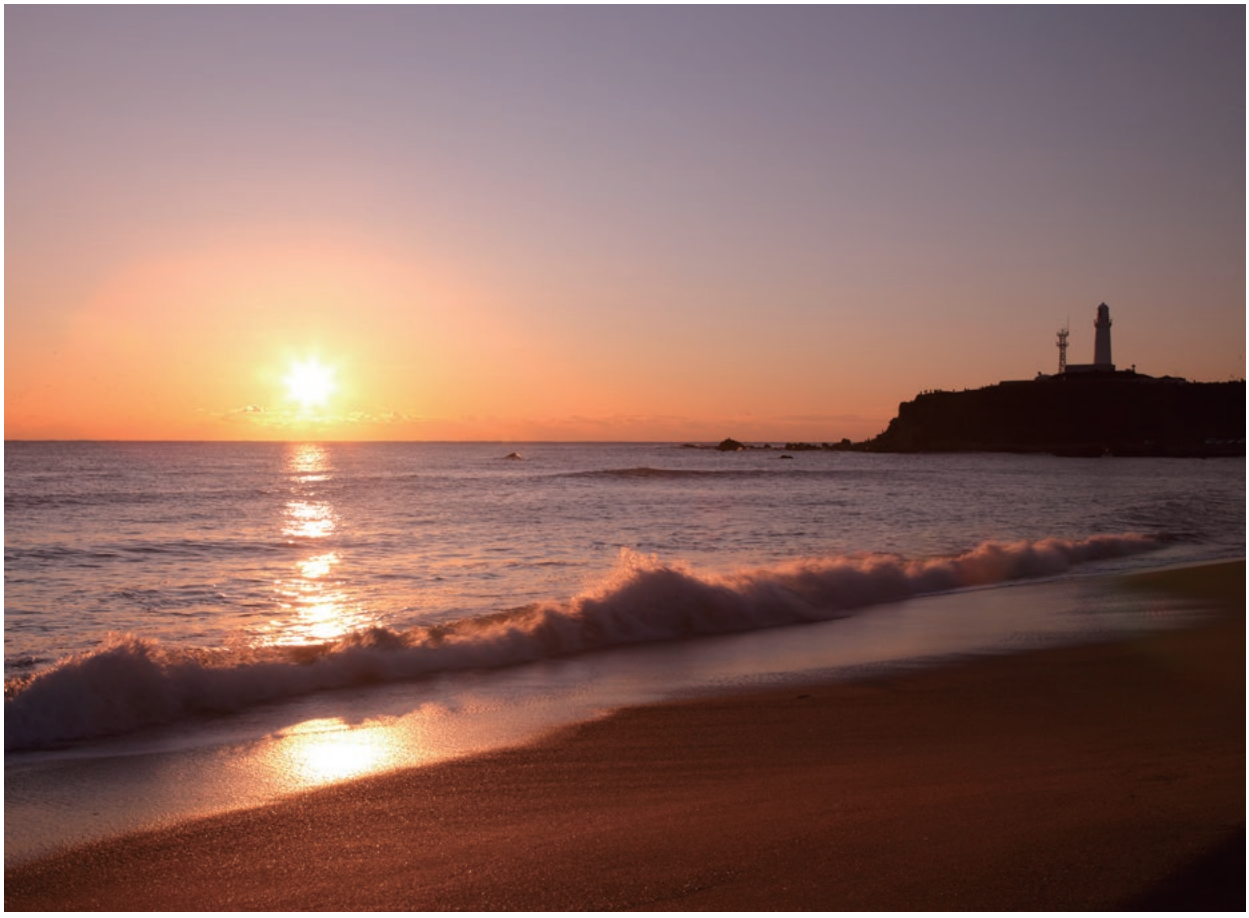
Note: All U.S. dollar equivalents for Japanese yen amounts in *We Are Tomodachi* are calculated at 120 yen to the dollar, roughly the rate at the time of publication.

Scenes of the New Year's Season



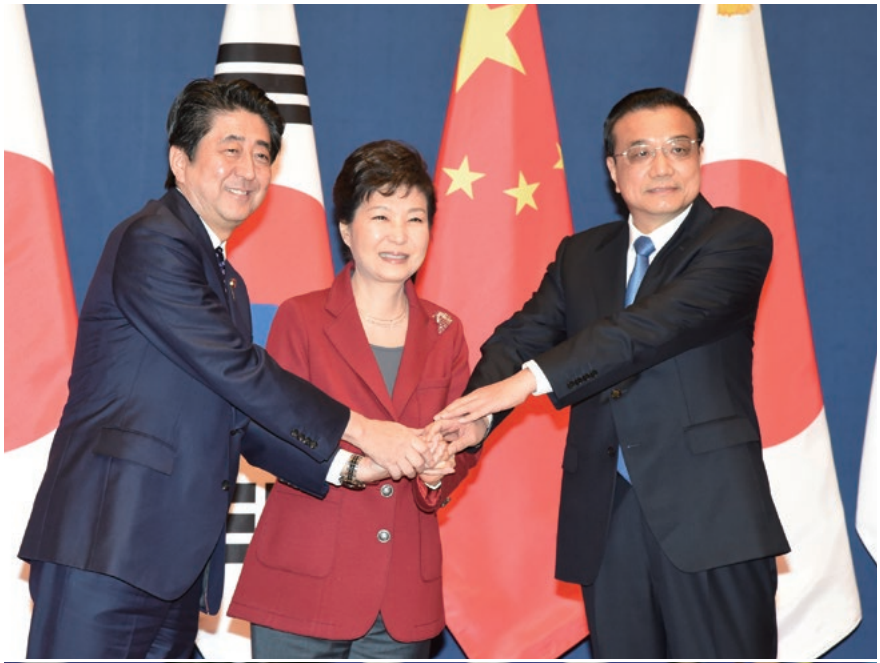
Cape Inubosaki: Choshi, Chiba Prefecture

Cape Inubosaki in Choshi, Chiba Prefecture, is located about 100 kilometers (60 miles) east of Tokyo and 50 km (30 miles) east of Narita International Airport. It is famous as the location where the New Year's sun rises first on the Japanese mainland. Making one's New Year's resolutions while watching the first sunrise of the year is a Japanese custom, and on the morning of January 1 Cape Inubosaki is thronged with visitors from around the country. At the tip of the cape is historic Inubosaki Lighthouse, built in 1874. The sight of the sun rising beyond this lighthouse over the vast Pacific offers the many visitors a captivating scene.

Bitchu Matsuyama Castle: Takahashi, Okayama Prefecture

Bitchu Matsuyama Castle is about an hour's drive from the prefectural capital of Okayama. Built near a summit at an elevation of 430 meters (about 1,400 feet), it is the highest among the mountain castles of Japan that have their original donjon. From autumn to winter, the surrounding basin is sometimes shrouded in morning mist, becoming a magnificent sea of clouds. This phenomenon only occurs for a few hours around sunrise on days when the weather is fair and the temperature has fallen sharply at dawn. But when it happens, a fantastic panorama comes into view as the rays of the rising sun strike the castle, which seems to float in the sea of clouds under the crisp, clear sky.

Moments of Prime Minister Abe



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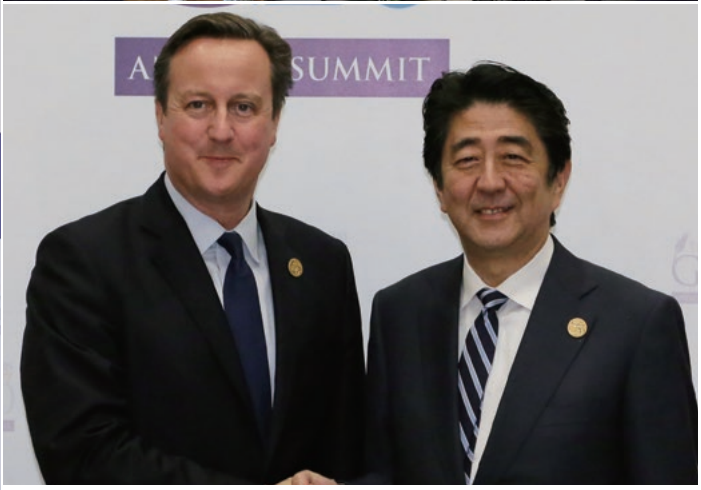
1, 2, 3. Prime Minister Abe attended the Sixth Japan-China-ROK Trilateral Summit Meeting in Seoul in the Republic of Korea, meeting with President Park Geun-hye of the ROK and Premier Li Keqiang of China (November 2015).

4. At the opening of the Group of 20 Summit on Financial Markets and the World Economy in Antalya, Turkey, Prime Minister Abe and other leaders offered a silent prayer for the victims of the November 13 terrorist attack in Paris (November 2015).



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Prime Minister Abe attended the G20 Summit in Antalya, Turkey. While in Turkey, he held meetings with other world leaders (November 2015).
5. The commemorative photo session. 6. Being welcomed by President Recep Tayyip Erdogan of Turkey. 7. With President Jean-Claude Juncker of the European Commission. 8. With Prime Minister David Cameron of the United Kingdom.

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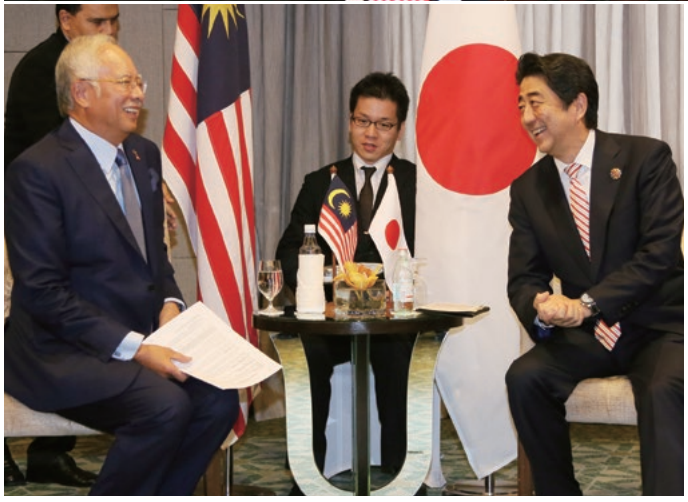
Prime Minister Abe held meetings with other world leaders at the G20 Summit in Antalya, Turkey (November 2015).
1. With President Vladimir Vladimirovich Putin of Russia. 2. With Chancellor Angela Merkel of Germany. 3. With His Majesty King Salman bin Abdulaziz Al Saud of Saudi Arabia.

He also held meetings with world leaders on the occasion of his attendance at the Asia-Pacific Economic Cooperation (APEC) Economic Leaders' Meeting in Manila, the Philippines (November 2015).
4. With Prime Minister Justin Trudeau of Canada. 5. With President Barack Obama of the United States. 6. With President Benigno S. Aquino III of the Philippines.



Prime Minister Abe visited Kuala Lumpur in Malaysia to attend Association of Southeast Asian Nations (ASEAN)–related summit meetings. While there, he held meetings with world leaders (November 2015).
7. Giving a speech at the ASEAN Business and Investment Summit.
8. Attending the 10th East Asia Summit (EAS) Meeting. 9. Attending the 18th ASEAN-Japan Summit Meeting. 10. With Prime Minister Najib Razak of Malaysia.

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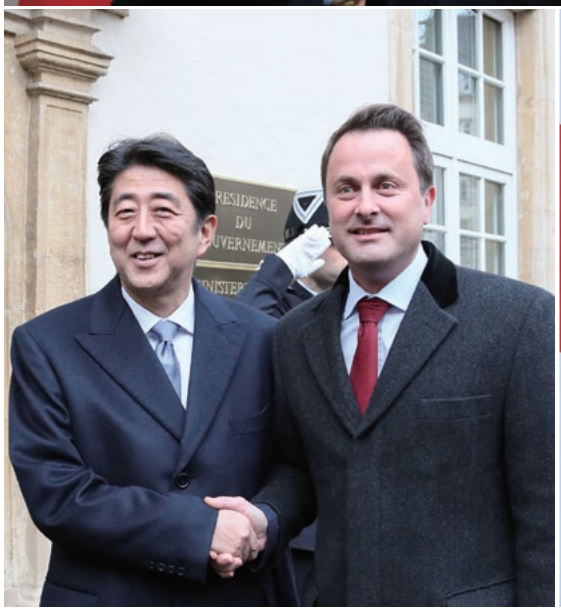
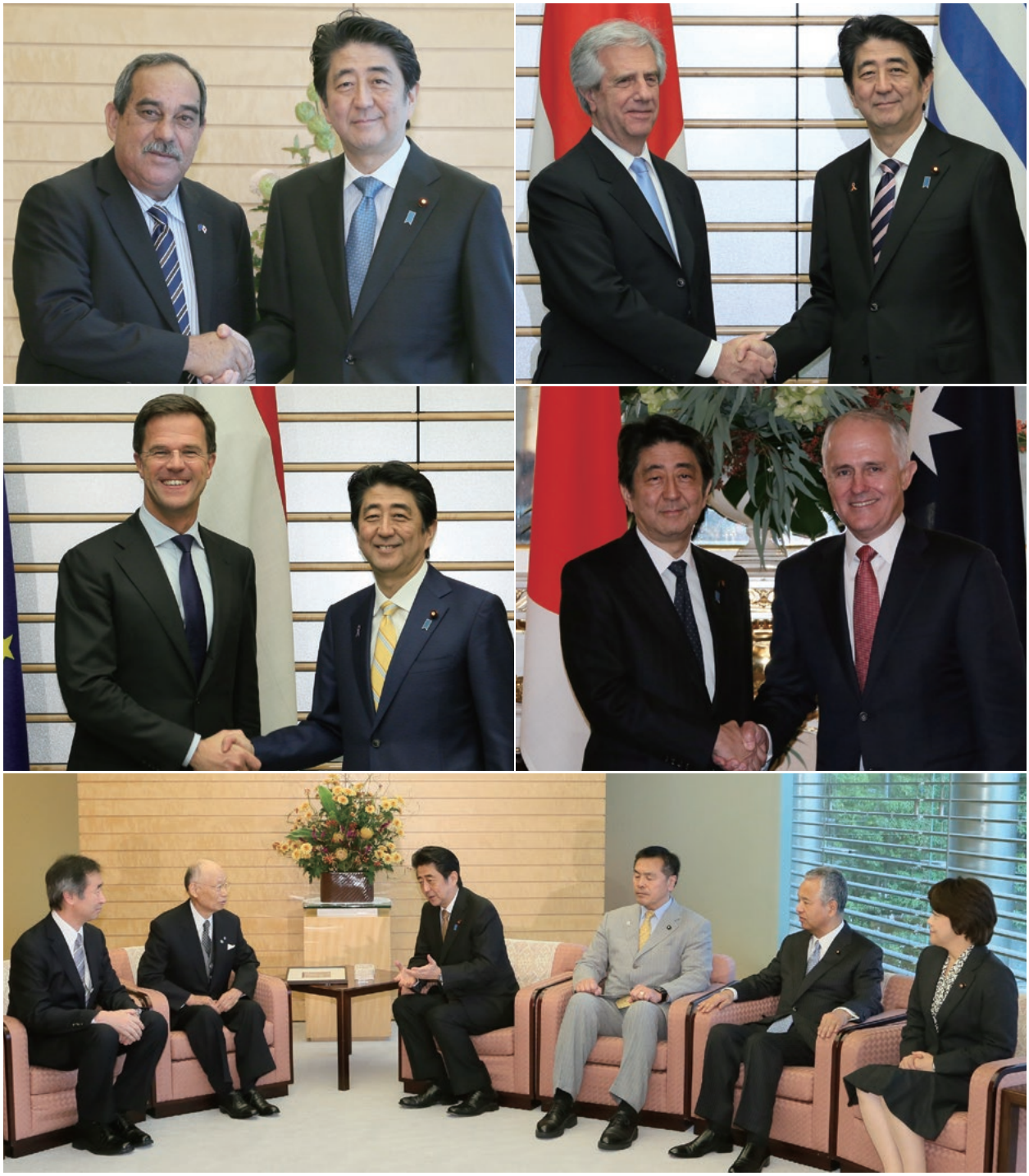
Prime Minister Abe visited Paris to attend the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 21) (November 2015).
1. Offering flowers at the Bataclan theater to mourn the victims of a series of terrorist attacks in Paris in November 2015. 2. With President François Hollande of France. 3. With Prime Minister Benjamin Netanyahu of Israel.

4. With Prime Minister Xavier Bettel during a visit to Luxembourg (December 2015). 5. With Prime Minister Narendra Modi during a visit to India (December 2015).





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Prime Minister Abe welcomed various world leaders to Tokyo for meetings.
6. With President Peter Martin Christian of Micronesia (November 2015). 7. With President Tabaré Ramón Vázquez Rosas of Uruguay (November 2015). 8. With Prime Minister Mark Rutte of the Netherlands (November 2015). 9. With Prime Minister Malcolm Turnbull of Australia (December 2015).

10. Receiving a courtesy call from Japan's 2015 Nobel Prize winners Prof. Satoshi Omura (Physiology or Medicine) and Dr. Takaaki Kajita (Physics) at the Prime Minister's Office (October 2015).

Speech at COP21 by Prime Minister Shinzo Abe

Delivered in Paris, December 1, 2015

http://japan.kantei.go.jp/97_abe/statement/201512/1214750_9934.html

Introduction

First of all, I express my deepest condolences to the victims of the recent terrorist attacks that occurred in Paris. I extend my respect for and show my solidarity with President Hollande and both the Government and people of France, who refused to submit to terrorism by opening COP21.

Today we must demonstrate our ability to overcome overwhelming challenges with our solidarity no matter how different our nations or cultures are.

Significance of the Paris Agreement

Eighteen years ago, the Kyoto Protocol, an important step to counter global warming, was adopted. Global average temperature, however, has been on the gradual rise ever since. We have witnessed frequent occurrence of extreme-weather-related disasters worldwide such as heavy rain and drought. Beautiful islands now face the risk of submersion. The Earth is the sole homeland to our humankind. We must hand it down safely to the generations of our children and grandchildren. Now is high time to build a new international framework, which developed and developing countries join together.

Constructive proposal for the international framework

Many point out that the present INDCs submitted by countries alone are unlikely to achieve the below 2°C objective. I would like the Paris Agreement to include the setting of a long-term goal as well as the establishment of a common process for the review of nationally determined mitigation contributions.

Japan on its part will steadily implement its already-submitted, ambitious INDC and its national adaptation plan.

Japan's new set of contributions: Actions for Cool Earth (ACE) 2.0 (support to developing countries, innovation)

Japan has announced the "Actions for Cool Earth 2.0," "ACE 2.0" for short. This is a reinforcement of Japan's contribution to climate change actions which was presented as "ACE" in 2013.

The first component of the contribution is our support to developing countries. We cannot overlook the difficulties of those developing countries suffering from negative impacts of climate change. Japan will provide, in 2020, approximately JPY 1.3 trillion of public and private climate finance, 1.3 times the current level, to developing countries. I believe the increased finance from Japan, if added to the accumulated contributions by countries and international organizations, clarify a pathway to the achievement of the commitment made at COP15: the mobilization by 2020 of USD 100 billion in climate finance per year to developing countries.

We will enrich the livelihood of people living on the Earth, while we reduce greenhouse gas emissions. We will take geothermal energy from the center of the Earth and deliver clean electricity to people in Africa. We shed light generated from sunlight in those areas not yet covered with the power grid. We pass on what cities in Japan have gone through to various emerging Asian cities that are experiencing rapidly growing concentration of population. We provide necessary equipment and know-how so that people of island states in the Pacific can evacuate with ample time available before a typhoon approaches. These are several fields of activities in which Japanese companies have been engaged for a long time and have sophisticated their skills. I am fully confident that we can be of great help for every one of you.

Japan has contributed USD 1.5 billion to the Green Climate Fund (GCF). I would like to see the fund made available for the support to developing countries as soon as possible. I will ensure Japan's involvement in the work of GCF from the project-forming stage for swift implementation of next year's support of USD 2.5 billion.

The second component of Japan's new set of contributions is innovation. The key to acting against climate change without sacrificing economic growth is the development of innovative technologies. To illustrate, there are technologies to produce, store, and transport hydrogen towards realizing CO_2–free societies and a next-generation battery to enable an electric car to run five times longer than the current level. By next spring Japan will formulate the "Energy and Environment Innovation Strategy." Prospective focused areas will be identified and research and development on them will be strengthened.

The "Mission Innovation," proposed by the interested countries, is in line with what Japan has consistently worked on, and I hereby express Japan's intention to join the initiative.

In addition, many of the advanced low-carbon technologies do not generally promise investment return to developing countries. Japan will, while lowering burdens of those countries, promote diffusion of advanced low carbon technologies particularly through implementation of the Joint Crediting Mechanism (JCM).

Conclusion

We, the leaders of the world, have all gathered here in Paris despite the challenges posed by the terrorist attack. Let all of us achieve an agreement on a new framework and show our solidarity.

Japan to Host G7 Summit in 2016

At a press conference in Germany following the Group of Seven Summit at Schloss Elmau on June 8, 2015, Prime Minister Shinzo Abe spoke about the site of the 2016 G7 Summit and Japan's responsibilities as the host country.

"Japan will again chair the G7, and I will invite leaders from around the world to Ise-Shima. Shima's magnificent sea spreading out before you stretches unbroken from the Pacific all the way to the Indian Ocean. Taking firmly to heart the feelings of a great many countries in both Asia and Africa, Japan as the holder of the 2016 presidency intends to discuss issues frankly with world leaders to foster world peace and prosperity. What's more, as this also represents a special opportunity, I would like for the other leaders to fully experience the Ise Jingu shrine and other aspects of Japan's traditions, culture, and natural beauty. I intend to make this an opportunity to send out to the world the message of how superb Japan's 'hometowns,' or local regions, are."

This will be the sixth time for Japan to host the G7/G8 Summit, which was previously held in Tokyo in 1979, 1986, and 1993, in Kyushu-Okinawa in 2000, and in Toyako (Hokkaido) in 2008. The 2016 G7 Summit will be held on May 26–27 in Ise-Shima, Mie Prefecture.

As Prime Minister Abe noted, Ise-Shima is an area with many attractions. It is the site of the Ise Jingu shrine, whose history goes back to ancient times, and it is a place of great natural beauty, including islands of various sizes and a coast with many inlets, offering an example of what may be described as Japan's primal scenery. Visitors can enjoy the area's rich harvest of seafood, including Japanese spiny lobsters, oysters, and abalone. It is where cultured pearls were first produced, and the pearls from here are world famous.

G7 ministerial meetings are to be held in 10 cities around Japan from April through September. They are all among Japan's leading regional cities and have been chosen as appropriate sites for discussions on the topics of each of the meetings. All of these cities are now energetically preparing to host the meetings.

Today's international community must work together to deal with numerous issues in a variety of areas. These concerns include the threats of terrorism and cyber-terrorism, the environment, energy, economic problems, and regional conflicts. The G7 Summit and ministerial meetings will seriously address these and other matters across a wide spectrum.

We hope that people around the world will pay attention to this year's G7 Summit and related meetings in Japan. We also hope that many will come to Japan this year and experience the nature, culture, traditions, and other attractions of Ise-Shima and the country's many other regions. We look forward to seeing you!

G7 Japan 2016 Ise-Shima Summit official website
http://www.japan.go.jp/g7/

Official logo of G7 Japan 2016

The red disc featured on Japan's national flag is circled by cherry blossom petals signifying the G7 countries. The blue crescent represents the ocean surrounding Ise-Shima, the venue of the G7 Summit. This logo was designed by a high-school student.

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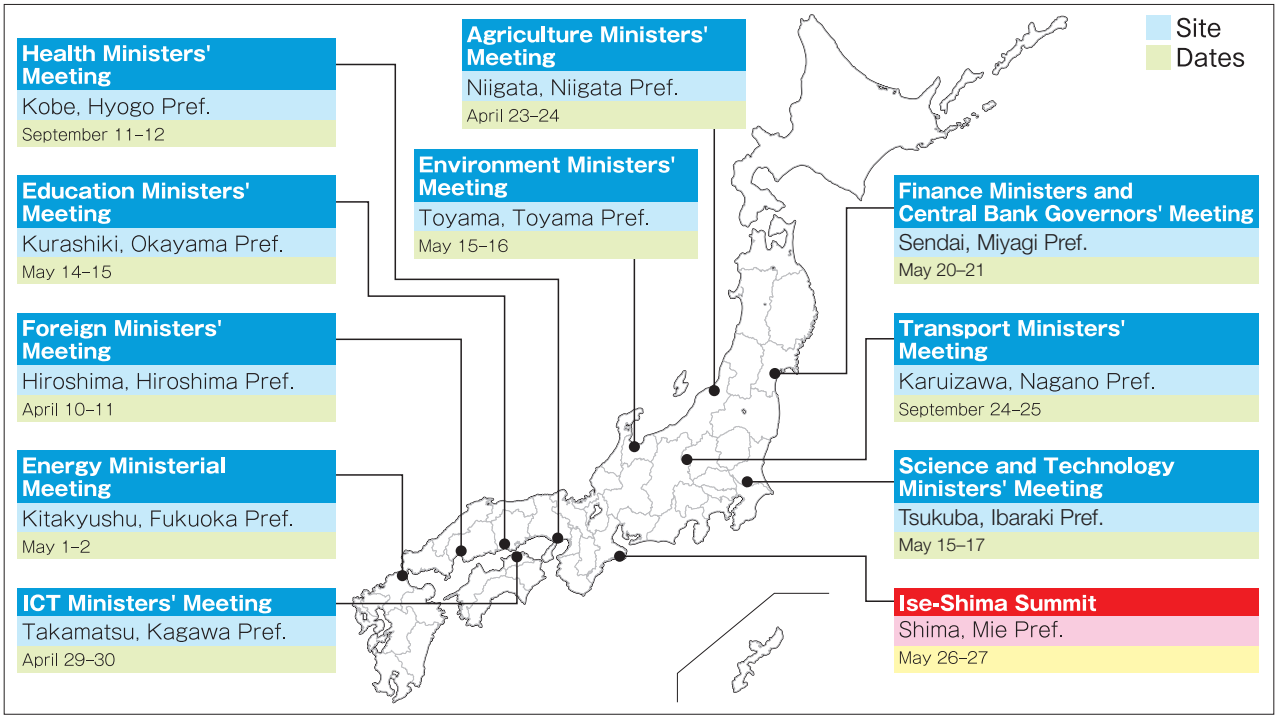
1. Kashikojima Island, the summit venue, is the largest island in Ago Bay, with a beautiful, deeply indented coast. 2. The Ise Jingu shrine has history and traditions dating back to ancient times. 3. Ise-Shima is famous for its pearls. The world's first cultured pearls were produced here in 1893.



From April through September, G7 ministerial meetings will be held in 10 cities around Japan, each with its own splendid features.

Defeating Diseases with Help from Microbes

Prof. Satoshi Omura, Nobel Prize in Physiology or Medicine

"I did half the work for the Nobel Prize, but the credit for the other half goes to the microbes," says Professor Satoshi Omura with a smile on his face. Omura, distinguished professor emeritus at Kitasato University, was selected as one of the recipients of the 2015 Nobel Prize in Physiology or Medicine for his contributions to the development of a novel therapy against parasitic infections using a substance produced by a single microorganism he discovered.

In 1974, during the course of his ongoing collection of soil samples for microbe research, Professor Omura discovered a new kind of bacterium in soil from Shizuoka Prefecture. This finding effectively changed his life. Joint research with the U.S. pharmaceutical company Merck & Co. led to the discovery of avermectin, an anti-parasitic compound produced by this bacterium, and development of the derivative drug ivermectin.

From 1981, ivermectin quickly became the world's most widely used anti-parasitic drug for livestock and domestic animals. And since 1987 it has been used in a program orchestrated by the World Health Organization to eradicate the devastating tropical diseases of river blindness and elephantiasis. Merck and the Kitasato Institute have supplied the drug, formulated for human use under the brand name Mectizan®, free of charge, currently providing it to around 300 million people every year. Mectizan® has already virtually eliminated river blindness in Latin America and is proving highly effective in Africa. It is projected that both targeted diseases will be eliminated globally within the next decade.

Satoshi Omura

Born in 1935. Graduated from the University of Yamanashi, where he majored in natural science. Received a doctorate in pharmaceutical sciences from the University of Tokyo in 1968 and a further doctorate in chemistry from the Tokyo University of Science in 1970. Worked as a professor at the School of Pharmacy at Kitasato University and served as president of the Kitasato Institute. Currently distinguished professor emeritus at Kitasato University.

Professor Omura holds the "Yellow Book," a comprehensive compendium of the products and results of his research team.

Professor Omura enthuses about the boundless potential of microorganisms: "Microbes came into existence three billion years ago, while humans have only been around for two hundred thousand years or so. We're still just tapping a few percent of their potential, simply because we don't know how to use them." After graduating from the University of Yamanashi, he immersed himself in experiments in organic chemistry at the Graduate School of the Tokyo University of Science while working as a teacher at a Tokyo metropolitan high school. He first became interested in microbes after taking a job as a research assistant in the Fermentative Production Department of the Faculty of Engineering at the University of Yamanashi. Then he joined the Kitasato Institute, founded by Shibasaburo Kitasato, the father of bacteriology in Japan, with the aim of undertaking microbial research in earnest.

In the course of his education and career, Professor Omura had a number of highly fortunate encounters with extraordinary scientists. Among his many mentors, the most important was Professor Max Tishler of Wesleyan University in Connecticut, who arranged for him to serve as a visiting professor in 1971. There he was involved in implementing an

approach that had not yet been adopted in Japan's scientific research circles, namely, to conduct research in cooperation with business. He had always declared his desire to conduct research that would help people, and after returning to Japan he applied the approach he learned in the United States for this purpose, becoming a pioneer in the development of industry-university tie-ups in Japan.

Professor Omura's socially minded posture as a researcher has extended into other parts of his life as well. He drew on the tremendous royalties he received from sales of ivermectin and other products to provide large-scale funding for research at the Kitasato Institute while serving as its vice-president. And he has remembered his hometown of Nirasaki in Yamanashi Prefecture, using his own money to develop a hot spring for local residents and to build an art museum that he has donated to the city.

So far, Professor Omura's research team has discovered almost 500 compounds produced by microbes that have led to the development of pharmaceuticals and other useful chemicals. Believing that microorganisms may hold the key to defeating diseases that remain intractable, he continues to work today on projects for creating drugs from naturally produced substances. "These projects increasingly require the power of youth," Professor Omura says, and he devotes himself to training young researchers at the Kitasato Institute and Kitasato University. He is looking ahead avidly to exploiting the unlimited possibilities that future research on microbes will create for the benefit of all.

1. Visiting an elementary school in Ghana in 2004. All of the children regularly take Mectizan®, which they know by name. 2. With his mentor Professor Max Tishler (right) at Wesleyan University in 1971. 3. Collecting soil samples for research purposes, as he does wherever he goes. 4. The bacterium that produces avermectin, discovered by Professor Omura in soil from Kawana, Shizuoka Prefecture. (© The Kitasato Institute)

Tackling the Mysteries of the Universe by Studying Neutrinos

Dr. Takaaki Kajita, Nobel Prize in Physics

Dr. Takaaki Kajita, director of the Institute for Cosmic Ray Research (ICRR) at the University of Tokyo, was one of the two winners of the 2015 Nobel Prize in Physics. The award was for the discovery of a type of neutrino oscillation; this showed that neutrinos have mass, contrary to what was previously assumed. In announcing the award, the Royal Swedish Academy of Sciences noted, "The discovery has changed our understanding of the innermost workings of matter and can prove crucial to our view of the universe."

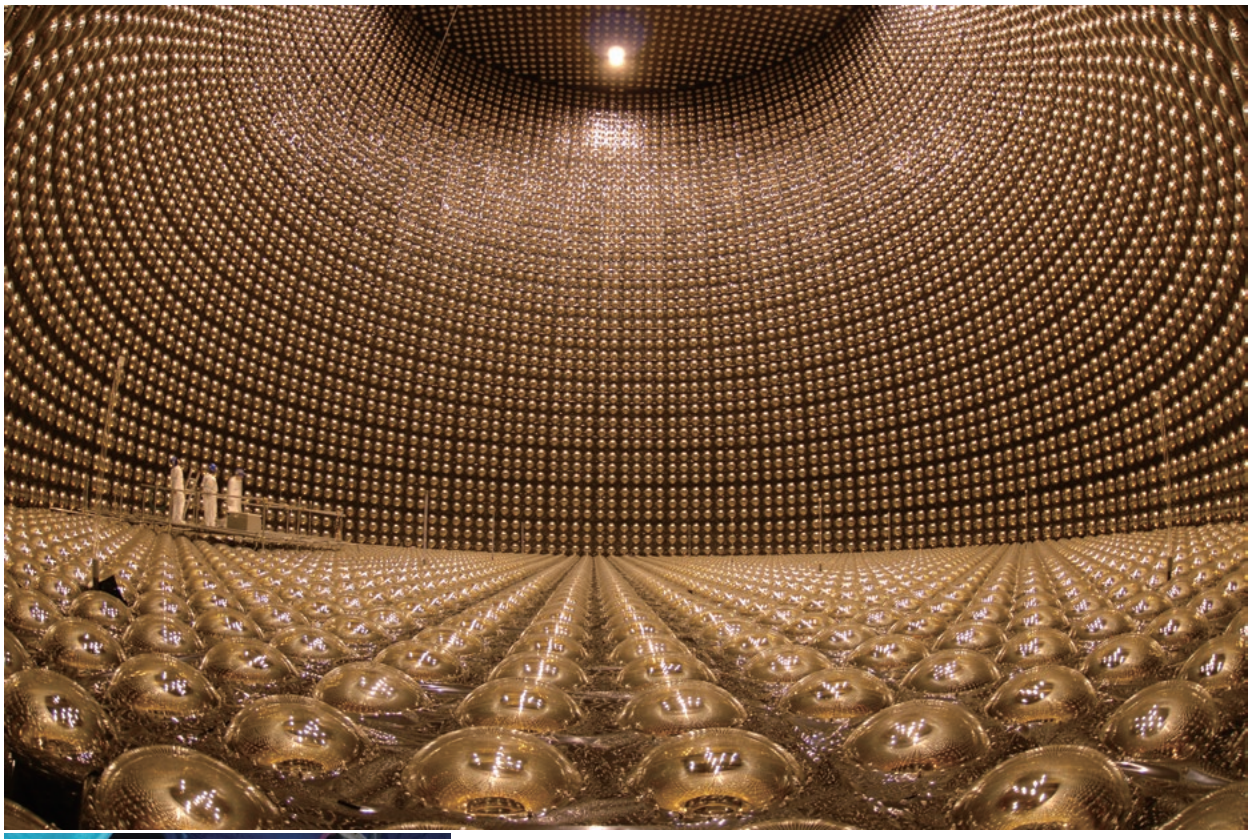
Neutrinos are among the most common particles in the universe. They are constantly flying through the space around us in large numbers. But since they very rarely react to other matter, they are extremely difficult to detect. They have been studied at an observatory in Kamioka, Gifu Prefecture, using detectors—Kamiokande and its successor, Super-Kamiokande—installed in a mine site 1,000 meters (about 0.6 miles) underground to avoid interference from unrelated cosmic rays. Now plans are being made for an even more powerful detector, Hyper-Kamiokande.

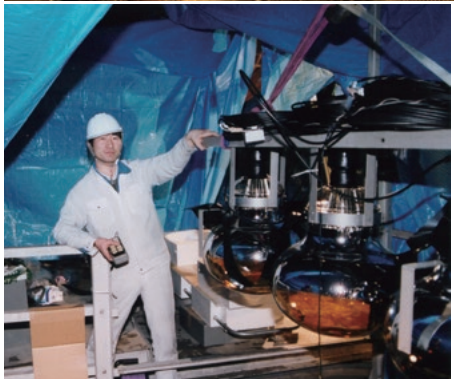
Dr. Kajita began his study of neutrinos as a research associate at the University of Tokyo in 1986. Neutrinos are observed using a huge tank full of purified water and highly sensitive photomultiplier tubes to detect the light given off on the rare occasions when a neutrino strikes a water molecule. Based on analysis of a tremendous volume of observational data, in 1998 he discovered the phenomenon of neutrino oscillation, meaning that the particles sometimes change type. This would not be possible if they did not have mass.

This discovery, which led to the Nobel Prize award, was the fruit of collaborative efforts by a team of over 100 researchers. And Dr. Kajita declares that he could not have won the prize without the help of two key figures: Dr. Masatoshi Koshiba, whom he identifies as his greatest benefactor, and the late Dr. Yoji Totsuka, the mentor who directed his research. Dr. Koshiba was the first to discover neutrinos from outside the solar system at the Kamioka facility, and he was awarded the Nobel Prize in Physics in 2002. It was his work that served as the basis for Dr. Kajita's research, which led to his own Nobel award 13 years later.

Asked to explain the significance of neutrino studies, Dr. Kajita stresses the importance of basic scientific research: "Though it has almost nothing to do with our everyday lives, research into the origins of matter in the universe has great significance for the human race." But he voices serious concern about the lack of progress in developing the next generation of researchers in Japan. Noting that emerging countries have become increasingly prominent in basic research since around 2000, Dr. Kajita declares that Japan must urgently step up its development of younger researchers in basic fields. He calls for improvement in the research environment, saying that it is important to create more steady positions for people completing their graduate studies so as to increase the number of researchers.

Dr. Kajita's next goal is to detect gravitational waves, whose existence was proposed about 100 years ago by Albert Einstein, and which have become a major research topic for physicists. "Some day," he says, "I hope to observe gravitational waves from when the universe was born." The search for answers to the mysteries of the universe is a never-ending quest.





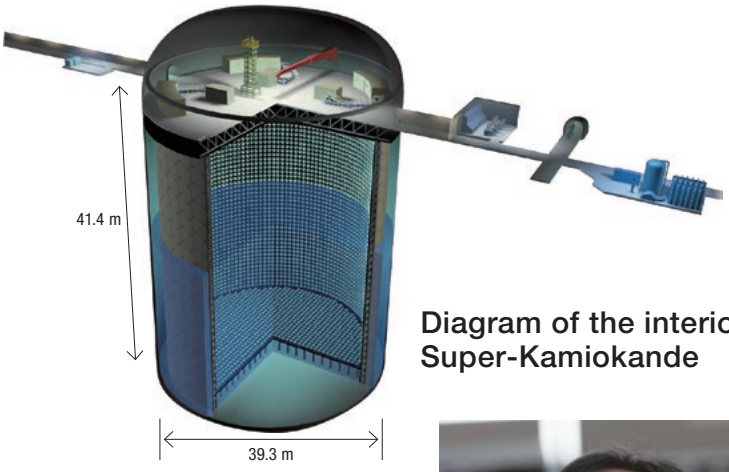


Diagram of the interior of Super-Kamiokande

1. The inside of the Super-Kamiokande detector (© ICRR Kamioka Observatory). 2. Dr. Kajita fixing photomultiplier tubes to the ceiling of Super-Kamiokande in 1996 (© ICRR). 3. Super-Kamiokande contains a giant tank (interior shown in photo 1) holding 50,000 tons of purified water. The inward-facing photomultiplier tubes are fixed to the inner tank (© ICRR Kamioka Observatory).

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Takaaki Kajita

Born in 1959. Graduated from the Faculty of Science, Saitama University, in 1981, and received his PhD in physics from the University of Tokyo in 1986. He was involved in research into neutrinos from his days as a graduate student, taking part in the original Kamiokande project and in the construction and operation of Super-Kamiokande. Since 2008 he has been director of the University of Tokyo's ICRR.

Japanese People Contributing Worldwide

Building Peace and Self-Reliance in Conflict Zones

Rumiko Seya, president of the Japan Center for Conflict Prevention (JCCP), has been active as a peacebuilding specialist in Kenya, South Sudan, Somalia, the Middle East, and other conflict zones. Working in cooperation with the United Nations, national governments, nongovernmental organizations, and community members, she has focused her efforts on three key areas: restoring security, supporting economic and psychological self-reliance, and building trust so that opposing forces can coexist.

Shortly before she graduated from high school, Seya happened to see a photograph taken at a camp for Rwandan refugees in the newspaper. This got her thinking about why conflicts occur and what she could do to help resolve them, and she started energetically searching for a way to get involved. After receiving her master's degree in conflict resolution, she built up experience in this area with five years of work in the field of disarmament, demobilization, and reintegration (DDR) in various locations around the world as an employee of the United Nations and as a diplomat.

In 2007, Seya switched her focus from DDR to peacebuilding, joining the nongovernmental organization JCCP. While DDR is certainly a worthwhile activity, its support for reintegration into society is limited to soldiers and former soldiers—who are often the perpetrators of violence. Seya had been troubled by the gap she had seen between the perpetrators receiving this support and their much more numerous victims. "I began to feel that a new form of peacebuilding was needed to provide structures for perpetrators and victims to live in the same communities," she explains.

This new form of peacebuilding is based on a policy of having local people take charge. In the case of youth counseling, for example, JCCP has trained local young people as counselors capable of keeping up the activities on their own. In a Kenyan slum where JCCP has been active for six years, locally recruited and trained counselors have developed into community leaders idolized by small children.

Seya has two targets for the next 5 to 10 years. The first is to turn peacebuilding into a business-generating activity with systematic frameworks to foster industries and create jobs in conflict zones. By producing economic benefits in this way, she hopes to fight the pull of war-oriented businesses. The second is to bolster structures for human cooperation. Seya notes that Japan has talented specialists, but they are not organized. "If organization and training improves, it will become possible for Japan to perform peace-related activities in a variety of ways other than through the dispatch of military units or simple provision of funding."

Seya has found that her Japanese nationality is an advantage when conducting peace operations in certain areas. "In Africa and the Middle East, Japan has no political or historical associations with colonial rule or other negative episodes, and it is viewed as an impartial country. This means that Japanese people can enter areas where Westerners would not be welcome. One of our roles is to contribute to peace by capitalizing on this strength."

Through her peacebuilding activities, Seya continues to provide new and better options for people living in conflict zones.

Japan Center for Conflict Prevention official website
http://www.jccp.gr.jp/english/

1. Young people trained as counselors with JCCP support interact with conflict victims in a Kenyan slum.
2. A Pulitzer Prize–winning photograph taken at a camp for Rwandan refugees in Zaire. Seeing this photo as a high school student made Seya aspire to a career in peacebuilding activities.
3. Seya took this photo in Afghanistan while serving as a DDR specialist at the Japanese embassy. Many people told her they would cooperate with her disarmament activities because Japan is an impartial country.

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Rumiko Seya

Graduated from the Faculty of Policy Studies at Chuo University in Tokyo and completed her master's degree in conflict resolution at the University of Bradford in the United Kingdom. Has conducted peacebuilding activities in conflict zones around the world, including Rwanda, Afghanistan, and Sierra Leone, working as part of United Nations Peacekeeping Operations, as a diplomat at Japanese foreign missions, and as an employee of the Japan Center for Conflict Prevention. She continues these activities now as president of JCCP.

Japan's Regional Strength

Sendai, capital of Miyagi Prefecture, is located near the center of the Tohoku region, about 300 kilometers (180 miles) north of Tokyo. It has a population of one million and is famous for its abundant greenery. By Shinkansen, Japan's high-speed rail, it is about an hour and a half from Tokyo. The city welcomes international investment and offers generous incentives for foreign companies locating there.

One of the incentives is the system of financial assistance for business location promotion, which compensates for fixed-asset taxes on businesses in seven categories: manufacturing, R&D centers, specified call centers and back offices, highly functional distribution centers, data centers and software business, creative industries, and wide-area customer attraction industries. The city also offers job creation financial assistance for each newly hired employee. A number of foreign affiliates are already operating in Sendai, including Amazon Japan, which set up a call center there in 2012. The city provides a comfortable living environment for non-Japanese residents with its international schools, medical facilities with foreign-language-capable staff, and a hotline providing interpretation support between Japanese and six other languages.

Mayor Emiko Okuyama declares, "Many executives of foreign companies that have set up operations in Sendai have told me they were glad that they picked Sendai and that they have been able to recruit highly talented employees. Our city attracts talented young people from all around the Tohoku region."

Sendai is home to more than 10 universities, including Tohoku University, which has produced world-class research results in fields like materials science and physics. Looking at the population by age in Sendai, the working-age (15–64) share is 65.7%, considerably higher than the national average of 61.3%.

Mayor Okuyama also emphasizes another advantage of doing business in Sendai. "We have offices that match those in the Tokyo area in terms of having the latest equipment—but at lower rents."

Sendai's international strategy is not limited to attracting investment; it is also working quickly to develop itself as an international convention city. In March 2015 it hosted the Third United Nations World Conference on Disaster Risk Reduction. Mayor Okuyama took the initiative in attracting this event to Sendai, because she saw it as an opportunity for Sendai to share the lessons it learned from the Great East Japan Earthquake in 2011. The conference brought together over 6,500 participants, including government leaders, from 185 countries. Thanks to the international convention management skills that the city has developed, along with its newly built meeting facilities and transportation infrastructure improvements, notably the recently opened Tozai (east-west) subway line, Sendai is now capable of hosting international meetings of up to 10,000 people.

This May, the Group of Seven Finance Ministers and Central Bank Governors' Meeting will be held in Sendai. This is the biggest ministerial meeting in advance of the G7 Ise-Shima Summit that Japan will be hosting later in the same month. (See pages 16-17 for more information.) Mayor Okuyama says, "I hope that we can make this important meeting, which will have a major impact on global financial and economic policy, an occasion to convey the appeal of Sendai and the Tohoku region, to expand our interactions with the rest of the world, and to promote additional investment. I sincerely look forward to welcoming visitors from around the world to Sendai."

Sendai City official website
http://www.city.sendai.jp/language/english.html

Watching Over Sendai

A statue of Date Masamune, the samurai leader who established Sendai as the capital of his domain in 1601, looks over the city from Aobayama Park, site of the castle he built.

Expanding the subway network

In December 2015 a new east-west subway line was opened, supplementing the existing north-south line.

Attracting international conferences

Sendai hosted the Third United Nations World Conference on Disaster Risk Reduction, the biggest UN conference ever held in Japan. With the success of this event, the city demonstrated the high level of its convention-hosting capabilities and gave a boost to its efforts to attract future conventions.

Financial assistance for business location promotion

New facilities (including rentals)	Assistance equivalent to 100% of fixed-asset taxes relating to the new investment for a period of 3–5 years
Expansion, movement within Sendai (including rentals)	Assistance equivalent to 70%–90% of fixed-asset taxes relating to the new investment for a period of 3–5 years
Additional hiring	One-time assistance of JPY 100,000–600,000 (about USD 800–5,000) for each newly hired employee (regular or other)

The above-indicated assistance amounts, payment years, payment limits, and other particulars differ depending on the type of assistance.

Basic facts and figures

Sendai, capital of Miyagi Prefecture, has a population of 1.08 million (as of September 2015). The Hirose River flows through the middle of the city, and the tree-lined streets of the city center have earned it the name “City of Trees.”

Mayor Emiko Okuyama

Born in Akita Prefecture. After graduating from the Faculty of Economics at Tohoku University, she became a municipal employee in Sendai, where she served in posts including assistant senior director of the Lifelong Learning Department, superintendent of the Sendai City Board of Education, and vice mayor. She has been the mayor of Sendai since 2009 and is now serving her second four-year term.

Hi-Tech Innovation for Better Food Drying

Microwave-Vacuum Dehydrator Saves Time and Energy

Dried fruits have traditionally been prepared by various methods, such as sun drying, preserving in sugar, and frying in oil. Foods can also be dried with dehydrators, which generally use hot air. Another option is freeze-drying. But a new technology developed in Japan has made it possible to dry fruits and vegetables while keeping them close to their original color, shape, and flavor. This is microwave-vacuum drying, a method that uses neither hot air nor freezing.

The hot air in regular food dehydrators dries foods from the outside. This causes the surface to harden, making it difficult for the water inside to get out and lengthening the drying process. In contrast, the microwave-vacuum dehydrator uses microwaves that reach inside the food, causing the water in it to evaporate. The water vapor is carried away in air currents. This technique results in uniform drying and allows the process to be completed more quickly. Because the air pressure is kept very low, the boiling point of water is less than 40°C, the temperature at which cell tissues begin to be affected by heat. This means that foods can be dried without damage.

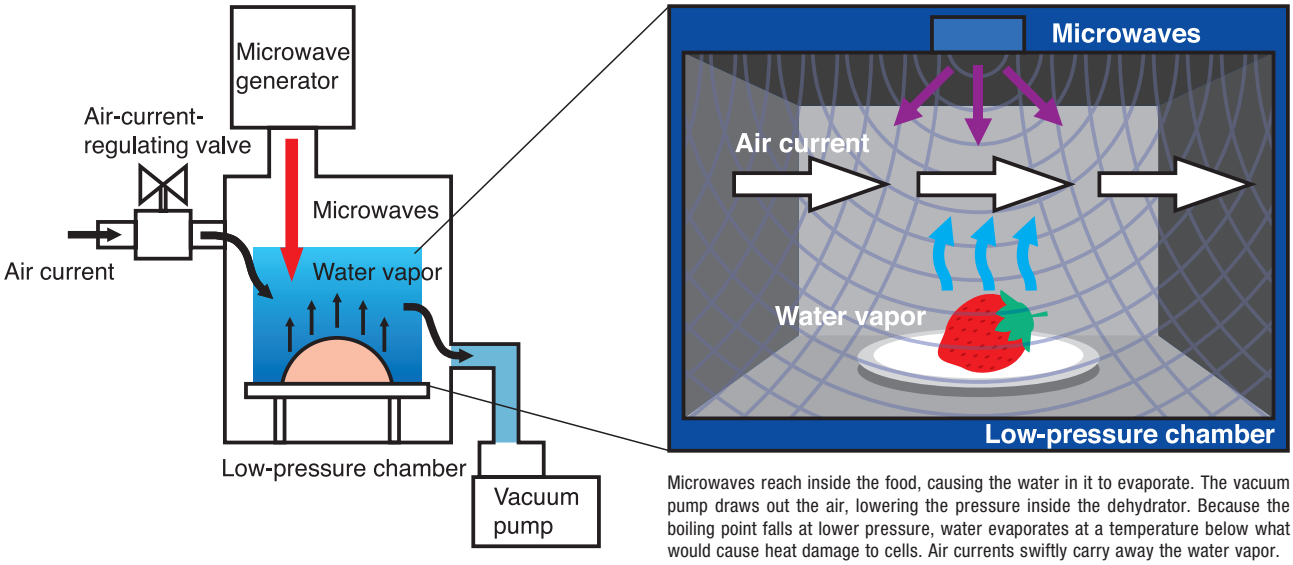
The company that produced the world's first commercial microwave-vacuum dehydrator is Seiko Engineering, a firm with 12 employees in Fujieda, Shizuoka Prefecture, about 200 kilometers (125 miles) southwest of Tokyo. President Kuniyasu Okamura, who founded the company in 1987, previously worked as an engineer designing equipment for drying locally grown tea leaves. Seiko Engineering initially designed and manufactured baking furnaces for automobile engine parts. Using its heat-control and drying know-how from these operations, the company undertook development of food dehydrators. In 2006, it started working on a microwave dehydrator to shorten the time required and lower the operating cost for the drying process.

Okamura, who is also involved in sales of local farm products and seafood, was looking for technology to dry foods while preserving their original shape and components. He explains, "I was searching for a method that would both keep foods delicious and deliver the ultimate in energy saving. And I found a method of microwave-vacuum drying that had been developed at Kyushu Institute of Technology." In 2012, his company produced a commercial food dehydrator using this method. The key to this success, he says, was the creation of a door that maintains a vacuum inside the device and prevents microwave leakage.

The microwave-vacuum dehydrators made by Seiko Engineering can ordinarily dry fruits in just two to four hours, compared with regular dehydrators, which generally take days. These devices can take as little as 1/25 of the time and electricity required by hot-air food dehydrators to complete the process. They also produce better-quality dried foods.

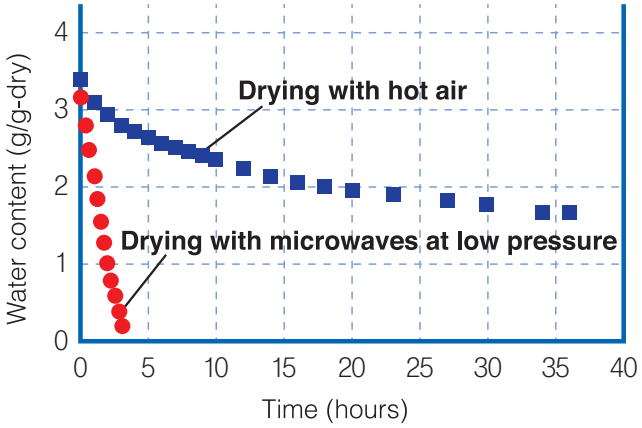
The microwave-vacuum dehydrator was commercialized just three years ago, but it has already attracted attention from overseas as well as within Japan. Seiko Engineering is now building a large-scale model in response to a request from a company in Singapore. "We're always developing some new technology," says Okamura. The company is working on further improvements to the device, such as functions to prevent excessive drying and to automatically exchange food trays.

How microwave-vacuum drying works



Microwaves reach inside the food, causing the water in it to evaporate. The vacuum pump draws out the air, lowering the pressure inside the dehydrator. Because the boiling point falls at lower pressure, water evaporates at a temperature below what would cause heat damage to cells. Air currents swiftly carry away the water vapor.

Drying methods compared



Note: Comparison is for production of dried scallop meat.

1. Orange slices dried in hot air (left) and in a microwave-vacuum dehydrator (right). The former have a burnt taste, but the latter preserve the original flavor and aroma. 2. President Kuniyasu Okamura of Seiko Engineering declares, "I want to lower the price of the dehydrator to make it easier for fruit and vegetable growers to acquire."

Friends of Japan

Peter MacMillan

Teaches at Kyorin University and the University of Tokyo, and is a Councilor of the National Federation of UNESCO Associations in Japan. He has lived in Japan for many years and strives to be a bridge between Japan and the world. His translation *One Hundred Poets, One Poem Each*, published in 2008, won prizes in both Japan and the United States.

The Beauty of Fleeting Blossoms — My Beloved Japan

I grew up in the countryside of Ireland, where there were more horses and cows than people. I never imagined that I would one day spend my life in a country on the other side of the world. At university I studied poetry and philosophy, and after I graduated I taught both of those subjects at a Japanese university. I only planned to spend a year in Japan, but already several decades have passed, and Japan remains a country of mystery and discovery that only increases with time.

In an attempt to learn more of the Japanese spirit, I translated the most famous work of Japanese poetry, the *Hyakunin isshu* (*One Hundred Poets, One Poem Each*), compiled by Fujiwara no Teika (1162–1241). I discovered that many of the poems in the collection are universal in nature and could easily be understood by people of other countries. But other poems in the collection display a more distinctly Japanese sensibility. Poems on cherry blossoms are especially Japanese. In one beautiful pair of poems from the *Tales of Ise* the hero Narihira writes:

If only there were
no cherry blossoms
in this world,
what calm would reign
in the heart of spring.

Then someone else replied,

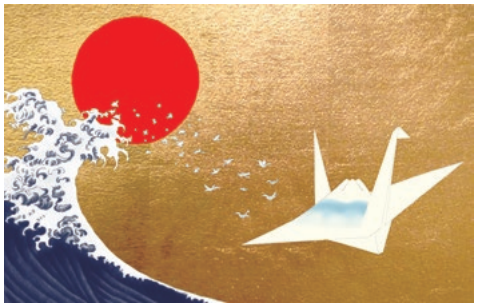
It is because
the blossoms scatter
that they are splendid.
In this world of sorrow,
what lasts for long?

The Japanese find the quintessentially beautiful in the fleeting, in contrast to Western literature, which has traditionally equated beauty with immortality. The reply poem asserts that in the world of impermanence the very fact that the blossoms are short-lived is what makes them beautiful.

After the Great East Japan Earthquake I resolved to do more for my adopted country. I now devote time to disseminating Japanese culture in Japan and overseas and translate Japanese poetry as my way of thanking Japan for the many blessings of life here. I spent the last four years translating the *Tales of Ise*, which is a collection of elegant and beautiful tales about love from the Heian period (794–1185). The *Tales of Ise* is a timeless encapsulation of the exquisite poetry and aesthetics of the early-Heian-period nobility. It is a world where the deepest aspects of love are expressed through poetry, and where pursuing the Way of Love means being wholly committed to poetic expression.

I have also translated many poems about Mount Fuji and created a series of prints called *Thirty-Six New Views of Mount Fuji*. Mount Fuji is a sacred mountain of cultural importance that has been depicted widely in literature and art since the seventh century. I hope the *Thirty-Six New Views of Mount Fuji* will transmit the cultural importance of this sacred mountain to people both in Japan and around the world.

For me Japan is my second home, the country of harmony and beauty, elegance and adventure, and an endless source of inspiration for my poetry and art. Though on the opposite side of the earth, I feel truly at home here. My love of Japan and its people grows day by day, and each moment is as fresh as when I first arrived almost thirty years ago.



Crane Fuji, a print from MacMillan's series *Thirty-Six New Views of Mount Fuji*, celebrates Mount Fuji becoming a World Heritage Site and the dissemination of Japanese culture around the world. The print series was inspired by the *Thirty-Six Views of Mount Fuji* of the ukiyo-e artist Katsushika Hokusai (1760–1849).

The JET Programme: A Great Way to Experience Japan

Building Rapport with a Vibrant Community

My first encounter with Japan came when my family hosted a Japanese student at our home in Christchurch. The experience inspired me to study Japanese at high school, where my interest in the country's rich culture and traditions continued to grow.

Japan and New Zealand share numerous aspects, including verdant countryside and snowcapped mountains, as well as a fondness for outdoor activities. Part of what motivated me to participate in the Japan Exchange and Teaching (JET) Programme was a desire to experience Japan's beautiful natural environment, which is why I was excited to be placed in Minakami, Gunma Prefecture, an area famed for its hot springs, skiing, and hiking.

Since coming to Japan in 2012, I have worked at Tsukiyono Junior High School as an Assistant Language Teacher (ALT). It has been exciting over the last three years to build a rapport with students, whom I strongly admire for their diligence and study-mindedness in and outside the classroom. I have worked to help them overcome their initial trepidation to use English by opening avenues to connect on a personal level and actively conversing with them, regardless of their age or English ability, during class time as well as breaks. A popular topic has been the spectacular performances by Japan and the All Blacks at the 2015 Rugby World Cup in England.

An important aspect of my job has been helping students prepare each year for a regional English speech contest. The competition provides an invaluable experience for students to hone their English communication skills, which I hope will serve them well in the future. The experience has had a positive influence on students, with many expressing to me a desire to study abroad or pursue careers where English is needed.

Outside of work, I take every opportunity to learn about the country and my host community. I have studied the Japanese tea ceremony and *taiko* drumming, and I have enjoyed outings to the surrounding ski fields and long soaks in local hot spring baths during the winter months. The smaller size of Minakami has enabled me to experience a side of Japan different than that of the country's bigger cities, providing unique opportunities to make authentic connections with the local community.

Another great aspect of JET, and a major motivation for choosing the prefecture Gunma, is the opportunity to be a part of a tight-knit community. Over the last few years I have volunteered with GAJET, the Gunma branch of the association of JET participants. The group regularly hosts regional and prefectural events, including ski trips and canyoning expeditions, along with events aimed at the local Japanese community. One of the largest is an annual charity event where items displaying the multifaceted talents of ALTs, such as artwork and even music lessons, are auctioned off, serving to build bridges by encouraging person-to-person interaction and to give back to the community.

Looking to the future, my experiences have impressed on me the close relationship Japan and New Zealand share, and I would like to give back to JET through involvement in the JET Alumni Association (JETAA), serving as a cultural ambassador between our two countries. I also enjoy my English educator role for the opportunities it provides to expand students' worlds, and on returning home or to my next overseas destination I would like to continue focusing on ESL teaching.

Kimberley Smith

Born in New Zealand. Arrived in Japan as a JET participant in 2012. Currently teaching at Tsukiyono Junior High School.

Smith demonstrates with the Japanese English teacher a new grammar structure to a first-year class. She combines cards and lively examples to keep the interest of students high.

1 2
3

1. Smith talks with students between classes.
2. A group photo with one of Smith's English classes. Students at Tsukiyono Junior High School attend classes at wearing tracksuits.
3. Smith and friends at a local festival.

The JET Programme official website
http://jetprogramme.org/en/

Websites

Official Websites of the Government and Related Organizations

The following websites offer information from various ministries, information for tourists, and other information relating to the contents of this magazine.

Prime Minister of Japan and His Cabinet

Cabinet Public Relations Office, Cabinet Secretariat

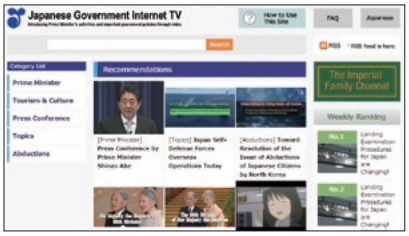
Information in English about Japanese government policies, speeches and statements by the prime minister, and press conferences by the chief cabinet secretary.

WEB http://japan.kantei.go.jp

https://www.facebook.com/Japan.PMO

https://twitter.com/JPN_PMO

Japanese Government Internet TV



Public Relations Office, Cabinet Office

Videos from the Japanese government relating to the prime minister, press conferences by the chief cabinet secretary, videos of the imperial family, and more.

WEB http://nettv.gov-online.go.jp/eng/

Ministry of Foreign Affairs of Japan

Ministry of Foreign Affairs

Information from Japan's Ministry of Foreign Affairs, with links to embassies and consulates overseas.

WEB http://www.mofa.go.jp

https://www.facebook.com/Mofa.Japan.en

https://twitter.com/MofaJapan_en

JNTO (Japan National Tourism Organization)

pp. 6-7

Japan National Tourism Organization (JNTO)

Information about tourism in Japan, including videos and photos. In English and many other languages, including Chinese, Korean, French, and German.

WEB http://www.jnto.go.jp/

http://www.jnto.go.jp/eng/fb/index.html

(US)
https://twitter.com/Visit_Japan

JETRO (Japan External Trade Organization)

Japan External Trade Organization (JETRO)

Information about how JETRO supports Japanese companies overseas, attracts foreign companies to the Japanese market, contributes to Japan's trade policy and conducts activities in developing countries.

WEB http://www.jetro.go.jp/en/

JET (Japan Exchange and Teaching) Programme

pp. 30-31

Council of Local Authorities for International Relations (CLAIR)

Information about the Japan Exchange and Teaching Programme.

WEB http://jetprogramme.org/en/

https://www.facebook.com/pages/JET-Programme/219440938121634

(US)
https://twitter.com/JETProgram

Publications

Official Publications from the Government and Related Organizations

The government of Japan and various organizations publish the following periodicals.

Cabinet Office

"Highlighting JAPAN"

Aimed at people in other countries, this regular publication introduces the latest major government policies.

http://www.gov-online.go.jp/eng/publicity/book/hlj/index.html

E-BOOK PDF HTML

Monthly

Ministry of Foreign Affairs

"niponica"

Using beautiful photographs, this journal illustrates the appeal of present-day Japan.

http://web-japan.org/niponica/index_en.html

E-BOOK PDF HTML

Three times a year

Ministry of Economy, Trade and Industry

"METI Journal"

Explains policies being instituted by the Ministry of Economy, Trade, and Industry (METI) in an easy-to-understand manner.

http://www.meti.go.jp/english/publications/index.html

PDF

Bimonthly

Japan National Tourism Organization

"Monthly Web Magazine"

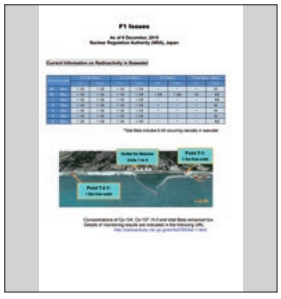
Each issue provides seasonal and updated information on three select features.

http://japan-magazine.jnto.go.jp/en/

HTML

Monthly

Nuclear Regulation Authority



"F1 Issues Fukushima Daiichi NPS's Issues"

This releases information about the Fukushima Daiichi Nuclear Power Station, such as details about the monitoring of seawater since the accident caused by the Great East Japan Earthquake and subsequent tsunami.

http://www.nsr.go.jp/english/

PDF

About once a week

Ministry of Defense

"Japan Defense Focus"

A monthly magazine that introduces various activities of the Ministry of Defense and Self-Defense Forces.

http://www.mod.go.jp/e/jdf/index.html#sub01

PDF HTML

Monthly

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Links to the websites of ministries

Cabinet Office http://www.cao.go.jp/index-e.html
Ministry of Agriculture, Forestry and Fisheries http://www.maff.go.jp/e/
Ministry of Defense http://www.mod.go.jp/e/
Ministry of Economy, Trade and Industry http://www.meti.go.jp/english/
Ministry of Education, Culture, Sports, Science and Technology http://www.mext.go.jp/english/
Ministry of the Environment http://www.env.go.jp/en/
Ministry of Finance https://www.mof.go.jp/english/index.htm
Ministry of Foreign Affairs http://www.mofa.go.jp
Ministry of Health, Labour and Welfare http://www.mhlw.go.jp/english/
Ministry of Internal Affairs and Communications http://www.soumu.go.jp/english/index.html
Ministry of Justice http://www.moj.go.jp/ENGLISH/index.html
Ministry of Land, Infrastructure, Transport and Tourism https://www.mlit.go.jp/en/
Reconstruction Agency http://www.reconstruction.go.jp/english/
Nuclear Regulation Authority http://www.nsr.go.jp/english/

The Government of Japan

JapanGov website

JapanGov app

WEB http://www.japan.go.jp

www.facebook.com/JapanGov

https://twitter.com/JapanGov
https://twitter.com/Japan

JapanGov

You can download the JapanGov app from the following stores.

iOS https://itunes.apple.com/app/japangov-official-gateway/id893574708?mt=8

Android https://play.google.com/store/apps/details?id=jp.go.japan.japanapp

Kindle http://www.amazon.com/The-Government-of-Japan-JapanGov/dp/B00LEAM0I0

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http://www.japan.go.jp/tomodachi

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