



We are committed to the SDGs!

Sustainability Report 2021

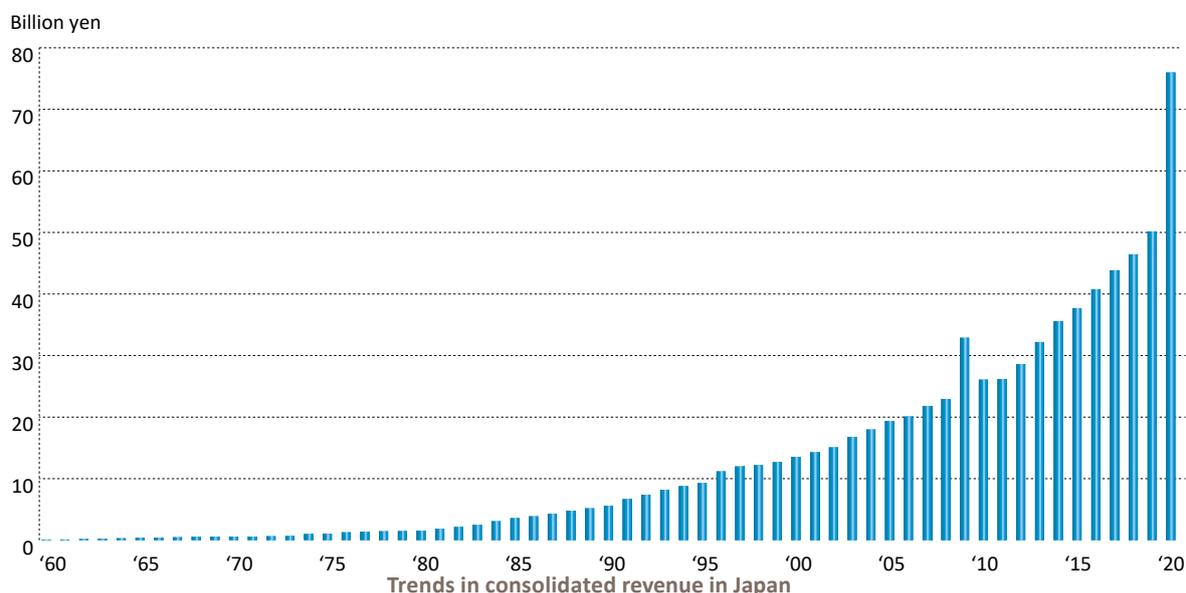
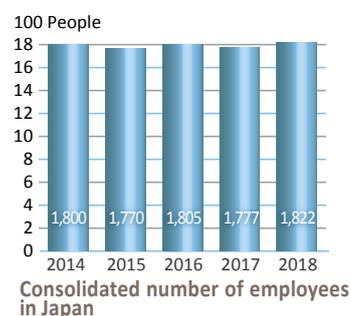
SARAYA Company Information

| | | Saraya Co., Ltd. | Tokyo Saraya Co., Ltd. | Smile Sangyo Co., Ltd. |
|---------------------------------------|------------------------------|--|---|---|
| Headquarters | | 2-2-8 Yuzato, Higashisumiyoshi-ku, Osaka Japan 546-0013 | 1-25-8 Higashishinagawa, Shinagawa-ku, Tokyo Japan 140-0002 | 24-12 Tamate-cho, Kashiwara-shi Osaka Japan 582-0028 |
| Telephone | | +81-6-6797-3111 | +81-3-5461-8101 | +81-72-978-7800 |
| President and Representative Director | | Yusuke Saraya | Syuji Saraya | Ryuji Saraya |
| Year of establishment | | 1952 | 1969 | 1983 |
| Capital | | 45 million yen | 60 million yen | 30 million yen |
| Number of employees | | 1,288 | 406 | 62 |
| Business summary | | <ul style="list-style-type: none"> Development, manufacturing and sales of health and hygiene products and services. Consultation for food and environmental sanitation. Development, manufacturing and sales of food products. | | Manufacturing plastic bottles, operating business sites |
| Business sites | Headquarters | Osaka | Tokyo | Osaka |
| | Research lab | Osaka, Guilin(China) | — | — |
| | Manufacturing sites | Osaka, Iga (Mie), Chonburi (Thailand), Dongguan (China), Selangor (Malaysia) | — | Osaka |
| | Main service office in Japan | 23 cities | 23 cities | 1 site |
| | Overseas bases | Manufacturing 6 sites, sales 23 sites | — | — |



International Organization for Standardization Certification

| Management System | Certified Organization (Certified Dept.) | Date |
|-------------------|---|----------------------|
| ISO 9002 | Saraya Co., Ltd. | 13 Dec. 1999 |
| | Smile Sangyo Co., Ltd. | |
| ISO 14001 | Saraya Co., Ltd. Tokyo Saraya Co., Ltd. Smile Sangyo Co., Ltd. | 26 Nov. 2001 |
| | Saraya Co., Ltd. Tokyo Saraya Co., Ltd. Smile Sangyo Co., Ltd. | 13 Dec. 2002 |
| | Saraya (Dongguan) Hygiene Products Co., Ltd. | 1 Nov. 2005 |
| ISO 9001 | Saraya MFG. (Thailand) Co., Ltd. | 7 Jul. 2006 |
| | Saraya Co., Ltd. (Head office, Development dept. Research Lab, Osaka fac., Iga fac.) | In part 22 Dec. 2006 |
| ISO13485 | Saraya MFG. (Thailand) Co., Ltd | Whole 26 Dec. 2008 |
| ISO 22000 | Saraya Co., Ltd. Tokyo Saraya Co., Ltd. (Food Sanitation Instructor, Food Sanitation H.Q. etc.) | In part 8 Dec. 2008 |
| ISO 9001 | Saraya Manufacturing (U) Ltd. | Whole 20 Feb. 2019 |



Foreword

“We are determined to take the bold and transformative steps which are urgently needed to shift the world on to a sustainable and resilient path.” This is quoted from “Transforming our world: the Agenda for Sustainable Development”. Saraya invented and supplied hand disinfectant liquid soap and its dispenser, and promoted hand hygiene at many workplaces, schools and public facilities in post WW II Japan when sanitation systems were still poor and hygiene practices were insufficient – the same issues that many developing countries such as Sub-Saharan Africa are still facing today.

In Target 3.1 through to Target 3.3 of SDG 3, it is believed that hand hygiene is the single most important means of preventing infection, and a fundamental element of good infection control. Saraya has vast knowledge, experience and resources with respect to infection prevention and control, and has been utilizing them to promote hand hygiene through business activity and corporate social responsibility in the East African region. This applies especially to Uganda where its work started.

This report covers twelve of the SDGs to explain Saraya’s sustainable product development, activities for preserving biodiversity, and the business contribution to improving and controlling global sanitation and hygiene for all stakeholders. This also contains Saraya’s legacy, together with the latest information and statistics (as of Oct. 2019) in order to provide a clear insight into how Saraya proceeds towards sustainability.

Any questions and queries are welcome, and you can contact us by email at <sustainability@saraya.com>.

Editorial policy

Guidelines used for reference

The Japanese Ministry of the Environment’s Environmental Reporting Guidelines 2012
GRI (Global Reporting Initiative)
“The GRI Standards”

Reporting period

The report mainly covers achievements in the 2020 fiscal year (1 November 2019 to 31 October 2020), but also includes some activities outside of this period.

Reporting scope

(Environmental Management System)
Saraya Co., Ltd.
Tokyo Saraya Co., Ltd.
Smile Sangyo Co., Ltd.
Saraya MFG. (Thailand) Co., Ltd
Saraya (Dongguan) Hygiene Products Co., Ltd

Month of issue

April 2021 (the next report is to be issued in March 2022)

Website

<https://saraya.world/images/sections/sustainability/SustainabilityReport2021.pdf>

Sustainability Report 2021

We are committed to the SDGs!

Publication: Saraya Co., Ltd.
Concept, content: Atsuko Takahashi
design: Atsuko Takahashi
Translation: Yukiko Maguire-Morioka
Text editing: Dr. Anthony Buglass
Date of issue: March 2021
Contact: 2-2-8 Yuzato, Higashisumiyoshi-ku
Osaka 546-0013 Japan
sustainability@saraya.com

Index

| | |
|---|-----|
| SARAYA Company Information | IFC |
| Editorial Policy | 1 |
| The SDGs of SARAYA in COVID-19 | 2 |
| The SDGs and the Lancet Countdown | 4 |
| SDG 3 : Good Health and Well being | 5 |
| Helping mothers and children in East Africa..... | 5 |
| Epidemics and SARAYA | 6 |
| COVID-19 Pandemic and SARAYA | 8 |
| SARAYA’s Donations in Response to the COVID-19 Pandemic | 10 |
| SDG 5 : Gender Equality | 11 |
| Promoting Women’s Empowerment | 11 |
| SDG 6 : Clean Water and Sanitation | 12 |
| Nature-based Solutions | 12 |
| SDG 8 : Decent Work and Economic Growth | 14 |
| Work Life Balance | 14 |
| SDG 9 : Industry, Innovation and Infrastructure..... | 15 |
| Establish Cold Chains in Cambodia and Eastern Africa..... | 15 |
| SDG 10 : Reduced Inequalities | 16 |
| Diversity..... | 16 |
| SDG 12 : Responsible Consumption and Production..... | 17 |
| Palm Oil Supply Chain | 17 |
| Sustainable Procurement..... | 19 |
| SDG 13 : Climate Action | 20 |
| Environmental Management System | 20 |
| Greenhouse Gas | 20 |
| Carbon-neutral | 21 |
| SDG 14 : Life Below Water | 22 |
| Saraya and ZERI Japan..... | 22 |
| Commitment to making a difference for generations..... | 24 |
| SDG 15 : Life on Land | 25 |
| Biodiversity in Sabah Malaysia | 25 |
| Kinabatangan Green Corridor..... | 26 |
| Desert Greening Project in Egypt..... | 27 |
| SDG 16 : Peace, Justice and Strong Institutions | 28 |
| Governance | 28 |
| SDG 17 : Partnerships for the Goals | 29 |
| Infection Control Training | 29 |

SDG 3

SDG 5

SDG 6

SDG 8

SDG 9

SDG 10

SDG 12

SDG 13

SDG 14

SDG 15

SDG 16

SDG 17

SDGs of SARAYA in COVID-19

Connect Through Life
SARAYA



2020 was a special year for the world: COVID-19 made destructive changes in society and business. The changes are taking place very fast, and we need to make a huge effort to control the situation, even as they continue into 2021. In the face of such changes, SARAYA seeks to make more commitments on SDGs in Sanitation, Health and Environment around the world, with the belief that we are “The Citizens of the Globe and its Community”. We are therefore focusing even more on the sustainability of our projects, both at global and community levels, to bring them into harmony.

(1) COVID-19 and our efforts

COVID-19 has affected countries all over the world. All global SARAYA locations have made significant efforts in supplying ABHR (Alcohol Based Hand Rub) for hand disinfection, dispensers, PPE, and other products to prevent COVID-19. We have been acting with urgency, and worked hard to keep up with supply and demand. In addition, in those countries and local governments where people cannot afford enough hand disinfectants, we made many donations, as shown in the charts of page 10. We wish to apply the SDGs in such a way that “We pledge that no one will be left behind” – but our best efforts are still small relative to the great need.

SARAYA set up a joint venture company “SARAYA Mystair India” in 2019. With respect to India, and with the hope that we can contribute to India through our business activities, I would like to quote the story of the Dancing Shiva. In India, they say when Lord Shiva dances, the world is destroyed, and then Lord Vishnu creates a new world out of the destruction. In this way, destruction and creation are two sides of the same coin. After the destruction by

COVID-19, we must therefore have hope for the future, and fulfil our mission to restore the world. Like Ganesha, the Hindu god of wisdom, we wish to restore and develop the world with a cheerful and positive attitude.

(2) Production in the world against the background of COVID-19

The COVID-19 epidemic broke out in Wuhan, China at the end of 2019, and quickly spread around the world, creating a huge demand for ABHR. The challenge for us has been to supply products with enough liquids, bottles and pumps. In Japan, the Kanto factory of SARAYA Japan in Ibaraki Prefecture was inaugurated on 4 March 2020, and played a big part in responding to this increased demand.

Our factories in the USA, France, Poland, China, and Malaysia also worked hard to match the increased demand for ABHR. In particular, our Ugandan factory had to cope with 20 times the usual demand. In addition, 100 new competitor companies were quickly registered in the country, making for a tough competitive environment. In the end, despite the competition, we successfully delivered good evidence-based products to the market in Uganda and Kenya. We plan to open a similar factory in Egypt in November 2021. We continue to look for local production around the world to supply ABHR quickly and locally.

(3) Standard precaution and UHC (Universal health Coverage)

For infection prevention, there are “Standard Precautionary” measures that apply to any infection. This starts with hand hygiene, then the use of masks, gloves, and gowns, etc., called PPE (personal protective equipment). COVID-19 has clearly shown that having an adequate supply of these items is essential for the prevention of infectious diseases. In addition to vaccines, UHC (Universal Health Coverage) should be ensured so that everyone has access to such standard precautionary equipment. The UHC objectives are mainly fulfilled in the developed countries. Now SARAYA will



A bronze sculpture of Shiva as Lord of the Dance



Borneo Conservation Trust (cf. p.26)

focus on supplying these products to southern Africa, west Africa, and south America.

(4) Therapeutic lotion for infections with Jigger

We established local subsidiaries to operate our business in Uganda in 2010, and in Kenya in 2016, with the aim of improving hygiene with hand disinfection and hand washing in east Africa. During the marketing activities, we discovered that jigger is a serious problem in local communities. We therefore responded by developing a therapeutic lotion to treat jigger (tunga penetrans) infections in 2020, and plan to start marketing the lotion in 2021.

(5) Climate Emergency Declaration and biogas production

We partnered with Dr. Ryoichi Yamamoto, Professor Emeritus of the University of Tokyo, to launch a network of local governments and corporations to respond and cooperate in the fight against global warming. With this initiative, we intend to raise awareness on climate emergencies, and take action on greenhouse gas reduction among communities, local governments, businesses and citizens nationwide, promoting innovation in the field of clean and renewable energy.

In the UK, Herriard Bio Power Ltd., a subsidiary of SARAYA and KSN, uses food waste and agricultural waste to make methane, for the generation of electricity and renewable power. We plan to launch similar projects in communities with Japan. (cf. p.21)

(6) Plastic pollution in the ocean

We are working with Blue Odyssey, and their boat “Porrima”, to launch a global campaign for the promotion of SDGs and the reduction of carbon emissions through innovative technology once the COVID-19 crisis is under control.

(7) SDGs in SARAYA’s Initiatives

We are tackling global issues such as:

- ① Global warming and climate change,
- ② Declining biodiversity,
- ③ Resource depletion and sustainable use of global resources,
- ④ Plastic pollution in the oceans,
- ⑤ Widening gap between the rich and the poor

In response to COVID-19, national barriers are now being raised higher nationalism becoming rampant in some countries. We should overcome such issues by harnessing a network of stakeholders, and improve the situation quickly and as much as possible.

For this reason, I believe that SARAYA’s mission of “Improving the sanitation, the environment, and health of the world” will be realized effectively through the SDGs format. Therefore, we will continue to cooperate with our customers, suppliers, world organizations, governments, local governments, NGOs, NPOs, and other organizations, in order to achieve such goals according to the SDGs mission.



SARAYA's ABHR and auto-dispensers



Tungiasis caused by infection with the female ectoparasite Tunga penetrans (jigger)



The inaugural meeting of Climate Emergency Network (cf. p.21)



In April 2020 RKE Bio Groupe UK started to operate the Herriard Bio Power Anaerobic Digestion Facility.



MS. Porrima will start "Blue Odyssey" for the campaign "Stop the plastic pollution in the ocean".

President and CEO Saraya Co., Ltd.
Yusuke Shiro Saraya



The SDGs and the Lancet Countdown

The SDGs are integrated and indivisible

On the 2030 Agenda for Sustainable Development: “They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.”

The three aspects - economic, social and environmental - are interconnected in each of the SDG goals. If we can reduce the mortality rate of children in developing countries by promoting sanitation, it will alleviate female fertility, and thus reduce poverty, promote education and women’s participation in society, reducing population growth in developing countries while helping to lower environmental impacts.

Protecting wildlife habitats by preserving and restoring natural forests is also a way to combat climate change. And the following “Lancet Health and Climate Change Countdown” report details how climate change will damage human health and cause economic losses.

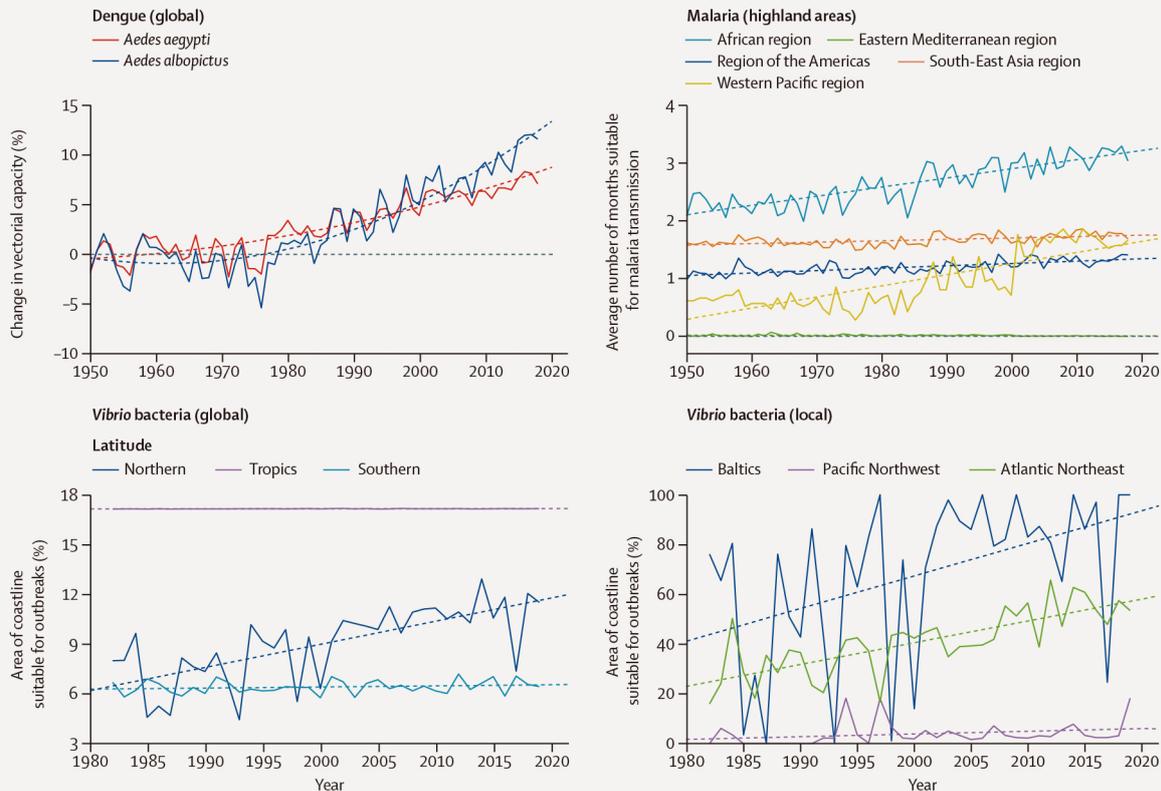
The Lancet Health and Climate Change Countdown

Led by the leading medical journal, the Lancet, the “Lancet Countdown on Health and Climate Change: responding to converging crisis” report, published on December 2, 2020, showed that disease transmission increased globally for all diseases tracked.

This research project, made in collaboration with the World Health Organization (WHO) and 35 international organizations to analyze the link between health and climate change, launched in 2015 and report annually on the progress of policy recommendations made by the Lancet Commission on Health and Climate Change until 2030.

The Lancet Countdown on health and climate change 2020:

Children are among the most susceptible to diarrhoeal disease, and experience the most severe effects of dengue fever. Trends in climate suitability for disease transmission are particularly concerning, with nine of the ten most suitable years for the transmission of dengue fever on record occurring since 2000.



Change in climate suitability for infectious diseases
Solid lines represent the annual change. Dashed lines represent the trend since 1950 (for dengue and malaria) and 1982 (for Vibrio bacteria).



Good Health and Well-Being

Helping mothers and children in East Africa

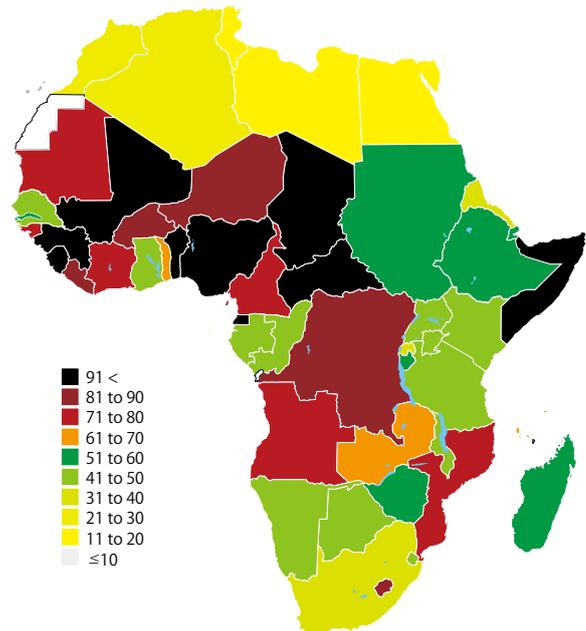
UNICEF Project - One Million Hand Washing Project

The map of the African continent on the right, color-coded by deaths per 1,000 children under the age of five in 2019, shows that sub-Saharan Africa is estimated to have 2.87 million deaths, accounting for 55.3 percent of the global total. Since 2010, Saraya has donated a percentage of sales of its leading brand hand-hygiene products to support the Japan Committee for UNICEF's efforts to educate and promote proper hand washing with soap among children and mothers in Uganda. With Saraya's support, UNICEF is promoting its activities, such as the installation of hand washing facilities in schools in Uganda and hand washing awareness. (Details: <https://tearai.jp/>)

Uganda Government & Private Sector Partnership Projects

The Ugandan Government launched a new policy to improve the reproductive health service. The "Strengthening Quality of Care for Sexual and Reproductive Health Services through Public Private Partnerships in Uganda (SARAYA safe motherhood project)", organized by the Japan Trust Fund (hereinafter referred to as JTFP) and supported by the International Planned Parenthood Federation, started in June 2018 with the participation of the governments of Uganda and Japan, SARAYA, Reproductive Health Uganda (RHU: Ugandan members of IPPF, NGO) and other NGOs such as JOICF etc. The funding was provided by JTF (75%) and SARAYA (25%).

As a part of this project, an infection control and prevention initiative started at district clinics in Gulu, Lira, Apac and Luwero, on the outskirts of Uganda's capital city Kampala. SARAYA Manufacturing (U) Ltd. and SARAYA Co. Ltd. are participating in this project. The launch event was held on 24 August 2019, welcoming the guest speakers: Hon. Dr. Sarah Opendi the Minister of Health of the Republic of Uganda, the Ambassador H.E. Kazuaki Kamada of the Japanese embassy in Uganda, Professor Didier Pittet, and representatives of RHU. Mr. Takeo Hojo of Saraya Manufacturing (U) Ltd., also spoke of the challenges faced in Uganda by Uganda's healthcare environments and Saraya. Professor Didier Pittet gave a speech about the widespread nosocomial infection issues around the world, and the effectiveness of hand hygiene using alcohol-based disinfectants to solve those issues.



Children in sub-Saharan Africa face higher risks of dying before their fifth birthday under-five mortality rate (deaths per 1,000 live births) by country, 2019

Estimates of child mortality in East African Community 2019

| Country | Under-five | | | | Infant | | | |
|--------------------|---|------|------------------------------|-------|---|------|------------------------------|-------|
| | Mortality rate (deaths per 1,000 live births) | | Number of deaths (thousands) | | Mortality rate (deaths per 1,000 live births) | | Number of deaths (thousands) | |
| | 1990 | 2019 | 1990 | 2019 | 1990 | 2019 | 1990 | 2019 |
| Burundi | 174 | 56 | 46 | 24 | 105 | 40 | 28 | 17 |
| Kenya | 101 | 43 | 100 | 64 | 65 | 32 | 64 | 47 |
| Rwanda | 150 | 34 | 48 | 13 | 92 | 26 | 29 | 10 |
| South Sudan | 250 | 96 | 62 | 37 | 148 | 62 | 37 | 24 |
| Uganda | 182 | 46 | 148 | 74 | 107 | 33 | 89 | 54 |
| UN Rep of Tanzania | 165 | 50 | 175 | 103 | 100 | 36 | 108 | 75 |
| Sub-Saharan Africa | 180 | 76 | 3,857 | 2,869 | 108 | 52 | 2,259 | 1,907 |
| Japan | 6 | 2 | 8 | 2 | 5 | 2 | 3 | 1 |
| World | 93 | 38 | 12,494 | 5,189 | 65 | 28 | 8,715 | 3,904 |

(Levels & Trends in Child Mortality Report 2020, UNICEF)



The launch event of JTF project (SARAYA safe motherhood project)

* JOICFP is the abbreviation of Japanese Organization for International Cooperation in Family Planning. JOICFP's mission is to create a society in which women and girls can make their own choices regarding their sexual reproductive health and rights, thereby realizing their potential to the fullest. Ultimately, JOICFP aims to contribute to the achievement of the Sustainable Development Goals (SDGs)

Epidemics and Saraya

The dysentery epidemic in 1952

People in Japan were often suffering from outbreaks of dysentery and food poisoning in 1951 after WWII. There were over 111,000 patients at the peak of the dysentery epidemic in 1952. Back then, solid soaps (bar soaps) were widely available in the market, but liquid soaps were not yet sold in Japan.

In April 1952, Saraya introduced liquid soap with a disinfectant effect, along with a dispenser. As the product was such an innovative and effective approach to improving hand hygiene, it gained people's trust, and gradually spread to the factories of leading industries such as the pulp & paper and iron & steel sectors, as well as schools and public offices. In November of the same year, the new regulations from the Japanese Ministry of Health for compulsory hand washing and disinfection at food processing facilities came into force. Saraya has been developing ever since as one of the leading companies in the field of public and food hygiene.

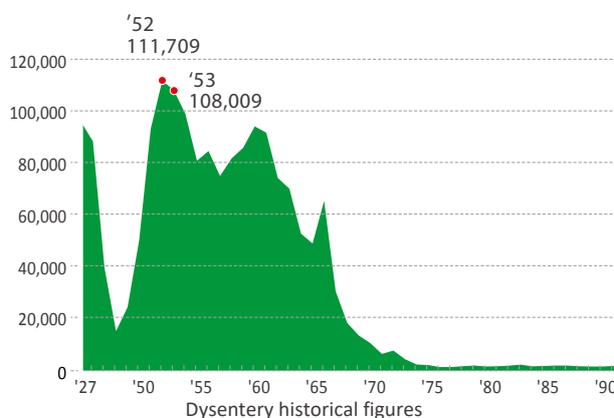
MRSA - Methicillin-resistant *Staphylococcus aureus*

The "Hand Sanitor S" was the very first alcohol-based hand rub (ABHR) product Saraya introduced to Japan. Saraya has been researching and developing alcohol-based hand rub (ABHD) ever since. Before 1976, MRSA (Methicillin-resistant *Staphylococcus aureus*) had never been isolated in any Japanese healthcare facilities, but by 1987, MRSA was isolated from over 58% of patients. In 1996, prevention and control measures for nosocomial MRSA infection, such as the application of alcohol-based hand rub, finally received medical funding from the government.

The number of MRSA patients in Japan reached 118,539 by 2013. Meanwhile, "Hibiscohol" (ABHD), which was first introduced in 1986 at the time of the MRSA outbreak in Japan, has become one of our leading products as a prevention and infection control measure. In 1995, Saraya acquired Best Sanitizers, Inc. A joint venture company was set up, and "Alsoft A", which has the same formulation as Hibiscohol was then introduced to the American market through Best Sanitizers. We launched our new product line called "Viro Stera" in 2010, which has proven effective against a wide range of microorganisms, including non-enveloped viruses such as Norovirus, as well as ordinary fungi. It is now being produced and sold by Saraya Manufacturing (U) Ltd. in Uganda as Alsoft V.



Push type dispensers (1952)



Source: The Survey of the Sanitary Conditions in Japan (1993)

Ebola hemorrhagic fever

In 2011, Saraya Uganda was established in the Ugandan capital Kampala, and first introduced Saraya's ABHR, Hibiscol SH, on a trial basis to Gombe and Entebbe District Hospitals through JICA's (Japan International Cooperation Agency) BOP Business Collaboration Promotion Program. At Gombe Hospital, a hand sanitizer compliance project was carried out under the guidance of Dr. Lele Haruna, the director of the hospital at the time. At first, it was difficult to increase the compliance rate, but when the rate increased to 70%, the first month of zero diarrheal illnesses among pediatric patients and post-cesarean section sepsis was recorded, as shown in the graph below.

In July 2012, Ebola hemorrhagic fever broke out in Kibale province in western Uganda, and Oriental province in eastern Democratic Republic of the Congo. Mr. Kazumasa Miyamoto, then head of SARAYA Uganda, offered to provide countermeasures for the Ugandan Ministry of Health through JICA. On 1 August, 100 1L bottles of Hibiscohol SH, and 600 40ml bottles of Sarayan gel, both hand sanitizers, were shipped from Japan and distributed to medical facilities in Kibale district. This infectious disease had killed 16 residents of the province, but had been successfully contained.

On 21 February, 2013, the “East Africa Infection Control Conference 2013” was held in Kampala, the capital city of Uganda, organized by Saraya Uganda, in cooperation with the Ugandan Ministry of Health, and with the support of JICA Uganda Office, and Saraya. Dr. Lule Haruna’s presentation on hand hygiene at Gombe Hospital, in the Pediatrics and Obstetrics and Gynecology Department was a highlight of the conference.

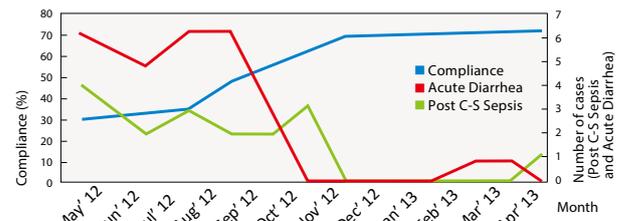
2014 Marburg Fever

In February 2014, the current Saraya Manufacturing (U) Ltd. (hereafter SMU) was established on the site of Kakira Sugar (a major Ugandan sugar manufacturer). SMU manufactures a hand sanitizer called Alsoft V using ethanol made from molasses, which is a waste product of sugar refining. Alsoft V has the same formulation as the Viro Stera series sold in Japan.

In Uganda, NMS (National Medical Store), the only pharmaceutical wholesaler in the country, supplies medicines and medical supplies to all public health facilities in the country, and the NMS tender is the only route to disseminate them to the public health facilities.

After years of not even getting a chance to tender, Hojo (Global Operations) petitioned President Museveni in person when he visited Japan in 2015, and the President himself sent a letter of intent to NMS to procure ABHR made in Uganda. There is a well-established rule that if there is a difference of 10% or less in the bidding process, priority is given to domestically-made products. There was no other product made in Uganda except Alsoft V, and the price difference was within 10%. However, when the bid opening finally took place two months later, an imported product from a competing supplier (made in China) was selected. Finally, on 31 July 2017, Alsoft V 50ml won the NMS bid.

Forty-four days later, on 13 September, a man in Uganda was brought to Kapchorwa Hospital (photo right), and he was presumed to be the first case of Marburg fever (hemorrhagic fever) after contracting the Marburg virus. Marburg fever is a very dangerous infectious disease with an average fatality rate of 50%. However, the outbreak ended without spreading, and the Ugandan Ministry of Health declared the end of the outbreak on 11 December . As shown in the photo, “Alsoft V 50ml” was also used for infection control, and the Kapchorwa Hospital and the Ugandan Ministry of Health successfully controlled the spread of this dangerous disease.



Comparison of hand hygiene compliance rate and reported disease occurrence in Gombe Hospital



Saraya Manufacturing Co., Ltd.



A nurse in Gombe Hospital

2018 Ebola hemorrhagic fever

In May 2018, Ebola hemorrhagic fever broke out in the Democratic Republic of the Congo, and in August, several people who traveled from Congo were infected in Uganda. However, due to the infection prevention measures taken by the Ugandan Ministry of Health, the disease has not spread in Uganda. SMU received large orders from UN agencies such as WHO, international NGOs, and trading companies serving the Congo, and met the demand for Alsoft V and auto dispensers. SMU has also increased the number of employees, and has started to increase production of Alsoft V.

According to the WHO website on Ebola in the Democratic Republic of the Congo, as of 3 July 2020, a total of 3,481 cases (including strongly suspected cases) have been diagnosed, and a total of 2,299 people have died. The fatality rate has reached 66%.



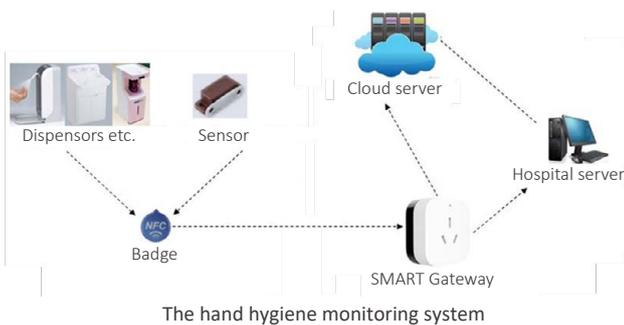
COVID-19 Pandemic and SARAYA

SARAYA offices in China

In 2003, SARAYA established the Dongguan factory (Saraya Hygiene Products Co., Ltd.) to manufacture equipment, and in September 2008, it was renamed Saraya (Dongguan) Hygiene Products Co., Ltd. (hereinafter called Saraya Dongguan).

In Xinhua, 2014, SARAYA signed a joint venture agreement with “Shandong Shinva Medical Instrument Co. Ltd.” (hereafter referred to as “Shinva Saraya”). Shinva Saraya manufactures and sells high quality disinfectants in China by providing technology from its Iga plant in Japan.

On 24 October 2019, we established the Saraya Dongguan Shenzhen Research and Development Center, a division of Saraya Dongguan, a base for research and development of global products using IoT and AI. The center is developing hand hygiene monitoring systems and other products.



After the outbreak of COVID-19 – Saraya China offices

Shinva Saraya, a Sino-Japanese joint venture company producing ABHR, received an enormous number of orders in one week, equivalent to a normal year’s worth of orders, and gave up the Chinese New Year vacations to accommodate emergency shipments and operate at full capacity 24 hours a day. The development department was also mo-



On 3 April 2019 (Saraya’s anniversary), the opening ceremony was held for the Steriace factory (on the left), and the Saraya Dongguan satellite factory (on the right). Behind this is Xinhua Saraya’s alcohol disinfectant manufacturing plant (a separate building). Xinhua Medical is on the left side.

bilized to handle the three-fold increase in logistics. On 31 January of the same year, at the request of Shinva Medical and its parent company, we donated Shinva Saraya’s ABHR along with Shinva Medical’s medical equipment to various hospitals and temporary hospitals under construction in Wuhan. The government of Shandong Province and Zibo City also became aware of Shinva Medical and Shinva Saraya, and the deputy provincial governor and city secretary visited the companies to tour the operation, and encourage the staff.

Meanwhile, in Saraya Dongguan, during the lockdown in China, the government granted permission to operate the factory on 10 February 2020. However, the number of employees who gathered on the first day was about half of the normal workforce of 158, the others were unable to return from Hubei province due to the lockdown, or were stranded and unable to come to work due to quarantine measures on their return. If even one person develops COVID-19, a government shutdown order is issued. We have supplemented our workforce with personnel who did not use public transportation, and part-time students who also served as interns.



A shipment of Shinva Saraya’s ABHR and other products from Shinva Medical in Xinhua to Wuhan Huoshenshan Hospital which was under construction on 31 January 2020. All three trucks full of goods were donated to hospitals in Wuhan.

Saraya Headquarters

The sales department was busy dealing with complaints from customers about backlogged shipments, coordinating controlled shipments, correcting order data, and other administrative work. At the customer service center, the number of incoming inquiry volumes was so high that the lines were temporarily down. In the material procurement department, the otherwise ample stocks ran out after the increase in orders in February, and while the backlog of shipments continued to accumulate, administrative work for the processing of controlled items was required as overtime work continued until late at night every day.

In addition, we had to respond to the rapid increase in orders by increasing the production of pumps, containers, raw materials, and other items in the overall supply chain, and we had to make adjustments on a daily basis, while assessing and checking the status of all incoming materials, sales orders, and factory production. The rest of the back-office department implemented a work schedule that included going straight home, working out of home, and flex working hours. The public relations department conducted more than 50 media interviews, including those providing information on proper hand washing and hand sanitizing methods. We also distributed masks and disinfectants to our employees to protect them from COVID-19.

Japanese Government Procurement

On 16 April 2020, the “2nd Roundtable Meeting with Companies Contributing to Increased Production of Medical Protective Equipment” was held by teleconference with then Prime Minister Abe and other cabinet members, and President Yusuke Saraya participated in the meeting from his office in Osaka via remote connection to the Prime Minister’s office.

We received a request from the government to increase our production, and we promised to deliver 1.7 million liters in May (6 to 7 times more than in the same month the preceding year). Japanese government procurement was purchased at a fair price, and that they would purchase any inventory for the nation’s reserves.

Uganda

As of 19 March 2020, SMU, SARAYA’s Ugandan subsidiary, has already quadrupled its orders for Alsoft V made in Uganda to counter the COVID-19 pandemic, and has doubled its production capacity in two shifts.

New Vision, one of the two major Ugandan newspapers, published an article in its 17 March issue. The article reported that although only two disinfectants (one made by SMU) are approved by UNBS (Uganda National Bureau of Standards), a Ugandan government agency, there are many counterfeit products on the market; that SMU is considering hiring extra staff; and that the disinfectants are being shipped on a first come first served basis. (Interview with SMU representative, Hojo); the article also mentioned that a medical supplies agency, Laborex Uganda, placed an order for 8,000 liters of Alsoft V, but after realizing that they would run out of stock in February due to the immense demand, changed the order to 10,000 liters instead (interview with their sales representative); before the outbreak of COVID-19, 20 cases of Alsoft V1L bottles were normally sold in the market every

day, but they were then selling at a rate of 200 cases a day, and had already run out of stock (according to a top medical store sales representative).

The Ugandan government had formerly imposed a luxury tax on alcoholic hand sanitizers, but they abolished this in the wake of the COVID-19 pandemic.

Other Overseas Branches

In terms of alcohol hand sanitizer production, Best Sanitizers, the U.S. production base, produced 950 tons in January-May 2020, 330% up on the same period the previous year; Malaysia-based Goodmaid, Co., Ltd. produced 247 tons, 900% up on the same period the previous year; and Saraya Korea, 43,000 liters in February-May 2020, 360% up on the same period the previous year, with food and other alcohol products production also up by 200%.

SARAYA manufacturing bases in Japan

At the Iga plant, the two-shift system was replaced by a three-shift system on 25 February 2020, allowing for 24/7 production. The April production volume was 2.5 times that of a normal month. From 6 April to 31 May, 32 new employees started at Saraya’s Iga plant and engaged in production and shipping operations as part of their training. We are also increasing the number of foreign employees to increase production.

The Saraya Kanto Plant commenced operations on 28 February. It has a site area of about 57,000 m² and a building area of about 8,800 m², consisting of a steel-framed 3-storey building (production building), a steel-framed 2-storey building (administration and research building), and four other ancillary buildings. To productivity, 14 new graduates participated in production training at the Kanto Plant, as well as the Iga Plant, and 7 new graduates of procurement departments also started to work.



The Saraya Kanto plant

SARAYA's Donations in Response to the COVID-19 Pandemic

SARAYA donated ABHR (alcohol-based hand rub), auto dispensers for COVID-19 infection prevention, and other donations and scholarships in Japan. In addition, SARAYA donated ABHR in developing countries.

| Time | Municipalities, Universities, etc. | Donation to: | Amount (1,000 yen) |
|--|---|---|--------------------|
| May '20 | Osaka Prefecture | Osaka-fu Ikuikai Scholarship Foundation Yumemirai Scholarship, Special Scholarship | 50,000 |
| June '20 | | Osaka City: Children and Youth Services Child Poverty Prevention Project | 30,000 |
| June '20 | Tokyo Prefecture | Tokyo Metropolitan Government: Bureau of Social Welfare and Public Health, Tokyo Metropolitan Government Single Parent Family Support Program | 50,000 |
| June '20 | Hokkaido Pref. | Hokkaido Prefecture: Education promotion funds (Hokkaido Education Agency remote business promoting project) | 20,000 |
| June '20 | Fukuoka City | Fukuoka City: Support for the families affected by COVID-19 | 10,000 |
| July '20 | Kanagawa Pref. | Kanagawa Prefectural Board of Education (Kanagawa Manabiya Education Fund) | 20,000 |
| July '20 | Kumano City | Kumano City COVID-19 Countermeasures to Prevent the Spread of COVID-19 | 5,000 |
| June '20 | Osaka University | Osaka University Future Education Fund: Saraya Disaster Emergency Response Student Support Project | 20,000 |
| July '20 | Osaka University | Osaka University Institute of Microbiological Diseases | 5,000 |
| August '20 | Osaka University | Prof. Shigemitsu Akamatsu Scholarship | 1,000 |
| July '20 | Kagawa Education Institution of Nutrition | COVID-19 Emergency Relief Fund | 900 |
| August '20 | St.Marianna University of Medicine | Department of Infection Control/Infection Diseases Section | 5,000 |
| September '20 | Friends of WHO Japan | Saraya no one left behind Fund | 100,000 |
| Others as scholarship donations or joint research expenses | | | 60,500 |
| Total: 257.4 million yen equivalent | | | |

| Time | Donation to: | Donation Item | Units | Total (1,000yen) |
|----------------|--|--------------------|--------|------------------------------|
| May - July '20 | Tokyo Pref. Osaka Pref. 7 other prefectures & cities | Hibiscol SH (ABHR) | 19,500 | 106.6 million yen equivalent |
| July '20 | Funabashi City Yokohama City | Auto Dispenser | 936 | |
| End of May '20 | communities & schools in SARAYA head office neighborhood | Sanitizer 100mL | 20,630 | |

| Time | Donation to: | Donation Item | Bottles | |
|-----------|------------------|-------------------------------|---------|---------------------|
| March '21 | Mie Pref. etc. | Sarayan Gel SH hand sanitizer | 19,190 | Designated donation |
| | Kumano City etc. | | 1,000 | |
| | Nabari City etc. | | 2,000 | |
| | Iga City etc. | | 2,000 | |



Fight against Covid-19: The government of Madagascar receives a donation of hand sanitizer from the Japanese company Saraya-Joint press release, 11 March 2021 (<https://www.unicef.org/madagascar/en/press-releases/fight-against-covid-19-malagasy-government-receives-donation-hand-sanitizer-japanese>)

| | Country | Donating Organization | Bottles | |
|--|-----------------------------|-------------------------------|------------|---------|
| June '20 | State of Sabah, Malaysia | | 149,176 | |
| July '20 | Cambodia | | 163,200 | |
| October '20 | Kuala Lumpur City, Malaysia | UNICEF | 81,864 | |
| | | | Ethiopia | 270,758 |
| | | | Malawi | |
| | | | Madagascar | |
| | | | Comoro | |
| September '20 | Ukraine | | 183,180 | |
| | Thailand | | 31,320 | |
| | Brunei | | 161,280 | |
| | Cameroon | | 240,000 | |
| August '20 | Nigeria | Sarayan Gel SH hand sanitizer | 355,920 | |
| | Benin | | 67,050 | |
| | Congo (Republic of) | | 67,050 | |
| | Uzbekistan (Republic of) | | 97,560 | |
| March '21 | Ghana | | 19,040 | |
| January-February '21 | Sarawak, Malaysia | | 73,200 | |
| February '21 | Kuala Lumpur, Malaysia | | 24,400 | |
| March '21 | Sarawak, Malaysia | | 48,800 | |
| April '21 | Vietnam | UNICEF | 143,500 | |
| | | | Comoros | 81,540 |
| | | | Malawi | 40,050 |
| | | | Senegal | 203,920 |
| | Cameroon | | 203,920 | |
| (Not including donations from Shinva Saraya to Wuhan, etc.) Total: 554.4 million yen equivalent | | | | |



Thanks to UNICEF for the distribution of the gels provided by SARAYA, the leader in hygiene products (<https://twitter.com/AmbassadeurJPM/Status/1376057207960264705>)



Gender Equality

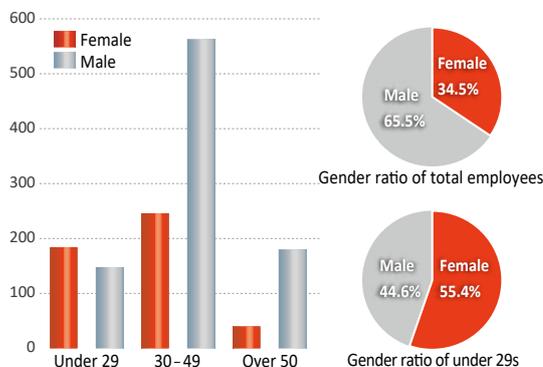
Promoting Women's Empowerment

Equal Opportunities and Treatment

At Saraya, there is no discrimination in hiring, promotion, salary, placement, education and training opportunities based on gender. There is also equal pay for men and women, and we strive to prevent any inherent discrimination. We hire and train people with high professionalism, morals, knowledge and other qualities and potential, regardless of gender.

In Japan, women account for a large percentage of Saraya's end users in the food hygiene and medical hygiene fields, and women also account for a large percentage of buyers at home, so we try to appoint as many women as possible, especially in the product development department, so that they can participate in design and decision-making.

The Sanitation Business Division launched the Food Sanitation Instructor System in 1989. This is Saraya's own system, in which the instructors visit stores and food production sites to check that detergents and disinfectants are being used in accordance with the manuals, and provide explanations and advice as needed, as well as food hygiene support. It is organized mainly by qualified women who are certified nutritionists with extensive knowledge of food and food hygiene. The Academic Department of the Medical Business Division has also been staffed by women with license for pharmacist since the beginning, and women are demonstrating their strengths in these professional positions. Both of these departments have recently been joined by men, who are also active in this field.



Saraya Co., Ltd. / Tokyo Saraya Co., Ltd. Permanent Employee Gender & Age Comparison Chart (as of Oct 2020)



"Osaka City Female Active Leadership Leading Company" Certificate logo (left), and Mr. Saraya delivered a speech at the ceremony, receiving the Best Award in 2015.

Give us more challenges and I believe we can do it!

Traditionally, women are expected to shine at home in their role as perfect wives as in: "Men make houses, women make homes". In modern times, the role of women in society has changed dramatically. More women have joined the labour force and become highly qualified.

At Saraya, there is no gender differentiation in our workforce. The job is given to the most suitable candidate. Have you ever seen a woman who is cooking, while watching her baby crawling on the floor, and talking to somebody on the phone? This is what you call "multi-tasking". Men, on the other hand, are good at doing one task at a time - this is how God created men and women, and blessed them with different skills. At Saraya, female managers can handle many tasks at a time, and be flexible. Literally, anything that can support the smooth running of the business, they will do it!

Women can also be more cautious than men when making financial decisions, and may refuse to take risks. This comes from their basic instinct at home when they have to look after

their family within the limited funds that their husbands bring home. In business, the rule: "No risk, no return" is also true. Men, naturally, are prepared to take risks. This is how God created them as the hunters. We also need the type of women who are prepared to take risks. I choose to take risks, but only "calculated risks", where I can afford the loss if I am wrong.

Give us more challenges and I believe we can do it!
Encouraging gender equality at work is to support the sustainable growth of our business, not only at Saraya, but also at any workplace environment.

Saraya Greentek Co. Ltd
Managing Director
Ms. Duong Linh Trang



Nature-based solutions (NbS) refers to the sustainable management and use of nature for tackling socio-environmental challenges. Our product concepts are “Nature-based Solutions”.

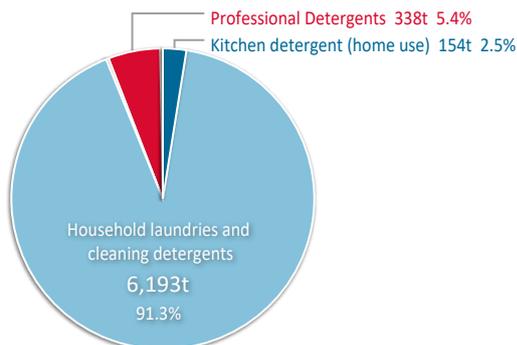
SARAYA household products are LAS free

Zinc and nonylphenyl ethers are known to have endocrine disrupting properties. In addition to these chemicals, the Japanese Ministry of the Environment added environmental standards in 2013 relating to water pollution caused by linear alkylbenzene sulfonate (LAS) to protect aquatic life. The Ministry of the Environment reported that aquatic organisms such as salmon and trout, which inhabit relatively low temperature freshwater habitats in Japan, can be impacted by LAS levels exceeding 0.03 mg/l, and that the environment for spawning localities should have LAS levels lower than 0.02 mg/l. The ministry also reported that saltwater aquatic organisms can be impacted by LAS levels exceeding 0.01 mg/l, and that LAS levels exceeding 0.006 mg/l could affect spawning grounds.

The Japanese Ministry of Economy Trade and Industry reports that 38,327 tons* of LAS were handled throughout Japan in FY 2018 (1 April to 31 March), with an estimated 32,134 tons of the surfactant going through sewage treatment, and 6,193 tons were released untreated into the environment household laundry and cleaning detergents accounted for 91.3% of this volume.

Saraya has never used LAS in its household products, and has started using novel sophorolipids in its flagship products, such as the Happy Elephant series of household detergents.

* Source: Japan Soap and Detergent Association and Japan Surfactant Industry Association



Amount of estimated LAS release to the environment in Japan in FY 2018

Acecide

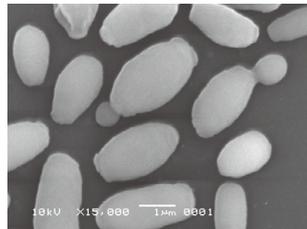
Acecide disinfectant is the first peracetic acid-based chemical sterilant / high-level disinfectant exclusively for medical devices, instruments, and equipment in Japan. Before the introduction of Acecide disinfectant, glutaraldehyde preparations were used for a long time for disinfecting endoscopes and other medical devices. However, the development of a substitute has been long overdue because of several issues, such as: slow bactericidal action of glutaraldehyde, especially on acid-fast bacteria and spores, the isolation of glutaraldehyde-resistant acid-fast bacteria from an automatic endoscope washer, and health concerns associated with the toxicity of glutaraldehyde, such as allergic reactions. Peracetic acid has great promise as a prospective candidate because of (1) its excellent bactericidal activity – even against spores and acid-fast bacteria – and its reported efficacy on glutaraldehyde-resistant acid-fast bacteria, and (2) very low toxicity from its residues and degradation products. After reacting with organic matter, or as time passes after draining, peracetic acid decomposes and breaks down into acetic acid and oxygen. Hydrogen peroxide in a peracetic acid solution also easily breaks down into oxygen and water. Acecide disinfectant boasts the quick and excellent bactericidal activity of peracetic acid, and has high stability in solution, and can be used repeatedly to reprocess reusable medical devices such as flexible endoscopes.



Acecide

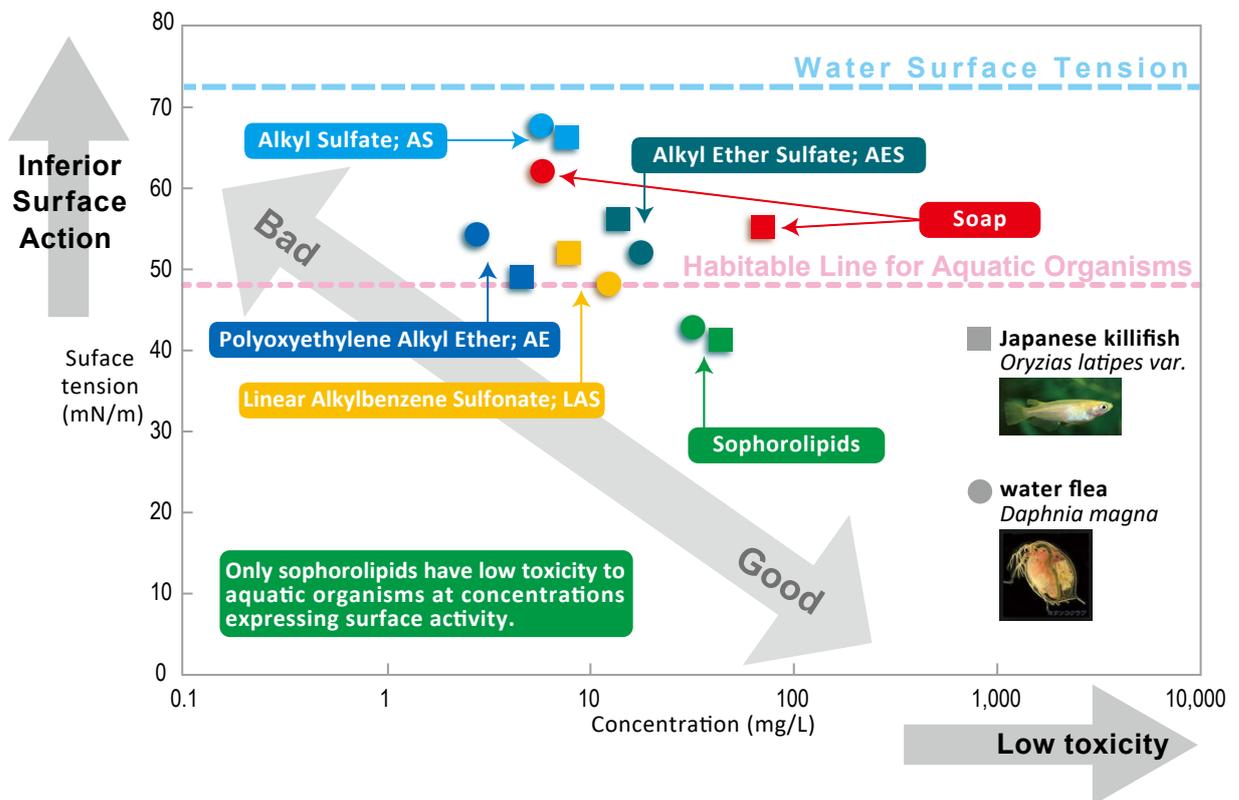
Sophorolipids

A new line of sustainable products made with a unique type of biosurfactant was developed by Saraya. Sophorolipids are biosurfactants (naturally-based cleaning agents) made by fermenting vegetable oil with yeast. In Saraya’s case, this is palm oil. Detergents made with this cleaning agent rinse away with less water while maintaining stronger cleaning power than other products on the market. In addition, Saraya has developed a way to produce sophorolipids with crude palm oil, removing the need for the extensive purification required to reach its currently traded state.



Application in Regenerative Medicine

SARAYA is collaborating with Osaka University to use sophorolipids in a freezing solution to prevent cells from being damaged by the formation of ice crystals when cells are stored at extremely low temperatures (about -196 °C) in the field of regenerative medicine. Conventionally, dimethyl sulfoxide (DMSO) has been used, but there are concerns about differentiation induction and cytotoxicity. Sophorolipids have low cytotoxicity, and are expected to have little effect on cell differentiation because they are glycolipids. Thus, sophorolipids are expected to be applicable as a “cell-friendly storage solution”.



Only sophorolipids have low toxicity to aquatic organisms at concentrations expressing surface activity.





Decent Work and Economic Growth

Work Life Balance

Better Balance between Family and Career

SARAYA provides various options for its employees so that they can work under different circumstances without losing job satisfaction and with a good work life balance. They can choose how they work flexibly in different circumstances at various life stages to suit their needs. For example, starting a family or looking after elderly parents. In these life changing periods, we need a good balance between work and caring for family members at home.

Prenatal and postnatal maternity leave, childcare leave, reduced working hours, flexible working hours, work-from-home, no overtime, restrictions on night work and out-of-hours, and leave for the care of a sick child. They are available to all of our employees to support their parenting, and of course they apply equally to both parents.

For those who need to look after and care for elderly parents, we provide nursing care leave, nursing care reduced working hours, nursing care flexible working hours, work-from-home, no overtime, and restrictions on night work and out-of-hours.

Personal development leaves and Volunteering leaves

It is necessary to have a good work life balance to refresh your mind and boost your energy to increase creativity at work. At Saraya, all full-time employees are eligible for 5 special paid leaves (total up to 12 days) as "Work life balance special leaves". In addition, SARAYA subsidise in-house clubs.

Saraya was certified by the Ministry of Health, Labor and Welfare as a "Childcaring support company" in 2009, and Saraya Tokyo was certified in 2014.



Days taken as childcare and nursing care leave from Nov 2017 to Oct 2020 at Saraya, Tokyo Saraya and Smile Sangyo

| | Female Employee | Male Employee |
|--|-----------------|---------------|
| Prenatal & Postnatal Maternity Leave/ Childcare Leave | 77 | 1 |
| Care for old people | 5 | 0 |



Taking a nap children at SARAYA Kanto plant in-house nursery

Cross-Appointment System to Implement Innovation in Society

At the Biochemical Research Laboratory, we are focusing on industry-university collaboration in order to sustainably implement innovations in society. As part of this effort, I have taken advantage of the cross-appointment system (*) and have also been registered as a Special Associate Professor at the Osaka University Graduate School of Engineering since school year 2018, where I am engaged in work at a ratio of 95% at Saraya and 5% at Osaka University. At Osaka University, I am mainly engaged in research on the practical application of proteases derived from hyperthermophilic bacteria, a technology held by a joint research partner. Although there are several hurdles to overcome in order to implement the technology in society, we are persevering in our efforts to create unique products.

In addition to my research activities, I also serve as a lecturer for on-campus seminars and classes on corporate research as an educational activity for students. I give lectures with the hope that I can be of some help to science students, who are

the future researchers, in making their choices, meanwhile I am often inspired by them and learn something new from them.

I will continue to conduct research and development by utilizing the diverse human networks, the latest information and knowledge in various research fields, and the broad perspective I have gained through the cross-appointment system, and I hope to deliver unique and high value-added products to the world.

*A system that allows researchers to work in research, development, and education by signing employment contracts with two or more organizations among universities, public research institutions, and private companies, and following the division of roles and the chain of command in each organization under a certain work ratio.

Biochemical Laboratory
Deputy General Manager

Ms. Yuka Oda

尾田 友香





Industry, Innovation and Infrastructure

Establish cold chains in Cambodia and Eastern Africa

JICA Support for JPN SMEs Overseas Venture Development

Normally when water drops below 0°C, it freezes and turns to ice. The freezing point of ethanol is shown in the table on the right. SARAYA introduced the “RAPIDFREEZER”, which uses a unique method to rapidly freeze vacuum sealed foods by immersing them in -30°C liquid ethanol. A project was launched using this “RAPIDFREEZER” to produce safe and high-quality frozen food. In January 2017, the “Survey on Projects for Improving Food Safety with Advanced Hygiene Management and Value-Added Processing System” was adopted by JICA.

We are exploring on a trial basis the possibility of commercialization by processing aquacultured tilapia from a collaborating company (Rainbow Progress Enterprise Co., Ltd.), and fresh fruit such as mango and pineapple from an agricultural venture (Japan Farm Products (Cambodia) Co., Ltd.). This not only makes it possible to export products to countries outside of Cambodia, but also enables the farmers in Cambodia to expand their sales channels.

Traditionally, tilapia has been said to be unsuitable for raw consumption due to contamination with bacteria and parasites. However, disinfecting foods with slightly acidic electrolyzed water using SARAYA’s Sanistar machine (also sold as Purestar in Japan), and killing the parasites by using the rapid liquid freezer RAPIDFREEZER, make it possible to provide safe sashimi. This tilapia is available in Cambodia’s local restaurants.

| | | | | | | |
|----------------|---------|---------|---------|----------|----------|----------|
| Consistency % | 0wt% | 10wt% | 20wt% | 30wt% | 40wt% | 50wt% |
| Freezing point | 0.0°C | -4.6°C | -11.2°C | -20.9°C | -30.7°C | -38.1°C |
| Consistency % | 60wt% | 70wt% | 80wt% | 90wt% | 95wt% | 100wt% |
| Freezing point | -45.4°C | -50.5°C | -67.0°C | -113.0°C | -120.0°C | -114.5°C |



Soaking in an ethanol solution at minus 30°C and freezing it at once, protects cell membranes, and therefore maintains flavor and texture, so that food still tastes fresh after defrosting.



Tilapia has been said to be unsuitable for eating raw because it contains quite a large number of bacteria and parasites. However, the parasites are killed by SARAYA’s Sanistar, which produces slightly acidic electrolyzed water with a strong bactericidal effect, together with the RAPIDFREEZER, which freezes food rapidly at low temperatures. The photograph shows slices of tilapia, which is similar to sea bream. It is considered that the taste and texture of tilapia are similar to those of sea bream when consumed as Japanese sashimi and sushi.

The Cold Chain from Mombasa to Kampala

In Africa, the Ministry of Agriculture, Forestry and Fisheries adopted a new business project “FY2018 Market Development Project to Solve Food Value Chain Problems in Africa and Other Areas,” whereupon Saraya commenced initiatives for food sanitation businesses in the East African region. This initiative is being implemented in collaboration with two Japanese companies, KAI GLOBAL Limited (Nairobi, Kenya), and Cots Cots Ltd. (Kampala, Uganda, a Saraya trade investment).

Temperature-controlled transport vehicles are rarely used in East African countries. Cooling during transport is usually done using ice-packaged polystyrene foam boxes. There is a large amount of food loss during the process from harvesting to consumption. Improving the situation therefore requires the establishment of a new food distribution system. In this project, Saraya, in collaboration with KAI GLOBAL Limited, conducted research on the distribution of marine products, and tested the transportation of marine products from fishing ports in Kenya to Nairobi and Kampala. Seafood is processed and provided at the Yamasen, a Japanese restaurant managed by Cots Cots Ltd. Yamasen’s kitchen undertakes food sanitation and processing using Saraya’s Sanistar and RAPIDFREEZERS, amongst others. We also plan to expand our food processing business to neighboring countries in East Africa.



(photo above) Staff members of the Yamasen Japanese restaurant in Uganda. The second person from the right in the first row is Mrs Miyashita, the representative of Cots Cots Ltd. (SARAYA trade investment), and the master chef of Yamasen, Mr. Yamaguchi, is pictured in the center in the second row. The restaurant is very busy and is fully booked several months ahead.



Reduced Inequalities

Diversity

Diversity is one of Saraya's Valuable Assets

Just as biodiversity is the key to ecological resilience in nature, so diversity at the workplace is one of the important factors for company growth and sustainability. The key characteristics of diversity in the workplace include gender, age, race, ethnicity, religion, nationality, cultural differences, family, educational background and disabilities.

At SARAYA, we implement strategic diversity management in the workplace to attract and maintain global talent. This brings a positive effect for motivating employees, improving productivity, and enhancing the company's competitive position in the market. We have set up the "Diversity Promoting Section" within HR at SARAYA headquarters, and are actively promoting the recruitment of elderly people, disabled people and foreigners.

"Diversity Management Selection 100"

In 2012, the Ministry of Economic Affairs, Trade and Industry introduced the "100 New Diversity Management Companies" initiative to award companies which have improved their company value by implementing diversity management. This initiative rewards companies for their contribution to promoting diversity in the workplace by strategic management. They provide opportunities for these diverse talents so that they can create innovations and promote a management system to create more value. Saraya was one of the 100



Percentage of SARAYA companies attaining the legally stipulated disabled employment rate

| | 2016 | 2017 | 2018 | 2019 |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Japan's Employment Rate of Persons with Disabilities | 2.0% | | 2.2% | |
| Saraya Co., Ltd. | 100% Employment rate: 2.09% | 100% Employment rate: 2.18% | 100% Employment rate: 2.97% | 100% Employment rate: 2.55% |
| Smile Sangyo Co., Ltd. | 71% Employment rate: 1.41% | 93% Employment rate: 1.85% | 100% Employment rate: 2.61% | 100% Employment rate: 2.34% |

SARAYA's employees and part-timers as of Oct. 2020

| | | Member of the Board | | Permanent employee | | Permatemp | | Associate employee | | Part timer | | Direct employment | | Temp staff | Total | | | | | | | | | | | | | |
|--------------|---------------------|---------------------|--------|---|--------|---------------------------------|--------|--------------------|--------|------------|--------|-------------------|--------|------------|-------|------------------------------------|----|--|-----|--|-------|--|-----|--|----|--|-------|--|
| | | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | | | | | | | | | | | | | | | |
| SARAYA | Under-29 | 0 | 0 | 97 | 145 | 0 | 3 | 1 | 2 | 21 | 123 | 119 | 273 | | 392 | | | | | | | | | | | | | |
| | 30-49 | 2 | 1 | 410 | 177 | 8 | 2 | 9 | 24 | 18 | 184 | 447 | 388 | | 835 | | | | | | | | | | | | | |
| | 50 and over | 12 | 2 | 126 | 29 | 35 | 7 | 2 | 7 | 43 | 104 | 218 | 149 | | 367 | | | | | | | | | | | | | |
| | Total | 14 | 3 | 633 | 351 | 43 | 12 | 12 | 33 | 82 | 411 | 784 | 810 | | 1,594 | | | | | | | | | | | | | |
| | Gender total | 17 | | 984 | | 55 | | 45 | | 493 | | 1,594 | | | | | | | | | | | | | | | | |
| Tokyo SARAYA | Under-29 | 0 | 0 | 48 | 39 | 0 | 0 | 0 | 0 | 2 | 1 | 50 | 40 | | 90 | | | | | | | | | | | | | |
| | 30-49 | 0 | 0 | 146 | 69 | 1 | 0 | 0 | 0 | 1 | 21 | 148 | 90 | | 238 | | | | | | | | | | | | | |
| | 50 and over | 3 | 0 | 52 | 9 | 8 | 0 | 0 | 1 | 7 | 11 | 70 | 20 | | 90 | | | | | | | | | | | | | |
| | Total | 3 | 0 | 246 | 117 | 9 | 0 | 0 | 1 | 10 | 33 | 268 | 150 | | 418 | | | | | | | | | | | | | |
| | Gender total | 3 | | 363 | | 9 | | 2 | | 43 | | 418 | | | | | | | | | | | | | | | | |
| Smile Sangyo | Under-29 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 1 | | 5 | | | | | | | | | | | | | |
| | 30-49 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 2 | 0 | 9 | 8 | 11 | | 19 | | | | | | | | | | | | | |
| | 50 and over | 1 | 0 | 2 | 2 | 0 | 1 | 0 | 3 | 6 | 17 | 9 | 23 | | 32 | | | | | | | | | | | | | |
| | Total | 2 | 0 | 12 | 2 | 0 | 1 | 0 | 5 | 7 | 27 | 21 | 35 | | 56 | | | | | | | | | | | | | |
| | Gender total | 2 | | 14 | | 1 | | 5 | | 34 | | 56 | | | | | | | | | | | | | | | | |
| Total | 19 | | 3 | | 891 | | 470 | | 52 | | 13 | | 12 | | 40 | | 99 | | 471 | | 1,073 | | 997 | | 27 | | 2,097 | |
| Gender total | 22 | | 3 | | 1,361 | | 65 | | 52 | | 570 | | 2,070 | | 27 | | | | | | | | | | | | | |
| | Social insurance | | | Enlisted | | Depending on legal requirements | | | | | | | | | | | | | | | | | | | | | | |
| | Maternity leave | | | Before and after childbirth | | | | | | | | | | | | Permanent employee and permatemp | | | | | | | | | | | | |
| | Child-care leave | | | Prin.: Until baby is 1 year old Exc.1: No admission nursery school: extend for another six months. Exc.2: If exception 1 repeats, it is extended until the end of the fiscal year or the second birthday. | | | | | | | | | | | | New hire: 124 Retiree: 67 | | | | | | | | | | | | |
| | Retirement benefits | | | No retirement benefits | | | | | | | | | | | | Proportion managerial posts: 29.5% | | | | | | | | | | | | |



Responsible Consumption and Production

Palm Oil Supply Chain

Palm Oil supports global food chain

NPO CDP (Carbon Disclosure Project) officially reports that 80% of the global deforestation on the planet resulted from agricultural and livestock farming supplying beef, wood products, soya and palm oil. Until 2005, soya oil topped the production and consumption figures for oil crops. However, palm oil overtook soya in 2006, and it has been steadily increasing ever since.

Country of Origin of Palm Oil

55% of palm oil is produced in Indonesia, followed by Malaysia at 34.6% - these two countries together therefore account for 88.6% of global production. The island of Borneo is the largest palm oil production location. Sabah in northern Borneo, is the closest state to Japan. This is where most of the exported palm oil products come from.

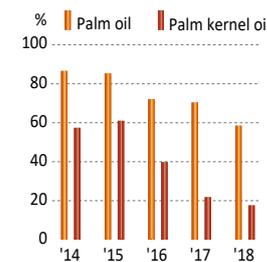
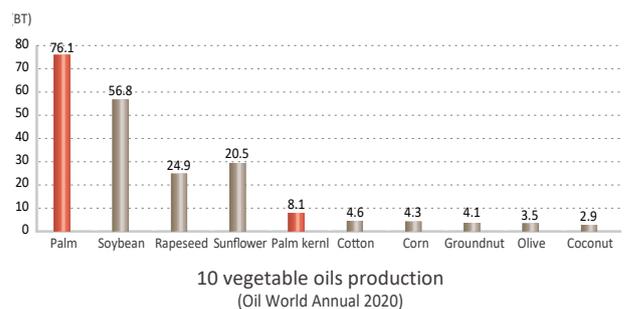
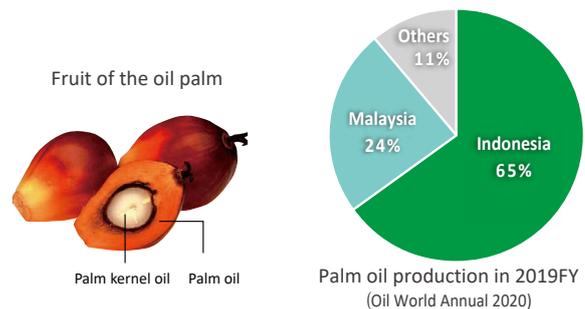
85% of palm oils are used in processed foods or deep-fried foods as an alternative to margarines, shortenings and cocoa butters. The majority of the palm kernel oils

are used as an ingredient in non-edible products such as soaps, detergents, cosmetics, candles and industrial products in Japan.

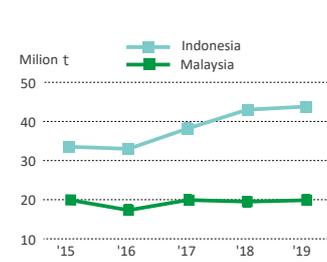
The main reason why palm oil became so popular is that it is much cheaper compared to other oils. The harvest yield per hectare (FAO Statistics Division, 2016) of oil palm fruits is 14.24 t, while soybeans follow far behind in second place at 2.71 t. On top of that, they are produced in equatorial areas like Malaysia and Indonesia where labor is relatively cheap, which contributes to the general low price of palm oil. There are said to be several issues behind cheap palm oil production such as child labor, forced labor or unlawful working conditions. To tackle these issues, SARAYA took action to seek a sustainable development approach for its whole value chain.



Harvesting a fruit bunch from an oil palm



The ratio of Japanese PO and PKO imports from Malaysia (Oil World Annual 2019)



The trends in palm oil production of Malaysia and Indonesia (Oil World Annual 2020)





Oil palm tree

Roundtable on Sustainable Palm Oil

In 2004, a Roundtable on Sustainable Palm Oil (NGO) was set up to promote the sustainable production, procurement and use of palm oil products. There are 8 principles and 43 criteria (established in 2013), which are reviewed every 5 years. CSPO (Certified Sustainable Palm Oil) is palm oil that is certified by the Roundtable on Sustainable Palm Oil (RSPO) according to specific criteria. The CSPO rate was 21% in 2016 for global palm oil production. RSPO farms can also earn credits according to their production and shipping volumes.

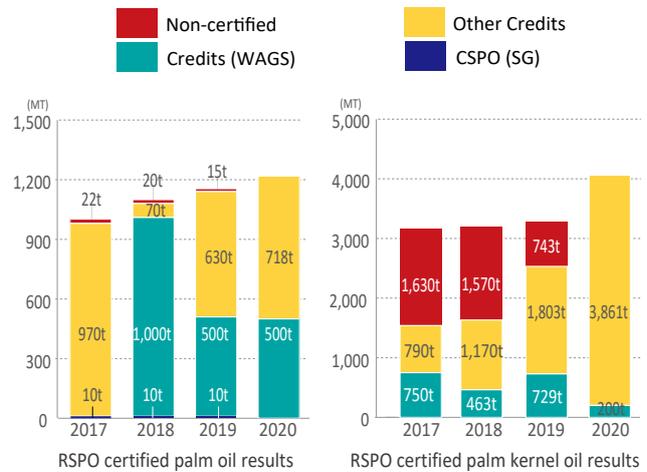
2020 RSPO Certification Targets

SARAYA's consumer goods are produced from materials derived from palm oil, either through segregated or credit supply chain models certified by RSPO. In terms of market availability, RSPO certified palm kernel oil (CPKO) is currently very limited, and this situation may not change much in the near future. We therefore decided to revise our previous target for 2020 certification.

Our new 2020 target is the use of RSPO certified palm oil, including Book & Claim (Credit) for all our domestically sold products. In 2030, we are planning to have RSPO certification for all product lines, including those sold overseas. The figures on the right show our current and future targets for RSPO certified palm oil and RSPO certified palm kernel oil.

RSPO 8 PRINCIPLES

1. Commitment to transparency
2. Compliance with applicable laws and regulations
3. Commitment to long-term economic and financial viability
4. Use of appropriate best practices by growers and millers
5. Environmental responsibility and conservation of natural resources and biodiversity
6. Responsible consideration of employees, and of individuals and communities affected by growers and mills
7. Responsible development of new plantings
8. Commitment to continuous improvement in key areas of activity



Types of RSPO Certified Palm Oil Used in Saraya Products

Segregation or Identity Preserved

RSPO-1106041

Segregation: Sustainable palm oil from different certified sources is kept separate from ordinary palm oil throughout the supply chain.
Identity Preserved: Sustainable palm oil from a single identifiable certified source is kept separate from ordinary palm oil throughout the supply chain. The Saraya Happy Elephant line uses segregation palm oils.

Credits (Book & Claim)

RSPO-1106041

The supply chain is not monitored for the presence of sustainable palm oil. Manufacturers and retailers can buy credits from RSPO-certified growers, crushers and independent smallholders. The Book and Claim supply chain model is supported by the trade of RSPO credits.



Sustainable Procurement

Cooperation with Wild Asia

Wild Asia is a social enterprise, which was established in 2003 with its headquarters in Malaysia. It has been promoting tropical rainforest conservation and supporting smallholders to obtain RSPO certification within the Wild Asia Group Scheme (WAGS). The younger generation of oil palm smallholders in Sabah is acting positively to obtain RSPO certification. In fact, they put into practice the WAGS to reduce pesticide or fertilizer use and increase yields.

SARAYA visited one of the WAGS smallholders who was experimentally using beehive fences as a Borneo elephant or wild boar deterrent. They take advantage of elephants' natural instinctive behavior to avoid bees. They also contribute to biodiversity, and carefully choose how and where to grow their crops so that they do not ruin beautiful sites for tourism.

Since 2017, SARAYA purchased palm kernel oil book & claim credits, which are worth 750-1,463t, through Wild Asia. These are the credits which smallholders gained from CSPO seeds and which were the equivalent of the palm oil they sold to mill farmers.

Lakanto and MDGs

One of Lakanto's ingredients, Lo Han Guo (monk fruit), is a gourd family plant which grows near Yongfu County of Guilin in Guangxi, China. In 1998, SARAYA entered a business cooperation contract with Guilin City of China (Lo Han Guo Sweetener Product Development Project MOU). The late Mr Saraya (the founder of SARAYA) sympathized with the severe conditions that the farmers of Guilin were facing at that time, when China was still relatively poor, and decided that the company's business policy regarding Lakanto was to protect and improve the lives of local people rather than the company's own profit. He said that a foreign company expanding its business in China should not keep all the profit for itself, but should put the local people first. SARAYA holds a patent in Japan, but not globally, and released its technical information. This is how the story behind the now world-famous monk fruit began.



Harvested Luo Han Guo (monk fruit).



The Kemajuan Tanah Julur Collection Center opened in 2017. They weigh the delivery trucks before and after unloading the fresh fruit to calculate the actual weight of the fruit. They apply a daily exchange rate for the purchase. The center enables them to transfer FFB weighed fruit collectively instead of being sold separately to mills. Unfortunately, the center does not yet have RSPO certification.



One of the WAGS projects: the Award System. Part of the B&C credits are used as operational payments for Wild Asia. They award independent smallholders for their achievement, and credits are used to award prizes such as mowing machines. The above picture was taken on 12 December 2017, when SARAYA purchased credits and made awards to three independent smallholders.

Monk Fruit Contract Farming

SARAYA normally enters contracts with local monk fruit farmers to efficiently manage and control the farming process, such as the use of pesticides, to achieve sustainable production. The contracted farmers grow their monk fruit under a strict pesticide management regime. At the Lakanto factory that SARAYA built in Guilin in 2016, they produce high quality and safe monk fruit extracts, and provide raw materials for all the Lakanto series. They monitor the activities, from growing monk fruit, to producing monk fruit sweetener under a full traceability system.



A contracted monk fruit farm.

SDG 3

SDG 5

SDG 6

SDG 8

SDG 9

SDG 10

SDG 12

SDG 13

SDG 14

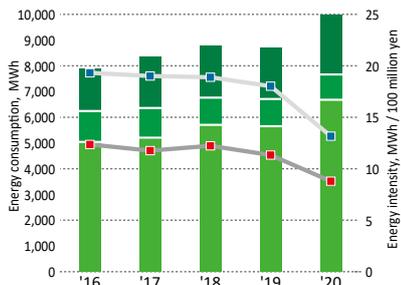
SDG 15

SDG 16

SDG 17

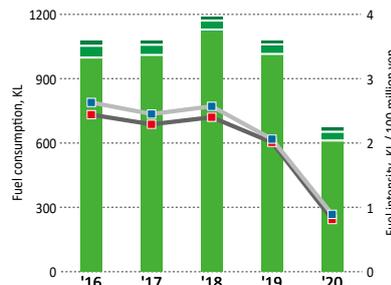
■ Saraya Japan consumption
■ Saraya Manufacturing Thailand consumption
■ Saraya Dongguan consumption
■ Saraya Japan intensity
■ Total intensity

Annual Energy Consumption



| MWh | FY | 2016 | 2017 | 2018 | 2019 | 2020 |
|------------------------|----|-------|-------|-------|-------|-------|
| SJ consumption | | 5,042 | 5,171 | 5,687 | 5,689 | 6,677 |
| SMT energy consumption | | 1,200 | 1,182 | 1,077 | 1,016 | 974 |
| SD energy consumption | | 1,560 | 1,641 | 2,000 | 2,002 | 2,343 |
| SJ energy intensity | | 12.36 | 11.49 | 12.23 | 11.33 | 8.79 |
| Total energy intensity | | 19.32 | 19.02 | 18.89 | 18.02 | 13.16 |

Annual Fuel Consumption



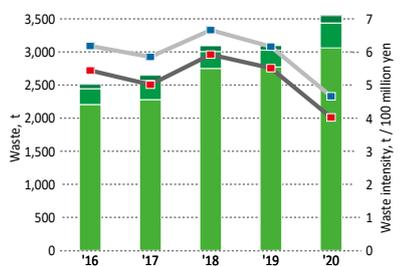
| KL | FY | 2016 | 2017 | 2018 | 2019 | 2020 |
|----------------------|----|------|-------|-------|-------|-------|
| SJ fuel consumption | | 995 | 1,006 | 1,124 | 1,012 | 1,072 |
| SMT fuel consumption | | 55 | 49 | 42 | 42 | 40 |
| SD fuel consumption | | 25 | 21 | 22 | 24 | 22 |
| SJ fuel intensity | | 2.44 | 2.29 | 2.40 | 2.01 | 0.81 |
| Total fuel intensity | | 2.63 | 2.45 | 2.57 | 2.06 | 0.89 |

Annual Paper Consumption



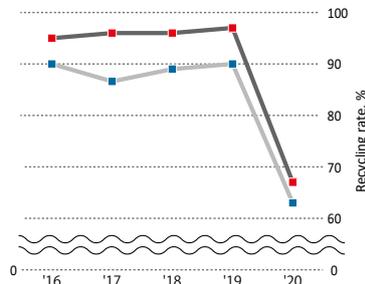
| Thousand sheets | FY | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------|----|-------|-------|-------|-------|-------|
| SJ paper consumption | | 6,500 | 5,637 | 5,861 | 5,313 | 4,234 |
| SMT paper consumption | | 302 | 295 | 295 | 325 | 319 |
| SD paper consumption | | 137 | 214 | 265 | 289 | 365 |
| SJ paper intensity | | 16.00 | 12.82 | 12.49 | 10.58 | 5.57 |
| Total paper intensity | | 17.05 | 13.96 | 13.69 | 11.81 | 6.47 |

Annual Waste Discharge



| Tons | FY | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------|----|-------|-------|-------|-------|-------|
| SJ waste discharge | | 2,206 | 2,280 | 2,751 | 2,773 | 3,061 |
| SMT waste discharge | | 239 | 289 | 256 | 255 | 377 |
| SD waste discharge | | 66 | 78 | 87 | 69 | 112 |
| SJ waste intensity | | 5.45 | 5.03 | 5.93 | 5.52 | 4.03 |
| Total waste intensity | | 6.15 | 5.86 | 6.67 | 6.17 | 4.67 |

Annual Recycling Rate



| Rates | FY | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------|----|------|------|------|------|------|
| SJ recycling rate | | 96% | 96% | 96% | 97% | 67% |
| SMT recycling rate | | 20% | 13% | 16% | 19% | 13% |
| SD recycling rate | | 78% | 81% | 83% | 79% | 79% |
| Total waste intensity | | 89% | 86% | 89% | 90% | 63% |

Annual Water Supply



| Thousand m³ | FY | 2016 | 2017 | 2018 | 2019 | 2020 |
|------------------------------|----|--------|--------|--------|--------|---------|
| SJ water supply | | 75,288 | 70,484 | 99,804 | 96,350 | 159,430 |
| SMT water supply | | 30,539 | 29,226 | 26,663 | 25,372 | 26,724 |
| SD water supply | | 24,902 | 22,996 | 18,291 | 25,116 | 34,238 |
| SJ water supply intensity | | 185 | 161 | 215 | 192 | 210 |
| Total water supply intensity | | 320 | 279 | 312 | 293 | 290 |

Greenhouse Gas (FY2020)



SARAYA declare the goal of achieving net zero greenhouse gas emissions by 2050.

| t | Total | Intensity | Ratio |
|---------|--------------------------|------------------------------------|--------|
| Scope 1 | 2,990tCO ₂ e | 3.93 CO ₂ e/100M yen | 3.3 % |
| Scope 2 | 3,558tCO ₂ e | 4.68t CO ₂ e/100M yen | 4.0 % |
| Scope 3 | 82,763tCO ₂ e | 559.3t CO ₂ e/100M yen | 92.7% |
| Total | 89,311tCO ₂ e | 570.03t CO ₂ e/100M yen | 100.0% |

| | CO ₂ emissions, t CO ₂ e |
|---|--|
| Purchased goods and services | 61,965 |
| Capital goods | 1,325 |
| Fuel and energy-related activities (not included in scope 1 or scope 2) | 675 |
| Upstream and downstream transportation and distribution | 17,059* |
| Waste generated in operations | 756 |
| Business travel | 273 |
| Employee commuting | 533 |
| Use of sold products | 99 |
| End-of-life treatment of sold products | 78 |

*Tentative predictive value

Carbon-neutral

Establishment of Climate Emergency Network

Ryoichi Yamamoto, Professor Emeritus at the University of Tokyo, proposed the establishment of the “Climate Emergency Network (CEN)”, which stands for “Climate Emergency Declaration and Carbon Neutral Society Support Network”. The inaugural meeting of CEN was held at the Imperial Hotel in Tokyo on Wednesday, 18 November, with Mr. Yamamoto serving as chairman of the inaugural committee, and Saraya President Yusuke Saraya serving as vice chairman. At the general meeting, 190 founders, including Dr. Takaaki Kajita (Director of the Institute for Cosmic Ray Research at the University of Tokyo, Nobel Prize in Physics), Dr. Yoshimitsu Kobayashi (Chairman of Mitsubishi Chemical Holdings Corporation), Dr. Motoyuki Suzuki (Professor Emeritus at the University of Tokyo), and Dr. Akihiro Nikkaku (President of Toray Industries, Inc.), applauded the keynote speech by Mr. Yamamoto, and affirmed their approval.

Yuriko Koike, Governor of Tokyo, gave a speech at the general meeting, and Shinjiro Koizumi, Minister of the Environment, also made a video appearance. ZERI Japan (Tokyo Saraya 2F), a non-profit foundation, will serve as the secretariat.

The main activities of ZERI Japan are to promote carbon neutrality by creating a network that brings together local governments that are concerned about climate emergencies regardless of whether or not a declaration has been made local governments that aim to become carbon neutral by 2030, youth, citizens, experts, businesses, and governments. ZERI also publishes information on pioneering efforts in Japan as well as abroad.

Herriard Bio Power

In April 2020, Herriard Bio Power Ltd. completed its plant construction in Herriard, near Basingstoke in the UK. The plant converts food and agricultural waste into biogas, which is then supplied to a gas station where it is used to generate electricity and renewable power. Herriard Bio Power Ltd. is now a subsidiary of RKE BioGroup Ltd. which became a subsidiary of KSN (Kansai Saishigen Network Inc.) in 2020.

The controlled outdoor burning of agricultural waste such as straw, rice husks, and fruit tree prunings is prohibited by law in most developed countries. Another problem with controlled burning is that it emits CO₂ and loses most of the nutrients such as nitrogen, phosphorus, potassium, and sulfur. In the long run, it also causes soil acidification.

This bio-power plant is based on the methane fermentation of agricultural waste, no longer edible food products from supermarkets, restaurants and food processing plants, and food waste, to turn it into biofuel. Food waste is separated from food



Chairman, Prof. Emer. Yamamoto speaking at the inaugural meeting of CEN



Nobel laureate, Dr. Kajita speaking at the inaugural meeting of CEN

organics and plastic packaging using an advanced sorting machine. The separated plastics are then recycled by specialized companies for material and thermal recycling. The digested liquid after fermentation is processed and detoxified so that it can be used as biofertilizer, and distributed free of charge to neighboring farmers to help promote organic farming.

This facility will produce 10 GWh of renewable electricity (equivalent to the electricity needs of 2,200 homes) and 14 GWh of biogas per year. This biogas will be connected directly to the national gas grid, contributing to a 92% decrease in CO₂ emissions.



The Herriard Bio Power Anaerobic Digestion Facility

The meeting between Mr. Saraya and Prof. Pauli

Mr. Saraya (president and CEO of SARAYA) met Mr. Gunter Pauli in 1982 through the activities of Junior Chamber International Japan in Osaka. Mr Pauli later became one of the proponents of zero emissions, and became a global authority on environmental issues. Later, in April 1994, Mr. Gunter Pauli visited the United Nations University in Tokyo and assisted the preparation of the Kyoto Protocol under Prof. Heitor Gurgulino de Souza, the third Rector of the United Nations University.

During this period, Mr. Pauli founded ZERI (Zero Emission Research and Initiative). The ZERI initiative is a scheme in which waste from one industry becomes a raw material for other industries, so that industries recycle and reuse resources like an ecosystem.

In 2001, Mr. Saraya established ZERI Japan, a specified non-profit corporation based in Japan, and was himself appointed as the chairman of the board of directors.

The office is located on the second floor of Tokyo Saraya Co., Ltd. Mr. Pauli's ZERI initiative has now evolved into a "blue economy" of sustainable businesses, and is in the process of putting its principles into practice. A similar concept is the so-called "Circular Economy."

ZERI Japan formed an alliance with R4W.

MS PlanetSolar was launched in 2010 in Kiel (The 36 meter catamaran completed her first solar powered round the world voyage two years later. From its launch to the present day, the largest solar boat in the world has covered over 150,000 km, more than three round the world voyages.

The Race for Water Foundation (R4W) is tackling the problem of plastics contamination of the oceans. The foundation, supported by Swiss watchmaker Breguet, has spent approximately 2.8 billion JPY to develop the boat (100t) as "MS Race for Water". It integrated hydrogen fuel cells and a traction kite in 2017.

It uses solar power to make drinking water from seawater, and electrolysis to make hydrogen. Using hydrogen, wind, and solar as its power sources, the boat sails only with the energy created by sun, wind and water to navigate the world.

Mr. Pauli is a special adviser to the non-profit organization ZERI Japan. R4W and ZERI Japan signed an alliance at the Saraya Medical Training Center in Osaka on 9 February 2019, after several discussions between Mr. Pauli and R4W. On 29 August, special adviser Mr. Pauli and the chairman Mr. Saraya issued a press release about the "Odyssey project" at the official residence of the Swiss Ambassador.



Mr. Saraya and Prof. Pauli in their youth

Mr. Saraya and Prof. Pauli in 2010



The R4W crew and their boat will be coming to Japan this Olympic year, invited by ZERI Japan.



R4W and ZERI Japan after their signing



The press release of the R4W Odyssey 2017-2021 at the official residence in Tokyo



MS Porrima

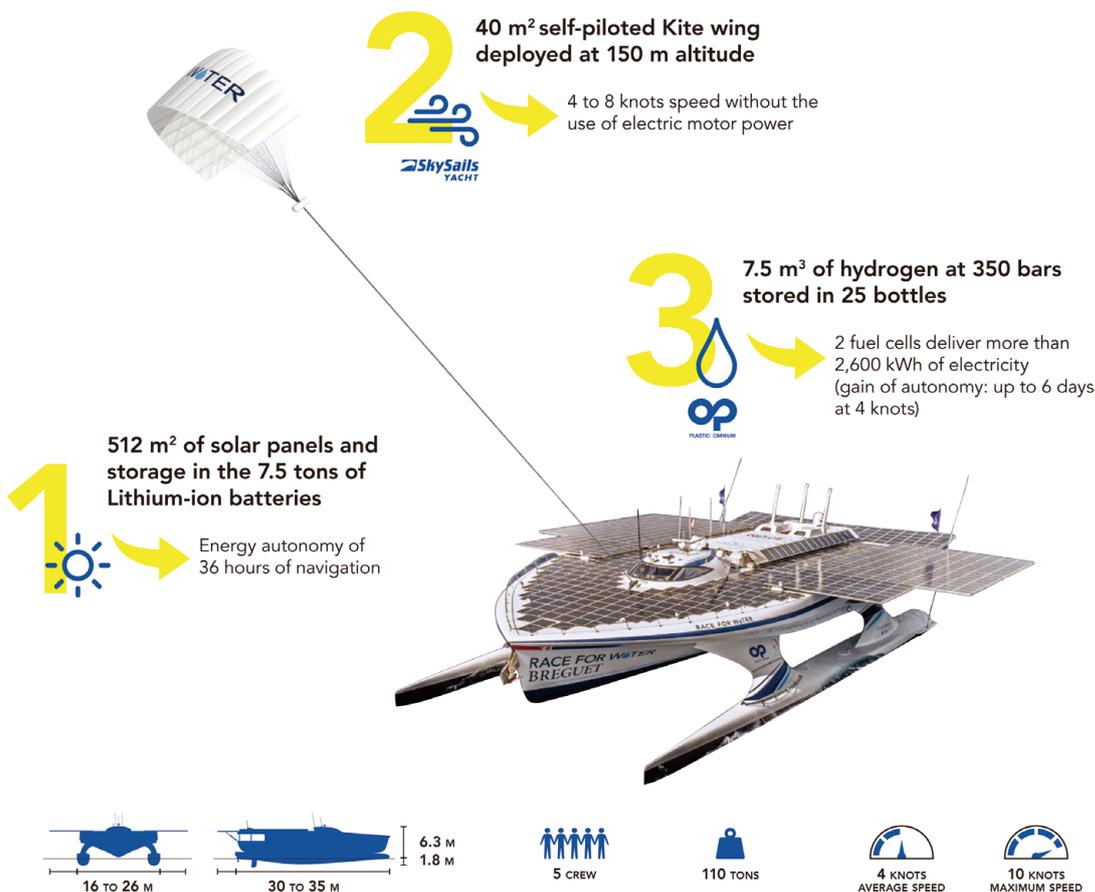
On 1 March 2021, Marco Simeoni announced the continuation of the odyssey in a new form while preserving the values and visions for a responsible and sustainable world. The Swiss association Porrima has become the new owner of the boat. Porrima is also the name of the boat, which is inspired by the Roman goddess of the future, the protector of pregnant women. (<https://www.raceforwater.org/en/news/a-new-shipowner-for-the-race-for-water-vessel/>)

Prior to departure on its third voyage in 2021, the boat will integrate thin biofilm solar made with alga cells, a reversible power system generating energy when the kite is used, super energy efficient high speed internet over light (Li-Fi), and 3 D projection screens, and other innovations. The “Blue Innovations” on MS Porrima, known as the Goddess of the Future, will embrace seaweed curtains as a clean up standard for micro plastics and pursue research on the removal of microplastics from the sea similar to the way lungs remove CO₂ from our blood.

The MS Porrima is a unique scientific and entrepreneurial platform. She integrates dozens of innovations and continuously adopts pioneering products inspired by nature, origami styled interior, bioplastics that degrade in sun, soil and sea. Porrima is the ideal ambassador to showcase how sea, water, sun and wind combined with creative design can guarantee an abundance of water, power and food while offering a quality of life with sustainable sources. A new reality emerges!

SUN, WIND AND WATER

Sole sources of energy for the Race for Water vessel



Commitment to making a difference for generations

The world is facing many challenges. Harvard University warned in 2019 that climate change, a rise in population density, a decrease in food quality, and exposure to chemicals will lead to immune system stress. The prominent university researchers concluded that this will cause pandemics. Little did we realize that this analysis would materialize throughout the world just a few months later.

We face an increasing number of health and safety issues, from health risks to dramatic shifts in weather patterns. Do we realize these are actually man-made? Many of us do not seem aware of all the unintended consequences caused by the way we live, produce and consume. And while the international community has focused during the past quarter of a century on climate change, and in recent years on SDGs, there is another subject that will need more attention: plastics, especially microplastics.

Today, the amount of plastics (including microplastics) in the oceans already surpasses the amount of fish. There is a need to design solutions. When Mr. Yusuke Saraya learned about the Race for Water campaign – directed by the Swiss Foundation with the same name – to bring science and technologies to coastal and island communities, Mr. Saraya immediately invited the vessel that carries the message to Japan.

The Race for Water is the first catamaran that circumnavigates the world without a sail and without using a drop of fossil fuel. The boat is powered by solar panels, hydrogen generated from seawater, and equipped with a kite that pulls the boat forward. When the vessel arrived in Japan in February 2020, it had already

sailed over 45,000 miles with renewable energy. After navigating across the Atlantic and the South Pacific, visiting communities in far flung places, the Race for Water brings hope through pragmatic solutions. The message is clear: if you have sea and sun you can clean-up the ocean, provide fresh water and clean energy forever. This vision has a strong appeal.

The Saraya Corporation has used plastics throughout its history. It is indicative of the culture and the strategy of Saraya to recognize the challenges and search for solutions. The engagement of Saraya Corporation in the Race for Water program ensures that more people become aware that solutions need to have a business model to support it. The Race for Water initiators published a book “The Plastic Solutions: The Business Model that works for the Oceans”, which is also available in Japanese.

While the clean-up of the oceans may take a century or more, the start of the campaign needs to be clear and swift. The proposed solutions include the growing of seaweed curtains to which plastic particles adhere, and the subsequent production of biogas. The residual pieces of polymers will then be destroyed by high temperature pyrolysis. There is thus a window of opportunity to start cleaning the oceans, while shifting towards bioplastics from renewable sources. It requires a company with vision and tradition to embark on this long-term mission. I am honored to know Saraya for nearly four decades, and realize how this family enterprise commits to making a difference for generations to come.

10 July 2020



The Global ZERI (Zero Emission Research and Initiative) Founder
Author of the Blue Economy
Chairman of Novamont SpA

Professor Gunter Pauli

A handwritten signature in black ink that reads "Gunter Pauli".



Life on Land

Biodiversity in Sabah Malaysia

Tears of Baby Elephants - The Hidden Pitfalls of Eco-friendliness

A TV programme called “Toyota Eco Series, the Earth, what a wonderful spaceship”, broadcast a documentary film titled “Tears of Baby Elephants - The Hidden Pitfalls of Eco-friendliness” on 1 August 2004. It was about the rapid expansion of oil palm plantations destroying the habitat of the Borneo elephants in the Borneo tropical rainforest.

At the end of the programme, Mr. Saraya, the president of a company selling detergents, whose main ingredient is palm oil, was interviewed and asked what he thought about the fact that he was unwillingly helping bring these animals to the brink of extinction by selling so called eco-friendly products. He was genuine and honest and admitted that he had no idea how selling his company’s products in Japan was affecting these innocent animals in Borneo. Since then, he took a swift U-turn and defined his company vision as being truly friendly to both people and the environment. As a start, he launched biodiversity conservation activities in Sabah, Malaysia.

Right after the interview, Saraya immediately sought out Mr. Nobuo Nakanishi, who is now a member of Saraya and a director of the Borneo Conservation Trust Japan. Then Saraya made contact with the BBEC (Borneo Biodiversity and Ecosystems Conservation in Sabah, Malaysia) in JICA. At the end of the same year, he then applied to RSPO, which had just been founded in August 2004.

In Sabah

Mr. Nakanishi joined an elephant rescue mission organized by the SWD (Sabah Wildlife Department) in autumn 2004. In the following January, Mr. Saraya made a public report on the rescue mission and the possibility of the extinction of the elephants at the RSPO Seminar in Kuala Lumpur. This report was also broadcast in the TV series as part 2 of “Tears of Baby Elephants - The Hidden Pitfalls of Eco-friendliness”.

At the RSPO RT2 (Second Roundtable meeting on Sustainable Palm Oil) held in November 2005, Mr. Saraya proposed the “Green corridor project”, but initially faced a rejection from growers and failed to gain their approval. In February 2006, Mr. Saraya again proposed the “Green corridor project” at the BBEC (Borneo Biodiversity and Ecosystems Conservation), and this time the same project received full approval at the conference. The success led to an aerial photo shooting from a helicopter including the Sabah State Secretary as a guest.

In February 2007, SARAYA started a field trip to Sabah together with oil palm suppliers and eight selected Saraya consumer product customers.



Green areas represent rainforests. Orange areas represent palm plantations. Around 35 years ago this entire area was covered by native rainforest. Now there is very little rainforest remaining, limited to a small area along the main river. It was a paradise for wildlife.



A baby elephant with its leg tied with a rope which was set as a trap by local hunters. If baby elephants escape from the traps but still have a rope tangled around a leg, this gets trapped under the skin as the elephant grows and ultimately causes the elephant’s death as it can no longer walk. These elephants are called “Tally” (rope) by the locals. It causes much more severe damage if the rope is wrapped around their trunks. The TV programme “Tears of Baby Elephants” tells this story. This elephant was the very first to be rescued by Saraya and received treatment. It was then released back to the care of its parents.



From the left, Sabah State Secretary and Mr. Saraya. Photo taken in 2006.



Palm Oil Symposium 2007

Threatened Species in Borneo (IUCN Red List 2020-3)

| Red list | Borneo | | | | Japan | |
|-----------------|-----------|-----------|-----------|------------------|--------------|-------------|
| | CR | EN | VU | Endangered total | All species | All species |
| <i>Amphibia</i> | 6 | 9 | 10 | 25 | 182 | 58 |
| <i>Aves</i> | 6 | 10 | 27 | 43 | 468 | 586 |
| <i>Mammalia</i> | 4 | 17 | 34 | 55 | 218 | 158 |
| <i>Reptilia</i> | 6 | 4 | 7 | 17 | 224 | 83 |
| Total | 22 | 40 | 78 | 140 | 1,092 | 885 |





Kinabatangan Green Corridor

Lower Kinabatangan

This map shows the 5km wide corridors on both banks of major rivers in Sabah, Malaysia. These areas are said to have the highest populations of wild animals such as elephant, rhino, tembadau, orangutan, colobine monkeys, sambar deer, clouded leopards and sun bears.

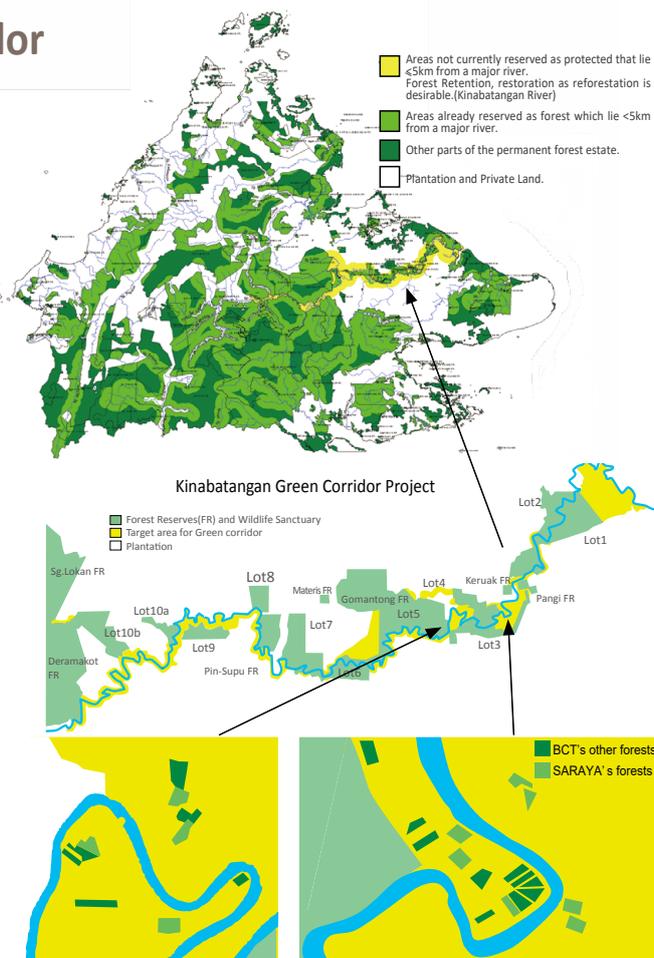
The yellow areas on the lower Kinabatangan River are where land has been developed as oil palm plantations. As you can see, the green highlighted conservation areas are splited by the plantations. However, these are essential habitats for wild animals and considerable numbers of wild animals are still living there – they are thus regarded as highly important for biodiversity conservation. The developed areas along the river must be preserved as secondary forests so that they can be a sanctuary for wildlife. This is why the Borneo Conservation Trust was established.

Borneo Conservation Trust

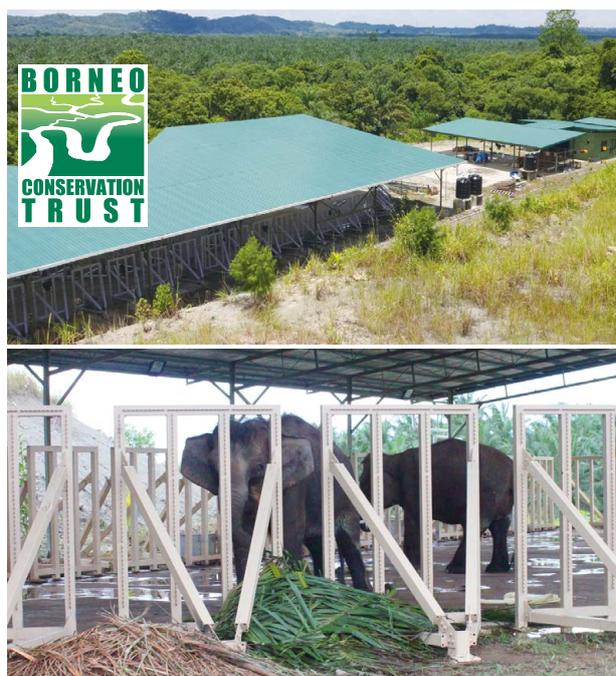
In September 2006, Mr. Saraya established the Borneo Conservation Trust, together with Mr. Patrick Mahedi Andau of SWD (Sabah Wildlife Department) and Dr Toshinori Tsubouchi, COO of then BBEC (Borneo Biodiversity and Ecosystems Conservation). Mr. Saraya was a trustee when the trust was launched, and then became Deputy Chairman in 2013. The trust was approved by the government as an NGO in October 2006. The headquarters were set up in the SWD (Sabah Wildlife Department) office in Kota Kinabalu, Sabah.

BCT's mission, other than the Green Corridors, includes wildlife conservation, such as rescuing injured elephants and isolated orangutans, as well as promoting biodiversity conservation activities. Saraya has been donating 1% of Yashinomi detergents and Happy Elephant products' sales to BCT since May 2007.

BCT has acquired 99.95ha of forest under the Green Corridor project (of which SARAYA's forests are 29.22ha), which is merely 0.5% of its goal of 20K ha.



The forests acquired by SARAYA and other BCT supporters



This rescue center was set up within the Borneo Elephant Sanctuary in LOT8 conservation area in 2013. Further construction work such as roofing and installing a sandpit was done in 2017. Saraya supported this construction work. The rescued elephants cannot be released back to the wild as they soon come back to the farmed areas.



Desert Greening Project in Egypt

Jojoba

The jojoba – botanical name *Simmondsia chinensis* (the generic name honours the English botanist Thomas William Simmonds) – is the sole species of the family Simmondsiaceae, and is a native evergreen shrub of the Sonoran Desert. Jojoba grows in dry semidesert regions and has an ability to withstand high salinity. It typically grows 1–2 meters tall and produces jojoba oil, 90% of which consists of a liquid wax ester, extracted from its seed.

The “wax ester” closely resembles human skin sebum, and jojoba oil has been used as a treatment for hair and skin for hundreds of years. Human skin sebum contains 20 to 30% “wax ester”, which helps keep skin hydrated and healthy. Jojoba oil is also naturally anti-bacterial and improves skin turnover. The cold-pressed golden jojoba oil is rich in vitamin A and E.

“Jojoba” Desert Greening Project

With tree planting projects, trees such as poplar can be planted and grown, but they are sometimes then cut down and burnt as fuel by the locals. To achieve a sustainable greening strategy, it is very important to create a system which profits the local community. Planting jojoba was not widespread, and harvests were unreliable, because little research was available. This changed when a study by Osaka University researchers established methods for the proliferation and breeding of jojoba, a drought-resistant and profitable plant. Based on the results of this study, the Osaka University venture company Simmonds Co. Ltd., was established in April 2017 for the sustainable production of jojoba in the desert, and sale in Japan. Jojoba oil was on sale from October 2017. Saraya invested in this project, and produced cosmetics using jojoba oil to promote the desert greening.

SARAYA Subsidiary in Egypt

SARAYA Middle East for Industrial Investment J.S.C was established on 4 July 2018. The company, currently building its factory in Suez, will start extracting and distributing jojoba oil to Egypt and the Arab world in 2020. The Suez factory is located in an industrial estate named the SIDC Zone (SIDC: Suez Industrial Development Company SAE). The area is 2 ha in size, and has direct access to the road, making transportation easy.



The Suez plant of SARAYA Middle East for Industrial Investment J.S.C



Jojoba and Golden Jojoba Oil



SDG 3

SDG 5

SDG 6

SDG 8

SDG 9

SDG 10

SDG 12

SDG 13

SDG 14

SDG 15

SDG 16

SDG 17



Peace, Justice and Strong Institutions

Governance

Participant of the Global Compact

The UNGC (United Nations Global Compact) is a voluntary initiative based on CEO commitments to implement universal sustainability principles, and to undertake partnerships in support of UN goals. There are 161 countries with 9,678 companies (as of April 2018) taking part worldwide.

Saraya Co., Ltd. joined UNGC in June 2009, and agreed on the 10 principles aimed at protecting human rights, banishing unlawful or unfair labour practices, promoting environmental responsibility, and acting against all forms of corruption. Saraya has been continuously striving to promote these principles and put them into practice, and acts through its Japanese local network called GCNJ (Global Compact Network Japan).

Mr. Saraya appeared and made a presentation at Session Part 1 of the “Global Compact China-Japan-Korea Roundtable Conference and Youth & Researcher CSR Forum” which was held in August 2014. Mr. Daishima from Saraya made a presentation at “SDG Industry Matrix ~Japanese Release Symposium~” co-organized with GCNJ in March 2017. In June 2017, Mr. Saraya gave a keynote speech at a symposium, co-organized by GCNJ and Sophia University, on the “Advanced Efforts of UN Organizations and Global Companies to Achieve SDGs”.

SARAYA’s Governance

SARAYA is a private company and promotes compliance and ethical behavior in business practices by following the 10 principles of the UN Global Compact as a guideline. The board of directors is structured as shown below, and a board meeting is held monthly.

There are designated staff members in the HR division who are responsible for handling complaints on any form of harassment. This service is open to everyone and it is there to help SARAYA employees.

| UN Global Compact – 10 Principles | | |
|-----------------------------------|--|--------------|
| Human Rights | | Page |
| Principle 1 | Businesses should support and respect the protection of internationally proclaimed human rights; and | 16,18 |
| Principle 2 | make sure that they are not complicit in human rights abuses. | |
| Labour Standards | | |
| Principle 3 | Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; | 14 |
| Principle 4 | the elimination of all forms of forced and compulsory labour; | 18 |
| Principle 5 | the effective abolition of child labour; and | |
| Principle 6 | the elimination of discrimination in respect of employment and occupation. | 11,16 |
| Environment | | |
| Principle 7 | Businesses should support a precautionary approach to environmental challenges; | 12-13, 17-21 |
| Principle 8 | undertake initiatives to promote greater environmental responsibility; and | |
| Principle 9 | encourage the development and diffusion of environmentally friendly technologies | |
| Anti-Corruption | | |
| Principle 10 | Businesses should work against all forms of corruption, including extortion and bribery. | 40 |

| The Board of Officers | | | |
|------------------------|-----------------|------------------|----------|
| | Total directors | Female directors | Auditors |
| Saraya Co., Ltd. | 18 | 2 | 2 |
| Tokyo Saraya Co., Ltd. | 10 | 2 | 1 |
| Smile Sangyo Co., Ltd. | 2 | 0 | 0 |



Saitama Prefecture gives Mr. Saraya, president and CEO of Saraya Co.Ltd., the Shibusawa Eiichi Prize* in 2014.

Shibusawa Eiichi Prize:

Shibusawa Eiichi (1840-1931) was a leading figure in the development of Japan’s modern society. A dynamic force in the industrial world, he was involved in the founding of some 500 enterprises and economic organizations. Equally dedicated to social and public welfare, he was instrumental in the founding of some 600 organizations for social welfare, education, and international exchange. To uphold his legacy, Saitama Prefecture awards the Shibusawa Eiichi Prize to Japanese managers carrying on his spirit of entrepreneurship.



Partnerships for Goals

Infection Control Training

Disinfection of Medical Instruments in Ugandan Hospitals

SARAYA's project of disseminating fully automatic washing and disinfecting devices for medical instruments in healthcare facilities for infection control and prevention was approved by JICA, and the pilot survey was carried out from 5 December 2013 to 30 November 2016 in 4 hospitals in Uganda (Mulago National Referral Hospital, Jinja Regional Referral Hospital, Entebbe General Hospital and Gombe General Hospital).

The device is specially designed for washing and disinfecting surgical instruments. Instead of the conventional method in Uganda of using buckets to wash medical instruments by hand, both washing and boiling water disinfection with 93 °C hot water for 10 minutes can be achieved fully automatically. In addition, it can save energy as well. Gombe General Hospital is a public hospital, but it has neither electricity nor a clean water supply. It was therefore necessary to build a solar panel and accumulator system first, along with a supply tank and a pump.

Infection Control Training of Ugandan professionals in Japan

JICA provided a training programme in collaboration with SARAYA. The programme was focused on preventing health-care-associated infections (HCAI). There were 9 participants in total, including two principal medical officers from the Ugandan Health Ministry, and doctors and nurses. It took place from 23 May 2015 to 1 June 2015, mainly at Saraya Headquarters in Osaka, but also included training in a local hospital.

Infection Prevention Training in Uganda

Japanese hospital infection control personnel acted as trainers in a 3-day infection prevention programme hosted by the Ugandan Health Ministry and Saraya at Jinja Regional Referral Hospital and Jinja School of Nursing and Midwifery. It was tailor-made to suit the local needs, and attended by hospital managers and infection control officers from 14 major hospitals in Uganda, along with four Ministry of Health personnel. It was focused on guidelines for the prevention of hospital acquired infections so that the hospital workers can apply them in their own workplaces. The participants acquired knowledge as well as hands-on learning experience in practical training sessions. The certificate of completion of training was presented by the Ministry of Health together with SARAYA, and was officially included in the criteria for eligibility to promotion in hospitals. There are high hopes that the trainees will be good ambassadors, and pass on what they have learned to others all over the country.



Washer Disinfector AR-40



Power Quick W
Alkaline cleaner for Washer Disinfector



A nurse operating a Saraya AR-40 at a local hospital in Uganda. (July 2016)

Program Curriculum of "Infection Control Training for Ugandan professionals Japan"

- | | |
|--|--|
| 1. Introduction to infection control management | 10. Environmental cleaning and disinfection |
| 2. HAI (hospital-acquired infection) Control Committee, system, actual approaches for prevention | 11. Hospital waste management, needlestick injury prevention |
| 3. Microorganisms in hospital environments | 12. Reprocessing of reusable medical devices |
| 4. Surveillance of HAI | 13. Infection prevention along transmission routes |
| 5. Introduction to infection prevention | 14. Case study 1 |
| 6. Hand disinfection | 15. Case study 2 |
| 7. Infection prevention tools for individuals, proper application of hand disinfectant | 16. 5S-KAIZEN-TQM |
| 8. Other standards for infection prevention | 17. Hospital visit |
| 9. Infection prevention along transmission routes | 18. Saraya Iga factory tour |
| | 19. Create your own action plan |
| | 20. Present your action plan |



2015 Infection Control Training for Ugandan professionals in Japan



Infection Prevention Training at Jinja Hospital and Jinja School of Nursing and Midwifery in Uganda



We are committed to the SDGs!

Sustainability Report 2021

SARAYA