

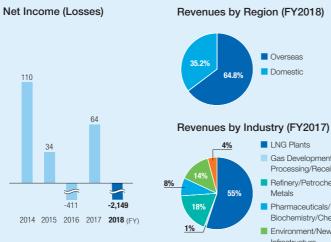
# CHIYODA GROUP Sustainability Report **2019**

#### Corporate Profile (as of March 31, 2019)

Company Name	Chiyoda Corporation	Number of Employees	6,137 people (Consolidated)
Established	January 20, 1948	Main Business Fields	Engineering and Construction
Paid-in Capital	43,396 million yen	Main Offices	Chiyoda Global Headquarters (CGH) Koyasu Office & Research Park
		Project Experience	Over 60 countries worldwide

**Consolidated Financial Highlights** (One Hundred Million Yen)





#### LNG Plants Gas Development/ Processing/Receiving Refinery/Petrochemical/ Pharmaceuticals/ Biochemistry/Chemicals Environment/New Energy/ Infrastructure Others

## **Editorial Policy**

#### CSR Activity Report Policy

The Chiyoda Group provides comprehensive reporting on its CSR activities, including detailed information presented on the Chiyoda Corporation website.

In addition, the Group has published this digest version of the Group's FY2018 report, highlighting the latest activities.

The contents of these reports are elaborated and compiled from the perspective of the Chiyoda Group Corporate Philosophy and CSR Values in collaboration with the members of the Group Liaison Meeting on CSR and those responsible for CSR in Group companies in Japan and overseas. For further details, including particulars on governance, please refer also to the below websites and other sources.

#### Applicable Period: FY2018

(April 1, 2018 to March 31, 2019, unless otherwise specified)

Website

#### Sustainability

https://www.chiyoda-corp.com/en/csr/

Website Corporate Governance Policy

https://www.chiyodacorp.com/ 181227\_GCPE.pdf

Chiyoda Group S	Sustaina	bility
Comprehensive reporting on the v	vebsite	
Sustainability Report FY2018 activity highlights		

#### Group Companies Covered by the Report

The scope of this report extends to all Chiyoda Group companies. The names of Group companies are given in an abbreviated form in the report. Regarding those abbreviations, please refer to the details below.

Chiyoda Kosho Co., Ltd. (CKS) Chiyoda System Technologies Corporation (CST) Chivoda International Corporation (CIC) L&T-Chivoda Limited (LTC) Chiyoda Philippines Corporation (CPh) Chiyoda & Public Works Co., Ltd. (CPW) Chiyoda Oceania Pty. Ltd. (COPL) Chiyoda Almana Engineering LLC (Chiyoda-Almana)

#### Date of Publication: November 2019

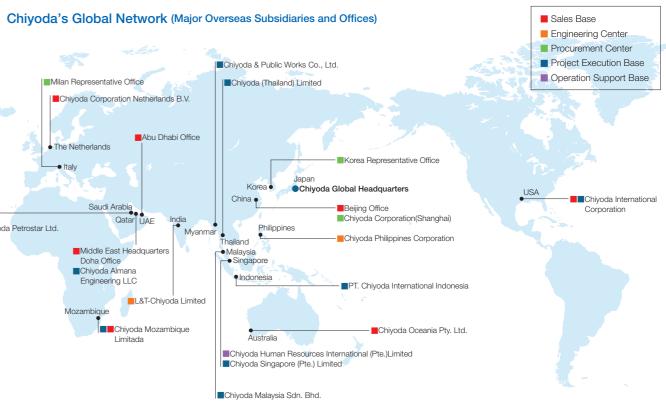


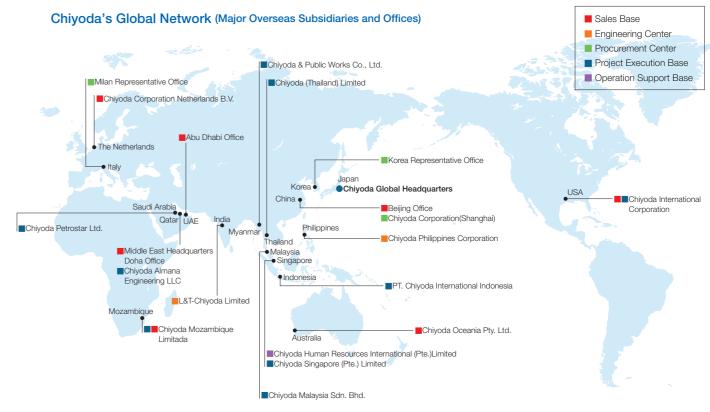
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#### Reference Chiyoda Group CSR Handbook

This Handbook is a compilation of the 'Corporate Philosophy,' 'Business Vision,' 'CSR Values,' 'Code of Conduct,' 'Compliance Manual (Employee's Practical Guide),' and other such basic policies of the Chiyoda Group. It is made public on the Group website and is also widely known among employees through the internal education.

### **Overseas Subsidiaries and Offices & Major Domestic Group Companies**





Engineering

#### Chiyoda Kosho Co., Ltd. Design, construction and maintenance for domestic projects. http://www.cks-ykh.co.jp/

Chiyoda TechnoAce Co., Ltd. Design and construction for pharmaceutical facilities. http://www.cta.chiyoda.co.jp/en\_corporate/

**Business** Support

#### Arrow Business Consulting Corporation Consulting for finance and accounting.

Chiyoda U-Tech Co., Ltd. Technical consulting of energy and environment, staffing of engineers and outsourcing services. https://www.utc-yokohama.com/english/

#### **INDEX**



1 CHIYODA GROUP Sustainability Report 2019

Chiyoda System Technologies Corporation

Engineering, procurement, construction and maintenance of electrical and instrumentation, and of social infrastructures. Consulting, development and operation for integrated IT systems. Supplying spare part and material http://www.cst.chiyoda.co.jp/english/index.html



COMMUNICATION ON PROGRESS

This is our Communication on Progress in implementing the principles of the United Nations Global Compact and supporting broader UN goals.

We welcome feedback on its contents.

# Aiming for Stable Supplies of -11

Value 1 A Reliable Company———	—13
Value 2 Environmental Initiatives ———	—15
Value 3 Social Contributions ————	—17
Value 4 Respect for Human Rights	—19
Value 5 Commitment to Fairness ————	21
The Chiyoda Group's Social Contribution Activities ————	
Messages from Stakeholders ———	<b>— 25</b>

# Steady Steps Toward Renewables and the Future



Our new management system has officially been launched following the approval of the Ordinary General Meeting of Shareholders held on June 25, 2019.

The current fiscal year marks the first year toward revitalization, by undertaking "Chiyoda's Revitalization Plan - Initiatives for Revitalization and the Future -". Under the plan, we will seek to strengthen the risk management structure and enhance engineering, procurement and construction (EPC) execution capacity to reform our organization and human resources systems.

Under the corporate philosophy of "Energy and Environment in Harmony," the Chiyoda Group has been operating as an engineering company for more than 70 years. During that time, it has contributed to the development of society by providing optimal infrastructure and responding to prevailing regional expectations through plant engineering and construction for liquefied natural gas (LNG) and other gas processing, petroleum, chemicals and many other types of industrial facilities, as well as pharmaceutical and renewable energy facilities both in Japan and overseas.

In a climate of increasingly complex social problems and environmental issues involving the international community in recent years, the business world faces an urgent need to rapidly respond to changes in the operating environment and to be proactive in tackling global issues. The Paris Agreement adopted at the United Nations in 2015 and the UN Sustainable Development Goals (SDGs) are common international goals regarding these issues. In conducting its business, the Chiyoda Group considers that its mission is to contribute to the future of the global environment and the development of a sustainable society with technology and passion as an engineering company.

Under the new management structure, the Chiyoda Group will steadfastly achieve revitalization, respond to diversified energy demands and contribute to the realization of sustainable global environment and society.

Kazushi Okawa Chairman of the Board & CEO Chiyoda Corporation

Masaji Santo President & COO Chiyoda Corporation

# **The Chiyoda Group: 70 Years of History**

Since Japan's strong postwar recovery, we have taken a pioneering role in the engineering industry and made contributions to the development of the energy and chemical engineering industries of more than 60 nations around the world.

Although the Chiyoda Group has worked under the philosophy "harmony between energy and the environment" since its founding and evolved to meet the needs of the times, we will continue to work to

1961~1980

engineer a future where both the global environment and

human society can continually develop.

#### 1981 ~ 2000

- Expand into fields of general industrial facilities and non-ferrous metals
- Initiatives for LNG projects shift into high gear
- Participation in national oil stockpiling projects

#### Chiyoda Group History

#### 1948~1960

- Contributions to the postwar reconstruction of Japan's domestic industry
- Participation by means of engineering in oil and petrochemical industries
- and respond to the diversification of plant demands led by oil producing countries Start initiatives for laboratory facilities projects

Promotion of Group-wide internationalization

 Construction of desulfurization units for the petroleum refinery

#### **Primary Achievements**

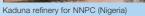


Construction to rebuild the Kaw refinery of Mitsubishi Oil Co., Ltd. (present JXTG Energy



Mizushima grass-roots refinery for Mitsubishi Oil Co., Ltd.







Direct desulfurization equipment for Nippon Mining Co., Ltd.



Arun natural gas liquefaction plant for Pertamina (Indonesia)



Complete construction of Fukui nationa petroleum stockpile base

desulfurization technology

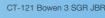
of projects in gas value chain

Execution of LNG mega projects and execution

Expansion of overseas licensing of flue gas

2001~2010





Qatar Gas Operating Co., Ltd.

#### 2011 and onward









## **Vision for the Revitalization and Future**

The Chiyoda Group pledges to continue as an enterprise that optimizes the use of the cutting-edge technology and human resources to create value for society. Our Corporate Philosophy proclaims "harmony between energy and the environment," and we are pursuing business with our CSR Values as shared values. We re-define our strength of engineering value in the implementation of "Revitalization Plan" and accelerate growing strategy by expanding of core business fields "Energy" and "Global Environment".

## **Revitalization Plan**

Mirai\* Engineering for the future for energy and global \*Mirai means future in Japanese

environment

#### **EPC** execution

Optimize design Guarantee high quality

#### ─ ISO26000

- United Nations Global Compact SDGs
- Paris Climate Agreement
- United Nations Convention
- on Biological Diversity

Global Standards

#### The Chiyoda Group's CSR Values

1. A Reliable Company 2. Environmental Initiatives 3. Social Contributions 4. Respect for Human Rights 5 Commitment to Fairness

 Human Rights Anti - Corruption Global Warming Securing Energy Resources
 Economic Disparity **Social Issues** Fair Employment in Local Communities

**Chiyoda's** strengths

#### New technology commercialization

Integration of basic research capability and knowledge applied from EPC

## **Value Provided**

- Data-centric EPC\* execution and plant delivery Optimized plant system operation to improve productivity, save manpower, automated, and remotely controlled
- Development and provision of optimal diversified compound energy systems and demand chain systems
- Creation of a carbon neutral society through managing carbon and developing new technology
- Development of technologies related to smart cells, iPS cells for fundamental cure and regenerative medicine

Engineering, procurement, construction

### Integration & Optimization

Provide the best solution for complex constraints and challenges by utilizing a mix of technologies across varying areas

These are goals that need to be realized by the year 2030 in order to achieve a sustainable development of society. They consist of 17 major goals and 169 targets that were adopted by the United Nations General Assembly in September 2015 to provide a basic framework for action in the international community of both developing and developed countries. In this report, we are reconfirming our own corporate activities and displaying icons for the relevant goals side by side with such activities.



#### **Realization of the Corporate Philosophy** - The Mission for us to Accomplish -

Enhance our business in aiming for harmony between energy and the environment and contribute to the sustainable development of a society as an integrated engineering company through the use of our collective wisdom and painstakingly developed technology.



Achievement of SDGs Enhancement of Corporate Value

#### What are the SDGs (Sustainable Development Goals)?



The Chivoda Group Supports the SDGs.

# Aiming for Stable Supplies of Rene

As an engineering firm, the Chiyoda Group is working to achieve a carbon-recycling society through construction of clean, low-environmental-footprint solar power stations and biomass generators.

Renewable energy's weakness is unstable supply due to climate impact on power generated, but stable supplies have become a possibility with breakthroughs in storage battery technologies. We will realize innovation in energy society with our customers, using our new storage battery technologies.

## Efforts to Popularize and Spread Renewable Energy with Local Roots

Located next to Japan's northernmost city in the Teshio district of Hokkaido the town of Toyotomi is the site at which we are constructing the North Toyotomi Transformer Storage Battery System, in order to accelerate popularization of renewable energy. Ground breaking ceremony held on October 2018.

As a prime contractor, we are carrying out comprehensive construction efforts for this, the world's largest storage battery system (with an output of 240MW and storage capacity of 720MWh). It is an effort by the North Hokkaido Wind Energy Transmission Corporation in the same region, intended to "make demonstration of electric transmission grid development for wind power" (over a total transmission grid development area of 77.8km), and adjoins the North Toyotomi Transformer Station. North Hokkaido Wind Energy Transmission Corporation itself is a Special Purpose Corporation (SPC), and was founded with capital contributions from Japan's largest wind power player, Eurus Energy Holdings Corporation. Construction schedule for the project will span five years, and will require due consideration of safety and measures to complete work without accidents or disasters, given that winter work in particular will be subject to harsh environmental conditions.

The electricity and energy storage fields - including storage batteries – are highly expected to bring about stable supplies of renewable energy. With adoption of renewable energy, future market growth is expected. We will continue our efforts to contribute to the popularization and spread of distributed energy generations, while building up experience and expertise in this field.



North Toyotomi Transformer Station Storage Battery System Completed Construction Concept CG (Aerial photography incorporated in CG created by Chiyoda Corporation based on maps from the Geospatial Information Authority of Japan)

VOICE

#### Comments from the Customer

This demonstration project plays an important role to "verify electric transmission grid development for wind power" by the Agency for Natural Resources and Energy, part of the Japanese Ministry of Economy, Trade and Industry (METI). Northern Hokkaido is suitable area for wind power stations, but has a frail electric transmission grid, which poses issues in the introduction and expansion of wind power. The company will conduct verification of technical issues and develop the regional power transmission grid, aiming to contribute to the economic and industrial development of surrounding areas through stable supplies of power upon resolution of issues with future wind power large-scale adoption. We are highly expecting Chiyoda Corporation to apply its experience and expertise from the construction of a variety of energy plants around the world to this key

storage battery system construction work. Furthermore, given the company is operating businesses with roots in the region, we are extremely grateful for your swift support for local residents and neighbors of the construction site during the prefecture-wide power

outages after the Hokkaido Eastern Iburi earthquake. Thanks to you, we avoided major losses from the outages. We feel thoroughly assured in our trust, and going to continue this project with the support of Chiyoda Corporation.

North Hokkaido Wind Energy Transmission Corpora President **Mr. Takeshi Ito**  wable Energy



#### **Contributing to Local Communities**

When all of Hokkaido prefecture lost power for several days after the September 6, 2018 Hokkaido Eastern Iburi earthquake, a neighboring dairy farmer asked to use a generator at our construction site office. The site manager accepted their request considering the urgency of the request, and the dairy farmers, able to continue work without losing milk, were delighted Later, the customer stated that "this action truly embodies the Eurus vision of 'being a corporation that develops together with each region, and is trusted by society,' and I am truly grateful to the Chiyoda Corporation site manager for this wise and timely decision." In addition to continuing our attention to the environment and safety in future construction, we will also continue to contribute to the local community through the construction work

#### Message from the Representative VOICE

The town of Toyotomi is our construction site, and is located on the Sarobetsu Plain, which is a part of a national park. It is a charming town blessed by nature with the Toyotomi Onsen hot springs, which have traits rarely found anywhere in the world, and spacious, cold plains that form stress-free pastures for Toyotomi milk.

Our staff members who experience these charms are grateful for their ties to Toyotomi, and have taken up working to spread the word within and outside the company. We value routine communication in order to smooth acceptance of us by those who

neighbor our construction site. HKB Team Project Mar

Project Manager Hiroshi Suzuki

#### Balancing Energy Independence and the Environment

In February 2018, Chiyoda System Technologies Corporation (CST) delivered a home-consumption solar photovoltaics system combined with lithium-ion batteries for the village of Toshima in Tokyo Prefecture. This system works in tandem with its lithium ion storage batteries under normal conditions to supply critical load\*<sup>1</sup> and general load\*<sup>2</sup> using solar power. It achieves efficient energy usage, and also serves as an emergency power supply by disconnecting from the grid to run as a UPS\*<sup>3</sup> for critical load power during outages.

Independent from the electrical grid of the Japanese mainland, Toshima also features climate conditions that cause major fluctuations in energy output from solar power systems. Connected to the island's grid as-is, these would produce major shifts in voltage and frequency. However, adopting this system eliminates those factors. This project was implemented based on the "Happy, Independent Island Plan Using Renewable Energy" planned by the village of Toshima in 2015, and contributed to regional value improvements by reducing energy purchases and island-wide carbon emissions, while also improving energy independence and strengthening disaster-prevention capabilities. CST will continue to work to help other regions overcome similar issues by balancing community energy needs with environmental concerns.

\*1. Power load that must be supplied at highest priority during outages

\*2. Non-critical load

\*3. Uninterruptible Power Supply: Facilities for power supply without immediate cutoff during outages



Solar Cells



Storage Batteries

My name is Masaji Santo and I am the President and COO of Chiyoda Corporation, having also served as the Chief Sustainability Officer (CSO) since July 2019.

In response to the FY 2018 financial losses and with sustainability as a goal for the corporate management, Chiyoda has developed a Medium Term Management Plan "Chiyoda's Revitalization -Initiatives for Revitalization and the Future", to enhance risk management and EPC project execution.

#### Achieving Chiyoda's Corporate Philosophy

Since its foundation in 1948, the Chiyoda Group has strived to embody its corporate philosophy of "Energy and Environment in Harmony" and to continue business activities that contribute to the development of a sustainable society.

To realize this philosophy, we must use our diverse knowledge to create new innovations and solutions to fulfill our mission of resolving shared social issues, as illustrated by the Paris Agreement and SDG's\*1.

Whilst addressing complex environmental issues such as climate change and to achieve a sustainable society that balances economic and social values through technological and human assets\*2, Chiyoda, as an engineering company, must also leverage the digital revolution.



#### Chiyoda's Corporate Social Responsibility (CSR)

Transparent corporate management based on fair terms and conditions is critical to continuing our business activities. As a global business, Chiyoda stakeholders and employees continue to diversify through an expanding customer base and business partnerships, local communities and shareholders. As a signatory to the UN Global Compact\*3, we have developed our business within human and labor rights parameters and by complying with legislation and anti-corruption laws. We have focused on adhering to Japanese and international laws and regulations in particular, as well as respecting human rights and preventing harassment. To improve transparency in all our business activities, we established new Human Rights and Tax Policies in FY2018 and are committed to their implementation. We will also continue our efforts to reflect the spirit of these policies in our daily work, while requesting understanding from clients and partners as we work towards these principles.

#### Aiming to be a Reliable Company

Although we recorded major financial losses in FY2018, the Chiyoda Group continues to enhance the value of our engineering by integrating knowledge and technology with employees taking a wide view, and using diversity as an asset in executing the revitalization plan. As well as strengthening our financial base, the Group will unite as an engineering company, creating the future of energy and the global environment whilst striving to improve our corporate value as a reliable company.

- \*1. Sustainable Development Goals shared by developed and emerging nations for 2030, selected at the September 2015 UN Summit, consisting of 17 goals and 169 targets aiming to eliminate poverty and achieve a sustainable world.
- \*2. The Chiyoda Group regards human resources as "human assets" given their status within the Group.
- \*3. Initiative proposed for companies at the 1999 World Economic Forum by Kofi Annan, then UN Secretary-General, requesting adherence to 10 business, human rights, labor, environment and corruption prevention principles

President and COO, CSO

## Corporate philosophy : Our Mission to Fulfill

Enhance our business in aiming for harmony between energy and the environment and contribute to the sustainable development of a society as an integrated engineering company through the use of our collective wisdom and painstakingly developed technology.

## Business vision : The Aim of Chiyoda

A Grand Opportunity for the Future The Chiyoda Group is committed to being an "Innovative" Engineering Company, shaping the future of energy and the global environment with passion and cutting-edge technology.

#### CSR Values : Our Shared Values

#### A Reliable Company



We strive to be a reliable company to our customers and all our stakeholders by providing world-class technologies and knowledge.

#### **Environmental Initiatives**

We will work to remain an invaluable company to society by utilizing refined technologies to promote harmony between the global environment and economic and social activities.

#### Social Contributions

Through our engineering business in Japan and overseas, we contribute to local communities and address global issues in ways including human resources development, technology transfer and environmental protection.

#### **Respect for Human Rights**



We are dedicated to respecting the human rights of all people. We will create a corporate culture where the diversity, individuality and character of employees are respected, where people are motivated to do their best, and of which employees and their families are proud.

#### **Commitment to Fairness**



We are dedicated to achieving even greater transparency and stability by conducting our operations fairly in accordance with the highest ethical standards.

ISO 26000 Core Subjects	UN Global Compact
Consumer (customer) issues	—
The environment	Principle 7: Businesses should support a precautionary approach to environmental challenges; Principle 8: undertake initiatives to promote greater environmental responsibility; and Principle 9: encourage the development and diffusion of environmentally friendly technologies.
Community involvement and development	_
Human rights Labor practices	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and Principle 2: make sure that they are not complicit in human rights abuses. Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; Principle 4: the elimination of all forms of forced and compulsory labor; Principle 5: the effective abolition of child labor; and Principle 6: the elimination of discrimination in respect of employment and occupation.
Organizational governance Fair operating practices	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

## A Reliable Company

For a corporation, the trust of its stakeholders provides the foundation for management. Through our business, the Chiyoda Group will contribute to the resolution of global issues and the sustainable development of society so as to continue earning the trust of our stakeholders.

## How

• Providing safe, reliable plants

- Carrying out high-quality engineering
- Technical proposals for the development of a sustainable society
- Equipment updates responding to the requirement of time Application of digital innovation technology

#### Efforts Toward Sustainability at Chiyoda-Almana



In addition to ensuring satisfaction of customer and stakeholder needs by strengthening acquisition of international standard certifications in labor safety and sanitation, quality, and the environment, Chiyoda-Almana is contributing to the

realization of a sustainable society as a trusted company.

#### **Environmental Efforts**

Given increased concern in minimizing gas flares\*1 and in order to bring about a low-carbon society, we have launched and are engaged in a Flare Reduction Project (FRP) with goals of reducing CO<sub>2</sub> emissions by reusing gas rather than combusting it. After completing basic designs for gas flare reduction in 2015, we began accepting EPC work in 2017 and are still actively engaged in this regard now.

\*1. Flames produced from burning excess gas generated during LNG plant operations in order to neutralize redundant gas. Burning at flue tips (flare stacks) reduces harm to some degree, but solutions are in demand from a perspective focused on reducing greenhouse gases

#### **Quality Efforts**

On November 22, 2018, the FRP Team help "World Quality Day 2018" in collaboration with corporate partners involved in this project. Companies participating emphasized quality improvements aimed at further reducing gas flares, and the full team came together as a unit. Furthermore, at Chiyoda-Almana, we ensure quality according to ISO90001 procedures, an internationally-recognized quality certification. We implement performance assessment campaigns on all projects completed each year, and actively respond to customer feedback as we engage in dialogue.

#### Acquisition of International Certifications

In addition to our environmental and guality efforts in business, we have also developed an Integrated Management System (IMS) as a framework for

business operational documentation, management, and improvements

From January to February of 2019, we also underwent IMS certification review by third-party agency Bureau Veritas for assessment of labor safety and sanitation, quality, environmental, and corporate responsibility compliance. We achieved the following results.

ISO14001, and ISO45001 via IMS acquisition

- New acquisition of ISO45001 certification for labor safety and sanitation
- Integration of ISO9001, ISO14001, and ISO45001 via IMS acquisition
- New adoption of ISO31000 as a risk management system



World Quality Day 2018



As a reliable contractor, we will collaborate with our cli-

#### **Receiving the Chiba Labor Bureau Manager's Grand Prize** (for Measures to Ensure Safety)

Chiyoda achieved safety record of no accident and tragedy over 2 years construction of CPKP ISBL Off-Site Project Work for the Cosmo Oil Co., Ltd. and was awarded as excellent company of safety measure by Chiba Labor Office in October, 2018.

Refinery complexes are base of oil production and supply and important foundation for national life and (local) economy. Therefore, preparation (building-up of) for the robust supply system of oil products is important mission of oil industries both in the normal time and emergency cases. This time Cosmo Oil Co., Ltd. successfully implemented rationalization and efficiency improvement of its refinery business to ensure the stable energy supply and low products pricing by underwater pipeline construction to be connected with other oil company. This pipeline enabled the optimization of refining facilities, production planning, and common use of raw materials.

Construction work in the existing production site required careful construction planning and schedule control with seasonal maintenance work as well as careful safety planning. For some critical works of new pipeline work, Chiyoda facilitated daily project meeting with the client to adjust construction schedule. In addition, over 200 applications

to the local fire office were required as per connecting point of pipeline and its construction schedule. Under the above mentioned conditions, Chiyoda completed this difficult project without accident and tragedy.



The Chiba Labor Bureau Manager's Grand Prize Awards Ceremony

#### Improved LNG Productivity Using AI ("LNG Plant Optimizer") on PT Donggi-Senoro LNG (DSLNG)

We have introduced "LNG Plant AI Optimizer" to increase LNG production on an existing plant of DSLNG on Sulawesi Island, Indonesia. This is the first project in the world where and innovative AI product - Deep Learning\*2 has been introduced on an existing LNG facility to safely increase LNG production and improve economic efficiency with no plant modifications.

We are continually striving to achieve its goal of Digital Innovation Technology.

\*2. A method and technology to enable computers themselves to capture the potential features of the data to make more accurate and efficient decision through multi-layered neutral networks simulated human neural networks created by machine learning

ent to establish "sustainable cities and communities" as the global goals.



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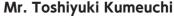
This was a challenging project, involving connecting our production facilities with those of other companies with a pipeline. It began by clearing a variety of differences between us and other partner companies. We held weekly meetings and made progress over the course of more than 100 conferences. Arrangements were widespread and a struggle given that numerous contractors were involved in on-site construction, but that also gave our employees a lot of chances to learn. Having completed everything smoothly, the experience has given us a lot of confidence and helped us grow.

Safety was one of the most important points for both businesses. The Chiyoda specialty of off-site construction is high-risk when plants are running, yet in addition to carrying everything out on a tight schedule while prioritizing safety, we are grateful that Chiyoda managed it without any accidents or disasters. Furthermore, handling the massive volume of bureaucratic applications involved shows their level of experience as an engineering firm.

An oil company's mission is to achieve a stable supply of energy. In the future, we aim to continue use of Chiyoda's first-class contracting experience and expertise as we strive for harmony with the environment, both for enhancements to existing plants and for efforts toward International Maritime Organization (IMO)

bunkering fuel sulfur content regulations.

Cosmo Oil Co., Ltd. Yokkaichi Refinerv Assistant General Manager (Refining)









# **Environmental Initiatives**

Ever since the Chiyoda Group was founded, we have engaged with the contradictory themes expressed as "harmony between energy and the environment." In order for the global environment and human society to be sustainable, we will aim to use engineering to realize climate change countermeasures and a carbon-free society. As we contribute to solutions for new issues as they arise, we will continue to be a leading company.

## **OW**

- Implement measures to protect the environment through project execution
- CO2 cuts to achieve a carbon-recycling society
- Suggest technology that addresses climate change
- Develop and provide technology to protect the environment
- · Use energy effectively by improving energy efficiency

#### **Environmental Initiatives to Protect Air Pollution in India**

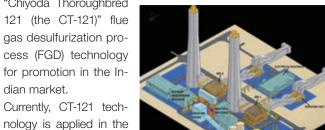


In India, coal accounts for 54.6% of the installed power capacity of 356GW (as of March 2019). With its robust and rapid economic growth, air pollution has been seriously increased, and removal of SO2 emitted from coal-fired plant has become an important social issue.

In 2030, domestic share of coal-fired plant will be still around 40 % as the demand for coal is firmly rooted in its low and stable price.

In November 2016, Chiyoda concluded a technology license agreement with India's major heavy industry manufacturer Larsen & Toubro (L&T) to provide its proprietary

"Chiyoda Thoroughbred 121 (the CT-121)" flue gas desulfurization process (FGD) technology for promotion in the Indian market. Currently, CT-121 tech-



8 FGD retrofit projects Artwork of the completed CT-121

allocated in the attached map, and going to contribute for the protection of air-pollution in India.



Map of CT-121 licensing projects underway in India

#### Efforts to Achieve a Carbon Recycling Society



Our aim of achieving a carbon-free society in 2030 and beyond is one key issue we must work toward. In that regard, we established our Decarbonization Advancement Office on June 1, 2018 (restructured to a Carbon Management Business Office in July 2019).

In FY2018, alongside the drafting of our strategy for a carbon-recycling society, we also considered ways to contribute toward quantitative CO2 emissions reductions. When doing so, we calculated quantitative contributions toward CO2 emissions reduces from LNG as a low-carbon energy source, and from EPC provision for renewable energy facilities. The results showed that as an engineering company, we can contribute an estimated 1.18 billion metric ton total reduction in CO<sub>2</sub> emissions by 2030 via plants constructed. We will reduces CO2 emissions through our engineering techniques in order to contribute to the future of energy and the global environment.

Chiyoda participates in the CCS (Carbon dioxide Capture and Storage) demonstration project, and currently executing the construction work of large-scale demonstration plant which recovers CO<sub>2</sub> from flue gas exhausted from Coal-fired Thermal Power Plant.

This demonstration plant is under construction in the Mikawa Power Plant of SIGMA POWER Ariake Corporation (SPAC), subsidiary of Toshiba Energy Systems & Solutions Corporation (Toshiba ESS), in Omuta-shi, Fukuoka prefecture, which will captures 500 tons of CO<sub>2</sub> per day, almost 50 % of its CO<sub>2</sub> daily emission. Based on the technical requirements of Toshiba ESS, Chiyoda is undertaking detail engineering, procurement, installation and test operation of facilities including civil construction work. This demonstration project led by Toshiba ESS was authorized as "Demonstration of Sustainable CCS Technology Project" sponsored by Ministry of the Environment in 2016 and will start operation in the summer 2020. Chiyoda is one of the consortium members of 16 organizations aiming for the construction and societal implementation of CCS demonstration plant.

This demonstration work is responding to the governmental vision for the introduction and commercialization of CCS technology to decrease CO2 from thermal power

#### The "GREEN OIL JAPAN" Declaration and Our Efforts with euglena Co., Ltd.

On November 2, 2018, we held the groundbreaking ceremony for construction on our experimental bio jet and diesel fuel plant for euglena Co., Ltd. ("euglena" below). The plant is the first of its kind in Japan. At the ceremony, euglena's President Izumo announced the new GREEN OIL JAPAN declaration of Japan's aims to become a leading biofuel nation. The declaration sets establishment of a biofuel industry as its goal, and calls for the adoption of biofuels produced at the experimental plant by 2020 in land, air, and marine vehicles, as well as the spread of biofuel production and usage supporters across Japan by 2030. We are working on joint development of biofuel production systems using Fluid Catalytic Cracking (FCC\*), in collaboration with euglena and Shinshu University. This research works to produce cheap, high-quality liquid fuels from low-environmental-burden biomass. Wood biomass is abundantly available, but bulky by the unit, and also features low energy density, making it difficult to use as a resource with existing technologies. To address that, we are producing fuels with economic quality equal to petroleum gasoline and reduced CO<sub>2</sub> production by liquifying wood

#### **Engagement for the Reduction of Green House Gas**

plant. With the project execution know-how of huge-scale gas processing project in both domestic and overseas market, Chiyoda is proposing high level pre-treatment technology of CT-121.

In addition, Chiyoda is adopted in NEDO Feasibility Study Program from 2018 and is collaborating with RIKEN and Furukawa Electric Co. Ltd., aim to commercialize, in the 2030s, the Hybrid Electrocatalysts System which can produce basic chemical products (C2 chemicals) directly from CO<sub>2</sub> and H<sub>2</sub>O.

Thus, Chiyoda is enforcing the promotion of renewable energy and reduction of CO<sub>2</sub> in these programs.



CO<sub>2</sub> breakdown/collection demonstration facility imagefacility image

biomass, and investing in existing FCC equipment. We support a part of euglena's GREEN OIL JAPAN declaration through our completion of projects and provision of technologies, and will bring about a bright new future alongside all our stakeholders as an engineering company that shapes the future of energy and the global environment.

\* FCC (Fluid Catalytic Cracking) is a process of obtaining primarily gasoline products from the catalytic breakdown of heavy oil raw materials. While this is a critical reaction in the oil refining field given its ability to produce clean gasoline from inferior heavy oil that cannot be used on its own, it is also an environmentally-friendly process that lets us make effective use of limited resources.



Two-stage process via biomass liquification and FCC

X)













## **Social Contributions**

Working to resolve societal issues is our social mission as an engineering company. We don't just provide plants; we develop social infrastructure with a fusion of Al and digital technologies, and work to develop global human assets through technical knowledge transfer and cultural exchange

## How

- Development of global human resources
- Transferring technology, creating job in countries where we execute projects
- Providing added value by integrating with cutting-edge technologies
- Establishing industrial infrastructure



#### **Developing the Next Generation of Human Assets**



People are the greatest assets in the engineering industry, and the finding and training of young engineers is also critical to reinforce international competitiveness and achieving resolutions for social issues through technological innovations. Chiyoda Group

provides a wide range of training programs in partnerships with schools, and works to develop the next generation of human assets and increase awareness of the engineering industry.



Interns at Chivoda Philippines Corporation

#### Example efforts in FY2018

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Chiyoda & Public Works employees speaking at a study abroad in Japan seminal

Chiyoda Corporation	<ul> <li>Accepted 57 interns</li> <li>Held project management courses at Yokohama National University and Kyushu University</li> <li>Held global human resources training model curriculum courses at Sophia University</li> </ul>
Chiyoda System Technologies Corporation	Accepted seven interns
Chiyoda Philippines Corporation	<ul> <li>Implemented two-month long on-the-job training programs for engineering students at 25 local universities</li> </ul>
Chiyoda & Public Works Co., Ltd.	<ul> <li>Assisted with corporate dispatch placements primarily coordinated by Okayama University for students from Myanmar</li> </ul>

#### Development of training for overseas customers

In relation to the execution of numerous overseas projects, we also focus on human resources development in relevant countries. At training sessions for our overseas customers, we offer domestic lessons that incorporate new guidance on how to interact with Japanese culture, and also training via instructors dispatched to customers' nations. We held nine training sessions in FY2018, with 124 trainees from four nations. Through technology transfers and cultural exchange, we will continue to contribute to the sustainable development of nations where we have constructed plants.



Scene from training for overseas customers

#### Integrating Hydrogen, AI, and Digital

Chiyoda exhibited in the Kawasaki International Eco-Tech Fair 2019 held in Kawasaki City, February 7-8, 2019. Featured at the Chiyoda booth were the SPERA Hydrogen® system that brings hydrogen on a large scale in liquid state at ambient temperature and pressure from overseas and the Plant Digital Twin\*1 that promote "visualization"

of plant operations and maintenance through the application of new data integration technology with 3D data platform. Mr. Ian Maidin, Charge d'Affaires ad interim at the Embas-

sy of Brunei Darussalam and Mr. Norihiko Fukuda, Mayor of Kawasaki City visited Chiyoda's booth and attended at the presentation and discussion.

It was not only an introduction to individual technologies, but also an exhibition that showed the goals and the whole sense of the future society including hydrogen integration of AI and digital.

#### **Contributing to Regional Economic Development and** the Engineering Industry Through Our Projects

Chiyoda won the Engineering Commendation Award 2018 of The Engineering Advancement Institution of Japan (ENAA), due to Titanium Sponge\*2 Plant Project in Saudi Arabia completed in 2017. In this project execution, Chiyoda, as a leader of JV with CTCI, could manage the same level of guality and construction schedule as in domestic project of equal type plant in Japan, and realized the supreme safety record under the very severe natural conditions. Chiyoda implemented various crisis management measures including terolist attack as well. Those project execution is highly evaluated and awarded by ENAA. Also, this project was selcted as Advanced project for the Do-

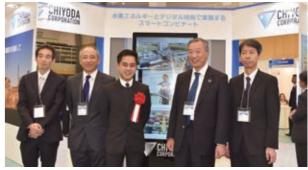


The FNAA Awards



We will contribute to realizing a smart society with total system optimization capability an integrated engineering company provides.

\*1. A virtual digital plant coordinating and consolidating all operational and security data, centering on a 3D model.



In front of our booth with the Charge d'Affaires ad Interim of Brunei (center





mestic Supply Chain Development in Saudi Arabia in the "Japan-Saudi Vision 2030" because titanium supply chain promoted by this project will contribute their economical development. In addition, this project won the GCC Winner, Industrial project of the Year in the MEED\*3 2019 Project award in April 2019.

Thus, Chiyoda will cntribute the development of engineering industy and follow the global goal of "Industy Innovation and Infrasructures".

\*2. Porous pure titanium obtained via smelting of titanium ore.

\*3. MEED MEDIA FZ LLC: A top media company founded in 1957 and specialized in the Middle East and North Africa



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## **Respect for Human Rights**

## Why

Human resources are valuable assets for an engineering company. In order to maintain a corporate culture that our employees and their families can take pride in, we are faced with a growing necessity to carry out work style reforms, develop global human resources, and respect the diversity of personnel.

## How

Share the consciousness of "safety as a core value"Strengthen emergency management systems

- Respect human rights
- Undertake work style reform initiatives
- Use of diverse human assets

#### Simulated Experience Training of Dangerous Situation with Clients and Partners

Chiyoda Kosho Co., Ltd. has developed simulated experience training of danger situation, and executed with clients and sub-contractors in the construction site.

To protect labor incidents in the site, raising awareness of danger is important and key to realize the Zero Incident". In this training participants experienced near-miss situation of construction work and analyze how it occurs by themselves.

In the feedback report in past 3 years, most of participants satisfied this program and more than 80% answered that awareness for the dangerous risk has been raised to more sensitive in construction work.



Simulated Experience Training at Oita Rinkai Field Office of Oita Liquefied Natural Gas Company, Inc.



#### Use of Diverse Human Resources

An engineering company's assets are its technology and human resources. We believe in the use of diverse human resources as one of our management strategies alongside work-life balance for group employees, and we aspire to further advance and enhance our human resources.

Through this use of diverse human resources, we aim to further advance our international competitive edge and build an organization that is flexible in the face of change, which can proactively accept new values and changes on an individual level.

#### Employee data as of March 2019 (Chiyoda Corporation)

(0) 0	
Number of women employees	248
Number of non-Japanese employees	63
Number of employees with disabilities	19

#### Human Rights Initiatives through the Project Execution

Chiyoda issued Human Rights Policy in September, 2018 as a management commitment for the respect of human rights by integrating of our human rights concepts included in the Code of Conducts and Employer's Practical Guide and some global initiatives.

In the execution of EPC project, Chiyoda is paying attention to the human rights of stakeholders including regional communities as follows;

#### **Children Human Rights**

Chiyoda is doing its project activities all over the world, and protection of children's human rights is common requirement in global society. In this respect, Chiyoda observing related local laws and regulations and to confirm how subcontractors and vendors observe human rights requirements as elimination of child labor, forced labor and discrimination etc., (in the inquiry registration process).

#### Voices of Employees

#### Polishing My Catch-Up Abilities on a Daily Basis

I was lucky to become a mid-career hire in October 2018. Since I serve as the secretary to the Division Director, I often have to make schedule arrangements for business trips or excursions or set up meetings with people both within and outside my department. I try to keep my eyes sharp and immediately catch what the other person wants, but I'm constantly aware that I still have a lot to learn in terms of "catch-up abilities."

Since being hired, I've gradually gained perspective on operational and management methods in the department through a variety of tasks, so I want to work with my superiors and the other people in charge to make improvements and support freedom of action for the sales staff. That is my goal.

I want to build better relationships while communicating with a diverse cast of people, in order to in-

crease acceptance for others with physical disabilities that require wheelchairs.

Global Environment & Green Energy Project Business Development Division,Business Development Department 1 Akira Kubota

19 CHIYODA GROUP Sustainability Report 2019



#### Employee Safety and Community Human Rights Considerations by Armed Security

For the enhancement of safety for the employee to be assigned in the project site, Chiyoda implements thorough local surveys before the site work is started. Depends on the results of those surveys, Chiyoda needs to deploy armed security guard under the local laws and regulations. In addition, Chiyoda only uses the service providers which not only comply with local law, regulations and international law, but also support international agreements such as "UN Global Compact" and "Voluntary Principles on Security and Human Rights".

#### **Employee Human Rights**

We have always worked to prevent harassment in our operational areas both within Japan and abroad. We have established and operate under the group consultation reporting system intended to detect and prevent and remedy violations immediately.

# Voices of Employees

#### It Is Only Natural That Chiyoda Corporation Will Bring in Countless People to Provide Clean Energy Worldwide

I work in the Gas and LNG Process Design Department, and our daily efforts are focused on the goal of creating plants and bringing LNG to people worldwide through cooperation with all departments, customers, licensers, vendors, and countless others. It is natural for a lot of people to be involved with these large projects, and while that includes people from diverse nationalities (I myself am looked upon as a foreigner by the people around me), I have never felt any issues due to our different genders or nationalities. Instead, this workplace environment is natural at CHIYODA, and those around me demonstrated with their attitudes and work how to accept others for their motivation and abilities, regardless of gender or nationality.

I think that as a company member, this is how I contribute to the creation of a sustainable society, both in terms of en-

vironmental and energy issues, and in terms of equality across gender and nationality.

Technology & Engineering Division, Gas & LNG Process Engineering Department Pantira Privatananupunt











## **Commitment to Fairness**

## Why

Commitment to fairness is the foundation for a corporation's continuing existence. The Chiyoda Group has also been pursuing stronger governance and a more thoroughgoing compliance. Meanwhile, transparency, fairness, and openness in management have been increasingly called for because of requirements in Japan and overseas.

## How

- Implementation of thoroughgoing compliance education and export control education
- Expand corporate management frameworks that are transparent and sound
- Implement thoroughgoing risk management

#### Various Efforts to Raise Awareness and Recognition of Compliance and Prevent Corruption



Chiyoda group have been continuously conducting training program on compliance for all employees to enhance compliance consciousness (awareness) and knowledge level. In this connection (For those purpose), we are operating annual e-learning program for thorough awareness of "Chiyoda Group Code of Conduct", and risk hedge of anti-bribery and cartels.

Furthermore, individual seminars for the construction business act, regulation of insider trading, bribery, cartels and harassment have been held with the many attendants of group all employees.

For the monitoring of overseas group companies, we have visited each companies to define their compliance risks and made lectures for individual compliance themes. In 2019, we have issued "Compliance Handbook" covering case studies of 14(fourteen) compliance cases and distributed to all employees in Chiyoda groups.

Also, we made "Investigation of Compliance Status" in 2018. As a result, outstanding compliance matters were defined and to be followed by us.

The purpose of the Group's consultation and reporting system (hotline, whistleblowing system) is to quickly detect and prevent any illegal activities or unethical conduct, whether actual or suspected, using a framework that properly processes reports and consultations regarding unethical conduct and illegal activities by individuals or organizations. This hotline is operated jointly by Chiyoda, its domestic Group companies and overseas Group compa-

#### FY2018 Compliance Education and Training Record

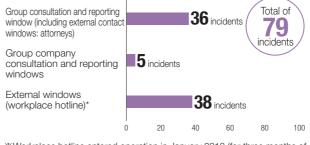
Туре	Item	Sessions, etc.	Number of Students
Tiered Training	<ul> <li>New hire training</li> <li>Mid career hire training</li> <li>New executive training</li> </ul>	1 3 1	82 11 19
Functional Training	<ul> <li>Pre-dispatch training for overseas assignment (for all applicable persons)</li> <li>Pre-appointment training for site managers (for all applicable persons)</li> <li>Security Export Control training</li> </ul>	Held as needed Held as needed 3	91 26 51
Seminars	<ul> <li>Insider trading</li> <li>Construction law</li> <li>Bribery and cartels</li> <li>Harassment</li> <li>Chiyoda Group Code of Conduct</li> </ul>	1 1 6 3 1	119 53 493 258 70
e-Learning	• The Chiyoda Group Code of Conduct and handling of bribery, cartels, and other serious risks	Chiyoda Domestic Group Companies Overseas Group Companies	2,429 1,536 704

nies. It has an External Consultation Center with a lawyer and workplace hotline available to all employees. The Chiyoda group will continue working together as a

whole to enhance compliance training as well as to reinforce our systems for ensuring early deletion and prompt response to cases regarding the compliance.

#### FY2018 Reporting and Consultation Record

#### By reporting or consultation contact window



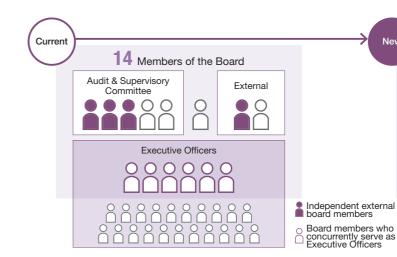
Workplace hotline entered operation in January 2018 (for three months of FY2017)

#### **Enhancing Corporate Governance**

We reinforced our corporate governance system as of July 1, 2019 in order to execute our renewal plan reliably and continue as a financially-healthy company that can continue to meet shifting societal demands.

## ① Increasing the ratio of independent external board members

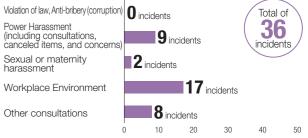
We have increased the incidence independent external board members to 40% and enhanced external monitoring functions.





Compliance Seminar at Chiyoda-Almana

#### By details (only for incidents reported to Group consultation and reporting windows)



There were no incidents of corruption or legal violations such as bribery or similar during FY2018.



#### ② Establishing new Chief Officers and clarifying the division of roles between board members and executive officers

We have limited additional roles as executive officers to the president and CFO alone, for further delineation of executive and auditing roles in management.

Furthermore, we have established a new COO (Chief Operating Officer) and CRO (Chief Risk Management Officer), and our President is serving concurrently as COO (with our chairman of the Board serving concurrently as CEO).



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## The Chiyoda Group's **Social Contribution Activities**

The Chiyoda Group is actively seeking solutions to global issues in order to help create a better society. This is not just a matter of social contributions through business. We will also continue working closely with local communities to contribute to the sustainable development of society.

## How

tion by all members together' as our motto, and coexistence with local communities as our object ue our corporate existence as a contri pment of society. By having our employ these activities, we are also heightening their motivation to contr society and developing human capital that will be capable of co ing not just to business performance but to society as a whole.

## **Educational Support & Human Resource Development**

Students received on company visits and CGH outreach lecturers dispatched





Implemented one corporate field trip and five off-site courses to support high school student career development.

Assisted with solar power plant construction site tours for local elementary school students.

#### **Chiyoda Young Inventors** Academy CIC



Held a two-week academy at the University of Houston for seventh through ninth graders interested in engineering and programming.

Assisted with a Japanese speech contest Chiyoda-Almana



University of Qatar

School Drive Campaign CPh,CIC



We do ed school supplies to local primary schools.



Interns accepted to program and



## Support for people with special needs

CGH

Heart-Made Sale Chiyoda Group within Japan



Held a total of 20 internal sales meetings for local site products for persons with disabilities in the city of Yokohama, at CGH and Koyasu Office & Research Park

Japan Philharmonic Orchestra of Beethoven's Ninth Symphony



Chiyoda has been supporting Japan Philharmonic Orchestra of Beethoven's Ninth Symphony since 2011, and every year we give invitations with 25 pairs of tickets to people with visual impairments.

TABLE FOR TWO<sup>\*2</sup> Chivoda Group within Japar



1.561 meals provided \*2: The TFT menu provided at employee dining halls includes a 20-ven donation, and each 20 ven can provide one school meal in a developing country.

ECOCAP Program<sup>\*3</sup> Chivoda Group within Japan



#### (Vaccine doses for 292 3: Caps for PET bottles are collected at the office and the proceeds (approximate ly 860 caps provides a polio vaccine for one person) are sent to developing countries.

## Assistance to areas hit by disasters

Assistance to Areas Hit by the Great East Japan Earthquake Employees Serve as Volunteer Relief Workers Chiyoda Group within Japan



Dispatched a full 53 personnel for three visits to the town of Otsuchi in the city of Kamaishi, Iwate Prefecture.

India Chiyoda-Almana



ed 20.681 Oatari rivals to The Chief Minister's Distress Relief Fund.

Registration for

Green Wave program<sup>\*1</sup>

#### Yubeshi no Kai Chiyoda Group within Japan



Purchase of CO2 sequestration credit (19.00 t-CO2)

http://greenwave.undb.ip/index.html/

internally for products from disaster-affected areas.

## **Contributions to Health & Welfare**

Donations to Yangon children's hospitals CPW

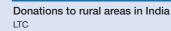
Blood donation CPW



Donated 1.5MM kyat and 500 nutritional meals for treatment of patients that require

Holiday food drive CIC

liver transplants.





Assisted West Houston Assistance Ministries and donated food to the hungry.

Provided refrigeration facilities for dairy producers and covered expenses for a medical examination bus.

#### Implemented fund-raising to benefit flooding-affected areas in southern



\*1: An initiative to spread a 'Green Wave' of growing things across the Earth by tree-planting and other such activities on the UN-designated International Day for Biological Diversity.









Support for the Papua New Guinea women's rugby team CGH, COPL



Source: Sports Journalists' Association website

## **Environmental** Conservation

Community clean-up activities Chiyoda Group within Japan



In cooperation with community clean-up activities, a total of 110 personnel participated in the Minatomirai and Koyasu districts.

Beach cleaning campaign Chivoda-Almana



About 120 employees and their family members participated in cleaning up Qatar's seafront.

Tree planting activities CPh



Planted 300 tree saplings.



## **Becoming a Company Even More Essential** to Society by Merging Sustainability With Management

Adjunct Professor, Mr. Masao Seki School of Business Administration, Meiji University

This is our first year driving toward renewal as a group, and this year's report clearly shows our will to work even more proactively on global issues, advancing the integration of sustainability and management strategy more than ever.

Have the strengths we've continued to heighten in energy and the environment since our founding ever been more necessary for society? We must polish our technical skills even further, and grow to become a company even more essential to society.

#### **Positive Points**

- **1**. The new corporate management system launched in July 2019 resolved that President and COO Santo would also serve as CSO (Chief Sustainability Officer). This sends a strong message internally and externally that we are merging sustainability with management even more solidly.
- **2**. We should also focus on the role of the Carbon-Free Promotion Office on June 1, 2018 (current: Carbon Recycling Business Office), established last year. I want us to use our abilities to the utmost as an engineering company that shapes the future of the global environment, as we fight against climate change. Special, urgent reinforcements for efforts of all sorts are required, as this is the issue with the greatest gap between reality and achievement of all SDGs.
- 3. For concrete results, we are working as the single contractor for the world's largest storage battery system's construction in the town of Toyotomi, Teshio District, Hokkaido Prefecture, and we also delivered home consumption-style solar generator systems for the village of Toshima as a disaster-prevention measure on the isolated island. Thanks to our record and experience in technology worldwide, we are able to provide solutions that suit diverse and varied sets of regional needs.

#### **Points Where Future Efforts Need Reinforcement**

- 1. We need to show more specific issues and road maps for efforts to achieve our vision for renewal and the future, and thus realize our corporate philosophy by providing society with value that incorporates our technological strengths. We should also work on setting longterm goals.
- 2. We have made major steps by seriously addressing points cited last FY and in drafting and disclosing our Human Rights Policy. It is also positive that we are considering the human rights of children and working to ensure armed security consider the needs of local communities. As a next step, we need to find human rights risks across our entire value chain, and work to create a system of human rights due diligence.
- 3. We should focus more on approaching and involving stakeholders. We will definitely need the support of diverse stakeholders to plan and implement the type of projects that lead the way for the society of the future.



**Diverse Human Assets** 

CHIYODA Corporation announced our "Renewal Plan -Vision for Renewal and the Future-" in May 2019, showing our longterm route toward management restructuring. We anticipate that the three pillars of advancing sophistication in our risk management system, evolving our EPC control strengths, and expanding and advancing human assets will produce not only improved financial results but also more satisfying non-financial results.

Only human assets can implement our Renewal Plan. The employees working passionately to resolve issues are the true source of Chiyoda Group value creation. Even advanced technology amounts to little unless paired with human assets.

I would like to consider the three following points regarding human asset development. First, there is securing diversity of ideas through hiring of human assets without regard to gender or nationality. This is precisely as noted in "activities by diverse human assets" under "Respect for Human Rights" in our CSR Values. Second is developing human assets capable of immediately spotting shifts in technological trends and putting those to use in work. Both construction and operating periods are long in the energy and environmental fields. Meanwhile, the technological revolution in AI is blindingly quick, and it is not coming from engineering companies. Third, human assets familiar with non-technical fields and capable of observing long-term changes in worldwide lifestyles. For example, what kind of ideas do you come up with when you ask yourself

#### In Response to the Messages from Stakeholders

I would like to express my gratitude once again to everyone for this report and these efforts. Understanding of the SDGs has spread fairly broadly over the last fiscal year thanks to efforts to identify materiality in SDGs items at each department. A reminder that our corporate philosophy is directly linked to the SDGs reminds us that there is a lot we can do to contribute to resolving societal issues, and I think it gives us a view of the path we all must follow. Under our President and now CSO, and as an engineering company, we always aim to fulfill our responsibilities toward the future with technology and ideas. Please continue to take a broad perspective and share your opinions and ideas.

# A Future Only Chiyoda Group Can Shape, Formed through the Development of Flexible,

Professor Mr. Kenichi Takayasu Department of Economics Dokkyo University

> about the relationships our technologies will have with babies born this year, over the course of their lives? Imagining the people behind our corporate clients can provide ways to use the technologies we possess.

> In business portfolio terms, we have produced a policy that emphasizes the global environment through solar power, biomass, marine wind turbines, and energy management services (EMS), while incorporating steady growth of demand for LNG, all under the umbrella of our Renewal Plan. These fields have deep ties to the SDGs and global environmental issues. The contents of our renewal plan are tailored to global issues that require resolutions.

> While the SDGs are not legally binding as some regulations are, they are becoming "soft" laws which restrict activities when violated, and it is growing more vital for companies to emphasize their efforts to address the SDGs. This year's Sustainability Report is our first to list contributions toward an estimated 1.18 billion ton reduction in CO2 emissions by 2030 through our LNG and renewable energy businesses. This should be a useful and powerful indicator for inviting ESG (Environmental, Social, and Governance) investment.

> The calls increase in intensity by the day for private companies to take the lead in driving innovations to resolve societal issues. We want to see a future that only Chiyoda Group can shape. The world has high hopes for us.



Kaoru Nakamura General Manager IR. PR. and CSR Department

#### Chiyoda Corporation Chiyoda Global Headquarters

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