Mitsubishi UFJ Morgan Stanley

Welcome to COP23 Event

Private Sector *in Action* for Adaptation

Clean Energy Finance Division
Mitsubishi UFJ Morgan Stanley Securities

- ◆ Since Paris Agreement, there has been an emphasis climate actions by non-state actors including the private sector.
- ◆ Many private corporations have begun to publicly announce their climate goals but their engagement in addressing climate change adaptation still lacks recognition.

Mitsubishi UFJ Morgan Stanley What is needed to accelerate private sector actions?

Visualisation of impact

- Linking the impacts with contribution to Sustainable Development Goals (SDGs) and Sendai Framework for Disaster Risk Reduction targets.
- Growing number of investors are looking towards businesses contributing to SDGs

Creating more successful cases

- Sharing experience and know-how
- Support and financing for scaling-up

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Agenda

| 14:30 | Welcome remarks | Ms. Mari Yoshitaka, Chief Consultant, Clean Energy Finance Division, Mitsubishi UFJ Morgan Stanley Securities (MUMSS) |
|-------|--|---|
| 14:35 | Adaptation needs in developing countries and potential for collaboration with the private sector | Dr. Saleemal Huq , PhD, Director, International Center for Climate Change and Development at Independent University, Bangladesh (ICCCAD) |
| | Building industrial resilience in Africa | Ms. Nahomi Nishio, International Consultant, Department of Environment, United Nations Industrial Development Organization (UNIDO) |
| | Sharing experience from business perspective (1) chemical industry | Dr. Masakazu Murakami , D.V.M, Senior Associate, Responsible Care Department, Sumitomo Chemical Company, Limited |
| | Sharing experience from business perspective (2) ICT industry | Mr. Seiya Yamazaki, Environmental Engineering Department, Environmental Technology Division, Corporate Environmental and CSR Strategy Unit, FUJITSU LIMITED |
| | Innovative approaches to utilizing private finance in adaptation activities based on a case study in Latin America | Mr. Jay Koh, Founder & Chair, Global Adaptation & Resilience Investment Working Group (GARI) / Founder & Managing Director, The Lightsmith Group |
| | Promotion of public-private partnership in promoting adaptation | Mr. Kohei Tamura, Assistant Director, Global Environment Partnership Office, Ministry of Economy, Trade and Industry of Japan (METI) |
| 15:35 | Discussion, networking and refreshment! | |

Launch of new Good Practice Case Book

Now available at

http://www.sc.mufg.jp/english/company/news/inform/e_news20171108.html



Climate Change Adaptation Good Practices by Japanese Private Sector

November 2017

13. Health & Sanitation

Preventing spread of infectious diseases associated with climate change

[Contribution to Adaptation Challenges]

Rise in temperature associated with climate change is forced to transform and expand the habitat of infectious discuse vector and heat organism, leading to the outbrook of infectious discuses in new territories and rerease in the number of patients. Sumitomo Chemical Co., Ltd. doveloped "Clyset[©] Net", ∎ mesh screen to repe malaria-transmitting mosquitoes in an effort to cradicate the discuse in 2001, the "Olyset" Net" was acknowledged by WHO as the first of its kind for its long lasting repellant effect. Containing the growth of nfectious discases associated with dimate change serves as an adaptation measure in the field of health and





for a long period after repeated weaking. The technology was enhanced for the development of "Divise" Plus" that effectively repels even the resistant malaria vector < Susiness Model of the Project>

[Project Details]

The Company started local production in September 2005 through the grant of manufacturing technology to A to I Enterprise in Tensania. To meet the surging domand, "Clyset" Net" production company was set up as a joint venture with A to I Enterprise, through which as large as 7000 job opportunites were generated and regional economy grow.

"Olyact" Not" was developed upon spries of research and

development in an attempt to help contain the outbreak of

malaria by applying the conventional technology used for

mesh screen in factories as bug shield. The Net is made of

polyethylene resin weven with insecticide agent for gradual surfacing which helps maintaining repellant effect

- in 2010, the Company built a production framework combined with Asian production bases which aggregately is capable of manufacturing as much as 60 million given annually. The anglest is now available in more than eighty countries through such international organizations as the Global Fund and UNICEF.
- In addition, the Company has launched sales to the general consumers through local supermarkets in Kenya and countries in Asia since 2011 in order to diversify channel of sales.

<Related SDCs of the Project3</p>





[Product & Technology]

Olyact^a Net/Olyact^a Plus: Mesquite not accredited by the "Sumika Sustainable Solutions" initiatives. The Products are made of polyethylane woven with the insect repalant agent of pyrethroid enhanced with the "Controlled Release" techniclogy that gradually releases the agent up to the surface. The Products are characterised as follows:

- Durability for thick polyethylene unlike the conventional polyester mesquito net.

- insect repellant effect that lasts more than 5 years Good airiness for unique mesh shape that suits the hot weather in Africa

[Key to Success & Challenges for Further Development]

At the initial developmental stage, the Product was first introduced to international organizations and governments of developing countries along with a proposal on its regulatory approval process in consideration for its revolty in global market. Sesides application to mosquite net, the technology will further be developed into comprehensive mosquite recollent measures considering the eco system including the treatment of agents that suits each environment.

[Profile of Project Company]
Sumitoms Chemical was founded in 1915 to manufacture feetile on from sulfur diexide emitted by smelting operations at the Seashi Copper Mine in Nithama, Chime Prefecture, Japan, with the aim of alloyating the air pollution caused by the emissions The Company, together with its over 100 group companies, currently supplies an array of products worldwide to support several industries and people's lifestyle from its five sectors of petrochemicals & plattics, energy & functional materials, IT-related chemicals, health & crop sciences and pharmacouticals. The Company received the GSC Health Supports Adian on Health Awards 200 2 for its defination for "Clust". Not".

Moforence) "Sumika Sustainable Solutions" Initiatives

https://www.aumitomo-chom.co.ip/oneligh/car/nova/docs/2017.07.51c.pdf

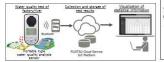
17. Secure Resources & Sustainable Water Supply / Health & Sanitation

Curbing flood damage with easy-to-use water quality analysis kit OPTEX CO., LTD. / FUJITSU LIMITED

[Contribution to Adaptation Challenges]

High incidence of floods due to increase in extreme weather events causes river overflow, inundation and contamination of water followed by damage to agricultural produce and health hazard such as infectious diseases in areas with poor sewage and drainage systems. In mining areas, the spread of heavy metal overflown from mines after heavy rain is also a serious issue.

"WATER it" developed by Optex is easy for anyone to handle. Combined with "FUJITSU Cloud Service IoT Platform", it enables automatic collection of water quality data from each point for simple and swift management and analysis of the measurement information through which changes in rivers can be detected early, making it possible to take steps against expected damage





[Project Details] <Background>

Visual results have been digitalized since 2015 for collection of data through collaboration of Optex and Fuiltsu. The system has been on a test run in China since January 2016 and thereafter extended to Southeast Asia in line with the business development of partnering Japanese companies. Since 2016, a feasibility study has been conducted in Vietnam on the adoption of a simplified water quality analysis kit and automatic data collection technology for the enhancement of controlling surrounding water environment as part of the "Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA Projects (SME ODA F/S)" of JICA.

< Business Model of the Project > The system solution is offered mainly to official organizations through local agents. < Related SDGs of the Project >





[Product & Technology]

"WATER it": A digital device measuring the substances contained in water by pouring water reacted with reagent into a portable water quality analysis sensor. The data will automatically be uploaded to "FUJITSU Cloud Service IoT Platform" enable instant viewing and management of water quality at each measurement area from a remote location.

[Key to Success & Challenges for Further Development]

By conventional method where it was necessary to bring collected water into a laboratory for measurement, it was difficult to collect wide spread data due to time and labor it consumed. WATER it successfully satisfied the demand of developing countries for affordable water quality measurement and data analysis by offering a simple and instant system. The Company will remain committed to an extensive campaign for government agencies, educational institutions and local residents to further their understanding of the system while approaching private companies that require water management for the adoption of the system.

[Profile of Project Company]

OPTEX CO., LTD. was founded in 1979. Since the development of the world's first far-infrared sensor for automatic door in 1980, the company has demonstrated its strength by offering unique products and services in niche areas and extended the sensing business in wide areas including security and factory automation. The sensing technology has also been translated into environment and disaster-prevention products for water quality analysis, building automation and lighting at disaster evacuation sites. http://www.optex.co.jp/e

FUJITSU LIMITED was established in 1935 as ICT service provider in various fields. The Company is also a comprehensive solution provider ranging from the development, manufacturing, and sale to servicing and operation of the latest, high-spec and high-quality products and electronic devices that underpin the ICT services. The Company is a front-runner in its own "decarbonisation" through ICT and presses ahead with mitigation of climate change and adaptation by offering the know-how on decarbonisation and its digital technology to clients and society.

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