

# COLLABORATING for **BLUE SKIES** and a **GREEN FUTURE**

In the 1960s, steep economic growth in Japan resulted in unchecked pollution, and people were suffered from the pollution as same as people in India's major cities now. Six décadas later, Japan is seen as the world leader in environment-friendly technologies and policies. It is now sharing technologies and knowledge with the Indian government to help the country build a more sustainable future.



**T**he recent winters in New Delhi witnessed one of the worst air pollution levels the country has ever seen. From November 2018 to January 6, 2019, the Central Pollution Control Board (CPCB) reported that the city's Air Quality Index (AQI) had reached hazardous levels (AQI below 100 is considered satisfactory, Delhi was hitting a dangerous 324 this season). By the end of the month, Delhi's air quality had far surpassed hazardous limits, in some areas the pollution was three times the permissible level, enough to cause lasting respiratory ailments among children and aging adults. According to a report by the Energy Policy Institute at the

University of Chicago, continued exposure to pollution was capable of reducing life expectancy by more than 10 years. As temperatures continued to drop to a minimum of 5 degrees Celsius, the city was enveloped in a toxic haze.

Almost half-a-decade ago, post-war Japan was suffered from heavy pollution too. In the 1950s, to recover from the ravages of the World War II, Japan made strides in economic and industrial growth. However, unchecked growth caused an alarming rise in air and water pollution. While the country prospered economically, the population experienced serious pollution-related diseases, especially due to methylmercury

or cadmium contamination of waste-water factories. Minamata disease (mercury poisoning) and Itai-Itai disease (cadmium poisoning) caused unbearable spine and leg pain, among other symptoms. Yokkaichi asthma caused severe bronchitis among the aging population. In a series of course-correcting measures in 1968, the Government of Japan, introduced the Basic Law of Pollution Control. In the 1970s, the Government passed fourteen more bills to cope with the pollutions. By the 1980s, Japan's air and water quality was showing remarkable improvements. Today, while Indian cities top ranks of the most polluted regions in the world, Japan's urban centres are

missing from these dystopian lists. The country is also gaining popularity as the leader in technological improvements that have successfully controlled pollution damages, without compromising on economic growth.

Scarred by the impact of hazardous pollution, Japan continues to keep a close check on pollution levels through constant monitoring, stringent regulations on industries and encouraging environment-friendly transportation. In a recent development, the Embassy of Japan, through a number of initiatives and introduction of new technologies, is assisting the Indian government in tackling

air pollution in the country. "The geographies and climates of India and Japan are different, but the approach that has helped resolve environmental problems in Japan is useful in tackling environmental problems here in India too," says Mr. Kenji Hiramatsu, Ambassador of Japan to India.

## WORKING TOGETHER TOWARDS BLUER SKIES

"For instance, Japan is willing to cooperate for alleviating India's air pollution by making full use of Japanese knowledge and technology. That's how our 'Blue Sky Initiatives' started." Ambassador Hiramatsu says. 'Blue Sky Initiatives' was launched by Ambassador

Hiramatsu in a lecture on the environment in Banaras Hindu University, December 21st, 2017, and was introduced by Mr. Yasuo Takahashi, Vice-Minister for Global Environmental Affairs at World Sustainable Development Summit on February 17<sup>th</sup>, 2018. This initiative covers a range of modern technologies, products and projects produced by Japanese companies that can help India move towards an environment-friendly future.

For instance, HORIBA, a leading Japanese manufacturer of precision instruments for measurement and analysis, produces highly sensitive ambient air pollution monitors, that are easy to use and maintain. On

# Japan's Blue Sky Initiatives

The Japanese ambassador at the launch of "Blue Sky Initiatives" in December 2017.



PHOTO COURTESY: DMRC



Delhi Metro built by Japan's ODA, an effective mode of transport to control air pollution.



JITMAP, a matchmaking platform of low carbon technologies between Japan and India.

January 28, 2019, Centre for Science and Environment (CSE) and HORIBA, in association with Delhi Pollution Control Committee (DPCC) launched a study on real time source apportionment of PM2.5 (particulate matter below 2.5 micron in size) in Delhi-NCR. These new dynamic air monitors from HORIBA allow for more real-time assessment of pollution levels, identify the sources and areas where pollution is severe and help sharpen strategies to tackle pollution in specific areas with heavy particulate matter, as well as develop large scale strategies at the city and national level.

In addition to monitoring real-time pollution statistics, the initiative has facilitated the introduction of the technology of Terra Motors, a Japanese company that manufactures eco-friendly, electric vehicles. The company has already sold over 25,000 environment-friendly e-rickshaws in the country and plans to expand its range.

Apart from the toxic air, Delhi's

PHOTO COURTESY: ZERO-SUM



An Intelligent Transportation System monitor installed in Ahmedabad through Japan's ODA.

heavy pollution also results from the dust on roads. Dust is a major carrier of pollutants and produces a thick haze that severely reduces visibility. As the air travels across cities, these dust particles gather harmful pollutants released by industrial complexes, cars, burning of farms etc. Last August, to curb the severe dust pollution, the state authorities sprinkled water on the roads and issued an advisory to construction sites and industrial complexes to spray water around their premises. Nitto Denko, a Japanese chemical manufacturer, sells dust suppressants that tackles this problem with greater efficiency. The manufacturers claim that once this suppressant is used, the dust settles for a week, and helps in containing dust pollution.

These Blue Sky Initiatives have

sparked conversations about the urgent need for environment-friendly technologies and advances, and how they can compliment and boost economic growth and industrial innovation. A presentation on Blue Sky Initiatives was made at the 20th World Congress on Environment Management & Climate Change organised by the Institute Of Directors (IOD). The 'Blue Sky Initiatives' were also introduced to students and faculty members of the Indian Institute of Technology Delhi (IIT Delhi) on February 7th 2019, and concluded to start collaborate with each other in air quality management field. Some of the products are successfully functioning in India's major urban centres. In 2014, Zero-Sum, a Japanese firm with expertise in

ITS (Intelligent Transportation System) launched a real time traffic congestion information delivery system in the city of Ahmedabad, in collaboration with the city's municipal corporation. In January last year, Japan International Cooperation Agency (JICA) signed a grant agreement with the Government of India to sanction an aid of up to roughly 70 crores rupees for the installation of advanced traffic information system in Bengaluru.

## COLLABORATING FOR A LOW CARBON, HIGH ENERGY FUTURE

With growing hazards of pollution and increasing focus on perils of climate change, Indian industries are seeking ways to reduce their carbon footprints, but at reasonable costs without compromising profits. Japanese companies have successfully managed to achieve this by employing low carbon, renewable energy technologies and energy efficient solutions. India, an emerging economy, is in need of these solutions and presents itself as a growing market for Japanese companies that offer solutions. In an effort to smooth the way for exchange of ideas and knowledge, a Japan-India Technology Matchmaking Platform (JITMAP) was envisioned.

Through this platform, The Energy and Resource Institute (TERI) and the Institute for Global Environmental Strategies (IGES) have successfully promoted transfer of Low Carbon Technologies (LCT) from Japan to India. JITMAP provides information about low carbon technologies, funding for government or public organisations to use these technologies efficiently and holds workshops to expand the number of users of Japan-India Technology Matchmaking Platform (JITMAP) in India. Apart from connecting Japanese Low Carbon Technology companies with Indian industries, an online information sharing portal was launched on February 15th, 2018 that makes information on policy, technologies, and successful case studies easily accessible.

However, effective policies, collaboration across manufacturers and Indian industries, and access to information and expertise can only achieve so much without the active participation of citizens. "Citizens are the real players to make the environment better," insists Sho Miura, Second Secretary (Environment), Embassy of Japan in India. "Even if the Government enforces strict rules,

PHOTO COURTESY: EMBASSY OF JAPAN



"Mottainai Grandma", donated to schools in Delhi for environmental education.

they do not work without citizens' participation. The civil society has an important role in disseminating the knowledge and contributing towards raising awareness."

## GRANDMA'S TALES

In Japan, the environmental successes were not just a result of innovation and policies but also engagement with local organisations and the citizens. While the Japanese government initiated several awareness drives through partnerships with local governments, schools and children were seen as important actors in creating a greener world. "Regulations by the Government and technologies by companies are important. But when Japan was struggling to solve environmental issues, we could not bring results without raising awareness. We have to use easy-to-understand formats. For example, popular medias such as animation and games can be used to convey message," adds Miura. A picture-book called *Mottainai Grandma* was one of the more successful creative awareness initiatives. *Mottainai*, in Japanese literally means 'don't be wasteful'. However, author Mariko Shinju struggled to translate the idea of *Mottainai* in English and across cultures. "What do you mean by *Mottainai*?" One day I was asked by my child. How can I explain this word? There are some Japanese

words that cannot be translated into English. This is how I started to think about making this picture story book," Shinju says on the e-book's website. "*Mottainai Grandma* is coming!" says the book, "Leftover food on the plate/ Last grains of rice stuck to the bowl."

She will come and say, "*Mottainai!*" / So much food left - *mottainai!* May I eat?" Today, this picture book is used in some schools in Delhi as an environmental education textbook after the Japanese State Minister of Environment donated 1,000 picture-books to city schools in Delhi.

Through a range of accessible resources, technologies, policy knowledge and social initiatives, the collaboration between the Embassy of Japan and Japanese industries can go a long way in building a sustainable and hopeful future, and restoring blue skies, without hampering growth in the country. "Japan has suffered from the consequences of pollution, it can help India avoid that fate," says Miura.



A Terra Motors e-rickshaw.