# ENVIRONMENTAL INITIATIVES UNDERTAKEN BY THE COMPANY CIPLA LTD.

Submitted by

Abhinav Agrawal (Roll Number: 203180004)



**Environmental Science and Engineering Department INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY** 

## (CIPLA)

# Part A: Description of the Company

Established in 1935, Cipla is the third-largest pharma company in India (IQVIA MAT Mar'19), an Indian multinational pharmaceutical and biotechnology company headquartered in Mumbai. Cipla was founded with the aim of self-sufficiency for India in pharmaceutical medicines, on responsible and sustainable growth through deep & wide portfolio and strong customer relationships. The company has completed more than 8 decades in the industry. It has 46 state-of-the-art manufacturing facilities across five countries, including India, South Africa, the US, and other key regulated and emerging markets with a 25,000+ workforce. The company is primarily into developing medicines to treat respiratory disorders, cardiovascular diseases, arthritis, diabetes, weight disorders, depression, and other medical conditions. It has an annual turnover of \$2.3billion.

**Products and services:** Cipla produce 50+ dosage forms and 1,500+ products using cutting-edge technology platforms to cater to 80+ markets. CIPLA's investments in manufacturing capital include the development of new drug delivery systems, facilitation of infrastructure supporting API (active pharmaceutical ingredients) and formulation developments, and strengthening of platform technologies.

#### i. Services Offered and Potential Customers

PRODUCTS	ANNUAL PRODUCTION RATE
Tablets and Capsules	34 Billion Units
Aerosols pMDIs (Inhalers)	120 Million Units
Lyophilised Injections	7 Million Units
Pre-filled Syringes	46 Million Units
Repsules	918 Million Units
Nasal Sprays	29 Million Units
Oral Liquids	101 Million Units
Seal Eye Drops	12 Million Units

# ii. Wastewater Treatment, Recycle and Reuse of the Treated Effluents, Air Pollution Control, *etc.*, if any.

# **Wastewater Management**

All their API manufacturing sites (except Patalganga) are zero liquid discharge (ZLD) sites. At Patalganga, part of the fully treated wastewater is discharged to CETP (Common Effluent Treatment Plant) under the obligation of discharge in line with the agreement. The total wastewater generated in FY 18-19 was 8,05,708.56 kL, of which 1,24,018.40 kL was discharged from Cipla's operations at Patalganga, Baddi, Vikhroli, and overseas sites into common effluent treatment plants (CETP) and publicly-owned treatment works (POTW) in compliance with the consent/permit conditions.

The summary of their effluents generated and discharged, and water recycled and reused is given below:



Source: Cipla Annual Report 2018-19

## **Waste Management**

Their waste management practice includes regular monitoring, safe disposal, and treatment. Waste solvents generated at API sites are partially recovered and reused, while the rest are sold to authorized recyclers. Formulation waste, which primarily consists of packaging waste, reject materials, and shelf life expired products, are sent to Treatment, Storage, and Disposal Facilities (TSDF) or subjected to thermal destruction in external incinerators/Co-processing.

The summary of waste generated from our operations in FY 18-19 is as below (Source: Cipla Annual Report)

Disposal Means	Unit	Quantity
Secured land-filling (SLF)	MT	1,399
Incineration/Coprocessing (Solid)	MT	1,576
Incineration/Co-processing (Liquid)	KL	831
Reprocessing/Recycling (Spent Solvent		
and Used OII)	KL	17,065
Reprocessing/Recycling (Containers)	MT	134
Composting	MT	227
Non-Hazardous Waste		
Scrap (PVC shoe covers, paper boxes,		
wood, glass, metallic waste, etc)	MT	8,062
Scrap (Plastic drum and cans, MS drum		
and fiber drums)	Nos.	76,227

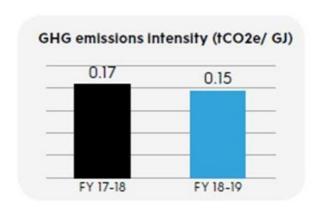
95% 4%

Of Hazardous waste (KL) Recycled Of Hazardous waste (MT) Recycled

# **Greenhouse Gas (GHG) Emissions**

The major GHG emissions at CIPLA are from Diesel, Natural Gas, Furnace Oil (residual fuel oil), and Electricity consumption. They have used IPCC AR 4 emissions factors for fuels (GWP as per AR 5) and CEA (Central Electricity Authority) emission factor for Grid electricity India. They have also used country-specific emissions factors for electricity used in other countries.

They have aligned their priorities to the global goals and national agenda for reducing GHG emissions.



Source: Cipla Annual Report 2018-19

# Part B: Pointers for Developing the Case Studies

i. Initiatives Undertaken by the Indian and Foreign Branch Offices in Health, Safety, and Environment (HSE)

Cipla being a responsible corporate recognizes the importance of managing HSE and it matters effectively as an integral part of their business activities. The company shall take all practicable measures to create a safe & healthy workplace for its employees and a clean environment for its employees as well as the surrounding community.

For effective implementation of the policy, Cipla

- Took full cognizance of HSE considerations and aim to continually adopt higher standards during the planning of projects, products & processes; and equipment & material procurement.
- 2. Assessed and seek to minimize the adverse impact of business activities on the environment and communities in which its operations are located.
- 3. Complied with applicable HSE regulations and participate with government, industry, and others concerned in creating responsible laws, regulations, and standards.
- 4. Work towards pollution prevention by eliminating and reducing environmental emissions & wastes; and resource conservation, including efficient use of energy and water.
- 5. They provided effective Occupational Health and Industrial Hygiene programs.
- 6. Developed and maintain appropriate emergency response procedures & contingency plans.
- 7. Recorded and investigated all incidents, shared and implemented the learning to prevent re-occurrence.
- 8. They have informed and trained employees & contractors on workplace hazards, associated risks, and arrangements to mitigate them.
- 9. Engaged & consulted employees and other stakeholders by fostering open dialogue on EHS matters.
- 10. Implementation of Occupational Health and Safety (OHS) system at all manufacturing sites in India, covering all their workers. The system is based on recognized risk management system standards.

## **Environmental Awareness and Employee Engagement**

They conducted various employee engagement activities aimed at creating awareness of environment protection amongst the employees. They celebrated 5th June as World Environment Day across all locations. Various

Initiatives like plantation, distribution of recyclable bags, outdoor waste collection, etc., were undertaken.

# ii. Initiatives Undertaken by the Indian and Foreign Branch Offices in Corporate Social Responsibility (CSR)

Their CSR initiatives are mainly undertaken through Cipla Foundation. The Foundation works with credible institutions, nongovernmental organizations (NGOs), government agencies, domain experts and visionaries, and other philanthropic foundations to enhance the outreach of their CSR initiatives in line with the CSR policy.

Health Skilling Education Disaster

The Cipia Foundation works across the following focus areas:

Source: Cipla Annual Report 2018-19

#### **HEALTH**

## Cipla Palliative Care (CPC) & Training Centre

A strong multi-disciplinary team of doctors, nurses, social workers, nutritionists, physiotherapists, pain specialists, and volunteers care for patients and their families at the center. They also extend free-of-cost palliative care through home care services in the community and out-patient (OPD) services at hospitals.

# **Highlights:**

Reached out to 4,700+ patients, 3,900+ sessions of home visits for holistic care

## **Training Palliative Care Professionals:**

**480+** nurses trained in palliative pain management at the All India Institute of Medical Sciences (AIIMS) in New Delhi

Over 300+ nurses received training on end-of-life nursing at Guwahati, Jodhpur, and Manipur.

# **Palliative Care to the Community:**

**240+** Asha workers trained to identify and refer patients

35+ District doctors and medical officers trained in palliative care

## **Respiratory Health**

The India State of Health Report (2017) has shown an alarming increase in both acute and chronic respiratory diseases. To address this issue, the Foundation had brought together institutions like AIIMS New Delhi, PGI Chandigarh, Asthma Bhawan, and Chest Research Foundation (CRF) on a single platform to conduct public health research on the causes and causative factors of asthma in children. They reported that the research findings would be based on data collected from a 160,000+ strong respondent base, and It will be used to understand respiratory conditions and informed health policy. This is the first-of-its-kind study in India to provide evidence to care.

## **Eliminating Hepatitis**

To help realize the WHO's global mandate of eliminating hepatitis by 2030, they have launched Project PRAKASH (Programmed Approach to Knowledge and Sensitisation on Hepatitis) in partnership with the Institute of Liver and Biliary Science (ILBS).

# **Highlights:**

1,200+ paramedics and doctors trained

**450+** patients from Purulia district in West Bengal were screened for hepatitis and attended vaccination camps

# **Supporting Technological innovation for Scalable Health Solution:**

Cipla Foundation partnered with Project ECHO to support a guided practice model of medical education. It aims to increase workforce capacity to reduce health disparities. It is a web-based hub-spoke platform where specialists share their knowledge and mentor health care providers in local communities. This exchange helps in better identification, evaluation, and management of diseases.

### Maternal & New-born Health

# Empowering individuals with disabilities (Aligning with Government of India's commitment)

Over 1,500+ professionals trained at the center reached out to 25,000+ children with disabilities.

#### **SKILLING**

## **Professional Skill Development:**

The focus of their unique transformational program in Baddi (Himachal Pradesh) is to provide professional education along with job-linked skills to capable youth from financially challenged backgrounds. The program has been running successfully for few years. Students get an opportunity to pursue a few-year Bachelor of Science (Pharmacy) degree at Baddi University and undergo on-the-job training.

# **Highlights:**

The first batch of 20+ students who completed the course had all been productively employed, while another 40 students are undergoing their studies.

#### Short-term vocational skilling:

They have partnered with the Skill & Entrepreneurship Development Institute (SEDI) in Baddi and the ITI, Sikkim, to provide opportunities for youth to learn technical and functional skills by trained professionals in areas such as carpentry, electrical, sewing, beautician course, etc.

## **Highlights:**

Over 200+ youth trained in Baddi,

**39+** sponsored youth from the first batch in Sikkim successfully completed industrial training.

#### Ambuja Manovikas Kendra:

The Skill Development & Rehabilitation Centre, which supports together with Ambuja Cement Foundation, imparts relevant vocational skills in areas such as bakery, pottery, and jewelry-making to persons with disabilities (PwD). In addition, they also create awareness and job readiness among PwDs to enable them to gain employment.

**18+** trainees successfully completed their training.

## **EDUCATION**

## **Enhancing Learning Outcomes for Students**

# **Early Childhood Development Centres (ECDs):**

They support ECDs in South Africa and India for children in the age group of 3-6 years whose parents are mostly migrant laborers. They strive to provide them with nutrition, education, physical protection, and security from abuse.

# **Highlights:**

1,430+ children benefitted in India and South Africa from the Ajuga and Balvatika initiatives.

## **Science Education**

They promote interest in science among students by supporting a unique hands-on and interactive learning program called Mobile Science Labs (MSL). These labs are equipped with over 100 science models. Each van goes to remote schools, where students have no access to quality learning. In FY 18-19, the four MSLs that they support engaged over 60,000 students in practical science learning.

### **Merit Award Scholarships:**

Felicitating meritorious students is a long-standing tradition at Cipla. They provide financial support to students from government and government-aided schools who have secured the top three positions in state-level board exams. They have felicitated over 600 students with merit awards, including 44 students with disabilities, in 122 schools across the country.

## **Infrastructure Support:**

To reduce inequities in learning environments, they support schools near their facilities by constructing sanitation blocks, libraries, and science labs. They promote digital literacy by providing computers and projectors apart from books and stationery to schools. The Indian Institute of Science Education & Research (IISER) in Pune has supported the establishment of a 20,000 sq. Feet world-class chemistry laboratory for undergraduate students and will be operational in FY 19-20.

#### DISASTER RESPONSE

They donated medicines worth Rs. 35 lacs to the Indian Navy and reputed non-profit organizations during the Kerala floods. This benefitted 16,000+ patients. The Indian Navy publicly commended them for their support and urged other corporates to follow suit. They also supported an innovative program that integrated palliative care with disaster response efforts; in addition, they also provided financial assistance to dialysis patients for a period of three months.

During FY 18-19, along with their on-ground partners, they extended immediate relief in the form of hygiene kits, ration, tarpaulin, and medicines to communities affected by the landslide in Manipur, the floods in Kerala, and Cyclone Gaja in Tamilnadu.

# iii. Initiatives Undertaken by the Indian and Foreign Branch Offices in Extended Producer Responsibility (EPR)

They have undertaken efforts towards green chemistry through which they have ingrained environmentally friendly manufacturing processes such as recycling and reuse of solvent and reducing the use of toxic and hazardous raw materials.

# iv. "Sustainability Reporting" Undertaken by the Indian and Foreign Branch Offices

To fulfill their primary goal of providing superior products, they have identified suppliers across the globe that is able to consistently provide them with key resources essential to their value chain. Their supplier base stands at 1,000+ suppliers and distributors spread across 28 countries today. They have extended their Code of Conduct to all their suppliers and contractual business partners. The Code lays down principles of environmental and social stewardship with a focus on patient centricity.

As a key element of their procurement processes, Cipla has put in place a continuous improvement program to enhance people capabilities and process efficiencies and to deliver cost benefits. Their procurement decisions are closely linked to their resource conservation and waste minimization efforts along with their overall growth and sales needs.

Cipla is reporting their Materiality (such as GHG emissions, water consumption, waste generation, etc.), Impacts, Risks, Mitigation Measures, and sustainable practices along with CSR, EHS, etc., in their annual reports.

## **Supply-Chain Sustainability**

**Encouraging local procurement:** Their supply chain strategy emphasizes sustainable procurement, and they took efforts to encourage local sourcing of materials. They have over 750 local suppliers, and ~65% of the total procurement spends for their operations are on local sourcing. Their initiatives have helped reduce the carbon footprint of their products and encouraged local economic development. In addition, they also work with small and local producers and provide on-site training on improving process quality and enhancing their awareness of compliances.

Green supply chain mechanisms: As responsible corporate citizens, they make every possible attempt to minimize the environmental impact associated with their logistics. They have introduced flow bundling and load consolidation systems for their operations by opting for bigger vehicles with optimum loads. This has resulted in the deployment of fewer vehicles, thus reducing emissions. Most of their vehicles, especially those of their dedicated service providers, have a vehicle tracking system. Vendors have to comply with safety measures like locking systems and also conduct periodic vehicular checks to reduce emissions.

**Network optimization:** In order to optimize their network footprint and reduce costs associated with logistics and depot operations, Cipla has initiated steps to review the entire depot network in India. They undertook a feasibility study and rationalized three regional depots in the current year (Baddi, Raipur, and Chandigarh). They continue to consolidate their network footprints in the next year also. This step has resulted in benefits such as:

- Reduction in the weighted average distance leading to a lower carbon footprint
- Lower inventory holding days and reduction in working capital
- Operational expenditure reduction due to reduced inventories, warehouse space manpower optimization, and other Resources
- Better control and focus on services due to reduction of warehouse footprint

# Part C: Comparison of Performance with Peer Group

Sr#	Parameter for Comparison	Cipla Ltd. Indian Office	Sun Pharmaceutical Industries Ltd.	Remarks
1	Brief description of the products and services offered by the company, locations as well as salient data on the workforce, annual turnover	PRODUCTS AND SERVICES:  Tablets and Capsules, Aerosols pMDIs (Inhalers), Lyophilised Injections, Pre-filled Syringes, Repsules, Nasal Sprays, Oral Liquids, Seal Eye Drops, etc.  The company is primarily into developing medicines to treat respiratory disorders, cardiovascular diseases, arthritis, diabetes, weight disorders, depression, and other medical conditions.  LOCATIONS: India, USA, South Africa, Europe, and some emerging markets.  Work-force: 25,000+  Annual turnover: \$2.3 Billion	PRODUCTS AND SERVICES:  Tablets and Capsules, Injectables, inhalers, ointments, creams, etc.  The therapeutic segments covered include psychiatry, anti-infective, neurology, cardiology, orthopedic, diabetology, gastroenterology, ophthalmology, nephrology, urology, dermatology, gynecology, respiratory, oncology, dental and nutritional, etc.  LOCATIONS: India, USA, South Africa, Canada, Brazil, Egypt, Hungary, Israel, Bangladesh, Mexico, Romania, Ireland, Morocco, Nigeria, Malaysia.  Work force: 30,000+  Annual Turnover: \$4.2 Billion	Sun Pharmaceutical Itd is a larger company than Cipla Itd in terms of higher annual turnover, higher workforce, a greater number of locations, and services provided.

Sr#	Parameter for Comparison	Cipla Ltd. Indian Office	Sun Pharmaceutical Industries Ltd.	Remarks
	•	Environmental awareness and		
		employee engagement	Their HSE Policy provides for the	
		They conducted various employee	creation of a safe and healthy	
		engagement activities aimed at	workplace and a clean environment	
		creating awareness of environment	for employees and the community at	
		protection amongst the employees.	large. It aims for the highest	
		They celebrated 5th June as World	international standards in plant	
		Environment Day across all locations.	design, equipment selection,	
			maintenance, and operations.	
		Assess and seek to minimize the		
	Initiatives on Health,	adverse impact of business activities	The policy is a commitment that we	Both the companies have
2	Safety, and	on the environment and communities	will manufacture our products safely	almost the same HSE.
	Environment (HSE)	in which its operations are located.	and in an environmentally responsible	They both can do more for
		Work towards pollution prevention by	manner. Their plant and processes	employee's safety.
		eliminating/ reducing environmental	are continuously upgraded to improve	
		emissions & waste; and resource	hygiene and health standards.	
		conservation, including efficient use of		
		energy and water.	The key processes comprise regular	
			safety surveillance, inspections, and	
		All their API manufacturing sites	audits; permit to work system for	
		(except Patalganga) are zero liquid	operational/maintenance safety; fire	
		discharge (ZLD) sites. At Patalganga,	prevention and protection activities;	
		part of the fully treated wastewater is	operation of the Effluent Treatment	

Sr#	Parameter for Comparison	Cipla Ltd. Indian Office	Sun Pharmaceutical Industries Ltd.	Remarks
		discharged to CETP (Common	Plant (ETP)/Incinerator; disposal	
		Effluent Treatment Plant) under the	activities related to hazardous wastes;	
		obligation of discharge in line with the	and regular monitoring of the	
		agreement.	environment, internally and also	
			through approved laboratories. The	
			state-of-the-art equipment installed at	
			our major facilities for recycling the	
			treated effluent has helped us achieve	
			the status of Zero Liquid Discharge	
			(ZLD).	
3	Corporate Social Responsibility (CSR)	HEALTH EDUCATION SKILLING DISASTER RESPONSE	HEALTH EDUCATION SAFE DRINKING WATER LIVELIHOOD ENVIRONMENT AND DISASTER RELIEF TRAINING IN VOCATIONAL SKILLS	Both companies can do more for the environment, such as organizing plantation drives, implementing green parking, rain harvesting.
4	Extended Producer Responsibility (EPR)	REDUCE, RECYCLE AND REUSE	REDUCE, RECYCLE AND REUSE	

Sr#	Parameter for Comparison	Cipla Ltd. Indian Office	Sun Pharmaceutical Industries Ltd.	Remarks
5	"Sustainability Reporting"	Working towards Green Chemistry Zero Liquid Discharge (ZLD) Encouraging local procurement Green supply chain mechanisms Network optimisation	Solid Waste Management Wastewater recycling Social Infrastructure Rural development Environmental Conservation Zero Liquid Discharge (ZLD)	

# **References**

- 1. <a href="https://www.expresscomputer.in/industries/pharma/how-cipla-is-embedding-digital-into-its-business-planning-and-execution/35007/">https://www.expresscomputer.in/industries/pharma/how-cipla-is-embedding-digital-into-its-business-planning-and-execution/35007/</a>
- 2. <a href="https://www.cipla.com/">https://www.cipla.com/</a>
- 3. https://www.cipla.com/investors/corporate-governance
- 4. Cipla Annual Report 2018-19.
- 5. https://www.sunpharma.com/operations/manufacturing
- 6. Sun Pharmaceutical Industries Ltd. CSR Annual Report 2018-19.
- 7. https://www.sunpharma.com/responsibility/csr