



# REGULATORY AND COMPLIANCE RISK

## ENVIRONMENT LAW NON-COMPLIANCE BY STERLITE CORPORATION

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# INTRODUCTION

The environment refers to our immediate surroundings in which all living and non-living components co-exist. It can be used to refer to the social, natural or built environment. The environment has a huge impact on an individual's behavior and intellect. Any change that occurs in a living entity either directly or indirectly is related to a change in his immediate surrounding.

# Environment Regulations

## **ENVIRONMENTAL (PROTECTION) ACT, 1986:**

The Environment (Protection) Act, 1986 was introduced as an umbrella legislation that provides a holistic framework for the protection and improvement to the environment.

## **WATER (PREVENTION & CONTROL ) ACT 1974:**

The objectives of the Water (Prevention and Control of Pollution) Act are to provide for the Prevention and Control of Water Pollution and the maintenance or restoration of the wholesomeness of water for the establishment, with a view to carrying out the purposes.

## **AIR (PREVENTION AND CONTROL OF POLLUTION) ACT 1981:**

The objective of this Act is to provide for the prevention, control and abatement of air pollution, for the establishment, with a view to carrying out the aforesaid purposes.

## **The Factories Act, 1948:**

Factories Act, 1948 is a social welfare legislation intend to secure health, safety and welfare of the workers employed in factories. However, some of the provisions of this Act are concerned with prevention of water pollution.

## **Environmental Impact Assessment (EIA) :**

It is an important management tool for ensuring optimal use of natural resources for sustainable development. The scope of the EIA has been enhanced to cover other developmental sectors such as industries, mining schemes, energy, etc.

## **Control Pollution Control Board :**

The Central Pollution Control Board (CPCB) is a statutory organization, whose function is to promote cleanliness of streams and wells in different areas of the States as well as Advise the Central Government on any matter concerning the prevention and control of water pollution. They Advise the Central Government on any matter concerning the prevention and control of water pollution.

### **Ministry of Environment and Forest :**

The ministry is responsible for planning, promoting, coordinating, and overseeing the implementation of environmental and forestry programmes in the country. It also ensures the conservation of flora and fauna of the Indian forests.

### **Ministry Of Water Resources:**

It is the apex body for the formulation of rules and regulations for the development of water resources in India.

### **Tamil Nadu Pollution Control Board:**

It is the governing body to monitor and control air, noise, and water pollution in the state of Tamil Nadu.

# About the company

- Sterlite Copper is a subsidiary of Sterlite industries, a company owned by Vedanta Limited.
- Sterlite operated the largest copper smelter plant in India, in Thoothukudi from 1998 to 2018.
- The plant also included a refinery, a phosphoric acid plant and a sulphuric acid plant.
- Anil Agarwal is the owner of Sterlite copper.



Tamil Nadu Government nods to the establishment of project. Tamil Nadu pollution control board (TNPCB) issues **No objection certificate** with a condition that it should be located 25 km from the Gulf of Mannar.

TNPCB issued the operating licence to Sterlite ignoring the violations and issued warnings that the licence would be revoked, if the company violates pollution standards.

Upon Madras High court instructions, a study was carried out by National Environmental Engineering research institute. **Sterlite was closed** for the first time, but only for a few. A second study was ordered from the same research agency.

Supremecourt monitoring committee was setup to inspect Sterlite. TNPCB reported that Sterlite was engaged in unlicensed production.

1994

1995

1996

1997

1998

1999

2004

Ministry of Environment and forests issued **environmental clearance** without taken into consideration of the environmental impact assessment and pollution hazards. The planned site was built at **14 km from the Gulf of Mannar.**

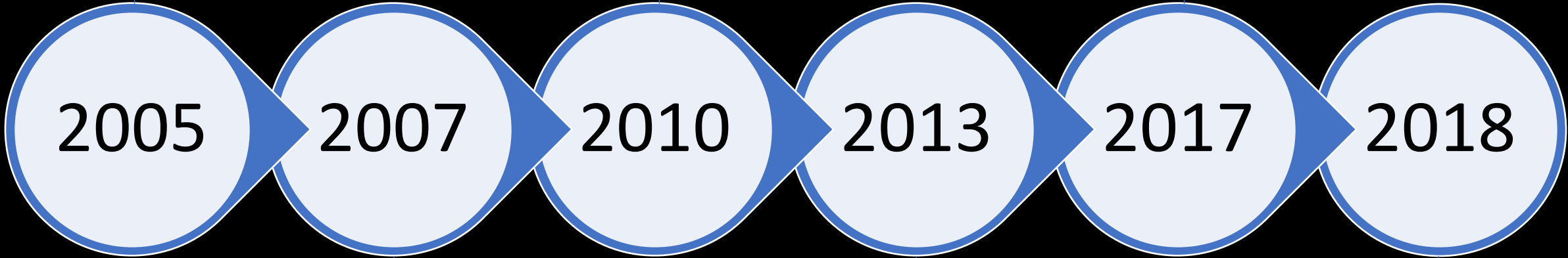
**Toxic gas leak** of July 1997 resulted in hospitalization of 100 people working in the vicinity including TNEB Substation workers .

Sterlite was given **clean chit** by NEERI. **Another gas leak where 11 workers** from All India radio were **hospitalized**. TNPCB & District administration gave a clean chit to Sterlite yet again. Sterlite was allowed by the TNPCB to increase it's copper production from **40000 Tonnes per annum to 70000 Tonnes per annum.**

The Ministry of Environment and forest directed TNPCB shall issue licence for the expansion.

Madras High court passed judgement for the 1996 case filed against Sterlite and ordered closure of the industry citing environmental pollution and violation of law. Three days later, Supreme court stayed the closure order and Sterlite was able to continue it's unlicensed production.

Sterlite started building another plant to expand **the combined production to 8,00,000 Tonnes per annum**. The plant is about to be set up at 200m from the residential area of Kumarareddiapuram, which is illegal. The Ministry of Environment and forests and TNPCB have given the clearance and Sterlite started expansion.



Sterlite was operating at **4,00,000 tonnes per annum**

On March 23, massive gas leak was experienced by people of Tuticorin. Six days later, a closure order was issued by apex court citing violations of prevention and control of pollution act. Ten days later, supreme court duly noted the pollution crisis, but rewarded Sterlite by reverting the closure order. Sterlite was given the licence to operate but with a fine of 100 crores.

On 28 May, the Sterlite factory was sealed after an order given by the Tamil Nadu Environmental pollution and Forests Department. Tamil Nadu's SIPCOT announced that it would take back 342.22 acres of land that it gave for expansion.



## Environmental Impact:

- Iron content of ground water was found to be 17–20 times the permissible limits making it unfit for agriculture
- Salinity level of 7854 mg/litre recorded in ground water
- Respiratory diseases and Ear-Nose-Throat problems were very common and instances of asthma was found to be twice the state average.
- High levels of iron, cadmium, nickel and arsenic in soil samples collected from near the plant higher than permissive levels contributing to more cancer cases and skin and respiratory allergies
- Water sample had ten times the permissible sulphate levels which could cause severe stomach disorders and calcium levels were also high.

# Aftermath Impact on Environment

## **TNPCB reports**

- Decrease in level of sulphur di oxide & air quality index improved significantly.

## **Impact on Financials of company**

- Closure of the plant made company to lose ₹5 crores every day.
- Total loss till date estimated by the company is around \$600 million.

## **Impact on economy**

The closure of company has led to

- Rise in import of copper worth USD 2 billion
- Export loss of over USD 1.5 billion, resulting in an overall loss of Rs 20,000 crores to the economy.

# Compliance Issues

- Company: Violation of the order by TNPCB to provide Environmental impact assessment (EIA) result.
- Company was engaged in unlicensed production. The year production was 1,64,236 Tonnes as against the permitted production of 70000 Tonnes per year
- Didn't comply with the TNPCB's order to develop green belt around 25 meters of the plant.
- Environment health and safety (EHS) – Noncompliance
- Release of Toxic wastewater along with rainwater to the nearby localities and presence of Arsenic was reported.
- Plant set up 14 km from the Gulf of Mannar ; where the prescribed distance to be maintained was 25kms.
- MOEF: Ministry of Environment and forests issued environmental clearance without conducting environmental impact assessment and pollution hazards tests.
- Three gas leaks incidence happened, and PCB did not take any actions.

# Root Causes

- The local board for environment (TNPCB) and regulatory body (District administration) in Tamil Nadu kept their own personal benefit as their priority instead of prioritizing the environmental issues affecting the people and their surroundings.
- Political support from various political parties helped Sterlite to set up and operate an unlicensed factory.
- Weak preventive measures and control set in the factory to avoid gas leaks.
- No measures were taken to reduce the environment impacts that their factory had.
- Constant bribery to various boards, regulatory bodies and political parties to avoid legal conflict for running an unlicensed factory

# Strategies

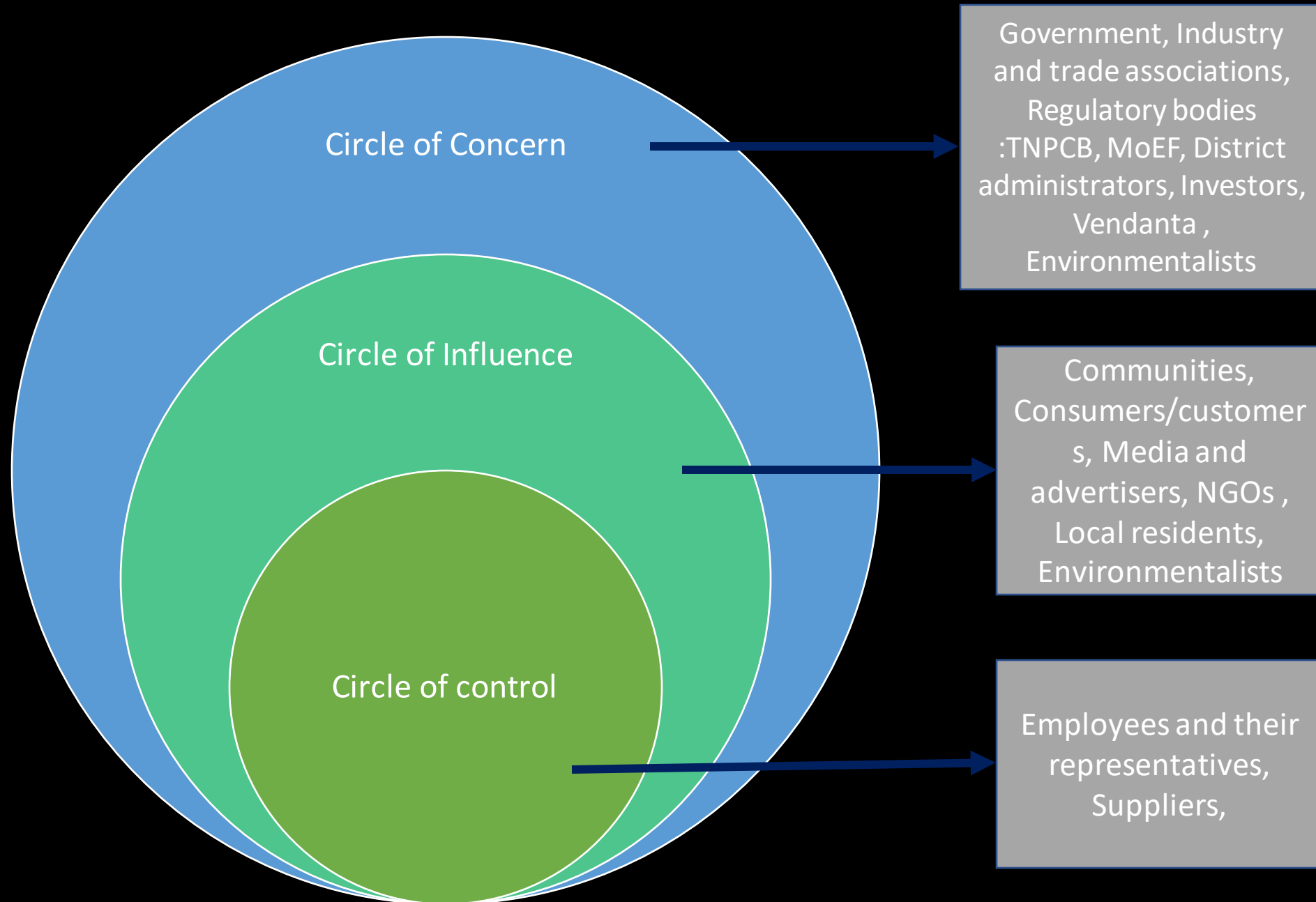
## **What the company could've done:**

- Complied with the 25 kms rule
- Proper waste management system
- Maintain a green belt
- Regular pollution checks and measures to reduce the same

## **What the company can do now:**

- Set up a factory in a secluded area which would not affect the environment or people.
- Assurance that it will be 100 percent compliant to all the environment and safety boards and the government
- A strong Regulatory and compliance audit at regular intervals
- Strong CSR contributing to environment.

# STAKEHOLDER MAPPING



# ENVIRONMENTALLY ETHICAL COMPANY

HINDALCO INDUSTRIES LTD.-an Indian Aluminium and copper manufacturing company, is a subsidiary of the Aditya Birla Group.

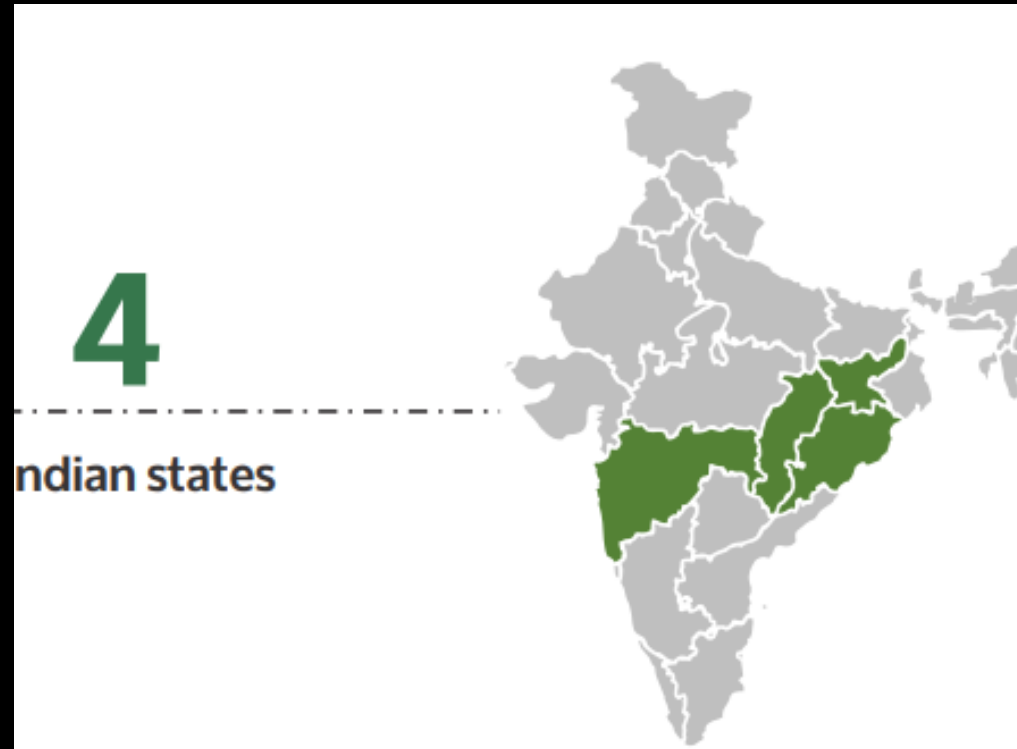


# ABOUT HINDALCO

- Locations-Jharkhand, Odisha, Chhattisgarh and Maharashtra.
- Focus – To achieve operational excellence while minimizing resource use and being accountable to the environment and society.
- Primary products at Hindalco - aluminum and copper

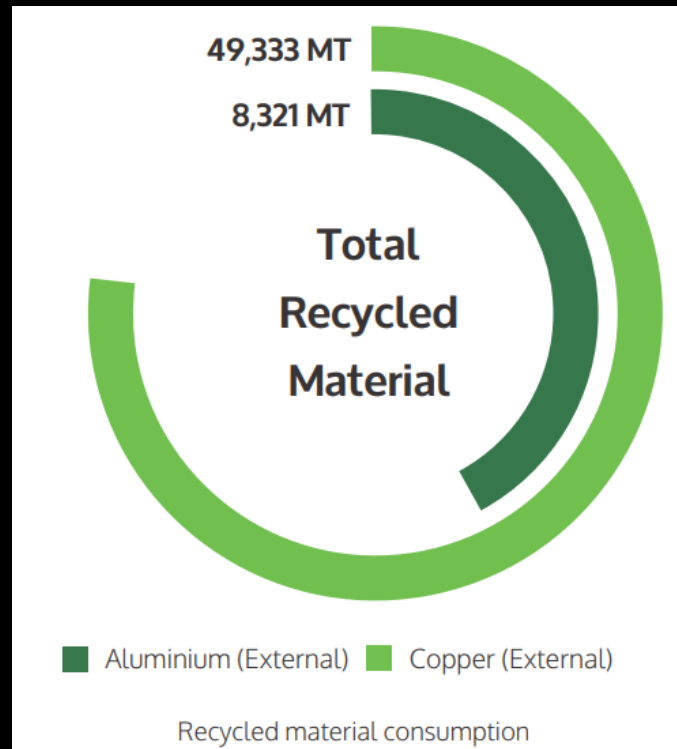
## Why aluminum and Copper?

1. minimum impact on the environment
2. significant recycling potential





# Recycling of Aluminium and Copper



- Reduces energy and environmental impacts.
- Aluminium recycling requires 95 per cent less energy than virgin metal.
- The downstream units in India have dedicated Aluminium recycling and remelting facilities.
- The copper smelting facility also undertakes recycling of copper scrap and recovery of copper from slag discarded by conventional production activities.
- During the reporting period, scrap copper as a recycled input material constituted 2.93% of the total input materials for copper production.

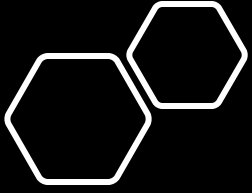
# Initiatives for sustainability and environment conservation

- **Watershed management-**  
Rainwater harvesting
- **Mine design and plants-**advanced mining equipment such as surface miner and ripper dozer
- **Solar energy used**
- **Plantations**
- **Federation of Indian Mineral Industries (FIMI) conducts sustainability audits**



## Other initiatives taken

- Training to employees for hazardous waste management.
- Environmental laboratory established for monitoring and analysis of environmental pollutants.
- Celebrating environment promotional activities like World Environment Day, Vanmahotsav, etc.



THANK YOU