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Environmental Accounting Disclosure Practices of India (A comparative study of Larsen and Toubro and Tech Mahindra).

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ABSTRACT: This study has been undertaken to examine and study the environmental accounting disclosure practices in India and the improvement needed to improve quality in the disclosure practices. The goal of the research paper is to focus on the importance of Environmental Accounting at the corporate level. It is observed that a standard style for environmental accounting disclosure practices is missing in India. In this study, five consecutive sustainability reports of two Indian companies, Larsen & Toubro, and Tech Mahindra were examined and compared on various parameters. These two companies are among the first five top companies of India that are disclosing environmental accounting information. After studying sample units, it can be concluded that though environmental reporting has become a part of corporate reporting, it is found that there is a lack of comparability and verifiability, the basic features of accounting information. There is a need that corporations should follow common guidelines in disclosing practices of environmental accounting.

KEYWORDS: Environmental Accounting, Environmental Policy, Larsen and Toubro, Tech Mahindra.

I. INTRODUCTION:

Today's corporate is facing dual problems of economic growth and conservation of its environment. Economic development without paying attention to the conservation of natural resources may damage the environment. As we know industrial activities are many times, directly and indirectly, responsible for incidents that adversely affect natural resources. Economic development must be environmentally sustainable. For the development of industries, many companies are using natural resources that are non-renewable in nature. It is a need to protect the environment by spending on the conservation of natural resources. The scope and coverage of economic accounting need to be expanded and made to include depletion and degradation of natural resources due to their usage by these industries. There is a need that corporates, governments, and society at large to take the initiative to understand environmental degradation and global warming. All have to understand the importance of ecological and social sustainability practices. Appropriate execution of ecological disclosure practices about the environment will help to reduce pollution and promote responsible consumption of natural resources. Day by day the demand for environmental accounting is increasing due to globalization and disclosure practices followed by advanced countries of the world. There are many laws and regulations coming into existence to protect the environment.

Compared to advanced countries like China, Japan, the USA, UK the disclosure reporting on environmental accounting in India is lagging behind. Many companies in India have started publishing sustainability reports but it is limited to the extent of disclosure. There is an urgent need to improve disclosure practices in Indian Corporates. Many Indian companies are not enthusiastic about the disclosure of environmental accounting. Some companies are disclosing some costs and benefits in a director's report, but there is a need to establish a standard system that should be mandatory to all. Through such practice quantitative as well as qualitative information related to environmental impact will be disclosed in an effective manner. All Indian companies should compulsorily meet the regulatory requirements. This is needed to reduce pollution and to promote scientific disposal of the hazardous material released by industries. From time to time disclosure of information to the stakeholders of the company about the preventive measures that are taken by the

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company to protect the environment should be made mandatory.

II. REVIEW OF LITERATURE:

CA. Mohammad F. (2010), concluded in his study that even if environmental financial reporting practices are increasing worldwide, there is a necessity to focus on the consistency of methodological approach in understanding and measurement of environmental cost and benefits and assets and liabilities.

M.Sahay (2004) confirms that in environmental accounting, Indian companies lag behind compared to the developed countries of the world. He also explained the reasons for the same, as in India companies are having less pressure from their stakeholders, environmental groups, and especially the government of India. The awareness of environmental protection in India is at a lower level compared to developed countries. Even in his study, he observed that major players of the banking sector also not taking environmental accounting seriously. The reporting of Indian companies in general is unsystematic and inadequate. He also recommended in his study that in India qualitative, good environmental performance should be encouraged and rewarded.

Japee G. (2018), in his article, studied 100 Indian companies' strategies on the basis of 11 different parameters towards environmental accounting and he concluded that in India, the awareness among the corporates about environmental Accounting is very less. The Corporates are not taking it seriously. It is required that economic development should be done with the help of environmental safety.

Aruna P. el. (2017) , studied 58 companies' financial performances and environmental disclosures' impact on them. For measurement of financial performance, they selected four parameters like return on capital employed, return on assets, earning per share and net profit margin, and their relationships with the green disclosure index. From the study, they concluded that there is no significant relationship between the green disclosure index and net profit margin and earnings per share of the companies. Whereas there is a positive relationship between the green disclosure index and return on capital employed and a negative relationship between return on assets and green disclosure index. They also recommended that irrespective of the size of the company it is important to focus on the impact of such disclosure on the companies.

Kumar Samntanand (2005) also explained in his article the growing importance of Environmental accounting and the methods adopted by developed countries for the same.

Dr. Minimol (2014) explained in their research paper 6 aspects to be covered in Environmental accounting to measure the performance of the organization towards environmental accounting.

Malik P. (2015) described more about green accounting of India and new challenges faced in the accounting system in her study.

C.Vijay (2020), examined environmental accounting in India and its current scenario. It also discusses the various government policy initiatives taken to environmental accounting. In the paper, suggestions were also made on the healthy functioning of environmental accounting. The paper provides an insight into the concept from the Indian perspective.

Maxwell P., el (2016) concluded that in India there is no common style for environmental accounting disclosure. Their study was based on a sample unit of ONGC and BPCL petroleum companies of India. They further concluded that both these companies are taking a lot of effort on environmental protection but still there is an absence of ecological cost, liability, and ecological expenditure in the reports.

Nitesh R, el (2018), focused on their paper on the importance of reporting the present position of environmental disclosure in Annual Reports of all BSE Sensex 30 companies for the year 2017-18. The evaluation of disclosure practices was done on the basis of GRI (Global Reporting Initiative), which is world- recognized guidelines for environmental reporting. They found that there was maximum usage of the Director's Statement and Sustainability Reporting in the Annual Reports. Many companies are providing qualitative data rather than quantitative data for environmental disclosure. They also suggested that total expenditure on the environment can be classified on the basis of capital and operating expenditure rather than just total outflow of cash.

III. OBJECTIVES OF THE STUDY:

1. To understand the concept of Environmental Accounting.
2. To study the environmental policy of sample companies.
3. To evaluate the environmental accounting practices of sample Indian companies.
4. To give suggestions to improve the disclosure of environmental information.

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IV. RESEARCH METHODOLOGY:

The study is exploratory in nature, based on secondary data for analysis. The data was collected through the internet, sustainability reports of Larsen and Toubro company, and Tech Mahindra for five consecutive years (FY 2015-16 to FY 2019-20). The reports were studied and analyzed for their environmental accounting practices, numerical data were tabulated and findings are analyzed with the help of percentage statistical tools. The analysis was also presented with the help of graphs. Also relevant annual reports of these companies available on official websites of these companies were studied. The conclusions were drawn on the basis of data analysis.

V. LIMITATIONS OF THE STUDY:

- The study is based on secondary data collected.
- The study is based on two Indian companies which are not sufficient to generalize.
- Simple statistical tools like percentages used for the analysis of data.

VI. ENVIRONMENTAL ACCOUNTING

Environment means the condition in which we live. All the physical surroundings on Earth are called the Environment. It is the circumstances, objects, or conditions that surround us. Traditional Accounting is not sufficient to disclose the cost that a company spends for use of natural resources. Environmental Accounting plays an important role in providing information about the accountability of the companies towards the environment. Through Environmental Accounting, one can understand the role of a company in the economy towards the safety and welfare of the environment. Environmental Accounting is a subset of accounting that not only provides numerical data but measures the use of natural resources and its cost incurred by the company and its impact on the environment. It provides data regarding the contribution of the company towards economic welfare and at the same time cost incurred by the company on pollution control and prevention of resource degradation.

Profile of Larsen and Toubro:

Table 1: Larsen & Toubro Limited

Type	Public Limited
Traded as	BSE:500510 NSE: LT BSE SENSEX Constituent NSE NIFTY 50 Constituent
Industry	Conglomerate (construction and engineering)
Headquarters	Mumbai, Maharashtra, India
Key people	Anil Manibhai Naik - (Chairman) S. N. Subrahmanyan - (MD & CEO) R. Shankar Raman - (CFO)
Products	Heavy equipment, Electrical equipment
Services	Power generation, Infrastructure, Construction, Heavy industry, IT Services, Rapid transit, Financial Services, Shipbuilding, Real estate, Defence
Revenue	□ 147,813.26 crore (US$21 billion) (2020)
Operating income	□ 13,430.95 crore (US$1.9 billion) (2020)
Net income	□ 9,549.03 crore (US$1.3 billion) (2020
Total assets	□ 308,140.13 crore (US$43 billion) (2020)
Owner	Shareholders
Number of employees	45,467 (2020)
Website	www.larsentoubro.com

Larsen and Toubro began from an organization established in 1938 in Mumbai by two Danish specialists, Henning Holck-Larsen and Søren Kristian Toubro. After India's freedom in

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1947, L&T set up workplaces in Calcutta (presently Kolkata), Madras (presently Chennai), and New Delhi. In 1948, 55 sections of land featuring swamp and wilderness were obtained in Powai, Mumbai. A formerly appalling scene accordingly turned into the site of its primary assembling center. In December 1950, L&T turned into a public organization with a settled up capital of □ 20 lakh (US$28,000). The business turnover in that year was □ 1.09 crore (US$150,000). In 1956, a significant piece of the organization's Mumbai office moved to ICI House in Ballard Estate, which would later be bought by the organization and renamed as L&T House, its current base camp.

In 1965, L&T had been picked as an accomplice for building atomic reactors. Dr. Homi Bhabha, at that point administrator of the Atomic Energy Commission (AEC), had shown immense faith in L&T during the 1950s to manufacture basic parts for nuclear reactors. He persuaded Holck-Larsen that the organization could do it, in reality, should do it. L&T has since contributed fundamentally to the Indian atomic energy program.

In 1985, L&T went into an association with the Defense Research and Development Organization (DRDO). L&T was not yet permitted by the public authority to fabricate guard hardware yet was allowed to partake in plan and advancement programs with DRDO. After the plan and improvement were done, L&T needed to hand over all the drawings to DRDO. The public authority would then allocate the creative work to a public area safeguard unit or arms industrial facility for production. After a progression of victories and positive strategy activities, L&T today makes a scope of weapon and rocket frameworks, order and control frameworks, designing frameworks and submarines through DRDO.

Table 2: Performance highlights of Larsen and Toubro (Amount in Cr) Except EPS

YEAR	2015-16	2016-17	2017-18	2018-19	2019-20
Sales Turnover	60,415.00	66,301.35	74,611.65	86,987.86	82,383.65
Profit before Tax	6,689.11	6,757.84	7,262.38	9,218.17	6,985.91
Profit after Tax	5,311.46	5,453.74	5,387.30	6,677.70	6,679.21
Earnings Per Share	54.44	64.58	52.49	63.40	67.95
Source: Company's Annual Reports.					

Environmental Policy of Larsen and Toubro :

Larsen & Toubro Limited remains committed to preserving the environment.

To fulfill the above commitment, the company will ensure the following:

- Integrate relevant EHS requirements across all processes, right from tendering, planning, design, recruitment, procurement, production, execution, operation, and maintenance to align with their respective business objectives.
- Meet or exceed all applicable legal and other compliance obligations, irrespective of the stipulations of the enforcement authorities in the country of operation.
- Impart structured training and augment resources for effective EHS performance.
- Prevent adverse environmental impact and occupational health and safety risks.
- Conserve natural resources, minimize waste generation and environmental emissions.
- Establish SMART EHS objectives to permanently reduce EHS risks by eliminating hazards or substituting with less harmful equipment, material, methods, and review implementation to achieve continual improvement.
- This policy is discussed with every stakeholder to ensure that it remains relevant to business and effective to improve performance.
- Larsen & Toubro Limited are committed to fulfilling economic, environmental, and social responsibilities while conducting business. We will conserve natural resources and enhance social equity to achieve sustainable growth.
- Incorporate environmental and social considerations in our business operations.
- Reduce the adverse impact of climate change, augment energy efficiency, and promote renewable energy usage.
- Adopt sustainable and resource-efficient processes and provide value-added products and services.
- In 2015-16 started with a plantation of 3,00,000 trees which has increased to 14,00,000 saplings in 2019-20.
- Larsen and Toubro company's all 24 campuses have been water positive and zero wastewater discharge since 2016-17. All the recycling water is used for gardening and flushing purposes.
- It has 17 green buildings with 1 green factory (at Vadodara) with 2.6 mn sq. feet from the last five years.

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- The company has introduced the 'Terracotta Pot' composter at Strategic Electronic Center (SEC) at Bangalore in June 2019.

Profile of Tech MahindraLimited:

Table 3: Tech Mahindra Limited

Type	Public Limited
Trade as	BSE: 532755 NSE: TECHM BSE SENSEX Constituent NSE NIFTY 50 Constituent
Industry	Global IT services, IT consulting
Founded	24 October 1986
Headquarters	Pune, Maharashtra, India
Key people	Anand Mahindra - (Chairman) C.P. Gurnani - (MD & CEO)
Products	N/A
Services	Outsourcing, Consulting, Managed services
Revenue	38,060.10 crores (US$5.3 billion) (2020)
Operating Income	5,063.30 crores (US$710 million) (2020)
Net Income	4,033.00 crores (US$570million) (2020)
Total Assets	37,353.51 crores (US$5.2 billion) (2020)
Owner	Shareholders
Number of employees	88,802 (31st March 2020)
Website	www.techmahindra.com

Tech Mahindra Limited is an Indian global innovation organization, giving data innovation (IT) and business measure re-appropriating (BPO) administrations. Tech Mahindra is settled in Pune and has its enlisted office in Mumbai.

As of April 2020, Tech Mahindra is a US$5.2 billion organization with 125,236 representatives across 90 nations. The organization was positioned #5 in India's IT firms and in general #47 in Fortune India 500 rundown for 2019. Tech Mahindra has 973 dynamic customers as of April 2020.

Mahindra and Mahindra began a joint endeavor with British Telecom in 1986 as an innovation redistributing firm. British Telecom at first had around 30% stake in the Tech Mahindra organization. In December 2010, British Telecom sold 5.5 percent of its stake in Tech Mahindra to Mahindra and Mahindra for Rs 451 crore. In August 2012, British Telecom offered 14.1 percent of its stake to institutional speculators for about Rs 1,395 crore. In December 2012, British Telecom sold its remaining 9.1 percent (11.6 million offers) shareholding to institutional financial specialists for all-out gross money consideration of Rs 1,011.4 crores. This deal denoted the exit of British Telecom from Tech Mahindra.

Table 4: Performance highlights of Tech Mahindra (Amount in million) Except EPS

YEAR	2015-16	2016-17	2017-18	2018-19	2019-2020
Sales Turnover	209,698	231,653	236,611	272,196	292,254
Profit before tax	39,233	38,787	49,065	54,273	53,322
Profit after tax	32,200	30,473	39,993	43,804	45,345
Earnings per share	31.70	31.60	42.70	47.70	45.90
Source: Company's annual Reports.					

Environmental Policy of Tech Mahindra:

As a technology company, Tech Mahindra leverages technology to minimize the impact of their business activities on the environment. They have taken a lot of efforts in the improvement of efficiency and environmental stewardship in the process of water consumption, water recycling, increasing renewable energy, and reducing waste.

Tech Mahindra strives to reduce the ecological footprint of the organization and its value chain while ensuring growth and development in the business.

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Tech Mahindra has ISO certification like ISO 9001- 2008, ISO 27001- 2005, ISO 22301- 2012, ISO- 14001- 2015, and OHSAS 18001- 2007.

It was the first company in India which had given the Integrated Report as per Integrated Reporting (IR) Framework in 2016-17. The Environmental Accounting Disclosure of Tech Mahindra is according to the Global Reporting Initiatives (GRI) guidelines.

The company's major energy consumption is in the form of electricity, which they purchase from the grid. To reduce this consumption company has already started energy conservation initiatives given in the table.

Sustainability highlights:

Renewable: Table 5: Renewable energy of Tech Mahindra

Energy	**Water**	**Waste**
Installation of solar Plants, Solar LED lights, and Solar water heaters to reduce electricity and to reduce GHG emissions.	100 % STP water recycled used for flushing and horticulture.	Leaf waste converted to manure
Many energy conservation initiatives such as phase by phase LED installation, and installation of motion sensors to increase energy efficiency.	Rainwater harvesting plants installed at Pune and Noida.	Organisation wide drive on awareness to reduce food waste at the canteen by 20% in 2019-20.
Efficient water coolers, VRV and HVAC systems	Water sensors and restrictions installation phase by phase at all locations.	32.5 tons of food waste converted to manure through vermicomposting and OWC.
Solar water heaters also reduce energy consumption.	RO installed at various locations to avoid the use of bottled water.	At Pune new organic waste converter installed.
		At Bhubaneshwar, waste converter pulverize installed and saving cost on transporting of waste.
		Also successfully reduced paper consumption in 2019-20 by 21% against the baseline year of 2015-16.

Carbon neutrality through various sustainability initiatives is a priority of the management, always trying to reduce GHG emission. The company has committed to reducing Scope 1 and 2 emissions by 22% until 2030 and 50% by 2050, which is approved by SBTi (Science Based Targets Initiative). To curb these emissions, Tech Mahindra is making plans and investments. Tech Mahindra has digitized internal communication with virtual meetings through video/ audio conferences. They are investing in Green solutions like smart cities, smart waste

management, an electric vehicle charging system, etc.

From 2015-16, the company successfully brought a reduction in paper consumption by approximately 45 % in 2019-20.

Started with a plantation of 4414 saplings in 2015-16, now in 2019-20, the company planted new 26,000 trees.

The company has started Food waste management from the FY 2017-18 and successfully reduced food wastages by 5.8% against 2018-19 and 49 tons of food recycled and converted to manure.

Environmental Performance Indicators:

Conservation Cost:

While using natural resources for economic development, it is required to spend on the initiatives and management measures which will protect the environment, reduce pollution, and conserve the environment. The conservation cost may be capital or revenue in nature. Expenditure which is capital in nature like an investment in depreciable assets, the benefit from the same will be for several years will be considered as an Investment, and revenue cost will be considered as an expenditure.

Energy Conservation:

Reduction in energy consumption leads to energy preservation or conservation. Energy conservation can be achieved through the effective use of energy and or reduction from conventional energy sources. Direct energy from Fuel and Indirect energy from Electricit**y.**

Renewable energy:

It is considered as clean energy that comes from natural sources or processes that are constantly replenished and is collected from renewable resources like solar, wind, waves, etc. Solar energy, wind energy, hydro energy, tidal energy are some examples of renewable energy. Wind and solar are powering a clean energy revolution. Wind energy is generated when the wind moves the blades on a wind turbine. It offers lower emissions of carbon and other types of pollution. Renewable energy is less expensive and now becomes a more important power source.

Material Management- recycled:

Many companies are using natural resources as their raw materials in the production process. Some of them are non-renewable in nature. Therefore it is needed to minimize the consumption of these materials to balance the environment.

Greenhouse Gas Emission (GHG):

A greenhouse gas is any gaseous compound in the atmosphere that is capable of absorbing infrared radiation, thereby trapping and holding heat in the atmosphere. Due to this increase in the heat in the atmosphere, greenhouse gases are responsible for global warming. Water vapor (H2O), Carbon dioxide (CO2), Methane, Nitrous oxide(N2O), and Ozone are examples of greenhouse gases. These gases are emitted through burning fuels, solid waste, trees, transportation of coal, natural gas, oil, etc. GHG Emission is often measured in carbon dioxide (CO2). GHG emission can be reduced through more plantation activities, reducing deforestation, etc.

Scope 1 emissions occur due to burning of fuels like diesel in generators and diesel and petrol in private vehicle engines and LPG used in the same.
Scope 2 emissions occur due to utilization of electricity purchased from the grid supplied by the state electricity supply board.
Scope 3 includes direct and indirect activities like transportation of goods and services, employee commute, business travel, waste generated like food, scrap, e-waste in operations.

Water conservation:

Water scarcity is a major problem and requires global attention and action. Through appropriate water management policy, water conservation can be achieved. Reduce water footprint through water efficiency measures like reduce, reuse, and recycle water.

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Environmental Indicators of Larsen and Toubro Limited:

Table 6: Environmental indicators of L&T

	2015-16	**2016-17**	**2017-18**	**2018-19**	**2019-20**
1.Total expenditure on environmental pollution control and management measures	□ 0.13 billion	□ 0.13 billion	□ 0.134 Billion (□ 134 Million)	□ 0.15 Billion(□ 14 7.6 Million)	□ 0.095 Billion (□ 94.5 Million)
2.Energy saved	more than 76 million units saved	82 millions units saved	95 millions units	110 million units	118 million units kwh
Direct Energy consumption (GJ)	5,058,777	5,988,755	6,014,602	7,866,065	7,234,401
Indirect Energy consumption (GJ)	1,482,222	1,652,040	1,403,277	1,629,059	1,721,254
3.Renewable energy utilized	18.2 million units (kwh)	34.7 million units (kwh)	29.4 million units (kwh)	42 million units (kwh)	31.8 million units(kwh)
4.Material Management - recycled					
Steel recycled	22,317tons	26,583 tons	27,159 tons	33,906 tons	40, 570 MT
Zinc recycled	470 tons	488 tons	726 tons	1,015 tons	1,494 MT
5.GHG emission		-			
Scope 1 (Direct GHG emission)	368,660 tCO2e	434,802 tCO2e	435,092 tCO2e	573,383 tCO2e	529,093 tCO2e
Scope 2 (Indirect GHG emission)	321,972 tCO2e	349,206 tCO2e	319,635 tCO2e	308,944 tCO2e	367,874 tCO2e
Scope 3 (Other indirect GHG emissions)	2,872,617 tCO2e	3,343,883 tCO2e	2,855,180 tCO2e	1,836,705 tCO2e	3,656,395 tCO2e
6.Water Consumption Litres and waste water recycled.	8,360,539,000	9,335,260,000	9,194,424,000 and out of which 79% is recycled	10,051,994,000 out of which 75% is recycled	24,303,181,000 out of which 76.5% is recycled.

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Environmental Indicators of Tech Mahindra:

Table 7: Environmental Indicators of Tech Mahindra

	2015-16	2016-17	2017-18	2018-19	2019-20
1.Environmental Conservation Cost :					
a.Investment:					
Capital expenditure on water	NA	□ 54,679,893.42	□ 15,928,799.99	□ 13,419,338.32	□ 2,583,149
Green Investment	NA	□ 166,082,385.7	□ 287,768,263.00	□ 128,949,820	□ 63,858,375
b.Total Expenditure (fuel, electricity, water)	NA	□ 1,531,287,048.00	□ 1,531,930,453.00	□ 1,343,074,850.00	□ 1,449,686,793.00
2.GRI 302-1 Energy Consumption					
Direct Energy Consumption(GJ)	84,500	53,117	39,948.3	36,844.69	23,960.10
Indirect Energy Consumption(GJ)	474,375	524,344.47	538,681.2	475,982.55	464,209.4
3.Renewable energy :					
Solar Installations	2442 (kwp)	3404 (kwp)	3404 (kwp)	3687 (kwp)	3830 (kwp)
Solar power energy Saved / generated	1,159,067 (kwh)saved electricity	1,577,220 (Kwh) electricity saved	4,436,406 (Kwh) generated electricity	23,729,084 (Kwh) generated	28,881,949 (kwh)saved
4. GHG Emission:					
GRI 305-2 Scope 1 (Direct GHG emission)MTCO2	6257	3263	2787.02	2561.04	1803.808
GRI 305-3 Scope 2 (Indirect GHG emission) MTCO2	108052	119434.02	122699.61	108418.247	105736.58
GRI 305- 3 Scope 3 (other indirect GHG	47227	54029	36884.76	39188.28	39285.21

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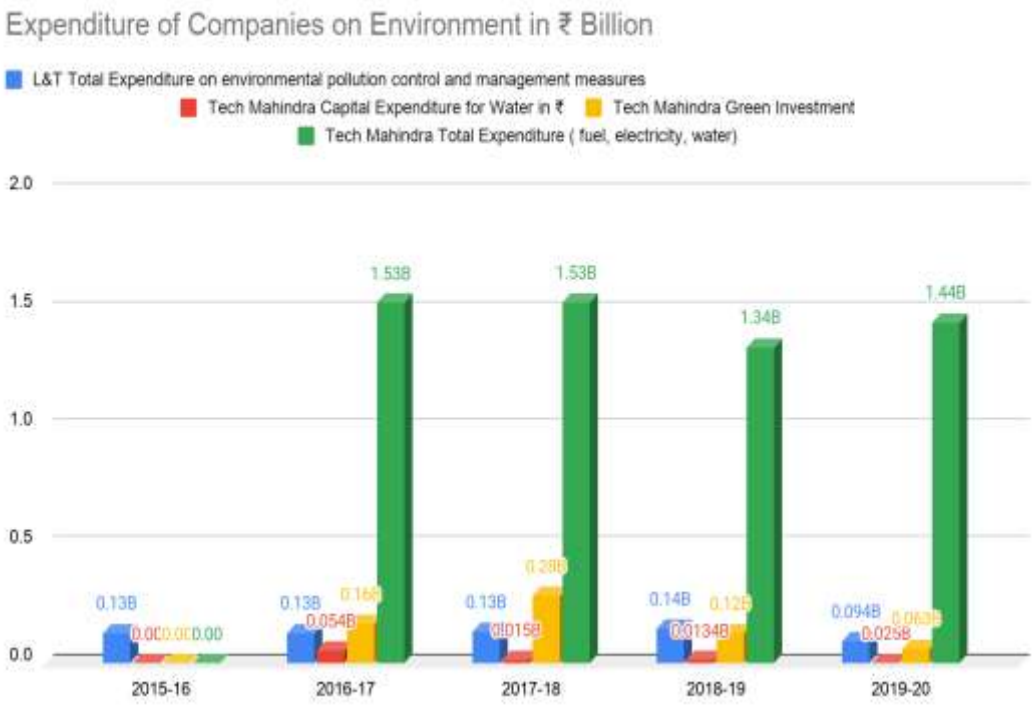
emission) MTCO2					
5. Water Stewardship:					
GRI 303- 3 Recycled Wastewater and Reused	405139.2 kiloliter	420949.02 kiloliter	504071 kiloliter	more than 606461-kilo liters of water	590 million liters of water (i.e.590000 kiloliters)

VII. ANALYSIS AND FINDINGS (ENVIRONMENTAL PERFORMANCE INDICATORS):

On the basis of selected environmental performance indicators, both company's environmental measures were analyzed and the findings are given below.

Analysis of Conservation cost on environment/pollution:

Graph No.1. - Expenditure of Companies on Environment in Billion



In the case of L&T total expenditure on environmental pollution control and management, measures are volatile in nature year by year. It is highest in 2018-19 and it shows that the rate has decreased by 26.92% in 2019-20 as compared to 2015-16.

Whereas in the case of Tech Mahindra the cost is divided into two parts i.e. Investment and expenditure. In the case of capital expenditure in water compared to the base year 2015-16 the cost is decreasing continuously. It was highest in 2016-17. In the case of green investment, the rate is volatile in nature in all years and highest in 2016-17. Compared to 2016-17 it has decreased by 61.55% in 2019-20. Whereas total expenditure is volatile in

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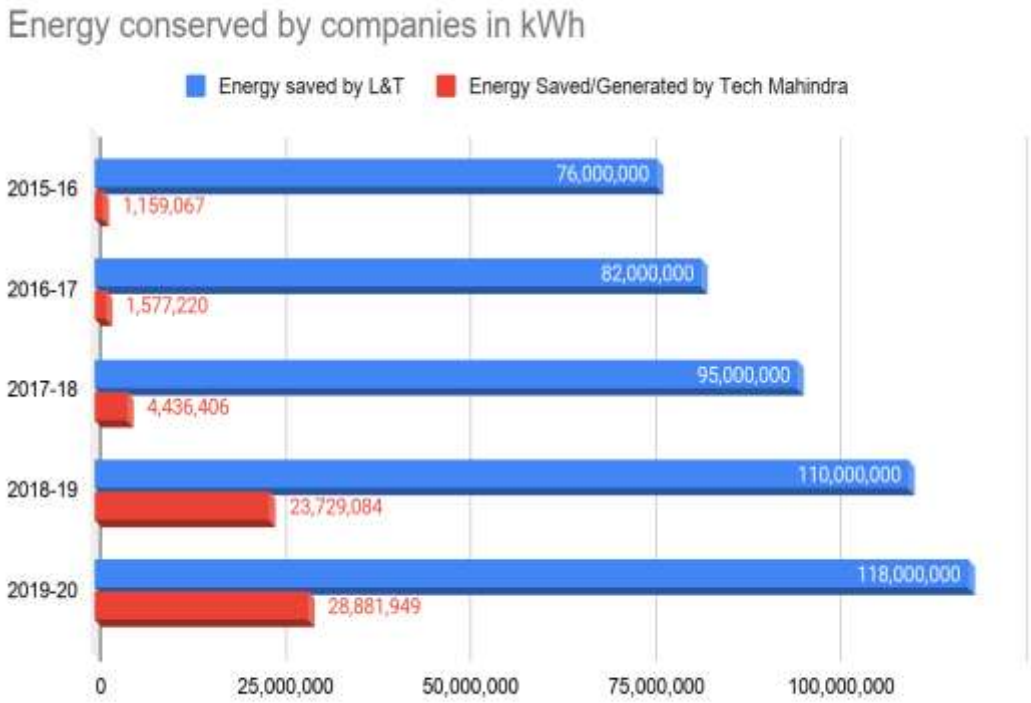
nature in all years and it is reduced by 5.33% in 2019-20 as compared to 2016-17.

It shows that in the case of the company the conservation cost is decreasing compared to earlier years.

Analysis on Energy conservation:

Graph No.2 - Energy conserved by companies in kWh



With respect to L&T, direct energy consumption is increasing year by year and it is increased by 43% in 2019-20 compared to the base year of 2015-16. Whereas in the case of indirect energy the rate is volatile in nature but compared to 2015-16 it has increased by 16.12% in 2019-20.

In the case of Tech Mahindra direct energy consumption is continuously decreasing year by year and in 2019-20 overall reduction is by 71.65% compared to the base year 2015-16. In the case of Indirect energy consumption, though the rate is volatile in nature, there is an overall decrease by 2.14% in consumption of 2019-20 compared to the base year of 2015-16.

Therefore we can say that in the case of L&T energy consumption is overall increasing whereas in Tech Mahindra overall energy consumption has decreased over the years.

Analysis of renewable energy:

As far as L&T is concerned the rate of renewable energy is volatile in nature but compared to the base year 2015-16 it has increased by 74. 7%.

In the case of Tech Mahindra, it shows that they have increased in a solar plantation in 2019-20 by 56.84% as compared to 2015-16. Whereas in the case of solar power energy generation is increasing year by year and in 2019-20 it shows an increase in rate by 2391.83% as compared to the base year 2015-16.

So we can say that in both the companies renewable energy implementation activities are increasing year by year.

Analysis of material management:

In the case of L&T being a construction and engineering company, the company's rate of recycling of its material like steel and zinc is increasing year by year. In the case of steel compared to 20150-16, the recycling has increased by 81.54% in 2019-20, whereas in the case of zinc, it has increased by 217.87%.

As Tech Mahindra is a multinational technology company providing Information technology services, material management is not applicable to it.

So we can say that the L & T company's rate of recycling of material has increased.

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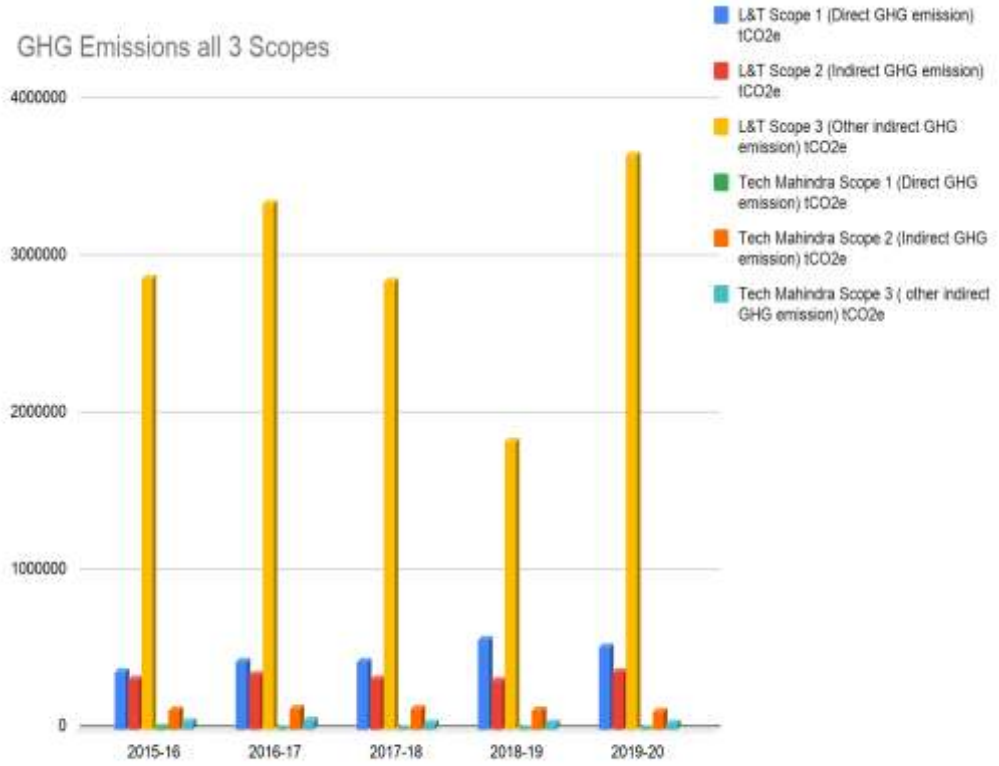
Analysis of GHG Emission:

Graph No.3 - GHG Emissions of both companies of all 3 scopes



As far as L&T is concerned, its GHG emission was increasing continuously year by year in Scope 1, and compared to the base year of 2015-16 it shows a 43.51% increase in 2019.20. In scope 2 the rate of GHG emission is volatile in nature, but compared to 2015-16 it is increased by 14. 16% in 2019-20. In the case of Scope 3, the rate of GHG emission is again volatile in nature, and compared to 2015-16 it has increased by 27.28% in 2019-20.

On the other hand Scope, 1 GHG emission in Tech Mahindra is continuously decreasing year by year and it is increased by 71.18% in 2019-20 compared to the base year of 2015-16. In the case of Scope 2 GHG emission rate is volatile in nature, but compared to 2015-16 it is decreased by 2.14% in 2019-20. In the case of scope 3, the rate of GHG emission is volatile in nature, and compared to 2015-16, it has decreased by 16.82%.

Therefore we can say that in the case of L&T GHG emission is continuously increasing in Scope 1 GHG and in the case of scope 2 and 3, it is volatile in nature but compared to the base year it has increased. Whereas in the case of Tech Mahindra, GHG emission scope 1, continuously decreasing, and in the case of scope 2 and scope 3 thought is volatile in nature, overall it has decreased compared to the base year.

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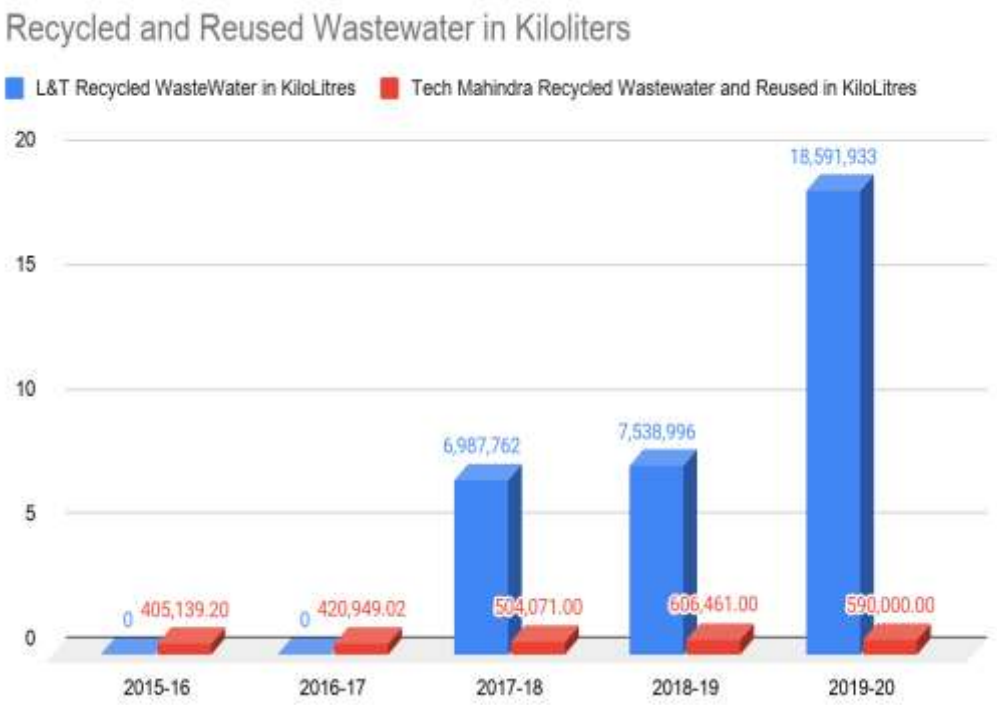
Analysis of water consumption:

Graph No.4 - Recycled & Reused Wastewater in Kilolitres



As far as L&T is concerned it shows that water consumption is increasing tremendously year by year, Out of this total water consumption the company is recycling and reusing 75%. for other purposes. Compared to the base year of 2015-16 the consumption has increased by 190.67% in 2019-20.

In the case of Tech Mahindra, the figures of water consumption are not given, but the water recycling rate is volatile in years, and compared to the base year of 2015-16 the recycling rate has increased by 45.63% in 2019-20.

So we can say that the water consumption level is increasing in L&T year by year and in the case of Tech Mahindra water recycling has increased.

VIII.CONCLUSIONS:

The report of Tech Mahindra is more in detail regarding conservation cost compared to L&T. Tech Mahindra has given proper bifurcation of the cost incurred by them on investment and expenditure.

In the case of renewable energy, Tech Mahindra has done an excellent job through the solar plantation. They succeeded in reducing the consumption of direct energy compared to L&T. Whereas in Material management, L&T is taking efforts to increase the recycling of their major material steel and zinc year to year.

In the case of water consumption, being a construction company, L&T uses water in huge amounts. Tech Mahindra has successfully utilized and recycled water year by year.

Tech Mahindra GHG emissions have successfully reduced in all categories. They reduced it at fuel, electricity and at the same time their waste management is also better than L&T. Whereas in case of L&T they have not yet succeeded to reduce GHG emissions in all categories. It is also noticed that both reports are diverse in nature, so evaluation becomes difficult.

In India, there is a need for common disclosure practice.

It is observed from the study that both companies are disclosing their environmental accounting practices in their sustainability reports on a yearly basis. There is no standard format for the reporting of environmental accounting. Both companies are disclosing information on different parameters. After studying sample units, it can be concluded that though environmental reporting has become a part of corporate reporting, it is found that there is a lack of comparability and

verifiability, the basic features of accounting information.

IX. SUGGESTIONS:

In India, all industries whether small, medium, and large should be asked to submit detailed environmental information to the government regarding the emission of specific toxic chemicals, pollutants, effluents, damage to the environment, and community health. They should also inform about the steps taken to reduce these externalities.

There is a need to focus more on the economic benefits of environmental conservation initiatives in both companies. Proper disclosure of environmental conservation cost and benefit is required to be done.

The companies which have taken initiatives to disclose their environmental accounting through sustainability reports should follow a common disclosure policy so that the evaluation will be easier. The method of accounting should also be the same for all industries.

The government, corporates have to come together to encourage awareness about environmental protection to the citizens.

There is a need for the integration of environmental accounting with financial accounting.

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