

Environmental consciousness of top two IT companies of India: A comparative study

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Abstract— India is urbanizing in a rapid pace, one of major sector is IT Industry, which employs a major chunk of employees in huge campuses. These campuses house state of art facility matching our western master's offices, millions of computers, lights, powerful AC chiller plants consuming quantum of electricity & water. Ground water is brought in uncountable number of tankers to keep the facility up and running. Local population who were leading a contented life with minor agriculture and life stock keeping are being suddenly exposed to this rapid urbanization leaving them caught between contented life style and desire to be part of urbanization. Hence it is imperative find out the IT major who have taken away so much natural resources and contented life leading common man, what conscious efforts are being made by them to share that part of profit and give back to this piece of land consisting of resources and human, animal and plant habitat. Hence, a study on their thought, spirit, spent and processes by having a closer look into their annual reports.

Keywords: Information technology (IT), Special Economic Zone (SEZ), TATA Consultancy Services, Wipro

1. Introduction

IT products exports brings in major Forex to the country, standing second only to money coming from Middle East. Mostly these companies operate out innumerable campuses each running into hundreds of acres. The scale is so big that it can be compared to mega shopping malls in Dubai or United States of America. Due to financial pressures of Forex, both the central government and state government has allocated huge area in prime locations in throwaway price with tax holidays. The expectation is these industrialist setup their facility and provide IT based solutions to western masters (customers), which in turn will provide employment to our ever-growing population and also add to Government reserves of Forex.

This campuses are called IT parks or SEZ – Special Economic Zones, they are of course governed by all the different arms and agencies of authorities, Customs, Revenue, Factory, Shop, establishment and most important Pollution control board. However it would be interesting to know how mature and evolved the practices of top IT majors are when it comes to environment, when they know, they have taken big chunk of this for their business.

2. OBJECTIVE

The objective of this paper is to go through the annual reports of two IT majors names TCS and Wipro and take key notes of their emphasis on Environmental related matter and what methods, strategies do they prioritize and more importantly what is spent year on year to safe guard environment, what are the power saving methods adopted by them.

3. IT COMPANIES COVERED IN STUDY

- 1) Tata Consultancy service Limited (TCS)
- 2) Wipro Limited

4. 2015-16 ANNUAL REPORT TCS & WIPRO LTD

TCS: The word environmental has been used 21 times, they take pride in telling that, The Company is enterprise-wide certified for ISO 14001:2004 (Environmental Management) and BS OHSAS 18001:2007 (Occupational Health and Safety Management) which demonstrates TCS' strong commitment to the environment and the occupational health and safety of its employees and business partners.

4.1 TCS

TCS was included in the prestigious Dow Jones Sustainability Index 2015 (world as well as emerging markets) for the third year in a row and was also included in the 'India Climate Disclosure Leadership Index' (CDLI), 2015. TCS' CSR policy is aimed at demonstrating care for the community through its focus on education & skill development, health & wellness and environmental sustainability including biodiversity, energy & water conservation.

Desilting, repair and maintenance of Chinnappanahalli Lake - Ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water including contribution to the Clean Ganga Fund set-up by the Central Government for rejuvenation of river Ganga - Amount Outlay (budget) project or programmes wise (in crores) – 0.86, cumulative Expenditure upto the reporting period (in crores) -0.06. Total Spending on Corporate Social Responsibility (CSR) as percentage of profit after tax (%): 1.64% of average profit for previous three years in respect of standalone TCS (computation as prescribed by the Companies Act, 2013) of which Environmental Sustainability 0.07 Crores. Aligned to The National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business

(NVGs) released by the Ministry of Corporate Affairs has adopted nine areas of Business Responsibility, Business should respect, protect, and make efforts to restore the environment. Separate link for Environmental Policy. Indicate the link for the policy to be viewed online? http://www.tcs.com/about/corp_responsibility/environmental/Pages/default.

List up to 3 of your products or services whose design has incorporated social or environmental concerns, risks and/or opportunities. One of them is for Environmental, Remote Energy Management Solution, Remote Energy Management Solution TCS has continued its investment in 2015-16 in the Remote Energy Management Solution. The technology has been further enhanced leveraging T CUP (TCS Connected Universe Platform), the Company's cutting edge and patent-rich cloud based IoT platform, and SDAF (Sensory Data Analytics Framework) providing a scalable platform for data management, analytics, rich query capabilities and visualisation. The scalability of this IoT platform can be used to integrate other resource management aspects such as water, transportation etc, while continuously enhancing the energy management capabilities.

The nature of the Company's business is such that there are no significant emissions or process wastes. The waste generation is fairly limited and restricted primarily to e-waste, lube oil waste, waste from lead-acid batteries and municipal solid waste. The Company's waste management practices seek to reduce the environmental impact by reduction in generation, segregation at source, maximisation of recycling and reuse to achieve the target of <5% waste to landfill. Waste Lube Oil, UPS batteries, e-waste – disposed through government authorised recyclers (100% recycling) Waste office paper – sent for recycling (100% recycling) Printer and toner cartridges – sent back to the manufacturer under product take-back arrangement (100% recycling) Bio-degradable garden waste and food waste - vermi-composting and bio-digestion respectively (30% recycling)

Environment Performance - FY 2015-16			
Sr no	Environment Performance Parameter	% Change over FY 14-15	% change (over FY 2007-08)
1	Electricity Consumption (kWh/FTE/month)	5% decrease	44.6% Decrease
2	Fresh water consumption (ltrs/FTE/month)	2% increase	14.1% Decrease
3	Carbon footprint due to Scope 1 + Scope 2 (tCO ₂ e/FTE/annum)	6% Decrease	43.3 % Decrease
4	Paper consumption (Reams/1000FTE/month)	6% Decrease	79.6% Decrease

TCS' Environmental Policy is applicable to all the business units/groups and extends to business partners including suppliers, vendors and contractors. 2. Does the company have strategies/ initiatives to address global environmental issues such as climate change, global warming, etc? Y/N. If yes, please give hyperlink for webpage etc Yes. The 'TATA Group Climate Change Policy' and TCS' 'Environment Policy' guide the organisation to continually mitigate the impact on climate change and global warming as a result of our operations. The Company has specific targets to reduce the carbon footprint and monitors it on an ongoing basis. Detailed plan to achieve these targets focus on creating green infrastructure which are designed for better energy efficiency, drive green IT (IT enabled energy efficiency in data centers and distributed IT networks), efficient operations and green power purchase.

Does the company identify and assess potential environmental risks?

Yes. ISO 14001:2004 has been adopted as the environment management system standard. As a part of this management system, an exhaustive impact assessment is conducted at organisation level as well as site level to identify all environmental impacts from our operations.

'Environmental Policy of the Company has been drafted in line with the ISO 14001:2004 environment management system. The overall responsibility of environment management lies with the Company's CEO & MD and the progress is reviewed by health, safety sustainability committee of the Board of Directors on a half yearly basis. External stakeholders can access this policy through the Company's website. For internal stakeholders, the policy has been posted on the intranet and at office receptions. Training on this policy is periodically conducted for all associates. TCS has enterprise wide certification for integrated health safety & environment management system as per ISO 14001:2004 and OHSAS 18001:2007.

Environmental Sustainability

Turtle Conservation Programme TCS in association with the Sahyadri Nisarga Mitra Chiplun has been implementing Marine Turtle Conservation Program on participatory basis from 2010-11. The aim of the program is to protect the breeding sites, prevent illegal hunting and killing of turtles and protect these species from other predators at breeding sites. In FY 2015-16, the program was implemented in 5 locations along the Maharashtra coastline. Till date, 150 nests as well as breeding population of endangered (female) Olive Ridley turtles were protected and 16202 eggs were successfully located to hatchery. A total 8290 hatchlings were successfully released into their natural habitat during breeding period from 2010-11 to 2015-16. The program has helped achieve the highest survival rate of 51.17% of hatching thereby contributing to an increase in the marine turtle population worldwide.

Chinnappanahalli Lake Conservation TCS started the association with Chinnapanahalli Lake, Bengaluru through financial support for the maintenance of the lake, apart from engaging volunteers in increasing community involvement in environmental conservation. TCS teams from several project accounts visited the lake and participate in various maintenance activities for the garden surrounding the lake. Volunteers helped rebuild the senior citizen's park, pruned hedge plants across the garden, built a nursery, manured the plants and have helped with the construction of a underground water drainage system. Over 800 TCS associates participated in these

activities. Post restoration, Chinnapanahalli Lake is now an abode of bird species like the Painted Stork, Spot Billed Duck, Egrets, Bee Eater and the Cormorant.

Other Environment Initiatives The biodiversity mapping of TCS sites has been carried out and various conservation & enhancement programs are being implemented to protect & enhance biodiversity. Currently, there are 305 types of flora being nurtured with TCS' various campuses.

4.2 Wipro

The word environmental is used 44 times in the 2015-16 Annual report. Their Philosophy - Traditionally, corporate annual reports focus on financial performance and statutory requirements. An Integrated Report incorporates financial and non-financial information – governance, environmental and social - in a manner that can help stakeholders understand how a company creates and sustains value over the long-term.

This report provides a consolidated perspective of economic, social and environmental aspects material to our strategy and our ability to create and sustain value to our key stakeholders. The report covers the nine principles of National Voluntary Guidelines from the Ministry of Corporate Affairs - a mapping table is provided at the end of this section. The topics covered in the report were identified through a materiality determination exercise conducted in 2015-16. Natural capital is broadly all renewable and nonrenewable environmental resources and processes that provide goods or services that support the past, current or future prosperity of an organization. It includes air, water, land, minerals, forests, biodiversity and eco-system health.

4.2.1. Environmental Management Systems is present in their Key Performance Indicators

Supplier Engagement - Educate our suppliers on environmental, social and governance best practices to be incorporated in their business.

Local Procurement: Wipro encourages sourcing from the local economy. At an aggregate level, nearly 75% of our suppliers are based in India; by value 66% of the procurement for the year was from India based suppliers. Local sourcing reduces costs, provides local employment benefits and reduced environmental footprint in sourcing, Performance Highlights Diverse supplier spend 5.4% (Supplier declared) Local supplier spend 75% by number of suppliers and 66% by value are based in India. Approach, Wipro's social initiatives center on the following dimensions. • Education: Engaging in deep and meaningful systemic work in the area of school and college education • Community Care: Engaging with the community on issues of utmost concern to them • Ecology: Addressing environmental issues.

4.2.2 Key Programs

Supported conferences on: multilingual education organized by Muskaan and Eklavya; Impact Assessment in Environmental Education conducted by Nature Conservation Foundation; Worlds of Fear: School Culture, organized by Centre for Learning and a conference on NaiTalim organized by AnandNiketan.

ECOLOGICAL SUSTAINABILITY (NATURAL CAPITAL) Ecological sustainability is a cornerstone of our charter on natural capital stewardship. Our approach is built on the pillars of Energy and Green House Gases (GHG) mitigation, Waterefficiency and Responsible Water management, Pollution and Waste management and Biodiversity. The increasing centrality of issues like climate change and water stress in the last few years has led organizations to look beyond their boundaries. While internal business drivers like resource efficiency, waste management and pollution mitigation have been the primary levers of any corporate environmental program for many now, organizations have come to realize that in order to make a real impact at a larger, systemic level, one can no longer ignore the externalized costs of ecological damage. At Wipro, our community programs on water and waste are two examples of such interventions.

Management system Our programs and management systems are pivoted and derived from the Ecological Sustainability Commitment, available at http://wipro.org/resource/Ecological_Sustainability_Policy.pdf. We have been following the guidelines of the ISO 14001 framework for more than a decade now as one of the cornerstones of our Environmental Management System (EMS). 18 of our campus sites in India and 2 in Australia are certified to the standards of ISO 14001:2004. No product business, leased assets, franchisees or equity investments with environmental impact. We continually assess operational risks to the environment and apply the precautionary principle in our approach to gain insights and plan – for example, the responsible water program and waste life cycle audits. In the reporting period, there were no instances of environmental fines imposed or negative consequences reported due to our operations. We proactively monitor regulatory compliances with respect to air, water and waste – and the emissions and waste generated by the organization are based on updated and approved consents as on date from respective State and Central Pollution control boards. We proactively respond to queries and clarifications received by regulatory bodies.

4.2.3 Wipro's Natural Capital Valuation Program – An update

Natural capital can be defined as the world's stocks of natural resources which make human life possible. Businesses rely on this natural capital to produce goods and deliver services. They depend on natural non-renewable resources (for example, fossil fuels and minerals) as well as natural renewable ecosystem goods and services (for example, freshwater and pollination). Businesses also rely on natural capital for its ability to absorb by-products of production such as pollution and water. Business extraction and production activities can damage natural capital with long term economic and social consequences.

These economic and social consequences manifest themselves as physical, regulatory and reputational risks for companies. One of the most useful ways for companies to account for these risks is to quantify and value the environmental impacts generated across their value chains in monetary terms. Traditional 'single parameter' environmental metrics such as cubic meters of water or hectares of land provide an indication of the scale of dependency on ecosystem goods and services or environmental impacts. However, they

often fail to identify optimization opportunities for business. Natural capital valuation, on the other hand, provides a deeper insight because it factors scale alongside critical environmental parameters such as regional water scarcity and the ecosystem services provided by land.

There are several global and national government-led projects underway which aim to develop environmental accounts and integrate them with traditional national accounts (GDP) including India. UN Principle of Responsible Investing (UNPRI), in 2010, estimated the environmental costs due to activities of top 3,000 companies at US\$ 6 Trillion per year. The Natural Capital Coalition (NCC), for example, is developing a Natural Capital Protocol to provide a standardized approach to natural capital accounting and valuation for businesses. Wipro, in association with Trucost (UK), has completed a natural capital valuation exercise for the previous two financial year 2013-14 and 2014-15. The valuation for 2015-16 will be completed by August 2016 – however the trends are unlikely to be significantly different. The valuation looks at our global operational footprint - from energy related emissions, water consumption, air/water pollution, waste generation and, land use change, business travel, employee commute – as well as from the embedded natural capital in all goods and services that we procure from our supply chain.

The natural capital embedded in goods and services is primarily based on valuation methodology that is based on Trucost's econometric Input-Output model which takes in spend across different sub-categories of procurement. Monetization of impacts is based on models and a selection of global and local factors - hence certain assumptions and accounting rules are inherent to the exercise. The total environmental costs relating to Wipro's operations and supply chain was estimated at INR 10,075 million for the fiscal year 2014-15. The largest contributions (see first chart) came from GHG emissions (51%), water abstraction and pollution (25%) and air pollution (20%). The second chart below shows the breakdown in environmental costs across each value chain stage. The operational value chain stage accounted for 36% of Wipro's total environmental cost. From a geography perspective, as expected, India accounts for 82% of the overall environmental cost. The above figures are net of our positive valuation that are attributable to our environmental initiatives. Wipro's environmental initiatives such as emissions reduction activities, renewable energy procurement and water recycling reduced its overall environmental costs by INR 884 million (9% of the total 2014-15 environmental costs).

For Wipro, this study provides useful indicators to understand impacts and assess the value of our environmental programs. For external stakeholders like customers and analysts, these data points provide a completely transparent full life-cycle understanding of our environmental footprint. CSR project or activities identified, Ensuring environmental sustainability, ecological balance, Agroforestry. Water Bangalore, Karnataka Amount Outlay (Budget) project or Program Wise (in million), 4.00, amount spent 3.00, Biodiversity Bangalore, Karnataka; Pune, Maharashtra 6.00 7.10 8.10 15.20 7.10, Energy Bangalore, Karnataka; Pune, Maharashtra 450.00 466.32 361.00 827.32 466.32, Waste Management Bangalore, Karnataka 1.50 1.50 1.40 2.90 1.50.

5. Conclusion:

The Study of Annual report of two IT major TCS and Wipro for the year 2015- 16 reveals, they have very focused and matured strategy towards environmental subject. They are committed not only to comply with the law of the land but also international standards. They have also gone beyond and done some beautiful programs on environment in their CSR activities. They comply with ISO EMS , OSHAS, and also the Aligned to The National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business (NVGs). If all small industries. Residential areas, commercial zones could adhere to this level of standard; we will not have to worry about environmental problems in this country.

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