



Disclosure of Business Responsibility and Sustainable Reporting (BRSR) of the Top Indian Pharmaceutical Industries with a New Approach

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ABSTRACT

The top pharmaceutical companies play a vital role in contributing to the global drug manufacturing facility, which not only helps supplying drugs to the Indian market, which is third highest volume manufacturer of drugs in the world. India supplies 40 and 20 % of generic drugs to USA and UK. It is very important that the pharmaceutical companies in India take the highest responsibility towards protecting the Environment, Sociological and Economical (ESE) approach for following the nine principles of the Business Responsibility and Sustainability Approach (BRSR). We have reviewed the top four pharmaceutical companies for their disclosures for the BRSR with the new approach. The review revealed that principle two and six delas with environmental activity, whereas principle three to five, seven to eight, which deals with the sociological and economical aspect, principles one and nine, deals with the economic activity. Such type of disclosures will help us to create the brand value and increases the market value of the manufactured drugs in India and globally. We can know the current services, which they have provided to the society and various ways in which we will protect the environmental at large. There is many published information on the environmental, sustainable goals (ESG) but there is very less information about the ESE approach of the approach, which shows the disclosures of the pharmaceutical industry.

Keywords: Business Responsibility and Sustainability Approach (BRSR), Environment, Sustainability, Sociological and Economical.

Introduction

The new framework for the business responsibility and sustainability reporting (BRSR) plays a vital role for the top 1000 listed companies by the securities and exchange board of Indian (SEBI). The frame works mainly deals with new conceptual framework in the form of Environmental, Social and Economic (ESE) approach (Figure. 1). Kahn et al. (2022) has reported that the sociological is a systematic approach study has been conducted by the Bangladesh leading manufacturing companies. Sánchez-García et al. (2024) have reported that the leadership in the corporate governance lays a vital role in the implantation of suitable aspects and improving the sociological aspects of the Swedish wine industry. There is know much published information on the BRSR on the pharmaceutical industry, specially which includes the sociological and encomia aspects and sustainable growth of that particular sector, which is in the form of SES approach. The various principles of the BRSR deals with the employee and contractor wellbeing and the various ethical practices, which are followed in the organization, which results good code of conduct and avoid the violations among the people. It very important that all the people in the organization should protect the environment, improve the safety aspects to protect the 3M, in the form of Men, Material and machinery (Ganganallimath et al., 2019), overall and above all the employees and contractors are responsible for protection of the health, which results in the proper wellbeing, which is good for the company and to their family members also. Further we can say that the wellbeing of the employees and the workers need to be paid by the organization based on new wage board. In case of employment, equal opportunities are given to men and woman, there is no differentiation for gender aspects, caste and all the origination will maintain grievance methodology of reporting to

the top management. All the policies, which are laid in the organization to be displayed and it should be followed and finally it should be implemented for the benefit of the people at large in the organizations. Generally, All the policies are signed by the top management. Many of the organizations are involved in the Corporate Social Responsibility (CSR) activities, which are beneficial for underprivileged people, which results in the empowering the woman manpower, enhances the skill, upgrading the education through free education. Bae et al. (2022) have studied the corporate social responsibility of the pharmaceutical industries in Korea. Over all and above employee, workers and customer is always based on the fulfilment of their wants leading to the satisfaction among the various people in the organization. All the points, which we have presented deals with the sociological, economic activity. Environmental aspects, which deals with the protecting the environment and involving in the sustainable activities.

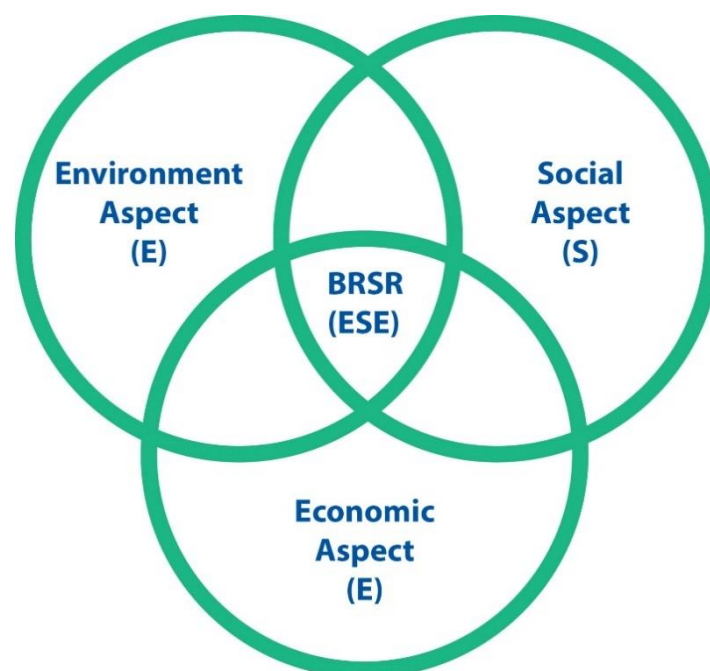


Figure 1. New SES approach, which has been applied for BRSR reports, which are reported to the SEBI

Sustainable practices are having a new approach in the field of environmental protection in India (Gupta et al., 2018), which helps in the protection against the depletion of the ozone layer and other environmental pollutants (Jabbar & Munir, 2022., Chipperfield et al., 2020), which are released during the usage of the hazardous chemical. The environmental protection and stringent standards, which helps in increase the business perspectives (Sanchez-Planelles et al., 2022). The Sustainable concept, which evolved in the year 1950 due to warming, which is caused by human activities. This has been informed during the Brundtland commission in the year 1987 (Kono., 2024). The commission they have discussed about the “Present need without compromising for the future”. Initially they focused on the environmental aspects, later it was found that the environmental protection aspects are linked to the social and economic (ESE) activities. The old concept of environmental social governance (ESG) has been discussed and published by many of the authors like Oyalabu et al. 2025., Duque-Gang et al. 2023., Grisales et al. (2019) but there is very little information about the ESE concept. The new ESE Concept has been focused detailly in the

paper. Further these concept, which has led to the formation of the “Earth Summit” in RIO from 3rd to 14th June in the year of 1992, which is known as United Nation Conference on Environment and Development (UNDP) has been described in detail by Grubb et al. 2019. They have framed a new framework for protecting the climate, which is known as the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC initiated implementing the Paris agreement in 2016. In the year of 1997 Kyoto protocol has been signed (Gupta, 2016) – the protocol is in place from 1997 to 2020, which succeeded Paris agreement. The Kyoto protocol is a top-down approach (Depledge, 2022), which is specially meant for the developing countries like India, China and Bangladesh. The protocol has legally bound targets, centralized mechanism, the targets are not fixed by the individual countries but is determined by the multilateral level, which is negotiable (Wang & Chen, 2013). Stahlke (2020) have reported that multilateral level committee works under the strong framework guidance for climate change under UNFCCC, which is in the form of a clean development mechanism (CDM). It limits the rise in the global temperature by 1.5°C above preindustrial levels. In 2022, a body known as conference of parties (COP), which was formed under UNFCCC (Recommendation Petri, F., & Karlas, 2025., Cointe & Guillemot, 2023). Its key role is to assess the control measures, which are taken by the individual nations for the adopting the new technology, resilience and mobilizing the finance for achieving the laid targets. Short et al. 2021 has informed that the COP 28 will be held in the United Arab Emirates (UAE), the upcoming conference is one of the largest of such kind, where around 85000 participants, around 150 head of the countries will represent the individual nation.

The Business Responsibility and Sustainability Reporting (BRSR) framework played an important role in the disclosures environmental, economic and social activities of the top manufactures of the in Indian companies, BRSR is introduced in the year of 2021 by SEBI, which has been evolved from the voluntary CSR guidelines of 2009 and then it has been called as mandatory Business Responsibility Report (BRR) in the year of 2012. It mandates top listed companies to provide detailed, quantitative, and standardized disclosures on ESG performance, aligning with global standards. The present BRSR report, which cover nine principles in the form of Environment, Social and Economic activity (ESE), which is new approach of the framework. The details of the nine principles overview, which in the Tabel.1. The recent published data from the various pharmaceutical industries from India have taken for reviewing the data by using the new conceptual approach. Further the various discourse with the various stake holders have been disclosed. The disclosures of the top pharmaceutical industries of BRSR.

Methodology

We have interpreted the published data of Business responsibility and sustainable reporting (BRSR), which we have taken from the available information from the internet and compared with the various principles with the new conceptual approach. By applying the new concept, we can say the credibility and the importance has increased for achieving the said goals of the Environmental, Sociological and Economic (ESE) activity disclosures. The input data for the review has been taken from the secondary source as mentioned above, and same has been submitted to the SEBI by the individual pharmaceutical company. The various principles of the BRSR disclosures for the year

2024 - 2025 for the major leading pharmaceutical companies like Dr. Reddy's, Divis labs, Sun pharma and Pfizer has been presented.

Results and Discussion

The various nine principles of the BRSR deals with the importance of the strategy, which are given by the top management, which not only leads to the growth of the company but it protects the environment, increases the importance of the economical and sociological activity of an industry.

Principle 1 - businesses should conduct and govern themselves with integrity, and in a manner that is ethical, transparent and accountable (Table. 1) as it relates economical aspect. Dr. Reddy Labs maintains the code of conduct and training (COBE), where 81 % of employees and 65 % of workers received training as per the annual training calendar, which covers various topics such as code of conduct, human rights and various topics related to the environmental, safety and sustainable goals but in case of Sun pharma it has declared that around 581 employees are trained, which includes principle 1 to 8 but does not include principle 7 BRSR similarly Divis Labs have reported the same but number of people involved in the training are 2536 numbers. Pfizer has code of conduct book known as blue book, which has included training aspects whereas Cipla has trained their employees on the code of conduct, where highest preferences have been given to the Anti-corruption and Anti-bribery with the zero-tolerance approach. Naevstad et al. (2019) have stressed the importance of the strategic regulatory training have shaped the organisation safety culture of various different sectors, where they shared the lessons, which they have learned from the past by the means of safety training. The Sun pharma is practising Global code of conduct (GCoC). They have disclosed that no charges were laid on the directors / employee / workers for bribery and corruption. In case of Sun pharma, the penalty has been laid on 23 occasions by various governmental agencies such as Tax, Exercise, ministry of corporate affairs and Customs department as per BRSR published report for the year 2024-2025, where seven occasions appeal has been filed in court (BRSR, 2025) whereas Divis lab reported no fines or penalty has been laid. Similarly, Abidin et al. (2019) reported the various ethical disclosures, which are made by the Malaysian public listed companies have resulted in open mind culture in the organisation. The Sun pharma have separate committee for Corporate Governance and ESG Committee (CG&ESGC) with the objective of monitoring the Company's compliance with the corporate governance as per the laid guideline. Other companies like Dr Reddy Labs have maintained strict policy against the corruption having a dedicated policy for not receiving any gifts, entertainment and conflicts of interest. There are no remarks on the company regarding the penalties, which are laid on the key managing members and their directors. In the report submitted to the SEBI they have disclosed that they are having Ombudsperson Policy, in order to address their grievances related to the bribery and any of the conflicts arises. The role of corruption in the form of gifts policy and its prevention followed by the European countries has been published by Peltier-Rives (2014). Global company Pfizer, it aims maintaining the "Trusted health brand", its main motive is to achieving the integrity in the policies, reducing the health desperateness and optimizing the operation cost. It is a multinational company, where they are having Anti Bribery and Anti-Corruption (ACAC) policy, which maintains a global policy standards known as "My Anti-Corruption Policy and Procedures (MAPP), which is different from the Ombudsperson Policy followed by the Dr. Reddy

Laboratory. The reporting procedure in the Pfizer, which is an open-door policy with on line compliance help line, which are opened to the employees for their grievance and suggestion but where as in case of Cipla they are having Vigil policy, where it allows the directors and employees to report the unethical behavior and fraud without fear. Supplier transparency is covered under the International Anti-Bribery and Anti-Corruption Business Principles" are incorporated into contracts with third parties, requiring them to comply with anti-corruption policies in case of Pfizer and similarly Divis labs has disclosed that they have not only have anti-corruption policy to the internal stake holders but also, they have extended to the suppliers and customers. In the policy statement published by Berhad (2020) have described the importance of the anti-bribery and corruption aspects and its frame work of functioning in the organisation leads to transparency and proper functioning of the organisation. Issa & Alleyne (2018) have published the corporate disclosure of the anti-corruption practices, which are followed by the Gulf corporation council. Faisal et al. (2022) have reported that the various ways by which CSR anti-corruption disclosures have presented in the form of report in case of public listed companies in Indonesia.

Principle 2 - The various Sustainable goods & its services deal with the Life-cycle sustainability, R&D, resource use, eco-design, which leads to protection of the environmental aspects (Tabel. 1). Dr. Reddy labs have conducted a life cycle assessment (LCA) for the two of its API products and they have enclosed that there is no significant risk towards social and environmental aspects. Sabour et al. (2023), Bassani et al. (2022) have reported that LCA plays a vital role in the pharmaceutical industry to know the amount of the CO₂ released from start to end of the production process. DR Reddy has dedicated supplier system where 100 % suppliers follow the Code of Conduct. All the 99 % of the waste generated from the organisation are sent to the recyclers and co-processing. Sun pharma has disclosed that CAPEX decreased from 24.60 to 4.68 % for the Research and Development (R&D) from 2023-24 to 2024-2025 but they have given highest preference in decreasing the environmental footprint in the form of water and energy conservation leading to the adoption of the renewable energy systems. Similarly, Divis Labs have disclosed their investment have decreased from 25 to 5 % but they have reduced the CO₂ emissions by 6350 MT by conserving water and energy by 92,130 KL and 34,870 GJ of energy. In consistence to the BRSR published data of Divis labs it was found that reducing of the carbon concentration in the many of major US cities has led to the water conservation (Sowby & Capener., 2022). The sun pharma has involved in recycling of the plastics has increased from 3772 to 4251 MT in year of 2023-24 to 2024-2025. Joseph et al. (2021) reported that the recycling of the plastics in the medical industry plays a vital role in not only protecting the environment but it also it saves the cost for buying the plastic bags / liners. Further they have disclosed that the reclaimed / expired medicine packing of 4 % has been sent to the pollution control board (PCB) dealers for further processing. None of the hazardous waste generated from the manufacturing has sent to the non-authorised PCB dealers for processing. Sun pharma has also disclosed that the input materials, which they have used for the manufacturing of the drugs has not been reused for any sort or processing and recycling during the drug manufacturing stage as the drugs are used for human consumption. The company has involved in the ESG practices for protecting the environment and achieving the sociological goals. Divis have involved in the sustainable practices where they have disclosed that the 61 % of the suppliers have followed the sustainable procurement policy but whereas the LCA of the two of the manufactured

products known as Naproxen Sodium and Valsartan, its total turnover of 5.20 and 6.37 % from the cradle to gate phase, which means that the product cycle has contributed to the CO₂ emissions during the usage phase, manufacturing phase, and disposal phase of the product. The quantity of the CO₂ has not been disclosed in the BRSR report but they have mentioned that there is no significant environmental and social concern. Divis have followed the Extended product responsibility (EPR) policy, where the waste, which has been generated from the process has been reused, recycled, co-processed or disposed in the environmentally friendly manner, which are acceptable by the PCB and same has been submitted to the state governmental authorities. Alev et al. (2020), Peng et al. (2018) have said that the by introducing the EPR in the corporate policy helps in maintaining the legal regulation and protecting the environment. There is a higher percentage of recovery of toluene and nitrobenzene solvent, which are recycled / reused in the process. In the BRSR report of the Divis labs they have disclosed that the solvents like toluene are recycle / recused has significantly decreased from 95 to 87.3 % from 2023 - 2025 to 2024 - 2025 but where as the toluene concentration of reusing in the process has slightly increased from 92.6 to 93 % from 2023 - 2025 to 2024 - 2025. Pfizer has disclosed that they have followed sustainable renewable energy practices, which has resulted in significant reduction in the non-renewable power at the Goa plant in India by 26 %. Pfizer has implemented the product LCA for their manufacturing products, which has resulted in good life cycle management resulting in the sustainable practices. They have disclosed that they have integrated environmental and social standards in its supply chain management. Further they have focussed on the product innovation, which leads to the Higher grade of medicines by following the ESG principles. Li et al. (2025), Bhattacharya & Bhattacharya (2023) have informed that the building up strong ideological ESG principals with higher grade of thinking leads to the innovation of new drugs in the pharmaceutical industry.

Principle 3 - Employee and workers wellbeing leads to the highest safety practices, following the wage policy and maintaining the good working conditions in the occupational environment, which is an economical and sociological activity (Tabel. 1). Dr Reddys, Sun pharma and Pfizer have disclosed that the 100 % of the employees and workers are covered under health and accidental insurance, which also includes the maternity and paternity benefits. Dr Reddy and Sun pharma have reported that they have followed the parental leave and retention of employee policy, where 95 and 92.5 % of people returned to the work after taking leave. Further Permanent employee retention rate is around 85.6 and 94.52 %. Kamalaveni et al. (2019) in his review reported that the importance of retention of the employees have achieved the various planned objectives of the organisation. A recent study conducted in the Romania has reflected that retention of the employee in the organisation helps in shaping the organisation culture (Turnea, 2018). Dr. Reddy has disclosed that 96.1 and 65.3 % of the employees and workers have received skill upgradation training, Further the 45,1 and 52.7 % of employees and workers have received health and safety training. 92.4 and 97.9% of employees and workers have undergone Carrer developmental programs. Similarly, the Divis Labs have disclosed 100 % of the employees and workers were covered under Health and accident insurance, which was similar to that of the Dr Reddys. Divis labs have disclosed that the maternity benefits were availed by 1,582 no's among the total number of employees of 10,489 whereas no paternity benefits are covered for all the working employees. Divis and sun pharma reported that Retirement benefits of the provident fund (PF) and Gratuity were

covered by 100 % whereas 81.80 and 29.3 % covered under employee state insurance (ESI) for the people working in the organization of Divis labs and Sun pharma. Panda & Komalavalli (2019) have said that the PF, ESI and gratuity, which plays an important role for the well being of the employees and workers in textile city of Tirupur, Tamil Nadu, India. Divis labs and Sun pharma both have reported that health and safety and up skilling upgradation has been covered 100 % to the employees and workers. Maclean et al. (2026) have reported that the upskilling the employees in the pharmaceutical industry helps in automation of the process equipment's leading to the digital future. There were no complaints, which are raised by the employees or the workers. Divis labs and Sun pharma reported that there are no safety related incidents in the year of 2024-2025. In the recent review published by Blanco-Juárez & Buele (2025) have reported that the pharmaceutical industries support the zero accidents in their EHS policy as its operations, which involves highest risk and control measures. Sun pharma and Pfizer reported that paternity benefits and day care benefits were utilized by 100 % of people working in the organization. Dr Reddys, Divis labs, Sun pharma and Pfizer have mechanism available to receive and redress grievances for employee and workers. Similarly, all have workers union members in the organization, which deals with the negotiation of the wages, safety and working conditions of the organization. Farida & Zulkarnain (2025) have said the labour union plays a vital role in the performance of the negotiations of the wages of the employees and workers in the organisation. Considering the wellbeing of the occupants of all the four organizations they have performed risk assessment in the form of HAZOP, LOPA, followed IMS procedures and complied to PPE compliance and safety in the organization. Agarwalla et al. (2025), Lilli et al. (2024), Chastain et al. (2017) have reported that the various risk assessment like identifying the risk in the process, conducting HAZOP or LOPA in organisation, which helps in reducing the incidents and better understanding of the various risks in the process, which results in the safe working practices leading to the wellbeing of the employees and workers.

Principle 4 - Stakeholder interest (esp. vulnerable groups) deals with the sociological and economic aspects (Tabel. 1). Dr Reddys have disclosed in the BRSR report that the company has conducted double material assessment to understand the financial materiality, which aligns with the various ESG strategy with the stack holders' expectations. Lehtinen (2025) and Yang (2025) reported that the emerging practices for double materiality assessment for the different stakeholder's reviled the importance of the corporate responsibility towards European sustainable standards has been reported in the doctoral dissertation. The organisation has involved in supporting the vulnerable groups and marginalized stakeholder. Dr Reddys given highest preferences to the people working in the organization by committing with the principal known as "Good Health can't wait", which gives highest preferences in accessing the health facilities, affordability of the treatment and fulfilling the needs of the recovery of people. In consistent to the present discloser, we would like to reveal that waiting is bad with subject to health (Howell et al., 2016), so Dr, Reddy have followed the principal "Good Health can't wait". Sun pharma where the investors / stake holders have given highest preference not only for the ESG but also to the product responsibility, statutory compliance, cost competitiveness and its over all company preferences. Divis labs and Sun pharma has disclosed their various stake holders, which include employees, customer, value chain partners, shareholders, community and government agencies. Each one of stack holders use different type of communication such as employee uses E-mail, notice board, web

site management, which is a continuous process, this is similar to the customers and value chain partners also but it is based on business need, in case share holders it is communicated through notices through e mail, arranging and announcing annual general body meetings which will be held yearly, community stake holder, which includes the CSR activities is community directly meeting the community people, this happens based on the requirement and need, the government agencies communication is done through E-Mail, writing a reply letter and its various disclosures. Lauff et al. (2020) and Bragantini Damiano et al. (2017) have said that the stake holder communication plays a vital role in improving the project implementation, practices and prescriptive of doing things to make things happen to achieve the given targets in time. Divis labs have disclosed that they have provided drinking water to 3,20,000 people in the surrounding area of the industry, skill developmental courses such as Tailoring, Beautician, Hospitality, computer skill has been developed by the Divis skill developmental center; apart from these activities, they are also involved in animal welfare, preventive health care, Swatch Bharat. Rural development and supporting the needs of the differently abled etc. but the list of CSR activities of Sun pharma has not been disclosed, whereas Pfizer have disclosed in BRSR report that CSR activities, which includes forecasting the health innovation, woman's and children health care, improving the skills of the woman community, providing governmental health care initiative and providing the disaster relief to the effected region and people. In consistent of the present disclosure the Paliwal (2023) informed that CSR activities in around the pharmaceutical industry in Gujarat has helped in improving the education, wellbeing of the people in the form community medicine and they have provided drinking water. In the literature reive by Saxena et al. (2021) have reported the CSR and the sustainable requirements disclosures played a vital role in conquering the customers in the marker. Vijayabanu et al (2018) reported that the CSR activity of the Indian pharmaceutical companies has led to the contribution in the improvement in the society by providing free education, community health and giving contribution for building class rooms for children's. Pfizer have involved in the transparency and accountability of the business activities, which includes the new ESG initiatives. Pfizer has disclosed the stake holder engagement depends on the need of the business requirement.

Principle 5 - Following Human rights practices, which deals with the sociological and economical aspects (Tabel. 1). In the BRSR report of Dr. Reddy labs have disclosed that all the people in the manufacturing units are assessed for human right issues. 70 and 99 % of employees and workers are trained on the business conduct, ethics and ESG parameters. Many of the case studies have reviled that ESG has contributed in shaping the thinking of the people towards environmental protection (Fabio & Roncagliolo, 2025). Further Dr. Reddy have disclosed that they have adopted strict policy against the child labour, forced labour or any sort of human trafficking in the operations and the supply chain management. They have a specific tolerance policy towards modern slavery. Human rights standards are included in the supply chain by following the strict code of conduct. Many of the authors Cao et al. (2024)., Schilling-Vacaflor (2021)., Snyder et al. (2018) have revealed that the importance of the social responsibility leading to the protection of human rights and increase the sustainability aspects with respect to the supply chain regulations plays an important role globally. Dr. Reddy is having the grievance redressal policy where the people in organisation have encouraged to report to the senior management, to the compliance

officer by using a hotline number. Dr Reddy has followed Diversity & Inclusion of non-discrimination policy towards the caste, creed, gender, race, religion or disability. In the recent years in the working environment, it was found that many of the religious / caste discrimination are avoided leading to the enhanced and a modern work culture with out any desecration among the co-workers (Rădulescu., 2022., Bhimraj., 2020). Dr. Reddy has set the goals for the organisation that the women in the senior level management leader will be increased to 35 % and include 5 % of people who are disabled in the working culture by the year of 2030. All the workers, including the employees in the organisations have followed minimum wage board policy. Divis labs and Sun pharma have disclosed that the 11276, 16203 and 7029, 9851 employee and workers have provided training for human rights in the year of 2024-2025. Further Minimum wage board policy has been followed for the employees for 10,485, 14,675 and non-permanent workers of 791, 1348 numbers. Subbiah (2021) has conducted a study in various organisations; it revealed that enforcing the minimum wage policy has been resulted in promoting the equality among the workers leading to social justice for the Indian economy. Divis labs, Sun pharma and Pfizer have disclosed the wages which are paid to the executive director, independent director, key managerial people, employees, which includes key management people (KMP) and the workers in the organisation. They have formed a separate committee for knowing the violation on the human rights and impacts which may impact the business in the form of grievance committee. In the recently published book by the world health organization, it has discussed the importance of the prevailing relationship among workers and their complaints of conflicts and solutions for the pharmaceutical industry for the low- and middle-income countries (World Health Organization, 2022). They have disclosed that there was no sexual harassment cases were registered asper the Prevention, Prohibition and Redressal Act, 2013. Pfizer have disclosed that it focuses on the Right to Health (availability, accessibility, and affordability), non-discrimination, privacy, and freedom from forced or child labor. Further they have disclosed that 60 % of suppliers have committed to the science-based targets leading to the reduction in the emissions and addressing the environmental and human impacts.

Principle 6 - Environmental & its sustainability, which deals with the environmental aspects (Tabel. 1). Dr. Reddy has disclosed that 68 % of total consumption from renewable energy. Further they have informed that 14 % of absolute reduction in the scope 1 & 2 emissions in 2024-2025., where there was 6 % reduction in the scope 3 emissions. Their main aim is to target carbon neutrality for their scope 1 and 2 emission by the year of 2030. Belkhir & Elmeligi (2019) reported that major global pharmaceutical industries have introduced in major projects leading to the decrease in the carbon footprint leading to the decrease in the emissions. Dr. Reddy has set the science-based Net zero climate targets for the physical year of 2045 where it aims in reduction of 80 % in scope 1 & 2 emissions and 52 % of reduction of scope 3 emissions. Beckmann et al. (2023), Teske (2022) have reported that the science-based targets (SBT) leading to the net zero depends on the commitments, which are made by organisations and working towards the sustainable goals and successfully achieve the said targets, which are committed to the SBT. In the year of 2024-2025 Dr Reddy have achieved the goal of recycling the rain water for 102,582 KL, which are reutilized and they have declared that there is 7 % reduction in the fresh water consumption. Reduced hazardous waste by 20 to 22 % for the high volume generated finished goods due to the implementation of the

new seventeen projects. 99 % of the waste, which are generated in the process has been sent to the co-processing and recyclers. Five of its manufacturing facilities have been certified by the green building council. In the recent published review by Singh et al. (2025) has revealed that practising the sustainable aspects, managing the hazardous and non-hazardous waste is a challenging task in the pharmaceutical sector in India. Das et al. (2025) informed that sustainable tools can be used for measuring the efficiency of the waste water treatment and the rain water conservation of the pharmaceutical industry. The LCA study of the manufactured product have disclosed that there was reduction of environmental impact during the operations. Siegert et al. (2019) reported that there should harmonized rules to be laid for the LCA of the Pharmaceutical products, these will result in the stagnant standards to be maintained by the hazardous chemical handling industries. Dr Reddy has recognised for their sustainable performance by receiving silver medal from EcoVadis and they have got high scores in the CDP climate change. Divis labs has disclosed that the company operates on a philosophy known as "waste-as-a-by-product", which leads to waste recovered, reused or recycled. Many of the pharmaceutical industries were involved in the new approaches, which have successfully led to the waste to resource recovery (Okojie et al., 2025). Divis lab has reported that it has reduced the carbon foot print and it saved water by 92,130 KL and reduced the energy by 34,870 GJ in the year of 2024-2025. In consistent to the present disclosure Sowby & Capener (2022) have reported that the reducing of the carbon emission in the USA cities has led to the water conservation and Wang et al. (2023) have reported that using of the sustainable energy leads to carbon neutrality. The sustainable goals of Divis have pledged that there will be significant GHG emission by 5 %, it will work toward the intensify the reduction of GHG emission by 24 % and reduce the waste consumption and waste generation by 25 %. Many of the countries of different sectors have pledged to reduce the GHG emissions as per the first commitment period of the Kyoto protocol (Lie et al., 2016). All the manufacturing sites which operate with the principle of Zero liquid discharge (ZLD). Further it has emission control equipment's such as, cyclones, bag filters and to control particulate matter from boilers and DG sets have used electrostatic precipitators (ESP). Sun pharma has disclosed that renewable energy has contributed to around 49.77 %, which is around 1,447, 199 Joules of energy. The total amount of volume of water withdrawn from various sources and consumed are 1,784,738 and 1,687,965 KL. They have disclosed that the GHG emissions have decreased for SO_x and NO_x 173 to 127 and 106 to 96 MT in the year of 2023-2024 to 2024-2025. Considering the present disclosure Shelyapina et al. (2020) have reported that SO_x and Nox have been reduced by introducing the suitable hazardous gas observant in the form of catalyst. But in case of PM it has increased to 153 to 198 when we compare to the year of 2023-24 to 2024-25. CO₂ emissions of the scope 1 and 2 has been decreased from 26,463 to 18571 Tons considering the year of 2023-24 to 2024-25. In the recent hand book published by the Elsevier they have described the various techniques or the ways for reduction of CO₂ for the scopes 1, 2 and 3 (Von Rosing, 2025). Sun pharma are having dedicated team for monitoring of the energy consumptions, by monitoring the different operational equipment, block wise for its current consumption, which has resulted in the implementation fo the ISO 50001:2018. Pfizer has declared that the Goa plant has reduced the conventional power consumption by 26 % by the year to 2024-2025. Over all considering all the manufacturing sites they have disclosed that there is 53 % of reduction in the conventional power, which leads to strong implementation of the renewable energy in the organisation. 1620 KL has

been reused or recycled for the year of 2024-2025. They have disclosed that the 22.28 MT of hazardous waste has been sent to the government authorised vendors. Pfizer employs Green Chemistry (GC) principles and they are involved in the usage of the sustainable solvents, which results in the protection of the environmental impact, considers safety and health aspects while handling the hazardous chemicals during the API manufacturing process.

Principle 7 - Business that engages in influencing public and regulatory policy, should do so in a manner that is responsible and transparent, as it is a socio-economic activity (Tabel. 1). Dr Reddy engages in the public and regulatory policy advocacy responsibility and transparently. Dr. Reddy's maintains transparent interactions with stakeholders, disclosing associations with industry bodies and chambers to avoid conflicts of interest. There are disclosure, transparency, and accountability and a qualitative survey of a public sector pharmaceutical committee conflict of interest policies in the World Health Organization South-East Asia Region have been recently disclosed (Grundy et al., 2022). All advocacy actions are designed to comply with fair competition and anti-bribery standards, ensuring high ethical standards. The company represents its interests in regulatory forums responsibly, often through industry associations, to shape the policies that promote access to affordable medicines. The scope of the commitment, which covers all areas of regulatory influence, which includes the intellectual property rights, environmental regulations, and healthcare standards. In the recent systematic review, it has been published that the importance of the intellectual property rights of the pharmaceutical industry had played a vital role in discovering the new medicines (Tenni et al., 2022). Divis Labs have associated with the nine trade and industry chambers / associations. Similar disclosures to that of the Reddy labs have made. Sun pharma has disclosed that they have indulged in engaging the advocacy with the help of regulatory bodies such as FDA, local regulatory agencies are conducted with the transparency with the high ethical standards. Karas et al. (2019) has revealed in a study that focused on the Pharmaceutical Industry funding for the Patient-Advocacy Organization has led to the cross-national comparison of disclosure codes on regulation. Divis labs uses the global code of conduct for the interaction with the government officials and industrial associations; it also ensures that it include on the public policy has been done ethically. The Board of Directors oversees the policies governing policy interactions, ensuring accountability in all public disclosures and regulatory communications. The Governance structures, voluntary disclosures and public accountability not only played an important role in the pharmaceutical industry but also it played a vital role in the educational field in the European countries like United Kingdom (Ntim et al., 2017). Similarly, Pfizer has disclosed that the industry bodies has developed public policy on legislative matter with honesty, integrity and openness. Advocating for policies that foster ethical business practices. Transparency by the industrial associations will discuss on the best practices, which are followed on the policy. Also to ensure that the interactions, which are made in the organisation with the regulatory bodies must comply with the law.

Principle 8 - Businesses, which promotes inclusive growth and equitable development, supporting community development. It is a socioeconomic activity (Tabel. 1). Dr. Reddy labs are strategically aimed in enhancing the access for the health care sector. Further they have involved in the community development, fostering fair, sustainable business practices that have a positive impact

on the society, particularly understanding the population. The CSR activities, which are focused on the community health, education and livelihood through the dedicated corporate social responsibility initiatives. See that all the necessary medicine are available in time at the OHC by following the principal known as "Good Health Can't Wait," thus providing affordable medicines for easy availability and accessibility. Further they have Integrating marginalized groups into their supply chain and supporting local livelihoods. In the year of 2024-2025 they have disclosed that CSR initiatives have been provided for 700,000 people. In consistent to the present disclosure Gupta & Gupta (2019) has said that pharmaceutical CSR activities played a vital role in India by providing the rural education and health care facility, which has benefited the population at large. Divis Labs has provided CSR activities for the Vishakhapatnam and Vizianagaram for 11.2 and 0.4 Crores. The amount of the CSR activities was spent on promoting education, preventive health care, village development, empowering woman, animal welfare, supporting differently abled, safe drinking water, environmental sustainability and promoting rural sports. Many of the CSR activities have given a ray of hope for livings, it improves the health conditions of the under privileged people and learn new skill will lead to the job (Doke & Dadas, 2021). Sun pharma has spent 142 crores for the CSR activities, it has involved rural transformation - Providing bio goas, implementing the solar lighting and providing education to the students in the form of remedial education, constructing new classrooms and promoting digital transformation. Further it has targeted programs for youth and women aimed to enhance employability, addressing high rates of local unemployment. To enhance the medical facility to the in and around the vicinity of the people who are living in the surrounding villages they have provided mobile health care units and it also it provides highest quality of the medicines for the village people. Yadav et al. (2020) has revealed the many of the CSR activities, which are carried out by the pharmaceutical industries, which plays a dual role, one is benefiting the people at large and other is fulfilling the legal requirement. Sun pharma has pledged to reduce the water consumption by 20 % by the year of 2028 and increase the renewable energy usage under the CSR activity. Sun pharma has taken all expenses to fulfil the needs of maintaining the Vedanthangal Bird Sanctuary located in Tamil Nadu, India. Pfizer's ESG and its Corporate Compliance frameworks give an equal opportunity for the values of the equity and their commitment in reducing the health care disparities. They are involved in the providing affordable medicines to the rural community through the Accord for a Healthier world.

Principal 9 – Engaging in providing the value to the customers. It is a Sociological and economic activity (Tabel. 1). Dr, Reddy has involved in providing the best affordable health care medicines and providing the lifesaving drugs, which are best in the market. Further they have ensured the manufactured medicines are having highest quality thus maintain the highest product stewardship. Ethical practices have been followed by adopting to the responsible marketing practices and providing the accurate information to the consumers in the form of health care providers. It has also ensured that the consumer data has been protected. Han et al. (2019) have revealed that following the ethical practices in the pharmaceutical industry has increased the good will relationship of the customers and also it improved the sustainable environmental aspects in the Malaysian pharmaceutical industry. Divis Labs has disclosed that regulatory requirement has been fulfilled by using the proper labelling display methodology on the manufactured product, so it will be easy for the identification of the medicines to the customers. Tong et al. (2018) has

informed that the labelling procedures varies from the industry to industry but the procedure of the information remains the same, which is very valuable to the druggist who are providing medicines to the customers. Divis lab have disclosed that they have not breached the data privacy, advertising, cyber security, delivery of the essential services, restrictive trade practices, unfair trade practices and others. Divis are following Information Security Policies which are aligned to ISO 27001. Sun pharma has disclosed that the first preference is to focus on patient health and safety, delivering high-quality, reliable, and affordable medicines globally. They have ensured that the ethical marketing practices have been followed. Strict policies have been laid for the protection of the customer and patient information. Grievance Redressal mechanism has been followed for addressing the customer queries and the feedback. Focus on making essential medicines are available in time, so that it will reach the medical health care shops or centres. Pfizer India has committed towards delivering safe, effective, and high-quality medicines while maintaining trust, transparency, and data privacy. Pfizer has committed to provide accurate information to the health care providers or patients. Pfizer India has followed the consumer redressal mechanism, which similar to that of the Sun Pharma. Adhering to responsible consumer practices includes robust mechanisms to protect the personal data of patients and participants in clinical trials leading to the highest data privacy and security. The company focuses on innovation in manufacturing of the medicine, so that there will be a value-added addition to the customers at large.

Table 1 – The various principles of BRSR – its focus area, key element description, which are linked to the new conceptual approach of ESE

Principle (P)	Functional Area	Key Elements / Metrics	New concept – Environment, Social and Economic activity (ESE)
P (1)	Ethics, Transparency & Accountability	It deals with the Anti-corruption, ethical practices training and code of conduct violations	Economical aspect
P (2)	The various Sustainable goods & its services	Disclosure leading to the Life-cycle assessment, sustainability, ECO design, environmental protection and R&D	Environmental aspect
P (3)	Employee Well-being	Following the Health & Safety, Diversity, Wages, Working conditions	Sociological & Economical aspect
P (4)	Stakeholder interest (esp. vulnerable groups)	The various inclusion In, fair treatment, Grievance handling	Sociological & Economical aspect
P (5)	Following Human rights practices	No Discrimination, forced child Labor and Giving equal opportunity to all	Sociological & Economical aspect

P (6)	Environmental & its sustainability	Energy savings, emissions control, water recycle, waste utilization and the biodiversity	Environmental activity
P (7)	Adequacy of the various policies	Having different policies, practical implementation of the policy	Socioeconomic activity
P (8)	Various Inclusive growth & equitable development	Projects related to CSR and investment in the community activities	Economic and sociological activity /impact
P(9)	The Customer value	Quality, safety, data privacy, customer satisfaction	Economic activity

The various nine principle of the disclosures of the top four pharmaceutical industry has been presented with respect to the SES approach, their disclosures, which lead to the improvised market value and building the customer data base and the disclosures of the BRSR has become mandatory for the industry, which are directly monitored by SEBI.

Conclusion

The disclosure of the nine principles has been varied from the industries, which has resulted in knowing the outcome of environmental protection / sustainable aspects, economical and sociological importance of the top four pharmaceutical industries have been revealed. The outcome of the review has revealed that two and six principles of BRSR, which delas environmental protection or its sustainability aspects, whereas the BRSR principle of three to five, seven to eight, which deals with the sociological and economical aspect, principles one and nine, deals with the economic activity. Such type of disclosures of BRSR has led to know the importance and depth of the information, which the pharmaceutical industries have provided in the public domain. The comparison disclosures of the pharmaceutical industries have been provided in the form of a new SES approach.

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