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EMBEDDING SUSTAINABLE DEVELOPMENT GOALS (SDGS) IN BUSINESS: A CASE STUDY

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Abstract

Sustainability and sustainable development had covered a long journey over the period of decades before adaptation of Sustainable Development Goals (SDGs) by United Nations in the year 2015 by replacing Millennium Development Goals (MDGs). One hundred and ninety-three countries were the signatory for the adaptation and incorporation of SDGs across industry and sectors. Since then companies are looking for identifying common standards and measurement tools for integrating the SDGs across the value chain for the benefit of all the concerned stakeholders/actors. This study proposed a framework for embedding SDGs in business, qualitative comparative analysis is used with desk method as suggested by Lukin et al. (2022). Further according to Locke (2001) for studying a novel phenomenon exploratory case study method is an appropriate tool. Two Indian fashion giant Arvind Limited (AL) and Birla Cellulose (BC) are selected for the study based on their sustainability report, social legacy, brand value, market capitalization, and global presence accessible through public domain information. The proposed framework comprises; seventeen common materiality issues (CMIs), fourteen key performance indicators (KPIs), fourteen instruments for performance measurement of eight common SDGs adapted by AL and BC for the benefits of key stakeholders/actors.

Keywords: Sustainability, Sustainable Development, Sustainable Development Goals, Strategic Framework, Materiality Issues, Key Performance Indicators, Stakeholders.

INTRODUCTION

Sustainability and sustainable development (SD) concepts had evolved over the period of time and started to get more attention during the transit from 20th to 21st century due to the nature's limitations and stakeholders concern for economic, social and environmental perspectives (Fonseca et al.;2020). United Nations (UN) organised many conferences, discussion forums and had taken initiatives for addressing the concerns related to poverty, hunger, health and wellbeing, sanitation, innovation, energy efficiency and other related issues for the betterment of the society at large and stakeholders interest. The year 2000 witnessed the formulation of Millennium Development Goals (MDGs) for rolling out a more structured blueprint towards the achievement of SD. Further the MDGs was replaced in 2015 by sustainable development goals (SDGs) as the part of UN, sustainable development agenda 2030.

According to Costanza et al. (2016), SDGs has a complex system due to 17 goals, 169 targets and more than 300 indicators for performance measurement. The same study also mentioned that over the period of time many researchers and practitioners had tried to simplified the complex system with SDGs clustering and prioritization as per the company, sector or industry requirements. The SDGs prioritization or integration was also explored from the organizations strategic perspective or stakeholder's benefits or addressing the materiality concerns. The integration from strategic perspective covers the economic, social and environmental dimension of the SDGs (Lassala et al., 2021). Van Zanten & van Tulder (2018) covered another view point that companies has to go beyond reporting for the SDGs integration.

This study will focus the light on the strategic perspective of the SDGs integration in the business with the example of two fast fashion giant from India; Arvind Limited (AL) and Birla Cellulose (BC). The fast fashion industry considered for the study due to its polluting nature, as quoted by Shen et al. (2017). The objectives of the study are;

a. Exploring the common materiality issues (CMIs), key performance indicators (KPIs), stakeholders, and instruments of performance measurement for AL and BC.

b. Identification of common and specific SDGs, for AL and BC

c. Proposing the strategic framework for SDGs integration based on the specific case study of AL and BC

The study divided into the following sections to achieve the objectives and proposing the strategic framework;

i. Setting the theme of the study with basic concept of sustainability to sustainable development (SD).

ii. Discussion about SD, business and SDGs.

iii. SDGs framework and theoretical perspectives.

iv. Methodology and Sample description.

v. Fashion industry and SDGs.

vi. Strategic framework for SDGs integration.

vii. Analysis and conclusion.

viii. Future scope of research.

i. Sustainability to Sustainable Development

Sustainability had completed a long journey since 500 BC, during 1st BC and 5th BC, ancient thinkers shared their concern about human role in environmental degradation (Pliny the Elder 1938; Columella 1948; Strabo 1949; Van Zon 2002). By seventeenth century human had altered the natural environment due to rapid increase in the population and human needs, the outcome was increase in air and water pollution. Wood was the major fuel source and used for production and other processes. Eighteenth century witnessed the industrial revolution and over consumption of natural resources, the outcome bothered the society to thought for responsible uses of natural resources in the interest of future generations, Van Zon 2002. Hans Carl von Carlowitz, from Germany was the first person to introduced the term sustainability in 1713 in reference of German forestry circle.

Post world war II more serious challenges were on the environmental front due to population, human life survival and its balance with planet. By nineteenth century coal emerged as the major source of energy, as it was natural resource so discussions were also started not to waste it. The term sustainable development (SD) was coined in 1970 by Barbara Ward founder of international institute for environment and development (Ward & Dubos 1972). United Nations (UN) constituted a commission called Brundtland Commission, the commission submitted its report in 1987 and conceptualise the term triple bottom line covering social, environmental and economic perspective. The new definition of sustainable development emerged as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987).

ii. Sustainable Development (SD), Business and SDGs

Brundtland Commission report of 1987 had covered different ministries and government action for a new journey towards sustainable development. The report also covered private enterprises of different size and capacity for the achievement of global agenda of SD. The major areas of concern were environmental and social issues and its balancing with economic and growth

perspective. The SD and its interface with business was first explored during earth summit in 1992 as an agenda of United Nations Conference on Environment and development. Over the period of decades since 1992, different researchers and practitioners explored the various theories, models and concepts and established the relationship between SD and businesses with the valid assumptions. World Business Council on Sustainable Development was established in 1995 to further streamline the role of businesses towards SD with representation from global member companies. By that time environmental reporting also emerged as an important tool in Europe and North America for accessing the journey towards SD.

KPMG (1999) reported that 24% companies out of 1100 sample complied with the Health, Safety and Environmental standards (HSE), comparing to 13% in the year 1993. Over the period of time companies followed different nomenclature such corporate responsibility, social responsibility, corporate citizenship, sustainability as the part of sustainability reporting varying from country to country and company to company. The academic research also reshaped during the time and the focus shifted towards corporate social responsibility, corporate governance, ethics etc. and deviated from SD.

The traction towards SD once again gets the momentum with the launch of United Nations "Transforming Our World: the 2030 agenda for Sustainable Development" in the year 2015 in the form of seventeen Sustainable Development Goals (SDGs). According to Haywood & Boihang (2021), the SDGs focus was on addressing the strategic and social challenges faced by the business and society. The SDGs coverage spectrum was to wide starting from no poverty, zero hunger, good health and wellbeing, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry innovation and infrastructure, reduced inequalities, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace and justice strong institutions, partnership for goals (United Nations;2015). The SDGs replaced the Millennium Development Goals (MDGs), year 2000 initiative towards SD. The SDGs action plan and blue print was signed by 193 member countries.

The SDGs implementation needs the action from all stakeholders and multifunctional integration and collaboration among business, society, and government (Ordonez et al., 2021, Stott & Murphy; 2020, Murphy & Stott; 2021). According to PwC (2018) report on "from promise to reality: does business really care about SDGs", 72% of the companies mention SDGs in their annual or sustainability report, 50% companies prioritized SDGs, 54% companies that prioritized SDGs adapted the same for their business strategy. The top five priorities identified for business were decent work and economic growth (SDG 8), climate action (SDG 13), responsible consumption and production SDG 12), good health and wellbeing (SDG 3), industry innovation and infrastructure (SDG 9).

iii. SDGs Framework: A Theoretical Perspective

The seventeen SDGs are not independent, they are closely interrelated and required multi-stakeholder efforts and action for strategic initiative and policy implication in alignment with business and society (Sagiv et al. 2017, Schaefer et al. 2020). The organizations, societies and nations integrating and implementing the SDGs in their action has to establish the strong connect between targets, indicators and prioritization of the same for resource allocation and output optimization (Visser;2011). Identifying and interpreting the SDGs interconnect is complex in nature due to its economic, social and environmental implications across five key component; people, planet, prosperity, peace and partnership. According to Mio et al. (2020) some businesses linked their activities with SDGs. Our study is based on a framework suggested by Garcia et al. (2017) for fast fashion industry; sustainability scorecard. The

scorecard developed for minimising the gap between SDGs adaptation and implementation. The key factors identified for the scorecard are performance evaluation instruments, SDGs prioritization, reported materiality issues (RMIs), common materiality issues (CMIs) and actors.

iv. Methodology and Sample Description

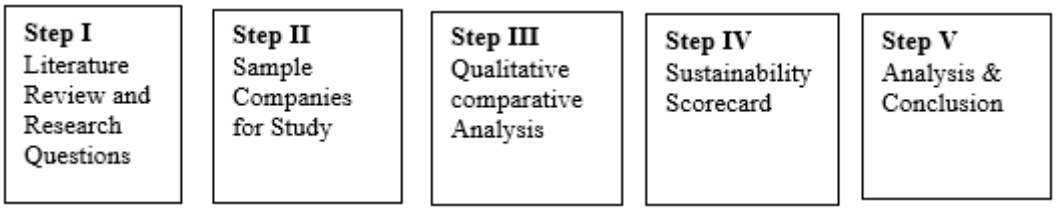
Sustainable development goals are emerging as a strategic tool for integrating SD across the value chain activities of many companies and industry in the 21st century. Textile and apparel industry as the representation of fashion industry is among the most polluting sector (Shen et al.;2017). The study followed a five step framework as shown in figure 1 for proposing the sustainability scorecard based on the comparative analysis of two Indian global fashion giant Arvind Limited (AL) and Birla Cellulose (BC). The step I of the study focused on reviewing the literature starting from sustainability to sustainable development, interface between sustainable development, businesses and sustainable development goals and SDGs framework in-alignment to industry needs.

The step II, identification of two leading fashion giants of India; AL and BC for doing a comparative analysis of their value chain activities and action towards incorporation and mapping of SDGs and further suggesting a strategic framework for effective execution. The companies selected for the study are based on their sustainability report, social legacy, brand value, market capitalization, and global presence accessible through public domain information.

Step III, as this topic is not much explored, so a methodology suggested by Lukin et al. (2022) considered for this study, qualitative comparative analysis is used with desk method based on the public domain information analysis on sustainability and SDGs. According to Locke (2001) for studying a novel phenomenon exploratory case study method is an appropriate tool. So the further discussions of the study are based on the comparative analysis of the two organisation considered for the study.

Step IV proposed a strategic framework for embedding SDGs in business, based on the comparative analysis of the two organisation and adaptation of a framework proposed by Garcia et al. (2017), step V conclude the paper with analysis and conclusion.

Figure 1: Research Flow



Source: Author Compilation

v. Fashion Industry and SDGs

The fashion industry activities and risks are derived by the behaviour of firm and its customers (Shen B.;2014). According to Garcia et al. (2017), downstream activities performed by the focal firm and upstream activities performed by the suppliers. Both type of activities and actors are responsible for establishing the balance between economic, social and environmental ecosystem of the whole industry. Shen B. (2014) pointed out in his study on H&M that conflicts arise at every stage of supply chain including material production, garment manufacturing, transportation/distribution, consumer education and retailing. The focal firm has to establish

an ecosystem in such a way that no harm to the natural environment, maximum value creation for the customers, and enhanced the value capturing for the all stakeholders including customers, employees, society, shareholders, management and others. Suggesting such a framework required identification of major activities, key actors, performance evaluation and capturing instrument, and its integration with SDGs. The following documents of AL and BC were reviewed and analyse for identifying the required information and parameters;

i. Arvind Limited Sustainability Report 2021-22

ii. Arvind Limited double Materiality Report 2022-23

iii. Birla Cellulose Sustainability Report 2021-22

iv. Birla Cellulose Sustainability Framework

AL identified twenty-one materiality issues, out of which 12 were considered by the company as key materiality issues, in case of BC thirty-four materiality issues were identified by the company out of which eleven were considered as key materiality issues (details provided in Appendix I). Seventeen issues are common materiality issues (CMIs) between the two organizations; water, energy, fiber, chemical, employees in the value chain/supply chain, people/own workforce, policies standard and code of conduct, customer satisfaction, waste, communication & engagement, product lifecycle impact, onsite air emission, climate change impact, resource inflow including resource use, communities, product safety, research & development. Five issues are identified as common key materiality issues (CKMIs); water, energy, chemical, employees in value chain, health and safety.

Appendix II mapped the AL and BC SDGs adaptation and key performance indicators (KPIs) for the execution of the same. The leading KPIs are Community Engagement, Gender Equality & Reduce Inequality, Sustainable Supply Chain, Occupational Health & Safety, Water Footprint, Climate Change Risks, Closed-loop Manufacturing, Sustainable Products & Circular Economy, Social Compliance, Waste Management, Regulatory Compliance, Responsible Wood Sourcing, Biodiversity, Valuable Partnerships. The common SDGs executed by both the company are Gender Equality (SDG 5), Clean Water and Sanitation (SDG 6), Affordable and Clean Energy (SDG 7), Decent Work and Economic Growth (SDG 8), Industry, Innovation and Infrastructure (SDG 9), Reduce Inequalities (SDG 10), Responsible Consumption and Production (SDG 12), Climate Action (SDG 13).

vi. Strategic Framework for SDGs Integration in Fashion Industry

Garcia et al. (2017) suggested Reported Actions Towards Sustainability (RAS)

framework with the example of two fashion giant H&M, Inditex as shown in Appendix III, the same adapted and modified for suggesting the strategic framework for SDGs integration in Indian fashion industry with the example of AL and BC. The three base criteria for suggested framework were; topics (18), instruments for performance measurement (14) and actors (16). Fourteen topics are mapped with the Gracia et al. (2017) but three additional topics observed in case of AL and BC; waste, onsite air emission and product safety. Gracia et al. (2017) identified 16 actors/stakeholders for SDGs integration while in case of AL and BC the stakeholders are only 8. Instruments of performance measurement and evaluation are more or less same that is 14, the details are captured in Appendix III.

The figure 2 shows the proposed strategic framework for SDGs integration based on identification of common SDGs considered as priority SDGs; 5, 6, 7, 8, 9, 10, 12 and 13. Seventeen CMIs are mapped as common CMIs as per Appendix III and 14 KPIs as per

Appendix II. Eight stakeholders considered as lead actors for addressing 17 CMIs and will help in integrating prioritized SDGs.

Figure 2: Strategic Framework for SDGs Integration

Instruments				
Training-Education: Awareness creation	Projects	Sourcing strategy and purchasing practices	Research	Sustainability-Oriented Investments (New Energy, New Processes, Improved Facilities, Appliances, etc.)
Assessment and Monitoring: Audit	Standards–Certificates–Internal Policies–Compliance	Awards and Rewards	Committees, forums, and consultations	Labels–Collections
Partnerships- Alliances	Funding–Philanthropy	Innovation and Technology	Dialogues among stakeholders	

SDGs			**Key Performance Indicators (KPIs)**		**Common Materiality Issues (CMIs)**	
Common SDGs Execution by AL &BC	**Additional SDGs Execution by AL**	**Additional SDGs Execution by BC**	Community Engagement	Waste Management	Employees in the value chain/supply chain	Communities
Gender Equality (5)	No Poverty (1)	Good Health and Wellbeing (3)	Gender Equality & Reduce Inequality	Regulatory Compliance	Energy	Communication & engagement
Clean Water and Sanitation (6)	Zero Hunger (2)	Quality Education (4)	Sustainable Supply Chain	Responsible Wood Sourcing	Resource inflow including resource use	Policies standard and code of conduct
Affordable and Clean Energy (7)	Sustainable Cities and Communities (11)	Life below Water (14)	Occupational Health & Safety	Biodiversity	People/own workforce	Customer satisfaction
Decent Work and Economic Growth (8)	Peace, Justice and Strong Institutions (16)	Life on Land (15)	Water Footprint	Valuable Partnerships	Chemical	Product lifecycle impact
Industry, Innovation and Infrastructure (9)		Partnership for the Goals (17)	Climate Change Risks		Water	Waste
Reduce Inequalities (10)			Closed-loop Manufacturing		Fiber	Onsite air emission
Responsible Consumption and Production (12)			Sustainable Products & Circular Economy		Climate change impact	Product safety
Climate Action (13)			Social Compliance		Research & development	

Stakeholders (STKHs)

Distributor	**Employees/Workers**	**Customers**	**Media**
Supplier	Local Community & NGOs	Government Bodies	Investors

Source: Adapted and modified from Garcia et al. (2017)

AL: Arvind Limited, BC: Birla Cellulose

vii. Analysis and Conclusion

Over the period of time as sustainability and sustainable development is taking the reshape, SDGs are emerging as an integrated solution to address the gap exist at national, regional and global level across countries and sectors. According to Fritz et al. (2017) & Kozlowski et al. (2015), there is a need of developing the integrated frameworks for common standards and measurement tools to have the strong communication among major stakeholders/actors. The fast fashion industry and the companies within the sector had many CMIs, the KPIs are required to minimize the gap for effective SDGs integration and action on the part of stakeholders/actors.

Sixteen CMIs were mapped with Gracia et al. (2017) for Indian fashion giant AL and BC, the three additional CMIs observed are waste management, onsite air emission, and product safety. Both the company considered for the study had fourteen KPIs, focusing almost on the similar areas of concern. The SDGs adaptation by both the companies was slightly different, the eight SDGs were common; 5, 6, 7, 8, 9, 10, 12 and 13. Besides this AL focused on SDGs; 1, 2, 11 and 16 also, so total SDGs mapped for AL was 12. In case of BC besides eight common SDGs, it focused on SDGs; 3, 4, 14, 15, 17, so total mapped SDGs for BC was 13.

Fourteen instruments and parameters adapted from Gracia et al. (2017) as performance measurement tools were more or less standard tools for fast fashion industry and same for AL and BC. The eight key stakeholders/actors were identified by content analysis of AL and BC sustainability and annual reports. Gracia et al. (2017) identified 16 actors in case of H&M and Inditex.

viii. Future Scope of Research

The sustainability, sustainable development and SDGs are the areas of common concern for the entire globe, irrespective of geographic boundaries and industries due to its impact on all stakeholders/actors. This study proposed as strategic framework for SDGs integration based on inputs derived from Gracia et al. (2017) and content and desk analysis of Indian fashion giant AL and BC. The future research can be conducted with more diversified industry and more number of companies in the same or different sector. The expert opinion or focus group can further strengthen the study and outcomes.

Reference

1. Brundtland, G.H. (1987). Our common future Call for action, Environmental Conservation, Vol 14, 291–294.
2. Columella LJM. 1948. Res rustica. Lucius Junius Moderatus Columella on agriculture, vol. 1 (Books I–IV). English translation by Harrison Boyd Ash. 1948 reprint. Cambridge, MA: Harvard University Press.
3. Costanza, R., Daly, L., Fioramonti, L., Giovannini, E., Kubiszewski, I., Mortensen, L. F., Pickett, K. E., Ragnarsdottir, K. V., De Vogli, R., & Wilkinson, R. (2016). Modelling and measuring sustainable wellbeing in connection with the UN Sustainable Development Goals. Ecological Economics, 130, 350–355. doi: 10.1016/ j.ecolecon.2016.07.009.
4. Fonseca, L. M., Domingues, J. P., & Dima, A. M. (2020). Mapping the Sustainable Development Goals relationships. Sustainability, 12(8), 3359. doi: 10.3390/su12 083359.
5. Fritz, M.M.C.; Schöggl, J.-P.; Baumgartner, R.J. (2017), Selected sustainability aspects for supply chain data exchange: Towards a supply chain-wide sustainability assessment, Journal of Cleaner Production,141, 587–607.doi:10.1016/j.jclepro.2016.09.080

6. Garcia-Torres, S., Rey-Garcia, M., & Albareda-Vivo, L. (2017). Effective Disclosure in the Fast-Fashion Industry: from Sustainability Reporting to Action. Sustainability, 9(12), 2256. doi:10.3390/su9122256

7. Haywood, L.K.; Boihang, M. (2021), Business and the SDGs: Examining the early disclosure of the SDGs in annual reports. Development Southern Africa, 38(2), 175–188. DOI: 10.1080/0376835X.2020.1818548

8. Kozlowski, A.; Searcy, C.; Bardecki, M. (2015), Corporate sustainability reporting in the apparel industry an analysis of indicators disclosed. International Journal of Productivity and Performance Management, 64(3), 377–397. DOI: 10.1108/IJPPM-10-2014-0152

9. KPMG. International Survey of Environmental Reporting 1999; KPMG: Amstelveen, The Netherlands, 1999.

10. Lassala, C., Orero-Blat, M., & Ribeiro-Navarrete, S. (2021). The financial performance of listed companies in pursuit of the Sustainable Development Goals (SDG). Economic Research-Ekonomska Istraživanja, 34(1), 427–449. doi: 10.108 0/1331677X.2021.1877167.

11. Locke, K., 2001. Grounded Theory in Management Research. SAGE Publications, London, UK.

12. Lukin, E.; Krajnovi´c, A.; Bosna, J. (2022) Sustainability Strategies and Achieving SDGs: A Comparative Analysis of Leading Companies in the Automotive Industry. Sustainability, 14 (7), 1-15,https:// doi.org/10.3390/su14074000

13. Mio, C., Panfilo, S., & Blundo, B. (2020). Sustainable development goals and the strategic role of business: A systematic literature review. Business Strategy and the Environment, 29(8), 3220–3245. doi: 10.1002/bse.2568.

14. Murphy, D.F.; Stott, L. (2021) (Eds.) Partnerships for the Sustainable Development Goals (SDGs); MDPI Books: Basel, Switzerland, 2021.

15. Ordonez-Ponce, E.; Clarke, A.; MacDonald, A. (2021), Business Contributions to the Sustainable Development Goals through Community Sustainability Partnerships. Sustainability Accounting, Management and Policy Journal,12 (6), 1239–1267. DOI: 10.1108/SAMPJ-03-2020-0068

16. Pliny the Elder. (1938). Natural history (Naturalis historia) in ten volumes, vol. 1 (praefatio, libri I&II). English translation by H. Rackham. Cambridge, MA: Harvard University Press.

17. PwC. (2018). From promise to reality: Does business really care about the SDGs? Retrieved from www.pwc.com/sdgreportingchallenge

18. Sagiv, L., Roccas, S., Cieciuch, J., & Schwartz, S. H. (2017), Personal values in human life. Nature Human Behaviour, 1(9), 630–639. doi:10.1038/s41562-017-0185-3

19. Schaefer A, Williams S, Blundel R (2020), Individual values and SME environmental engagement', Business and Society, 59 (4), pp.642-675. doi: 10.1177/0007650317750134

20. Shen B, Li Q, Dong C, Perry P. (2017), Sustainability Issues in Textile and Apparel Supply Chains. Sustainability, 9(9):1592. https://doi.org/10.3390/su9091592

21. Shen, B. (2014), Sustainable fashion supply chain: Lessons from H & M. Sustainability, 6(9), 6236-6249; https://doi.org/10.3390/su6096236

22. Stott, L.; Murphy, D.F. (2020) An Inclusive Approach to Partnerships for the SDGs: Using a Relationship Lens to Explore the Potential for Transformational Collaboration. Sustainability, 12(19), 7905; https://doi.org/10.3390/su12197905

23. Strabo. (1949) The geography, vol. II, Book V. English translation by Horace Leonard Jones. 1949 printing. London: Heinemann.

24. United Nations (UN) (2015). Transforming our world: The 2030 agenda for sustainable development. Resolution adopted by the General Assembly on 25 September 2015. Available at: http://tinyurl.com/od9mens.

25. van Zanten, J. A., & van Tulder, R. (2018). Multinational enterprises and the Sustainable Development Goals: An institutional approach to corporate engagement. Journal of

International Business Policy, 1(3), 208–233. doi: 10.1057/s 42214-018-0008-x.

26. Van Zon H. (2002) Geschiedenis & duurzame ontwikkeling. Duurzame ontwikkeling in historisch perspectief: enkele verkenningen. Nijmegen/Groningen: Werkgroep Disciplinaire Verdieping Duurzame Ontwikkeling.

27. Visser, W. (2011) The Age of Responsibility: CSR 2.0 and the New DNA of Business; Wiley and Sons: Chichester, West Sussex, UK, 2011.

28. Ward B, Dubos R. (1972) Only one earth – the care and maintenance of a small planet. London: Deutsch.

29. WCED (World Commission on Environment and Development). (1987) Our common future. Oxford: Oxford University Press.

Appendix I

Arvind Limited/ Birla Cellulose Materiality & Key Materiality Issues				
	Arvind Limited		Birla Cellulose	
S No	Materiality Issues	Key Materiality Issues	Materiality Issues	Key Materiality Issues
1	**Water**	**Y**	Welfare of Local Communities	
2	**Energy**	**Y**	Capacity Building in Value Chain	
3	Fiber	Y	Gender Equality	
4	**Chemical**	**Y**	**Water Footprint**	**Y**
5	**Employee in the value chain (People)**	**Y**	**Occupational Health & Safety**	**Y**
6	**Own workforce (People)**	**Y**	**GHG Reduction in Manufacturing**	**Y**
7	Policies, Standard and Code of Conduct	Y	Talent Development	
8	Long Term Viability of Core Business (Money)	Y	Collaborating for Human Rights	
9	Customer Satisfaction	Y	Economic Performance	
10	Regulatory and Legal Challenges	Y	**Fair Labour Practices in Supply Chain**	**Y**
11	Waste		Collaborating for Enhancing Local Supplies	
12	Communication & Engagement		R&D for Technology Upgradation	Y
13	Product lifecycle impact		Equal Opportunity Employer	
14	On-Site Air Emissions		Global Certifications for Products & Process	
15	Climate Change Impact		Circular & Recycled Products	
16	Resource Inflow including Resource Use		Partnership for Sustainable Viscose Promotion	
17	Policy Influence		Responsible Supply Chain Management	
18	Communities' Economic, Social, and Cultural Rights		Customer Satisfaction	
19	Privacy		Sustainable Procurement	Y
20	Product Safety		Waste Management	Y
21	Research & development		Best Available Techniques (BAT) for Production	Y
			Closed-loop Manufacturing	Y
23			GHG Reduction in Supply Chain	
24			Biodiversity & Resources Management	
25			**Chemical Management**	**Y**
26			Sustainable Product Development	
27			Marine Pollution from Microfibres	
28			Sustainable Product	
29			Responsible Wood Sourcing	Y
30			Transparency in Sustainability Disclosures	
31			Transparency in Governance System	
32			Collaboration for Value Chain Sustainability	
33			Partnership with Multi-stakeholder organisations	
34			Transparency & Traceability	

Source: AL Sustainability Report 2021-22, BC Sustainability Report 2021-22

Note: Highlighted text shows the common key materiality issues

Appendix II

Arvind Limited/ Birla Cellulose SDGs/ Key Performance Indicators (KPI) Mapping			
		Arvind Limited	**Birla Cellulose**
SDGs	**SDG Description**	**Key Performance Indicators (KPI)**	**Key Performance Indicators (KPI)**
1	No Poverty	a. Local community hiring for social inclusion by the means of employment and sustained income **(Community Engagement)** b. Respect and abide to minimum wages (G**ender Equality & Reduce Inequality)**	
2	Zero Hunger	a. Sourcing of sustainable cotton exceeds 40% of our total volumes – Better Cotton, Organic Cotton and Regenerative Cotton **(Sustainable Supply Chain)**	
3	Good Health and Well being		a. Reduce Lost Time Injury Frequency Rate (LTIFR) **(Occupational Health & Safety)** b.Total no. of beneficiaries **(Community Engagement)**
4	Quality Education		a.Total no. of beneficiaries **(Community Engagement)**
5	Gender Equality	a. Efficient and organisation-wide implementation of Prevention of Sexual Harassment (POSH) Act **(Gender Equality & Reduce Inequality)** b. 11.1% Women Directors on the Company board **(Gender Equality & Reduce Inequality)**	a. Women Empowerment **(Gender Equality & Reduce Inequality)**
6	Clean Water and Sanitation	a. Zero blue water for industrial purpose by effectively using ZLDs **(Water Footprint)** b. Constant efforts to use less water per meter of fabric and per garment **(Water Footprint)** c. Setting up Centre of Excellence in partnership with GAP Inc. for water stewardship **(Water Footprint)** d. Rainwater harvesting at different production units **(Water Footprint)**	a. Reduction in water intensity in VSF manufacturing process **(Water Footprint)** b. Reduce pollution load in effluent by 2022 **(Water Footprint)**
7	Affordable and Clean Energy	a. Energy efficiency initiatives including investments in newer and better capital goods **(Climate Change Risks)** b. Increased use of renewable energy (solar, wind and hybrid plants) **(Climate Change Risks)** c. Increased adoption of biomass to replace coal and fossil based fuel**(Climate Change Risks)**	a. 50% GHG intensity reduction by 2030 and Carbon Neutrality by 2040 in scope 1, 2 & 3 (identified scope 3) and sequestration in managed forests **(Climate Change Risks)**
8	Decent Work and Economic Growth	a. Respect and promote safe workplaces to consistently reduce injuries and incidents **(Occupational Health & Safety)** b. Uphold labour rights **(Gender Equality & Reduce Inequality)** c. Gender equality in terms of pay/wages for men and women **(Gender Equality & Reduce Inequality)** d. Being equal opportunity employer by eliminating biases of gender, race, disabilities, etc. **(Gender Equality & Reduce Inequality)**	a. Assess the sustainability performance of key suppliers **(Sustainable Supply Chain)** b. Reduce Lost Time Injury Frequency Rate (LTIFR) **(Occupational Health & Safety)**
9	Industry, Innovation and Infrastructure	a. Retrofit existing machinery and modify operations to have incremental savings / reduction in CO per meter of fabric or 2 per garment **(Sustainable Products & Circular Economy)**	a. Adaption of EU Best Available Technology for Viscose Staple Fibre manufacturing **(Closed-loop Manufacturing)** b. Growth of eco-enhanced products **(Sustainable Products & Circular Economy)**
10	Reduce Inequalities	a. Extensive work to increase/boost income of small and marginalised farmers to bring them to mainstream **(Gender Equality & Reduce Inequality)**	a. Women Empowerment **(Gender Equality & Reduce Inequality)**
11	Sustainable Cities and Communities	a. Reviving the Indigo history through an ambitious project that is forward looking for exploring continued and new ways of uses of Indigo as well as appreciating the invigorating past of Indigo through the Indigo Museum **(Social Compliance)** b. Digital repository of ancient paper and palm leaf manuscripts – 33 lakh manuscripts digitised till now **(Social Compliance)**	

12	Responsible Consumption and Production	a. Reduce virgin materials and increase recycled materials to positively impact material footprints **(Closed-loop Manufacturing)** b. Aspirational level etiquettes for chemical use and management, waste handling and waste disposal and continually strive to reduce absolute and normalised quantities of chemicals consumed and waste generated. **(Waste Management)** c. Completed a decade of sustainability reporting and released maiden Integrated Annual Report for 2021-22 **(Regulatory Compliance)** d. Significant strides in incorporating renewable energy sources in the total energy mix **(Climate Change Risks)** e. Tribal home stay project helping tribal communities with alternate source of income and promoting tourism at a major tourist destination in the state of Gujarat, India **(Community Engagement)**	a. Adaption of EU Best Available Technology for Viscose Staple Fibre manufacturing **(Closed-loop Manufacturing)** b. Reduction in waste to landfill and incineration **(Waste Management**
13	Climate Action	a. GHG accounting for Scope 1, 2 and 3 **(Climate Change Risks)** b. Third party assurance for GHG inventory and slew of measures to reduce GHG emissions as Arvind has signed the commitment letter for Science Based Target Initiative (SBTi) **(Climate Change Risks)**	a. 50% GHG intensity reduction by 2030 and Carbon Neutrality by 2040 in scope 1, 2 & 3 (identified scope 3) and sequestration in managed forests **(Climate Change Risks)**
14	Life below Water		a. Scaling of circular products utilising textile waste **(Sustainable Products & Circular Economy)**
15	Life on Land		a. Percentage of sustainably sourced wood **(Responsible Wood Sourcing)** b. Conservation/protection of Ancient & Endangered forests **(Biodiversity)** c. Scaling of circular products utilising textile waste **(Sustainable Products & Circular Economy)**
16	Peace, Justice and Strong Institutions	a. Operations completely free from child, bonded or trafficked labour. This includes upstream and downstream supply chain **(Regulatory Compliance)** b. Efficient implementation of POSH Act and effective grievance redressal systems to ensure harassment and abuse-free workplaces **(Regulatory Compliance)** c. Strict corporate governance and code of conduct for ethical practices and behaviour integrated in all aspects of working for people at all levels in the organisation for dealings with all stakeholders **(Regulatory Compliance)**	
17	Partnership for the Goals		a. Major collaborative efforts across industry **(Valuable Partnerships)**

Source: AL Sustainability Report 2021-22, BC Sustainability Report 2021-22

Appendix III

Arvind Limited/Birla Cellulose CMIs & Stakeholders Mapping					
S No	**Topics**	**CMIs Arvind Limited/Birla Cellulose**	**Instruments**	**Actors**	**Stakeholders Arvind Limited/Birla Cellulose**
1	Human Rights (Compensations and Benefits, Social Equality, Bargaining Power, etc.)	Employees in the value chain/supply chain	Training–Education–Awareness raising	Retailers (=fashion brand = focal company)	Distributor
2	Resources and Energy Saving	Energy	Assessment–Monitoring–Audits	Direct Suppliers (tier 1)	Supplier
3	Circular Economy and Recycling	Resource inflow including resource use	Partnerships–Alliances–Multi-stakeholders' Initiatives–Platforms	Sub-suppliers (tier 2, and upstream)	
4	Health and Safety	People/own workforce	Projects–Special Plans	Workers	Employees/Workers
5	Chemicals	Chemical	Standards–Certificates–Internal Policies–Compliance	Non-Governmental Organisations (NGOs), Foundations, and Private Institutions	Local Community & NGOs
6	Transparency, Traceability		Funding–Philanthropy	Customer	Customers

7	Water Stewardship	Water	Sourcing Strategy and Purchasing Practices	Raw Material Suppliers	
8	Raw Materials	Fiber	Awards–Rewards–Grants	Other Supply Chain (SC) Partners	
9	Renewable energy	Climate change impact	Innovation and Technology	Education Institutions, Universities	
10	Empowerment, Capacity Building	Research & development	Research	Certification Companies	
11	Emergency Situations (Refugees and Others)	Communities	Committees–Forums–Consultations	Governments and Public Institutions	Government Bodies
12	Ethics	Communication & engagement	Dialogue–Stakeholders and Customers	Technological and Innovation Partners	
13	Animal Welfare	Policies standard and code of conduct	Sustainability-Oriented Investments (New Energy, New Processes, Improved Facilities, Appliances, etc.)	Social Partners and Unions	
14	Consumer Service	Customer satisfaction	Labels–Collections	Broad Stakeholders and Citizens (Activists)	Media
15	IT			Logistics Partners	
16	Responsible Consumption–Use–End of Life	Product lifecycle impact		Traders, Agents	
17	Ecoagriculture				Investors
18	Forest Management				
19		Waste			
20		Onsite air emission			
21		Product safety			
	18	**17**	**14**	**16**	**8**

Source: Adapted and modified from Garcia et al. (2017) based on AL Sustainability Report 2021-22, BC Sustainability Report 2021-22