

**"Environmental Disclosure Practices in India: A Content
Analysis of NIFTY 50 Companies
Using GRI Standards."**

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Abstract:

In the world of corporate sustainability Environmental disclosure has become an essential aspect, which paves companies' road toward stakeholder communications as they report their environmental performance and risks or introduce initiatives. In India, rising awareness about corporate environmental responsibility has made it necessary for businesses to apply international reporting frameworks such as the Global Reporting Initiative (GRI) standards. This study examines the environmental disclosure practices of NIFTY 50 companies through a content analysis of sustainability reports for the year 2023-24, assessing to what extent and quality their public commitment is built into each sector or industry. It also identifies varying patterns among different industries in its documentation practices.

To this end, this study will provide policy-makers, investors and corporate decision-makers with insights into how environmental disclosure in India--as one aspect of standardized transparency essential for sustainable business practice--ought to be improved.

Introduction:

Entering the 21st century, environmental corporate responsibility has become an important facet of business sustainability (a method to efficiently manage resources), due to increasingly serious international worries about global warming, depletion of resources and the environmental erosion which we and future generations must deal with. Environmental disclosure is key to corporate sustainability. Companies disclose their impacts and intentions to stakeholders openly, transparently. Among the various frameworks for sustainability reporting, the Global Reporting Initiative (GRI) standards are perhaps the most popular. The standards provide a comprehensive reference source for companies to monitor their environmental, social as well as governance (ESG) performance and are used in more than many countries. When companies observe these standards they can upgrade the comparability, transparency and accountability of their disclosures on sustainability matters.

An outline of the Business Responsibility and Sustainability Reporting (BRSR) framework was issued by SEBI. It encouraged companies to file financial statements under this format. Since many of India's large companies are publicly traded, founder of the Institute on Women and Technology Ritu Kapur says it is also likely that their largest shareholders will be international investors or foreign-based funds. But one recent investment by one Hongkong company in Indian high speed broadband showed this may not always be the case. Although such initiatives have been taken, the actual amount of data companies are required to hand over still fluctuates heavily depending on industry or company. This differential comes at a growing cost as it generates many questions about whether some industry or company is engaged in

greenwashing. There is a need now to standardise and find out whether voluntary disclosure frameworks work.

In this study, we examined the environmental disclosure practices of NIFTY 50 companies. The companies on this list are India's largest and most influential publicly held firms. With content analysis methods, we explore the extent, quality and sectoral differences in environmental triggers GRI standards through this study. Through such research, the aim is to illustrate what Indian companies are reporting about enhancements and thus provide inspiration for better next steps towards sustainable corporate development across sectors such as construction or manufacturing industries. It is desirable that some of this information may be quantified in a future project-otherwise stated, when individual companies start publishing their sustainability reports. We will find out how far India's own dates back, how much it reflects the disclosure approach of global conventions, and what impact current practices have had on corporate social responsibility.

Literature Review :-

Kachhiya, M. R., & Rana, R. D. (2023) study will focus on energy enterprises conducting sustainability reporting in accordance with the Global Reporting Initiative standards for five years (2016-17 to 2020-21). Using secondary data such as disclosure collected from sustainability and annual reports, as well as other materials such as academic papers and company websites, we apply content analysis to test a wide range. A disclosure index in accordance with GRI rules is compiled to measure adherence with statistics for environmental projects and their distribution. The guiding idea for looking into the sustainability reporting activities of a company is as follows: scoring mechanism is established for assessing the disclosed items: - Reported: 1 point - Not Reported: 0 points - Not Material: 0 points - Not Applicable: Excluded from scoring.

PwC India. (2023) : The SEBI has been very supportive of sustainability reporting. Through initiatives such as the Business Responsibility and Sustainability Reporting (BRSR) framework, it has had a important impact on corporate environmental and social responsibility- such that now every company in India must include ESG data called for by this framework.

Sharma, N. (2023) : Introducing GRI criteria was a major step forward, but achieving consistency, accuracy, reliability, balance and depth in environmental reporting was proven by numerous – indeed, many – hard-hitting studies. Scholars pointed out problems like greenwashing and called pointedly for longer descriptions of a single environmental topic. For example, research indicates that while companies make general claims about their

environmental policies, such reports often lack detailed environmental impact assessment or corrective measures.

Kriplani, P., & Bhanawat, S. S. (2021) : Two studies of Indian companies found that, in reporting environmental information there is considerable variation in both extent and quality. In order to take a company-by--consider sample study fraternity, focusing on the leading fifty companies (predominantly stock-exchange listed) thus far has drawn attention not only it's lack of consistency and content but also places greatest emphasis for example upon energy information whilst providing relatively few materials relating to how companies can resolve claims about their environmental responsibilities.

Global Reporting Initiative (2019): The GRI Standards offer a complete framework for sustainability reporting which empowers organizations to report on their environmental, social, and governance (ESG) performance. A survey on the latest trends in sustainability reporting in South Asia found that of companies in Nifty Fifty 92% used GRI Standards, reflecting very high level acceptance even with among India top names.

Mandviwala, F. R., & Oza, H. S. (2019) The researchers focus on the environmental disclosure practices among select Indian companies, analyzing a sample of 50 companies across 18 different sub-sectors. This study aims to find out differences in the levels of environmental disclosure. Literary support is provided traditionally from Legitimacy Theory and Stakeholder Theory. Draw on content analysis and the Environmental Disclosure Index (EDI), the research investigates factors influencing disclosure. They include industry type, firm size, foreign ownership, profitability, government ownership, and financial leverage. One of the study's major findings was that industry type significantly impacts environmental disclosure. Government ownership plays a key role in influencing levels of disclosure in India.

Objective :-

- (1) **To assess the extent of environmental disclosures** made by NIFTY 50 companies in their sustainability reports.
- (2) **To study comparative analysis of industry.**

RESEARCH METHODOLOGY:-

SAMPLE SIZE :- The sample size for the research includes fifty companies from the various sector.

DATA COLLECTION :-

For this research work secondary data will be collected by using sustainability report and annual report of the companies.

DURATION OF STUDY :-

five years from 2023-2024 taken for the study.

TOOLS FOR ANALYSIS :-

For achieving the above objective Descriptive Analysis, Comparative Analysis, Co-relation Analysis, average used.

RESEARCH METHODOLOGY :-

Content analysis is used for the study. The different aspects are taken as per the GRI Guidelines. Checklist and environment disclosure score has been prepared for analysis the data. There are Nifty – 50 Companies but in 2023-24 only 38 company disclosed GRI Standard.

$$\text{GRI INDEX} = \frac{\text{Total Point Obtained}}{\text{Total Point}} \times 100$$

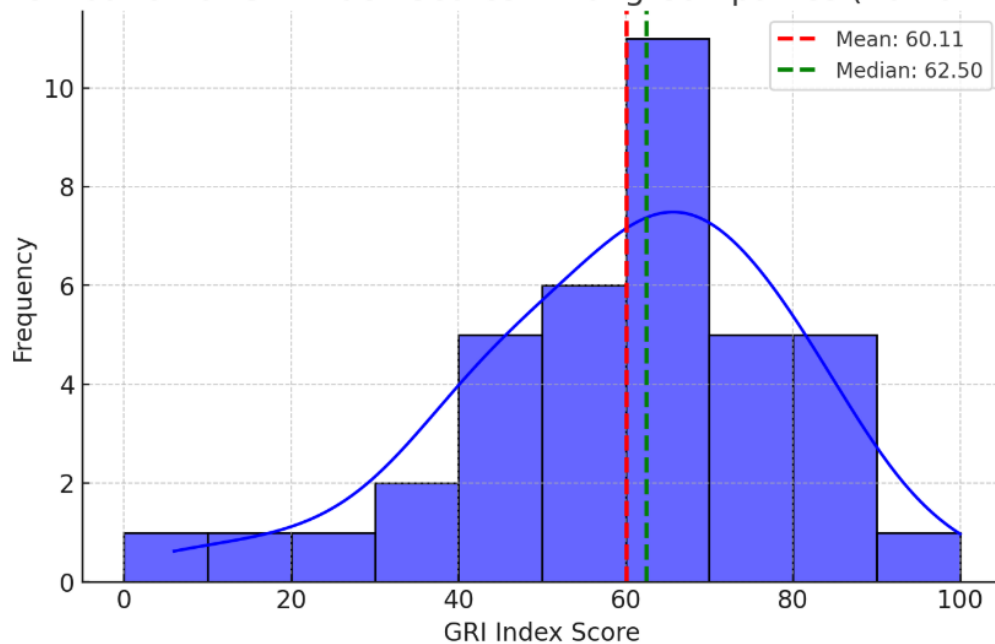
Nature	Score
Reported	1
Not Reported	0
Not Applicable	Excluded

Sr. No.	Company Name	GRI 301	GRI 302	GRI 303	GRI 304	GRI 305	GRI 306	GRI 306	GRI 308	GRI INDEX
1	Adani Enterprises Ltd.	0	5	5	0	7	1	5	2	69
2	Adani Ports and Special Economic Zone Ltd.		5	5	4	7	0	5	2	85
3	Apollo Hospitals Enterprise Ltd.	0	4	5	0	6	0	5	1	58
4	Asian Paints Ltd.	2	3	5	2	7	0	5	2	72
5	Axis Bank Ltd.	0	3	2	0	5	0	3	0	36
6	Bharti Airtel Ltd.	1	5	5	0	6	0	5	2	67

7	Britannia Industries Ltd.	0	5	5		7	0	5	0	61
8	Cipla Ltd.	0	4	5	1	7	0	5	0	61
9	Dr. Reddy's Laboratories Ltd.	2	3	5	1	6	0	5	1	64
10	Eicher Motors Ltd.	2	4	5	0	5	0	5	2	64
11	Grasim Industries Ltd.	0	2	4	1	6	0	3	1	47
12	HCL Technologies Ltd.	3	3	4	4	6	0	5	2	75
13	HDFC Bank Ltd.	0	4	0	0	5	0	3	2	39
14	HDFC Life Insurance Company Ltd.	0	0	0	0	7	0	0	0	19
15	Hero MotoCorp Ltd.	3	3	5	0	7	0	5	2	69
16	Hindalco Industries Ltd.	0	4	5	0	6	0	4	0	54
17	Hindustan Unilever Ltd.	3	3	5	1	5	5	0	2	67
18	ICICI Bank Ltd.	3	4	5	0	5	0	5	2	67
19	ITC Ltd.	3	5	5	0	7	1	5	2	78
20	IndusInd Bank Ltd.	0	1	0	0	1	0	0	0	6
21	JSW Steel Ltd.	3	5	5	4	6	4	5	2	100
22	Kotak Mahindra Bank Ltd.	0	3	3	0	4	0	5	0	42
23	Mahindra & Mahindra Ltd.	1	4	5		7	0	5	2	83
24	Maruti Suzuki India Ltd.	1	3	3	0	5	0	3	0	42
25	NTPC Ltd.	2	3	5	3	7	0	3	2	69
26	Oil & Natural Gas Corporation Ltd.	1	4	3	3	4	0	3	0	50
27	Power Grid Corporation of India Ltd.	2	5	5	4	6	5	0	1	78
28	Reliance Industries Ltd.	0	2	3	0	3	0	2	0	28
29	SBI Life Insurance Company Ltd.	0	2	5	0	4	0	5	0	44
30	Shriram Finance Ltd.	0	4	3	0	5	0	4	0	44
31	State Bank of India	1	4	3	4	5	0	5	1	82
32	Sun Pharmaceutical Industries Ltd.	0	3	5	0	6	0	5	0	53
33	Tata Consultancy Services Ltd.	0	2	5	3	5	0	4	2	58
34	Tata Consumer Products Ltd.	1	3	4	1	6	0	3	1	53
35	Tata Motors Ltd.	3	3	4	3	7	0	5	1	72
36	Tech Mahindra Ltd.		5	5	4	6	0	5	2	84
37	UltraTech Cement Ltd.	2	4	3	2	6	0	4	1	61
38	Wipro Ltd.		5	5		7	0	5	2	83

Descriptive Analysis (Company Wise) :-

Distribution of GRI Index Scores Among Companies (10-Point Bins)



Descriptive Analysis of GRI Index Scores

Summary Statistics:

Statistic	Value
Count	38
Mean (Average)	60.11
Standard Deviation	19.55
Minimum Score	6.00
25th Percentile (Q1)	47.75
Median (Q2)	62.50
75th Percentile (Q3)	72.00
Maximum Score	100.00

Key Observations:

1. The average GRI Index of companies is 60.11, median of 62.50, show that most companies have a medium level of sustainability disclosure.
2. The lowest GRI Index is 6 (IndusInd Bank), on other hand highest is 100 (JSW Steel), significant variability in reporting standards.

3. **25% of companies have a GRI Index below 47.75**, show that some firms need to improve their environmental disclosures.
4. **The standard deviation of 19.55** indicates considerable variation in reporting practices.

Comparative Analysis (Industry Wise) :-

Sr. No.	Company Name	GRI Index	Industry	Rank
1	Adani Enterprises Ltd.	69	Metals & Mining	2
2	Adani Ports and Special Economic Zone Ltd.	85	Services	1
3	Apollo Hospitals Enterprise Ltd.	58	Healthcare	3
4	Asian Paints Ltd.	72	Consumer Durables	1
5	Axis Bank Ltd.	36	Financial Services	7
6	Bharti Airtel Ltd.	67	Telecommunication	1
7	Britannia Industries Ltd.	61	Fast Moving Consumer Goods	3
8	Cipla Ltd.	61	Healthcare	2
9	Dr. Reddy's Laboratories Ltd.	64	Healthcare	1
10	Eicher Motors Ltd.	64	Automobile and Auto Components	4
11	Grasim Industries Ltd.	47	Construction Materials	2
12	HCL Technologies Ltd.	75	Information Technology	3
13	HDFC Bank Ltd.	39	Financial Services	6
14	HDFC Life Insurance Company Ltd.	19	Financial Services	8
15	Hero MotoCorp Ltd.	69	Automobile and Auto Components	3
16	Hindalco Industries Ltd.	54	Metals & Mining	3
17	Hindustan Unilever Ltd.	67	Fast Moving Consumer Goods	2
18	ICICI Bank Ltd.	67	Financial Services	2
19	ITC Ltd.	78	Fast Moving Consumer Goods	1
20	IndusInd Bank Ltd.	6	Financial Services	9
21	JSW Steel Ltd.	100	Metals & Mining	1
22	Kotak Mahindra Bank Ltd.	42	Financial Services	5
23	Mahindra & Mahindra Ltd.	83	Automobile and Auto Components	1
24	Maruti Suzuki India Ltd.	42	Automobile and Auto Components	5
25	NTPC Ltd.	69	Power	2

Sr. No.	Company Name	GRI Index	Industry	Rank
26	Oil & Natural Gas Corporation Ltd. (ONGC)	50	Oil Gas & Consumable Fuels	1
27	Power Grid Corporation of India Ltd.	78	Power	1
28	Reliance Industries Ltd.	28	Oil Gas & Consumable Fuels	2
29	SBI Life Insurance Company Ltd.	44	Financial Services	3
30	Shriram Finance Ltd.	44	Financial Services	3
31	State Bank of India	82	Financial Services	1
32	Sun Pharmaceutical Industries Ltd.	53	Healthcare	4
33	Tata Consultancy Services Ltd. (TCS)	58	Information Technology	4
34	Tata Consumer Products Ltd.	53	Fast Moving Consumer Goods	4
35	Tata Motors Ltd.	72	Automobile and Auto Components	2
36	Tech Mahindra Ltd.	84	Information Technology	1
37	UltraTech Cement Ltd.	61	Construction Materials	1
38	Wipro Ltd.	83	Information Technology	2

For each industry, companies are ranked based on their GRI Index scores in descending order.

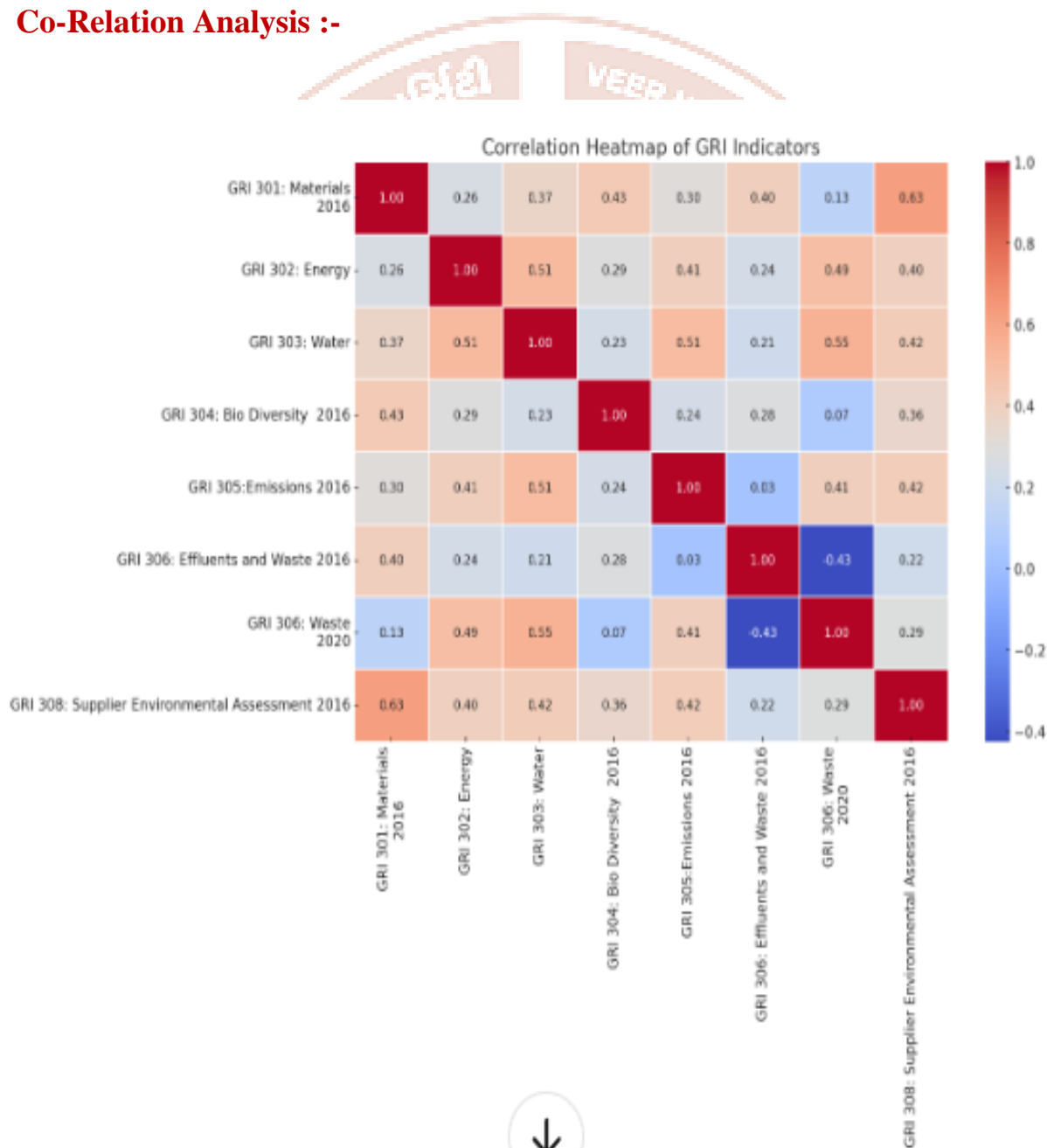
Industry	No. of Companies	Min	Max	Average GRI Index
Services	1	85	85	85.00
Information Technology	4	58	84	75.00
Power	2	69	78	73.50
Consumer Durables	1	72	72	72.00
Automobile and Auto Components	5	42	83	66.00
Fast Moving Consumer Goods	4	53	78	64.75
Telecommunication	1	67	67	67.00
Metals & Mining	3	54	100	74.33
Healthcare	4	53	64	59.00
Construction Materials	2	47	61	54.00
Oil Gas & Consumable Fuels	2	28	50	39.00
Financial Services	9	6	82	42.11

Observations:

1. **Services (1 company)** leads with a perfect average of **85** (Adani Ports), but that's just one data point.

2. **Metals & Mining (3 companies)** has a strong average (74.33), driven up by JSW Steel's top score of **100**.
3. **Information Technology (4 companies)** also shows strong performance, averaging **75** (top scorers include Tech Mahindra at **84** and Wipro at **83**).
4. **Financial Services (9 companies)** is the largest group but has a **relatively low average** (42.11). IndusInd Bank is the lowest overall at **6**, while SBI is much higher at **82**.
5. **Oil Gas & Consumable Fuels (2 companies)** has the lowest average (39), with Reliance Industries at **28** and ONGC at **50**.

Co-Relation Analysis :-



Interpretation of the Correlation Heatmap

1. **Red (Closer to 1.0)** → Strong positive correlation (as one factor increases, the other also increases).
2. **Blue (Closer to -1.0)** → Strong negative correlation (as one factor increases, the other decreases).
3. **White (~0.0)** → No significant relationship.

Key Observations:

- **GRI 301 (Materials) & GRI 308 (Supplier Environmental Assessment) → Strong Positive Correlation**
→ Companies that focus on materials also focus on supplier assessments.
- **GRI 302 (Energy) & GRI 303 (Water) → Moderate Positive Correlation**
→ Firms investing in energy efficiency also focus on water conservation.
- **GRI 306 (Effluents and Waste 2016) & GRI 306 (Waste 2020) → Negative Correlation**
→ Waste management strategies have changed over time.

Conclusion :-

1. Descriptive Analysis Conclusion

- The average GRI Index score across NIFTY 50 companies is **60.11**, indicating a moderate level of environmental disclosure.
- The **highest** scoring company, **JSW Steel (100)**, sets a benchmark, while **IndusInd Bank (6)** represents the lower end of reporting standards.
- A **wide variation in disclosure practices** exists, as seen in the standard deviation of **19.55**, highlighting the inconsistency in sustainability reporting among companies.
- While many companies fall in the mid-range, a few outliers demonstrate exceptional or poor environmental reporting performance.

2. Comparative Analysis Conclusion

- Industry-wise, in a **services sector (85)**, while in a **metals & mining sector (74.33)**, and **information technology (75)** lead in sustainability reporting, **oil & gas sector (39)** and **financial services (42.11)** lag behind.
- The **financial sector**, highly regulated though it shows **low and inconsistent** disclosure, some banks ranking high (SBI: 82) on other hand rank extremely low (IndusInd Bank: 6).

- Companies in industries like **automobile (66)** and **fast-moving consumer goods (64.75)** demonstrate **moderate commitment** to environmental disclosure.
- The ranking system shows that **larger, publicly visible companies** tend to report better, possibly due to investor pressure and regulatory expectations.

3. Correlation Analysis Conclusion

- When companies prioritize sustainable materials, they also scrutinize their suppliers more carefully: a solid correlation of 0.62 between GRI 301 (Materials) & GRI 308 (Supplier Environmental Assessment) demonstrates such a pattern.
- The correlation is moderate (0.51) between GRI 302 (Energy) & GRI 303 (Water), showing that companies which aim for energy efficiency also tend to engage in water conservation.
- Conversely a negative correlation (-0.42) between GRI 306 (Effluents & Waste 2016) & GRI 306 (Waste 2020) illustrates changes in waste management practices over time, possibly due to amendments to regulations or developing understanding of sustainability.
- This points to a general tendency for companies good at one aspect of sustainability to be good also at adjacent fields, illustrating the wisdom of an approach that pulls everything together into environmental responsibility.

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guidelines.

ForAppendix:-

https://drive.google.com/file/d/1owAbY_CjAVrlU0bSvgXkfqog16n1K2N7/view?usp=sharing

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