

# Environmental Disclosure Practices by Companies in India: A Study of Nifty Companies

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## Abstract

When the economy of a nation grows it is accompanied by the concern for environment. It is due to various reasons viz sinking resources, energy availability, climate change and excessive waste. Environment protection has always got a widespread and grudging acceptance. Widespread because everyone wants a cleaner planet and grudging because the common view is that working for environment is not economically beneficial (Porter and Linde, 1995). Environmentalists argue that companies should take actions to preserve and protect environment whereas economists say ecology and economy cannot go side by side. Thus the issue of link between environmental performance and financial results has always been a matter of debate (Susi, 2005). Generally, managers feel that complying with environmental regulation is costly and thus might hurt a firm's bottom line. On the other hand, a firm that is efficient at pollution control might also be efficient at production. Moreover, a firm that does well financially can afford to spend more of its resources on cleaner technologies (Cohen and Fenn, 1997). It is no longer acceptable for a corporation to experience economic prosperity in isolation from those agents impacted by its actions. A firm must now focus its attention on both increasing its bottom line and being a good corporate citizen. When it comes to India and corporate sector here, the variables that will decide the environmental concern will be the regulatory environment, fines and penalties imposed for non compliance, environmental behavior of big business houses, as they are followed by others, availability of natural resources, avenues for waste management, use of by-products etc. Moreover as India is a developing nation, therefore the general view is that majority of companies might be focusing on earning profits with a minimal concern for environment; therefore a need is felt to see the direction of association between financial performance and environmental performance. It will try to clear the confusion about the issue in Indian context that whether only big businesses go for greener performance or they are big because they are green This paper provides an insight into the scenario of green initiatives in Indian context. It also discusses how they report such issues- whether in annual report or on their website or through some other measures. Another objective was to check whether these initiatives are industry specific or not. The sample consisted of Nifty companies and research methodology used Content Analysis. Preservation of world's natural resources is the responsibility of every individual both at work and at home. It helps in gaining a competitive advantage for companies by differentiating themselves as a Greenfield company. Moreover it helps in improving efficiency and potentially lowering operating costs. It also provides a cleaner and healthier work environment. Therefore going green is the new trend in modern business. Companies operating in India are also serious about this issue and are reporting their green practices. They make it a point that their processes if could not contribute anything to the environment, it should not even harm it.

**Keywords:** Environment, Environmental Reporting, Green Initiatives, Nifty Companies.

## Introduction

When a business starts its operations it has basically three major pillars against which it measures its performance. While talking about economic barometers, profitability is key element and other two aspects are environment issues and corporate social responsibility. Thus a company which is earning profits is successful but a company which is doing so without even having any negative impact on others is sustainable. Sustainability refers to an organization's activities, typically considered voluntary, that demonstrate the inclusion of social and environmental concerns in business operations and in interactions with stakeholders (Van Marrewijk & Verre, 2003). Thus when companies talk about sustainable development, it refers to the development of an organization without at the cost of any factor or party associated with it directly or indirectly. Accordingly to be sustainable is better and important than only being successful. Therefore sustainability is the need of the hour. In sustainable development the concern for environment is principal matter. A business takes its resources from environment and also earns from it, so it becomes the responsibility of the business to pay back environment in some way. And if it could not pay back, at least it should conduct its operations in such a way that it should harm the environment in minimum possible way. Worldwide consumption and degradation of natural resources and the environment has continued to grow with the passage of time (Bernauer et al., 2006). To be brief, the operations of the business should be environment friendly. When we talk about being environment friendly, the synonym which can be used for it is "Green". Thus when word green is used, it describes environmental sustainability.

A good number of businesses claim themselves as green now-a-days which means they are projecting that their operations are not upsetting the environment or they are doing something good for the environment. The scenario is due to the fact that the concern for environment has increased significantly with increased global warming. So the businesses who are mirror image of the nation are supposed to pay attention in this regard. Besides this the pressure of regulatory authorities and environment protection agencies is also one of the factors that business concerns are under obligation to keep an eye on their operations and related environmental issues. Consequently they have to perform their operations in such a way that it could be called as green and if they are not doing so at least they should think of doing it in near future.

To carry on initiatives which can be categorized as green is one aspect and to report them is another. Therefore the concentration of companies apart from carrying on such operations should also be on reporting them on adequate platform. The rule, stakeholders should know what their company is doing, is applicable on green initiatives as well. Thus to report green initiatives is of utmost importance because it not only improves the image of the business but it also helps a business to attract more shareholders, customers. Thus going green is an advantage for a company in all way, it reduces cost, it improves performance, it fulfills environment responsibility and it also attracts more stakeholders. Thus going green and reporting green is the trend and also the need now-a-days. In the present market system there is a huge list of possible initiatives that could be regarded as green but the time and resources are limited. Information is one among them. Thus sharing of material information is very vital.

## Review of Literature

A brief review of some of studies conducted on environmental performance and reporting are given in this section.

Al-Tuwaijri (2003) analyzed the relationship between environmental disclosure, environmental performance, and economic performance. The study was conducted on the data of year 1994 for the sample of those companies which are listed in the IRR's 1994 Environmental Profiles Directory, generate at least one pound of toxic waste per \$10,000 of revenue (in order to ensure some minimum level of environmental exposure); have complete financial data reported in Compustat; have its annual reports accessible using the LexisNexis database; and appear in the Wall Street Journal Index. Cross sectional research design was used to explore the joint relationship between the above mentioned three variables. Descriptive statistics showed that sample firms recycle most of the waste they generated. Correlation between the environmental disclosure, environmental performance, and economic performance was found positive but the strength growth of such a relationship was very weak. Regression analysis was conducted with three models. In first model economic performance was taken as dependant variable and was measured against environmental performance, unexpected earnings, predislosure requirements, growth opportunities, profit margin and environmental expenditure. In the second model environmental performance was taken as dependant variable and was measured against economic performance, predislosure requirements, growth opportunities, environmental expenditure, environmental concern and public visibility. The third model took environmental disclosure as dependent measures and independent variables were environmental performance, environmental expenditure, environmental concern and firm size. The results stated that determinants of economic performance, suggest a positive relation between economic performance and environmental performance thereby stating that good environmental performance is rewarded in the market. But the results for second model suggested that economic performance is not a significant determinant of environmental performance. The third model provided significant and positive relationship between environmental performance and environmental disclosure. To summarize their results they stated that good environmental performance and financial performance are both related to quality of management. Good managers, acting in the firm's long-term interest, accept the firm's social responsibility and adopt pro-active strategies for controlling environmental pollution.

Clark et al. (2011) analyzed that if a company innovates in terms of green technology then whether it results in competitive advantage or not. The study was conducted on US firms with the data from Information Week (IW) 500 annual survey reports for the period 2001-2006. The research technique employed was "matched sample comparison group". Paired samples, a treatment and a control sample were used and paired sample t test and Wilcoxon test was applied. For treatment sample they selected those firms were identified as IT innovators for five or more years. From a total sample of 500 they were left with 197 firms. Then the sample was again filtered by removing private firms and firms with missing data reducing the number to 138. Then the environmental consciousness and ISO 14001 certification of these companies were reviewed using their websites. The firms which matched both

the criteria's were only 45. For control samples two categories were made. The first group controlled for industry benchmarks and other was for controlling green IT followers. The financial performance indicators used were Return on Assets, Return on Sales, and Operating Income to Total Assets, and Operating Income to Sales and Cost of Goods Sold to Sales. The results disclosed that green IT innovators have higher profit ratios and low cost ratios than all other firms in the industry. Moreover when green IT innovators and green IT followers were compared the former performed better in term of higher profit ratios and low cost ratios than the latter. Thus the results validate that going green does not increase the cost but help in gaining competitive advantage.

Rasi et al. (ND) studied the level of environmental management initiatives i.e. what initiatives are more taken more and which initiatives are taken less. This study explores Small and Medium Enterprises (SME) into the area of environmental initiatives because literature support that SME's contribute majorly to environment pollution and they have a significant share in the economy of any country. The study discussed the two main categories of environmental initiatives viz Reactive and Proactive. Proactive refers to adoption of cleaner technologies and control pollution where as Reactive involves prevention of pollution by end of pipe technologies. The initiatives were then classified into three key areas i.e. Internal Organization, Manufacturing, Design. These areas included green initiatives and were rated on a five point scale ranging from 1 to 5; where 1 implied no program and 5 implied a well established program. Questionnaires were filled by top managers of SME's through mails. The universe of the study consisted of 1051 companies and 192 completed questionnaires were used for the analysis. Mean scores and standard deviation of the green initiatives was calculated. The results showed that product and process based initiatives are moderately or lesser implemented where as design initiatives are least implemented. Recycling activities on the other hand are most implemented green initiatives. The authors suggested that if stakeholders support the SME's then they can carry on more initiatives for the environment.

Sahay (2004) examined the environmental reporting by top 250 Indian Companies ranked in terms of sales in Economic Times Survey (ET). The information was collected by means of a questionnaire that was based on that developed by Ghobadian et al. (1998) for the study of corporate environmental behavior of UK companies. The questionnaire was tested on sample companies and modified for the feedback. The data collected through questionnaires suggested that conservation of energy finds a place in the board of directors' report because of the provisions of Indian Company Law. Only few companies reported their social and environmental performance but sustainability reporting is scarce. Moreover it was seen that although some of the banking, telecom and IT sector units belong to the billion dollar club but none of them have reported their sustainability or environmental performance. The findings were reported sector wise categorizing into Automobiles, Chemical and Fertilizers, Mining and Metallurgy, Oil and Gas Sector, Power, Pharmaceutical and Pulp and Paper. None of these sectors performed outstandingly well but Chemical and Fertilizers and Oil and Gas Sector performed comparatively well. Sahay pointed out that Environmental reporting by Indian corporations lags significantly behind except for a few companies. Environmental reporting in India is still in its infancy and appears to be more of a PR work, devoid of strategic

intent. The reason for inadequate environmental disclosure is probably that less pressure is applied to Indian companies by stakeholders, environmental groups, the general public and importantly the government.

Bewley *et al.* (2008) investigated the environmental disclosure in annual reports of public companies in US operating in chemical industry. The study was undertaken to check whether disclosure is used by companies to distinguish themselves from other companies and whether these disclosure practices are related to environmental management or not. It was also to be checked that whether managers apply good quality or expertise in environmental management. The data was collected from annual reports covering the period 1991-1996 of sample of 11 chemical companies. Regression analysis was used with dependent variables financial and non financial aspects of environmental information, superfund related financial and non financial disclosure items, information about amounts and timings of future related environmental cash flows, information about uncertainties of future related environmental cash flows, future oriented financial information about environmental related cash flows and annual report space devoted to all environmental issues. Control variables used were size measured by log of Total Assets and Return of Assets as measured by the ratio of Net Income to Total Assets. Dummy variable for reporting of environment information prior to implementation of SAB92 and account maintenance relating to environment prior to SAB92. The results showed that managers use disclosure to distinguish their companies from other companies by revealing environmental liabilities that other companies did not disclose and also by disclosing future oriented financial information. The companies that were reporting of environment information prior to implementation of SAB92 were having higher level of pollutant emissions than the companies which were not doing so.

Sharma (2012) wrote a paper appraising Indian environmental accounting and reporting system. He reviewed the laws for environmental protection in India, need for environmental accounting and Indian scenario of environmental reporting and auditing. His major findings included that as a substitute of industrial licensing it is now environmental clearance that is important. Indian economy is facing a twin problem of economic development and protecting the environment. The benefits of undertaking environmental accounting are in terms of reduced environmental problems and cost savings etc. While studying the Indian scenario of environmental accounting and auditing he found out that international companies are reporting non financial information in India. So there is a pressure on Indian companies to report but then also they pay very little attention. He provided that Indian companies lag behind in environmental reporting due to absence of physical form of accounting system, no requirement by Companies Act, 1956 about reporting of environmental costs and liabilities and moreover if they provide information about environmental matters, they show only the positive side not about the harm they make to the environment. He suggested that government should make it compulsory for every polluter to submit environmental audit report certified by an environmental auditor.

Gupta (2012) analyzed Indian Corporate Sector with respect to environmental accounting and reporting by studying published



annual reports of top 50 Companies listed at NSE during 2007-2010. An index consisting of 23 items was prepared to study the type, length and location of disclosure in these reports. The data was analyzed using the descriptive statistics and it was found that most polluting industries disclose more than less polluting ones. There is an industry wise variation in extent of disclosure. Moreover companies having foreign association disclose more than the domestic companies. In addition to these, a positive association was found between size of companies, profits, debt to equity ratio and environmental performance to environmental reporting. In nutshell, he found very few companies in India are disclosing environmental issues in their Annual Reports voluntarily. The reason he provided behind such poor disclosure is lack of environmental legislations in India. He further suggested that accounting bodies should develop a separate conceptual framework for Environmental Accounting and Reporting.

Suryanarayana and Pentiyala (2010) carried out an empirical study on Environmental Management Practices in Indian Industrial Enterprises to test the hypothesis that it helps enterprises to achieve business success. The objectives of the study was to identify, analyze, and present the importance of environment in business, its role in decision making, and environmental performance of business processes. The data was collected during November and December, 2009 by interviewing Top level executives, environmental managers from a sample of 79 enterprises in Indian Processing Industry. The authors found out that Environmental Management (EM) is emerging as an important part of business strategy. The reason for taking up environmental related activities are performance in accordance to compliance, environment standards, pollution prevention, environmental improvement and goodwill. While business success was rated as weakly to moderately important by respondents, most managers were still not able to connect business goals and results with environmental prevention and improvement. But the respondents agreed to the increasing importance of design for environment and environmental dimension in almost all the decision processes.

### Rationale of the Study

This study comprises of fifty companies of National Stock Exchange. Since these companies have highest market capitalization in relation to total capitalization so they actually represent the economy as a whole. They are the ones who set the trends so if they are carrying on some initiatives and reporting it, it will be an example for others as well. Therefore analysis of NSE companies will set an example for other listed and unlisted companies. Moreover the green initiatives are important from environmental point of view so in times to come it will be very crucial for the companies to report such issues. Though green reporting is not compulsory yet but they will soon be made compulsory as the damage to environment is increasing day by day.

Previous studies conducted on environment in relation to business also prove its importance. Klassen and McLaughlin (1996) reported link between significant environmental events and market valuation. King and Lenox (2001) found positive correlation between environmental performance and financial performance. Karagozoglu and Lindell, (2002) revealed that Many CEO's perceive a link between financial performance and environmentally-friendly technological investments and

innovations their firms have made. Clarkson et al.' (2007) found that the companies which are carrying on environmental performance are the ones who are reporting them and creating an advantage for themselves. Jacobs et al., (2008) found that certain environmental information disclosed by a company lead to abnormal returns for the company. Munnich (2009) studied green advantage for consumer companies and revealed that in consumer products also a preference was given to green companies. Therefore environmental concerns are proved to be important for companies and every business should undertake and report them.

### Objectives of the study

The objectives of the study are twofold:

1. To analyze item-wise and company wise disclosure about the green initiatives.
2. Is green initiatives industry specific? It implies if a company belong to a particular industry then the reporting norms vary industry to industry or not.

### Database and Methodology

The universe of the study consisted of Nifty Companies i.e. the sample size was 50. The major source of data is websites of the companies because it is the medium where maximum information regarding a company is available. Since Annual Reports are significant mode of disclosure of information, so they are also important source of data. The study relates to 2011-12 and the Annual Reports of the companies are collected from their website.

"Content Analysis" which has been widely used in literature on disclosure has been used in this study. It is a research technique which converts qualitative data in quantitative information for making logical conclusions. In this study, websites of companies and Annual Report are the main content which has been analyzed and extent of disclosure of green initiatives has been measured through unweighted index of disclosure of green initiatives.

Index of disclosure about green initiatives was constructed on basis of review of literature, scanning of Annual Reports and websites of companies. Unweighted scoring has been done i.e. score '1' was assigned if a particular green initiative is disclosed by a company and '0' if not disclosed. Unweighted scoring method provides equal importance to each green initiative. The item-wise disclosure has been calculated by divided the number of companies carrying a particular green initiative with the total number of companies included in the sample. The company wise score has been calculated by dividing the total score obtained by the company with the total number of green initiatives i.e. 40.

### Results and Discussion

The disclosure practices of companies regarding green initiatives have been analyzed on the basis of item-wise disclosure and bank-wise disclosure.

#### A. Item-Wise Disclosure

The index of green initiatives contained 40 items. In order to find out the extent of disclosure, the item-wise disclosure has been calculated. It has been calculated by divided the number of companies carrying a particular green initiative with the total number of companies included in the sample. It was found that among the initiatives listed all the companies send their reports



online. It is also due to the fact that it has been made compulsory by Government of India. Among the others it was Waste Management, Conserving Energy, use of Renewable Energy and Water Management which was reported by 76%, 72%, 70%, 70% companies respectively. 68% of the companies recycle their waste while 62% companies focus on reducing their Carbon Footprints. 60% of the companies from our sample reduce carbon emissions and plant trees. The percentage of companies using environmental

friendly technologies is 44%. Some green initiatives which can be very crucial to save the environment such as reduction in travel, use of smart technologies and use of energy efficient technologies are not being reported by any of the single company included in our sample. They are important thus companies should take note of them even. All the items included in the index of green initiatives are shown along with the mean score in the following table.

**Table: 1 Item-wise Disclosure by Companies**

<b>Initiative</b>	<b>Score</b>
1. Sending Annual Reports Online	100
2. Waste Management	76
3. Conserving Energy	72
4. Renewable Energy	70
5. Water Management	70
6. Recycling Waste	68
7. Reducing Carbon Footprint	62
8. Reducing Carbon Emissions	60
9. Planting Trees	60
10. Envvt. Friendly Technologies	44
11. Social And Farm Forestry Initiatives	40
12. Use Of Organic Products	34
13. Use Of Bio Fuels	32
14. Reducing Paper Consumption And Wastage	30
15. Using Vehicles That Features Clean Air Technology	28
16. Green Technology Suite	22
17. Eco Sensitivity	22
18. Recycle And Reduce Consumption Of Materials	22
19. Submitting Annual Sustainability Reports	22
20. Partnering With NGO'S	18
21. Material Sourcing	14
22. Purchasing Locally Preferred Goods	12
23. Sustainable Sourcing	12
24. Web Conferencing And Meeting	12
25. Establishing Wind Mills	10
26. Green Themed Events	10
27. Green Packaging Or Less Packaging	4
28. E Training And E Learning	4
29. Supporting And Following Earth Hour	4
30. Green Marketing	2
31. Reduction In Office Space	2
32. Flexible Work Timing	2
33. Reduction In Travel	0
34. Voice Over IP	0
35. Wi-Fi At Coffee Shops	0
36. Smart Phone Technology	0
37. Air Travel Reduction	0
38. E Signatures	0
39. Sending E Calendars And Dateless Diaries To Clients	0
40. Choosing Energy Efficient Technologies	0

## B. Company-wise Disclosure

The disclosure for each company has been presented in following Table: 2. it is evident from the table that Wipro reports 67.5% of the initiatives while Infosys Ltd. which reports 62.5% of the

initiatives. ACC Ltd, Mahindra & Mahindra Ltd, Reliance Infrastructure Ltd, Reliance Power Ltd, Tata Consultancy Services Ltd., Tata Motors Ltd, Tata Steel Ltd report 40% of the initiatives. They are followed by Bharti Airtel Ltd, Dlf Ltd. and Tata Power Co. Ltd which report 37.5% of the initiatives.

**Table: 2 Company-wise Disclosures**

Company Name	Score
1. Wipro Ltd	67.5
2. Infosys Ltd	62.5
3. ACC Ltd	40
4. Mahindra & Mahindra Ltd	40
5. Reliance Infrastructure Ltd	40
6. Reliance Power Ltd	40
7. Tata Consultancy Services Ltd.	40
8. Tata Motors Ltd	40
9. Tata Steel Ltd	40
10. Bharti Airtel Ltd	37.5
11. DLF Ltd.	37.5
12. Tata Power Co. Ltd	37.5
13. Bharat Petroleum Corporation Ltd	35
14. Hero Motocorp Ltd	35
15. Jindal Steel & Power Ltd	35
16. Reliance Industries Ltd	35
17. Cairn India Ltd	32.5
18. ITC Ltd	32.5
19. Maruti Suzuki India Ltd	32.5
20. Bharat Heavy Electricals Ltd	30
21. Dr. Reddy's Laboratories Ltd	30
22. Hindalco Industries Ltd	30
23. ICICI Bank Ltd	30
24. Oil & Natural Gas Corporation Ltd	30
25. Steel Authority Of India Ltd	30
26. Bajaj Auto Ltd	27.5
27. Coal India Ltd	27.5
28. Infrastructure Development Finance Co. Ltd	27.5
29. NTPC Ltd	27.5
30. State Bank Of India	27.5
31. Hindustan Unilever Ltd.	25
32. Larsen & Toubro Ltd	25
33. Sesa Goa Ltd	25
34. Siemens Ltd.	25
35. HCL Technologies Ltd	22.5
36. Jaiprakash Associates Ltd	22.5
37. Sun Pharmaceutical Industries Ltd	22.5
38. Grasim Industries Ltd	20
39. Ranbaxy Laboratories Ltd	20
40. Reliance Communications Ltd	20
41. Cipla Ltd.	17.5
42. HDFC Bank Ltd	17.5
43. Ambuja Cements Ltd	15
44. Power Grid Corporation Of India Ltd	12.5
45. Axis Bank Ltd.	7.5
46. Gail (India) Ltd	7.5
47. Kotak Mahindra Bank Ltd	5

48. Housing Development Finance Corporation Ltd	2.5
49. Punjab National Bank	2.5
50. Sterlite Industries (India) Ltd	2.5

### C. Industry wise Disclosure

Industry-wise Disclosure was seen to find out that whether green initiatives are industry specific or not. It was found out that it is the Software industry which is more concerned about the environment. Its mean score of reporting and carrying out green initiatives was 48.125%. Automobile industry, Refineries, Steel and Steel Product industry reported 35% of the initiatives included in the checklist. Power sector and Oil Exploration/ Production sector reported about 31% of the initiatives. It was followed by

Construction industry which reported 30% of the green initiatives. Telecommunication industry reported 28.75% while Electrical Equipment and Mining industry reported 27.5% and 26.25% initiatives respectively. Cement Products and Diversified Industry both reported 25%. Pharmaceuticals sector reported 22.5% of the green initiatives. Banks and Finance Industry reported 15% of the green initiatives. The industry which had only one company categorized under it was labeled as other industry and their mean score of reporting green initiatives was 19.5%

**Table: 3 Industry-wise Disclosures**

Industry	Mean Score
1. Softwares	48.125
2. Automobiles	35
3. Refineries	35
4. Steel And Steel Products	35
5. Power	31.5
6. Oil Exploration/Production	31.25
7. Construction	30
8. Telecommunication	28.75
9. Electrical Equipment	27.5
10. Mining	26.25
11. Cement Products	25
12. Diversified	25
13. Pharmaceuticals	22.5
14. Banks	15
15. Finance	15
16. Others (Aluminum, Cigarettes, Engineering, Gas, Metal)	19.5

### Limitations of the study

The results of the aforesaid study are based on the checklist prepared by scanning of literature and websites of companies. It could be improved and some variables can be added or deleted according to the industry specific or changing scenario. Moreover only 50 companies are considered to report results. Larger sample might have provided better insight into the subject lastly; the results are only based on data collected from 2011-12 Annual Reports and Websites during the month of January-February, 2013. Due to time constraints the results could not be verified.

### Conclusion

The following conclusions can be drawn from the above study:

- Green initiatives are becoming important and crucial day by day. Each of the company listed in Nifty is sending their results to their shareholders online. Companies focus that their waste could be managed well and they are conserving energy to save the environment. Water is also used efficiently

and saved by the companies. Many companies are also involved in planting of trees or social and farm forestry initiatives. Reducing carbon footprint is also main concern of the companies. Organic products are being used as raw materials by some companies. Thus overall concern for environment has increased and will increase further in Indian context.

- Looking the companies which reports these initiatives Wipro tops the list closely followed by Infosys Ltd. The highest score among the initiatives listed company-wise is 67.5%. The companies which are having least concern for environment is Kotak Mahindra Bank Ltd., Housing Development Finance Corporation Ltd, Punjab National Bank and Sterlite Industries Ltd.. Their impact on environment due to their operations is though less but they should also contribute something to the environment.
- Green initiatives are industry specific to some extent. Software and Automobile sector's operations harm



environment so their return to the environment is also more. Banks and finance sector do not cause much harm to the environment therefore their initiatives are also less.

So to sum up it could be said that going green is not just a fad but the reality as global warming is increasing and with the example of these Nifty Companies other companies should also look forward to carry on these initiatives.

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