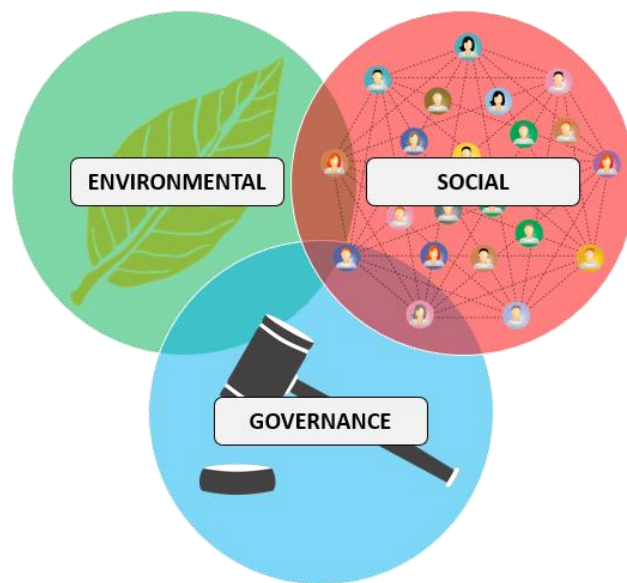


Possibilities of using Environmental, Social, and Governance (ESG) Framework for Urban Local Governments



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Dedicated to

I would like to thank my parents for their unconditional support and encouragement.

This is for my parents and grandparents.



Undertaking

I, Anushri S Alatagi, the author of the DRP report titled “Possibilities of using Environmental, Social, and Governance (ESG) Framework for Urban Local Governments”, hereby declare that this is an independent work of mine, carried out towards partial fulfilment of the requirements for the award of Masters Degree at Faculty of Planning, CEPT University, Ahmedabad. This work has not been submitted to any other institution for the award of any Degree/Diploma.



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This is to certify that the DRP report titled **Possibilities of using Environmental, Social, and Governance (ESG) Framework for Urban Local Governments** has been submitted by Ms. Anushri S Alatagi towards partial fulfilment of the requirements for the award of Masters Degree. This is a bona-fide work of the student and has not been submitted to any other university for award of any Degree/Diploma.

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Acknowledgments

I take this pride and opportunity to first and thank Ms. Aditi Dwivedi and Mr. Dhruv Bhavsar, my guides, my mentors for having accepted to guide me and for their unparalleled and valuable guidance throughout my DRP tenure that helped to give proper direction and structure to my project. I would like to thank Dr. Meera Mehta and Dr. Dinesh Mehta for always giving constructive comments and making to push myself further and think in a different direction.

My sincere thanks to Ms. Arwa Bharmal and Ms. Kasturi Kalwar for guiding me to conduct this research with their takes on the research project and their guidance during the development of this project.

I heartily thank every reviewer who was there in this journey throughout reviewing my work at every stage. I would want to extend my gratitude to my family, my parents, and my grandparents for supporting me through out.

I would also like to thank CEPT University for giving such immense opportunities at every stage and the encouraging environment to go beyond our limits and perform our best.

Abstract

Possibilities of using ESG Framework for Urban Local Governments.

In the business world, historically, investment decisions are dominated by criteria related to financial returns. However, in recent times, investors are increasingly applying non-financial factors and ethical considerations to identify the growth opportunities and possible risks of the for their organizations and investment decisions. ESG assessments are an emerging method for measuring the impact on society and sustainability of an investment in an organization. Environmental, Social, and Governance aspects form the three central criteria in ESG frameworks. The ESG environment has been emergent in India since the 1960 with ethical investment in the form of socially responsible investing when investors started excluding stocks or entire industries such as tobacco production from their portfolios. Since then, the ecosystem has grown with developing CSR legal support, emerging ESG indices, priority sector lending and national alignment to global values.

This research explores the possibilities of using the ESG criteria to evaluate the functional characteristics of Urban Local Bodies – the rationale being that since Municipalities are mandated to operate in the interest of the public good (services such as education, transportation, sanitation etc.), they are logical candidates for ESG assessments in order to identify improvement opportunities. Moreover, a push from MoHUA (Ministry of Housing and Urban Affairs) for cities to raise their own funds in the market, has encouraged cities to build their credentials for potential investors. In this scenario, ESG assessments are key and a good ESG rating will signify judicious use of funds, low investment risk and consequently easier borrowing from banks, capital markets or bi/multilateral funding agencies. This is further reflected in the trend of Municipalities increasingly going for ISO certifications for various functions in current times.

The study builds on the fact that in the current national context, urban local bodies are already reporting on/being assessed on various frameworks which are relevant to a holistic ESG assessments such as Service level Benchmarking, Ease of living Index, Swachh Survekshan, Good Governance Index, Human Development Index,

mandatory budget disclosures, Green bonds, and Municipal Credit rating. These were referred to understand the functioning, applicability, benefits, and challenges of current reporting frameworks as well as tap into the vast amount of valuable knowledge and information available through them in the public domain. Using them, a relevant ESG Assessment Framework for Municipalities was built which would assess the environmental, social and governance aspect of the ULB's performance and indicate areas for improvement. This Framework was tested for two Indian cities – Ahmedabad and Indore to understand applicability and gauging sample performance. Further, part two of the framework I.e., ESG Investment-ready Index was formulated and tested so that this could be used by the funding agencies to take the decision of the investment readily. This is based on the fact that investors, philanthropic and development related agencies give priority to projects that align with their values. Many of them list such priority topics on their websites.

Lastly, rating systems were set for both frameworks that defines the eligibility criteria for the investors to make the decisions. Thus, as both the frameworks – ESG Assessment and ESG investment-ready index assess the performance of the Urban Local Bodies, this will make them to perform better to achieve higher score and thus attracting more investment.

Key Words: Sustainable Investment, ESG Assessment, CSR, Municipalities, Urban Local Bodies, Investment-ready Index, Funding agencies, Municipal Credit Rating

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1. Introduction to ESG Frameworks

1.1 Emerging trend of ESG Assessments

In the business world, historically, investment decisions are dominated by criteria related to financial returns. However, in recent times, investors are increasingly applying non-financial factors and ethical considerations to identify the growth opportunities and possible risks for their organizations and investment decisions.

The ESG Framework that consists of Environmental, Social, and Governance aspects form the three central standards in measuring the impact on society and sustainability of an investment in an organization. They can be used as basis to assess an organization's operational integrity. In the last decade, the ESG investment landscape has changed significantly. (Greg Easton, Feb, 2019)

ESG is a way of evaluating a company or an organization's environmental and social impact. It signifies a set of positive social outcomes, next to which a business or an investment can be assessed. It is, essentially, another layer of performance information, giving investors more context to proceed than financial data alone such as debt ratio, revenue streams, profitability ratio etc.

As it has grown into a prominent field, ESG has opened a range of business and investment opportunities. ESG is generally considered to be a rapidly growing trend, both in terms of the capital it represents and the number of investments, and one that is becoming impossible for investors and wealth managers to ignore. (Georg Kell, 2018)

In India, while data reporting across cities has not been uniform in the past, there is a significant shift towards consistent quality and cities have started adopting measures to report data on such aspects with the introduction of indices such as Ease of Living Index and Municipal Performance Index, Swachh Survekshan as well as IT platforms such as PAS, Open Government Data Platform, India Urban Data Exchange etc. driven by MoHUA and other ministries.

1.2 ESG Frameworks in Corporate Sector

1.2.1 The shift of attitude from profit-making to responsible business

Traditionally, financial factors were more investigated by the Corporate investors in making the investment decisions such as cashflow trends of the company and its debt load,

the company's plan to include multiple sources of revenue in the project and if the company can generate significant profits with adequate financial projections. Thus, it can be observed that the financial factors dominated the invest making decisions in the Corporate sector.

However, "the collapse of the companies like Kingfisher, Satyam, and Yes Bank recently which are some of the India's biggest corporations have been credited to the failure of governance", (Acuity Law, 2020). Hence, across Asia, there has been a renewed emphasis on the investments which are focused on ESG (Environmental, Social, and Governance) in recent times. (Acuity Law, 2020). It can be seen that ESG investments are more than a bull market phenomenon, as the data between financial performance and ESG investments are added with investors that are looking at sustainability and longevity. (Mckinsey , March 2019) People are now-a-days actively carrying out environmentally and socially conscious changes as they become more knowledgeable regarding the same, (Survey by Mahindra Group , 2019)This is triggering a shift in the attitude of investors. Investors have now started considering the environmental and social aspects along with the governance factors. Investors are now not looking at the investment that is only profit-driven but also focusing on investments that are socially driven and the investments that derive profit and thus creating an impact with their investment, (Shamika Ravi, 2019). However, alignment with values and ethical considerations are the common purposes for most of the investors in ESG. The field of ESG investment is rapidly evolving and growing. Although, earlier ESG were sought by niche institutional clients, now it has turned mainstream. ESG now covers classes of multiple assets, and it also includes distinct group of investors, (Angel Broking, 2020).

1.2.2 What does the Corporate sector include in ESG investment?

In order to boost companies' financial performance and their capability to grow and compete, good ESG (Environmental, Social, and Governance) practices have become the measuring index in performing the business.

In a recent analysis carried out by IFC (International Finance Corporation) of 656 companies, it was discovered that the companies with good ESG practices were performing better than the companies with poorer ESG practices on ROE (return on equity) by basis points of 210. Another research carried out by investee companies of IFC indicated that the companies with top corporate governance (CG) quartile showed three times ROE than the companies which had bottom CG quartile. This was seen as a result of good

environmental and social management and governance was found to be enhancing the business performance. These value-creating ways when integrated provides a powerful collaboration for competitiveness, business growth and most importantly, innovation, (IFC, World Bank, July 2018).

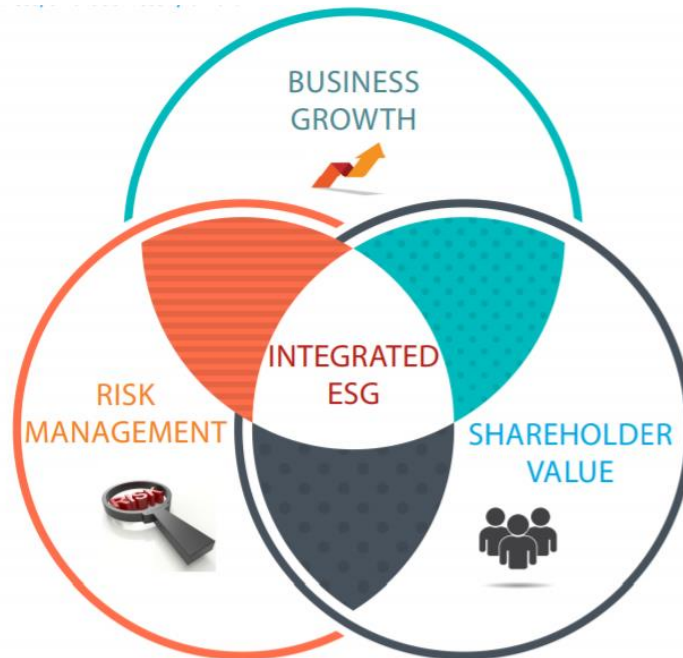


Figure 1 ESG - Corporate Sector

Source: The Investopedia – ESG in Corporate World

Environmental and social attributes of doing business have been considered conventionally from the perspective of risk management that includes business continuity, cost control, safeguarding the value of property etc. IFC, which is a prominent private sector as a finance institution worldwide, has included environmental and social risk assessment into its decisions of investment from about 20 years and presently, every large, reputed financing organization is doing the same. This enables the integration of business idea with the risk management system of E&S into associated governance systems.

Investors seek for companies that can create impact on environment and society and look for creating long-term value by tackling environmental and social challenges and opportunities. In order to get eligible by reputed and sophisticated investors, the company's environmental and social management systems need to be integrated into governance, and institutional mechanisms should be provided to the shareholders in order to influence the strategy and practices of the company. The Company's sustainability for a long term can be measured by the corporate governance, which forms an important pillar and provides

important tools for management succession and ownership and helps in arriving at a strategy of development in order to boost the value for all the shareholders. (IFC, World Bank, July 2018)

1.2.3 Evolution of ESG in India – The Paradigm Shift

The inception of ESG in India happened in 1960s in the form of socially responsible investing (SRIs). From then on, investors started looking for more value oriented and ethical ways of doing business. The investors started to eliminate the industries or stocks from their portfolios, based on the participation of business activities which weren't having good impact on social or on environment such as the tobacco manufacture, and the support for South African apartheid regimen. (Angel Broking, 2020)

Over the last decade, there has been a stream of reforms in the policies that led to the inclusion of ESG in a greater extent in Indian organizations. In 2007, Reserve Bank of India (RBI) published a letter that recommended all the banks which were scheduled commercially regarding their role on sustainable development, reporting of non-financial matters and majorly about Corporate Social Responsibility (CSR).

In the year of 2009, Corporate Social Responsibility guidelines were issued by the Ministry of Corporate Affairs (MCA). It had mentioned about six major elements – proper functioning, care for stakeholders, respecting environment, respecting workers' welfare, and rights, respecting human rights and working towards social and inclusive development and all the business companies were recommended to formulate the policy of CSR centered around these major elements. In the year 2010, the guidelines of CSR were released by Department of Public Enterprises (DPE) for the Central Public Sector Enterprises (CPSEs). The guidelines mentioned of having a CSR policy by Public Sector Enterprises which would be approved and accepted by their respective board of directors.

In the year 2011, National Voluntary Guidelines (NVG) regarding the responsibilities of environmental, social, and economics of business was published by MCA. These guidelines published were intended to be utilized by all the companies in India. Further, the details regarding the nine principles which was in the form of Business Responsibility Report (BRR) were to be given.

Further in the year 2012, the Securities and Exchange Board of India (SEBI) published a circular that stated the largest 100 listed companies were required to publish an annual report of business responsibility and it was made compulsory. Further in the year 2015,

SEBI's Listing Obligations and Disclosure Requirements Regulations made the publication of annual business responsibility report a mandate for the 500 companies.

Further, MSCI (Morgan Stanley Capital International) India ESG leaders Index was introduced in the year 2013. In the year 2014, the CSR law was passed that mandated the companies of certain profitability and scale to devote average profit of preceding years of 2%. Further in the year 2015, RBI encompassed two major sectors in the requirement for banks in the priority sector namely, renewable energy and social infrastructure.

Further in the year 2016, green bond guidelines were issued by SEBI. India was the second country to issue national-level guidelines after China. Further, National Voluntary Guidelines were published by Indian Bank's Association for responsible financing. These guidelines helped in providing a standardized and systematic framework of action for the risks, duties, and opportunities of banking sector that also included the integration of environmental, social, and economic factors.

In 2017, in order to address the issues faced by the investors, Kotak Committee was formed on corporate governance. Further in the year 2018, the guidance document regarding ESG disclosures was issued by the Bombay Stock Exchange (BSE). This guidance document was a holistic set of recommendations regarding ESG reporting which was steered by the reporting frameworks of global sustainability.

In the year 2019, the National Voluntary Guidelines were further changed to National Guidelines on Responsible Business Conduct (NGRBC) by MCA, in order to align with the "Respect" pillar of UNGP (United Nations Guiding Principles and the SDGs. Currently, MCA is planning and in the progression of creating India's National Action Plan on Business and Human rights by consulting state governments and different ministries. A zero draft has been prepared regarding the same and is currently available on the MCA website.

Thus, it can be seen that all these guidelines and policies over the years played a role in the establishment of ESG investing in India, making a way for better and improved corporate governance and transparency.

1.2.4 Factors responsible for this Paradigm Shift

In India, a Number of factors are responsible for the growth of ESG investment which are listed as follows:

A move towards Socially Responsible Investing and greener economy: In 2015, India recorded its National Determined contributions under the Paris agreement for the period

of 2021-2030. An estimated investment of USD 2.5 trillion was stated between 2015 and 2030. Also, India is set on its way of achieving the SDGs (Sustainable Development Goals) in order to carry forward the mission of development with no destruction.

Aligning with Global Values: Companies are being more pro-active due to the factors such as corporate governance, business risks, and ethical awareness. Many companies are now aware of the advantages of ESG investing. Parenthetically, global ESG funds are also being invested in India. There has been an investment by 41 global E&S seeking funds of approximately 25 percent of funds in line with the GSIA (Global Sustainable Investment Alliance). A greater ESG investing in India is expected in the upcoming years.

Increasing interest from domestic investors: Gradually, there has been a significant participation by domestic investors such as Quantum, SBI, Kotak Mahindra in ESG investing and they are heading their way up for sustainable ventures. The UN-supported principles for responsible investment are being supported by asset management companies. The market of Indian investment has witnessed the entrance of increased number of ESG funds over the past few years. The initial ESG-based fund was introduced in 2019 by Avendus. And at the same time, Quantum India ESG Equity Fund which was the first open-ended ESG fund was introduced by the Quantum Asset Management Company. Quantum launched this fund in order to accomplish the long-term capital growth by making an investment in a share of companies that meet the ESG criteria of Quantum.

The increase in reform measures: A swing of reform measures have been observed in India in order to drive the investment in the segments that are emerging such as renewable energy. Few voluntary and obligatory guidelines are released to make reporting and ethical corporate behaviour on material ESG factors.

Sustainability in Indian Policies: In recent years, many indices have been introduced to follow, monitor, and determine the ESG performance of the companies. Few of the examples include S&P BSE Carbonex, NIFTY 100 ESG Index, S&P BSE Greenex, NIFTY 100 Enhanced ESG Index, and S&P BSE 100 ESG Index.

1.2.5 A long way to go for India

All these developments and methods have steered to the development of ESG investing in India and the whole world. India's share of global GDP and share of global economy are 7.09% and 4.5% respectively, whereas India's share of the Socially Responsible Investment (SRI) asset base stands at USD 28 billion, that comprises of 0.1% of the global SRI assets. (Angel Broking, 2020).

1.3 ESG Frameworks for Urban Local Bodies

1.3.1 Rationale for applying ESG for Urban Local Governments

This research will explore the possibilities of using the ESG criteria to evaluate the functional characteristics of Urban Local Bodies – the rationale being that since Municipalities are mandated to operate in the interest of the public good (services such as education, transportation, sanitation, etc.), they are logical candidates for ESG assessments in order to identify improvement opportunities. Moreover, a push from MoHUA (Ministry of Housing and Urban Affairs) for cities to raise their own funds in the market, has encouraged cities to build their credentials for potential investors. This is further reflected in the trend of Municipalities increasingly going for ISO certification for various functions in current times.

1.3.2 Public good as primary functions of Urban Local Bodies

Government by definition is the system responsible for administration and regulation for reinforcement of social norms, public convenience, and well-being. In India, local governments are the lowest level of government.

According to the 73rd and 74th Constitutional Amendment acts of India 1992, states are mandated to establish a three-tier structure of Panchayats, intermediary, and Municipalities at the village, district levels, and the urban areas, respectively. According to these acts, adequate number of powers, finances, and duties are decentralized by state upon these bodies that enables them to preparation of plans and implementation of schemes for social justice and economic development. Thus, a basic framework of decentralization of authorities to the Municipal bodies or Panchayat Raj at various levels has been delivered by these acts.

The 74th Amendment act 1992, was passed by the parliament of India in 1992 that involves Municipalities (Urban Local Government). These acts provide the urban local bodies certain framework of obligations that enables them to perform as an efficient democratic unit of the local self-government. (The Constitution, Indian Government, 1992). The key provisions of 74th Amendment act are as follows:

- Municipal corporation, municipal council and nagar panchayat are known as urban local bodies and are classified based on the population. The traditional areas have Nagar Panchayats, smaller urban areas have municipalities or municipal council, and the larger urban areas have municipal corporations.

- These urban local bodies are constituted for a period of 5 years.
- A reservation of 1/3rd of the total capacity is made for women.
- The power of legislation and execution of schemes for social justice and economic development have been granted to the urban local bodies.
- The state government can assign certain duties, tolls, and taxes for the operation of urban local bodies.

The Article 243W of the 74th Amendment act assigns certain functions and powers of the Municipalities as mentioned out under the Twelfth Schedule. According to this, the State government is given the power to allocate the ULBs 18 functions as per 12th schedule that can be associated to infrastructure, solid waste, planning, environment, amenities, public health, poverty alleviation, fire service, aesthetic, education, culture, etc. (The Constitution, Indian Government, 1992) The obligatory functions of the Urban Local Bodies according to 12th schedule (Article 243W) are as mentioned below:

1. Urban planning that includes town planning.
2. The regulation of construction of buildings and land use.
3. Planning towards social and economic development.
4. Construction of roads and bridges.
5. The supply of water for commercial, industrial, and domestic purposes.
6. Amenities such as conservancy, public health sanitation, and solid waste management.
7. Provision of fire services.
8. The protection of urban forestry of the environment and the promotion of ecological features.
9. Protecting and maintaining the interests of weaker sections of society, that includes mentally retarded and handicapped.
10. Upgradation and improvement of slums.
11. Poverty alleviation of Urban population.
12. Provision of urban facilities and amenities such as gardens, parks, and playgrounds.
13. Promotion of aspects related to education, culture, and aesthetics.
14. Provision of other public amenities such as cremations, burials and burial grounds, electric crematoriums, and cremation grounds.
15. Provision of cattle pounds and preventing cruelty to animals.

16. Maintaining the vital statistics of the region that includes registration of births and deaths.
17. Provision of public amenities that includes parking lots, street lighting, bus stops, and other public conveniences.
18. The regulation of tanneries and slaughterhouses.

Therefore, it can be observed that according to 74th Amendment act, public good is the main responsibility of the government. At Present, cities have started adopting measures to report data on certain attributes with the introduction of indices such as: Swachh Survekshan, Ease of Living and Municipal Performance Index, Sanitation Ranking, service level benchmarking, Smart city ranking, City resilience frameworks. All these indices cover different sectors and are working in silos. Recently, due to a push from the MoHUA, cities are raising their own funds on the market and are building their credentials for potential investors. And corporates are being the investors, since due to the amendment made to the companies' act 2013, made in April 2014 that makes CSR mandatory and India is the first country to have made CSR mandatory.

1.3.3 Need of ESG framework for Urban Local Bodies

Urbanization forms an integral part of the development of the growth of the economy. The town and cities of India have a major impact on the economy of the country, similar to most of the countries. Although less than 1/3rd of India's population resides in its urban areas, but it accounts for more than 2/3rd of the GDP of the country and is responsible for producing 90% of government revenues. As millions of people migrate to towns and cities in search of employment and economic opportunity, this has led to rapid urbanization in India. (The World Bank, 2018). Few of the important issues that need to be solved are:

- The poor local governance
- Weak finances
- If planning is not done strategically, then it leads to high costs of office space and housing. In many Indian cities, it is observed that these expenditures tend to be among the highest in the world.
- Deficiencies in the provision of infrastructure and other major services such as insufficient transportation systems, power supply and water supply.
- The environment which is rapidly deteriorating.

A way to Assess & Measure Modern Urban Planning Challenges ...

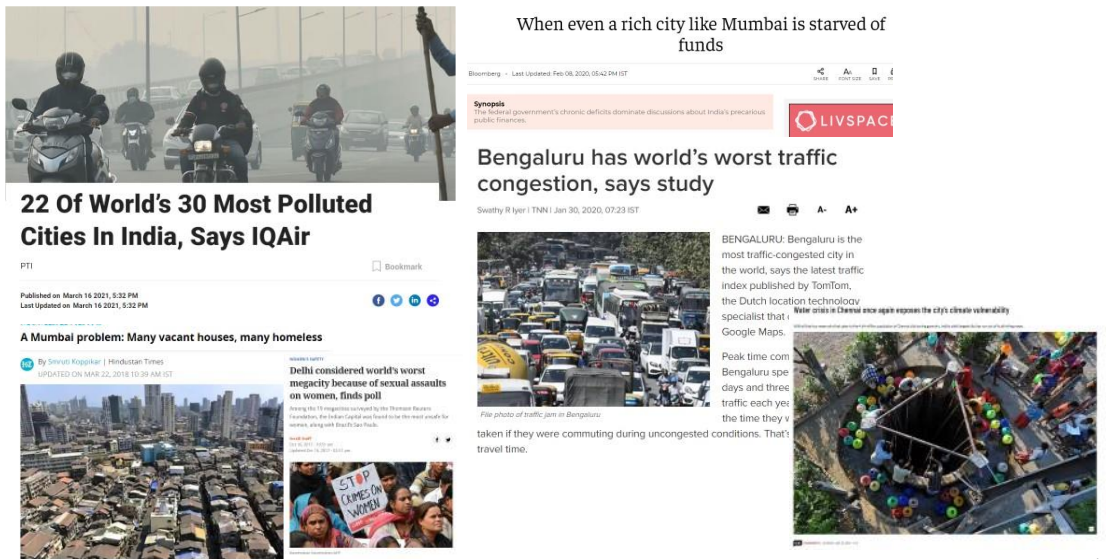


Figure 2 Urban Planning Challenges

The urban planning challenges faced in delivering the above-mentioned critical issues are as follows:

- **Planning:** There is a lack of modern planning framework in many urban governments. There is a lack of efficient planning and land use due to the diversity of many local bodies. The land accessibility for the buildings is limited due the restrictive zoning regulations and the presence of rigid master plans. This also hinders the access to the construction sites and the capability of growing and developing according to the changing needs. (Lathabhavan, 2020)
- **Service Delivery:** The city governments provide many services which do not have clear lines of accountability. It has been observed that adding physical infrastructure is given more importance rather than providing reliable as well as environmentally and financially sustainable services. Service quality is often overlooked. The recovery of operation and maintenance cost is not achieved by the service providers and they are also dependent on the government for finance. There is no presence of independent regulation authorities in order to set taxes, subsidies, and check quality service.
- **Infrastructure:** Many urban local bodies do not generate enough revenue in order to upgrade the infrastructure and also, they do not even possess the eligible

creditworthiness to assess funding from the capital market. There is a need of more holistic urban transport planning which not only focuses on the moving vehicles but also considers in planning for the people who walk and use non-motorized transport such bicycles.

- **Housing:** The property prices are going high due to the presence of building regulations which restrict the urban density such as floor space indices. The number of houses available for rent are getting decreased due to the presence of outdated rent control act which is causing a serious problem for the poor. Many sums emerge due to the lack of efficient planning, policy, and regulation. Also, the urban local bodies are unable to expand the trunk infrastructure which is required by housing developers due to weak finances.
- **Environment:** The quality of life of the people is being reduced due to the deteriorating environment and is also affecting people's efficiency and health. (The World Bank, 2018)

In addition to the urban planning challenges, there are certain urban management challenges that urban local bodies in India would face in concerns with ESG investment (Angel Broking, 2020) which are as follows:

- **Lack of quality data:** The data regarding environmental, social, or governance performance of urban local bodies are generally produced from fund manager, an investor, or an analyst. It can be also obtained from other sources such as from media, reports published such as sustainability report, and information that is openly available for public such as news articles. This procedure of data gathering would be complicated and not accurate and thus, these issues of accuracy of data, data credibility, and trustworthiness are obstacles in the expanding of ESG investment in India.
- **Lack of market standards:** ESG investments are called by numerous names such as socially responsible investing, impact investing, sustainable investing, and responsible investing. Hence, there is a dearth of standardization of naming ESG investing in the market. Also, there is no proper standards in impact measurement, no consistency in data collection of ESG and reporting methodology which leads to many complexities for investors.

- **Conventional mindset:** Many asset managers and investors consider ESG assessment as an added expense. Thus, this lack of vision prohibits the growth of ESG market in India.
- **Lack of track record of ESG funds:** India lacks the presence of long track record of funds aligned with ESG and many ESG funds have come up in recent times i.e., in last two to three years. Thus, this lack of ESG funds in Indian market does not entice much investment.
- **Lack of advocacy:** Many investors are not aware of the advantages of ESG investing in India. Although ESG investing is gradually becoming famous and mainstream with the companies, but it still lacks enough promotion or advocacy.

Although, there are many urban planning and management problems faced by the urban local bodies, an effort can be made to solve these issues by few of the crucial learnings from the corporate sectors. As is stated in the chapter 1.2.4, that there is a shift towards ESG in the corporate sector as it creates value. Hence, the important five ways on how ESG creates value can be acquired from the corporate sector by the ULBs, which are as follows:

- **Top-line growth:** With a strong and robust proposal of ESG, it will be easier to tap into new markets and also the existing ones can be expanded. Also, this helps in gaining access to licenses, and approvals from governing authorities to allow new growth opportunities.
- **Reductions of Cost:** A good ESG framework also helps in cost reduction to a substantial level. If ESG is executed efficiently, it helps fighting against the operating expenses which are always on rise.
- **Less regulatory and legal interventions:** With a sharp and robust external-value proposition, companies will be able attain reduced regulatory pressure combined with a great strategic freedom. A good ESG proposition will also help lower the risk of companies of unfavorable action from government. It also helps in getting good support from government.

- **Upliftment of Employment Productivity:** A strong and robust ESG proposition enables companies to retain quality employees, enhance and increase motivation for employees by inculcating a sense of purpose in them and thus helps in increasing the efficiency as the shareholder returns are directly proportional to the satisfaction of employees. It is also observed that employees who have both a sense of satisfaction and connection tend to perform and work better. Thus, with the good, motivated employees the company will thrive to achieve and perform more.
- **Investment and Asset Optimization:** Investment returns can be improved with the help of a strong ESG proposition by utilizing the capital for more sustainable and promising opportunities such as waste reduction, renewables etc. It also helps companies to avoid the investments that do not have the prospect of paying-off. (Witold Henisz, 2019)

Thus, these five links of approaches to think of ESG systematically can be learned from the corporate sector by the urban local bodies. These five ways are not a guarantee that each link will apply, or apply to the similar degree, but are prone to arise in specific industries or sectors.

As mentioned earlier, presently the data reporting system and all the indices assessing the ULBs are working in silos. Thus, there is a requirement of a comprehensive framework i.e., ESG framework to assess all the sectors together, as, in recent times, investors are progressively applying non-financial factors to recognize material risks and growth opportunities. The Environmental, Social, and Corporate Governance (ESG) criteria are the three central standards in assessing the sustainability and impact on society of an investment in an organization. They can be used as a basis to evaluate an ULB's operational integrity.

Also, a push from MoHUA for cities to raise their own funds in the market, has urged cities to build their credentials for potential investors. After making an amendment to the company's act 2013, in the year 2014, India became the first country to make CSR (Corporate Social Responsibility) mandatory in the whole world. According to this, the businesses or companies were allowed to invest their profits and revenues in fields such as poverty, gender equality, hunger, and education as a part of CSR compliance. Thus, the ULBs can attract a lot of corporate investors. To help out ULBs achieve in

raising their own funds, the ESG assessment would help in attracting investors and increasing credibility.

2. Review of existing assessment frameworks

To understand the basic challenges in developing and implementing the ESG framework, the previously existing frameworks are reviewed and the learnings from the review are contextually incorporated in the further research.

2.1 Service Level Benchmarking

The key growth driver of the economy of India is recognized that it is the increasing urban sector. There is also rapid growth in population of the people residing in urban areas of India which has increased drastically from 28% in 2001 and when projected, the population is estimated to increase by 38% by 2026. Although there is a rapid growth of urban population, but the basic service levels persist to remain the same, which are below desired levels.

Thus, recognizing the significance of basic service levels with the growing population, Service Level Benchmarking (SLB) was launched by the MoUD (Ministry of Urban Development), Government of India. SLB program covers mainly four sectors of basic services namely water supply, wastewater and solid waste management, and storm water drainage. (mohua.gov.in, n.d.)

MoUD has created and released a handbook regarding Service Level Benchmarking. The main objectives of the Handbook are as follows:

- It recognizes a few sets of parameters for standard performance which are generally used and understood by most of the stakeholders throughout the country in the sectors of water and sanitation.
- It also describes a framework for these indicators in terms of reporting and monitoring.
- Set out guidelines on how to operationalize this framework in a phased manner.

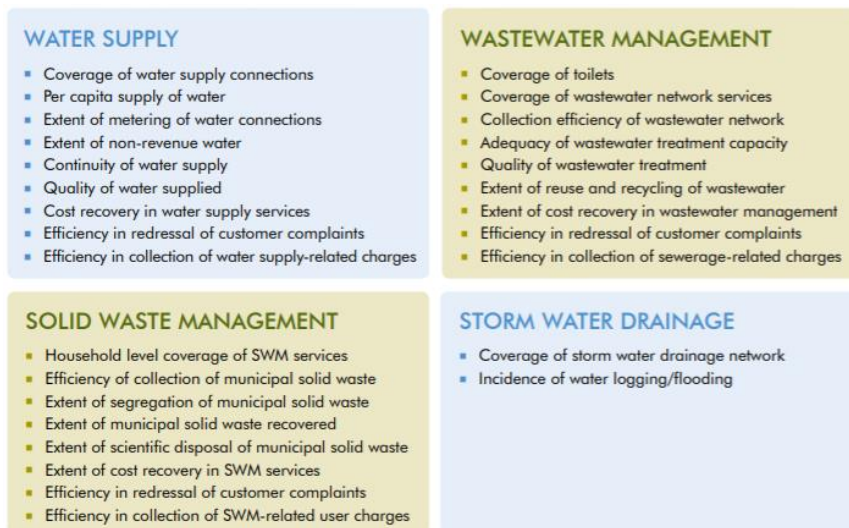


Figure 3 Performance Indicators - Service Level Benchmarking

Source: Handbook for Service Level Benchmarking, MoUD, Govt of India, 2008

This theory of accountability for the service levels is now getting a recognition at all levels on broader basis. According to the plan of decentralization, as stated under the 74th constitutional amendment, the urban local bodies are being at the forefront of this shift of



Figure 4 Five-point SLB agenda for ULB

Source: Handbook for Service Level Benchmarking, MoUD, Govt of India, 2008

carrying out the basic services. (Improving urban services through Service Level Benchmarking, 2017)

According to the SLB, the urban local bodies are given a simple and basic five-point agenda as follows:

2.2 Ease of Living and Municipal Performance Index

It has long been agreed that material well-being, popularly measured in terms of Gross Domestic Product (GDP), cannot fully describe the broader wellbeing of a region and its inhabitants. Even though economic growth has lifted billions all around the world out of poverty over time, it has not been adequate in ensuring the welfare of societies. Keeping this in mind, ease of living becomes a worthy goal to engage in to improve the wellbeing of citizens. Since the eventual aim of development is to enhance livability rather than just expansion of economic output, a robust measure of ease of living is essential.

In order to achieve a better quality of life, and in search of better social and economic opportunities, many Indians migrate to cities, but it gets difficult and challenging to address the challenges and issues that come along with it. Cities require effective and planning and management to maintain stability of themselves and grow in terms of prosperity and well-being, as there is a consistent growth of population and the resources are getting limited. Therefore, a three-level strategy, as emphasized below was followed:

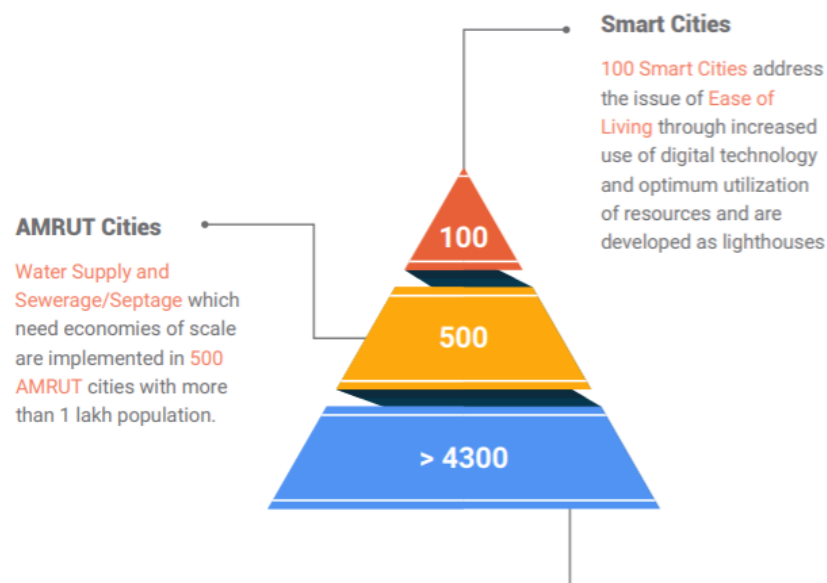


Figure 5 Three-level strategy for Ease of Living Index

Source: The Ease of Living Index Report, NIUA, MoHUA, Govt of India, 2019

The Ease of living index has the following important objectives:

- Create information that helps in guiding the policy making which is evidence based.
- Attain development outcomes that are in broader sense which includes Sustainable Development Goals and thus catalysing the action accordingly.
- The outcomes which are achieved from many diverse urban policies and schemes will be assessed and evaluated.
- The citizens' perception will be considered regarding the provision of services by the city administration. (Ease of Living Index, 2019)

This report summarizes the methodology that will be adopted in calculating the Ease of Living Index and discusses the interpretation of the survey.

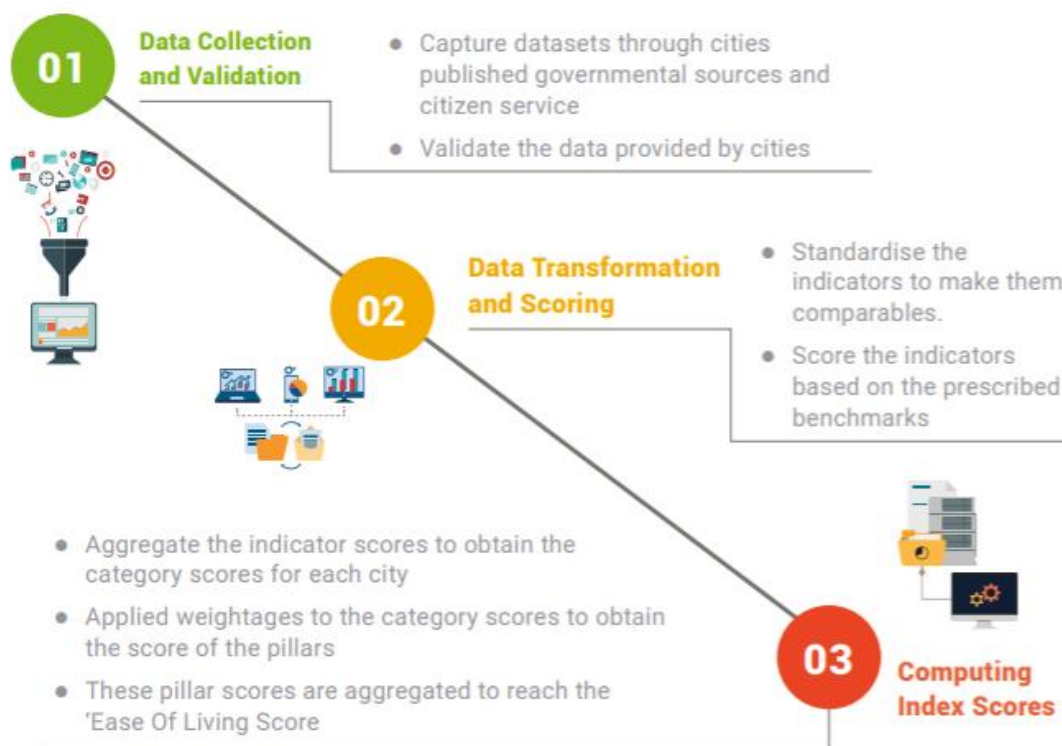


Figure 6 Methodology - Ease of Living Index

Source: The Ease of Living Index Report, NIUA, MoHUA, Govt of India, 2019

The Ease of Living Index examines the livability of Indian cities within a set of three pillars, which include the various aspects of well-being of citizens. The three pillars include a total of 14 categories and 50 indicators.

The framework of the Ease of Living Index 2019 consists of three pillars which are quality of life, economic ability, and sustainability. Each pillars have further detailed sectors in order to assess the pillar in detail.



Figure 7 Framework - Ease of Living Index

Source: The Ease of Living Index Report, NIUA, MoHUA, Govt of India, 2019

Thus, it can be seen that both the Ease of living index and the Municipal Performance index aim at giving a comprehensive view of the Indian cities starting from the provision of services by urban local bodies, the administration effectiveness, and the outcomes that are generated from these services provided in terms of the livability in

the cities and also the perception of citizens of the outcomes of these services. (NIUA, 2019)

2.3 Swachh Survekshan

Swachh Survekshan majorly aims to encourage citizen participation at a large scale and creation of awareness for all the divisions of the society regarding the importance and benefit of working together in order to create cities and towns which are a better place to live. In the year 2019, in order to recognize the good work accomplished by the smaller urban local bodies recognizing the vision of Swachh India, the following categories of population have been recognized and improved namely:

1. Fewer than 25,000 in which 3750 ULBs were competing for 95 zonal awards.
2. 25,000 to 50,000 population
3. 50,000 to 1 lakh population
4. One to three lakh population where 425 ULBs participated for 23 award categories.
5. 3 to 10 lakh population
6. Greater than 10 lakh population

Swachh Survekshan is organized to study and analyze the progress of Swachh Bharat Mission and rank the Urban Local Bodies of India created on sanitation and cleanliness. For Swachh Survekshan assessment, MoHUA has assigned certain weightage for the overall assessment and elements of Swachh Bharat Mission. The scoring for each ULB in order to rank them is divided into four main components, as follows:

1. Data collected from online portal of MIS from MoHUA and also the documents that are dedicated to Swachh Survekshan 2019 portal and the evaluation of the progress of the service levels. This part is given 1,250 marks which accounts for the 25% of the total score.
2. Data is collected from Direct Observation which carries 1,250 marks accounting 25% of the total score.
3. Data collected from the feedback of citizens carrying 1,250 marks 25% weightage.
4. Certifications that are provided to cities which are garbage free, and open defecation free carrying 1,250 marks and 25% weightage.

The Service Level Progress has an overall of 33 indicators that are classified into seven thematic areas.

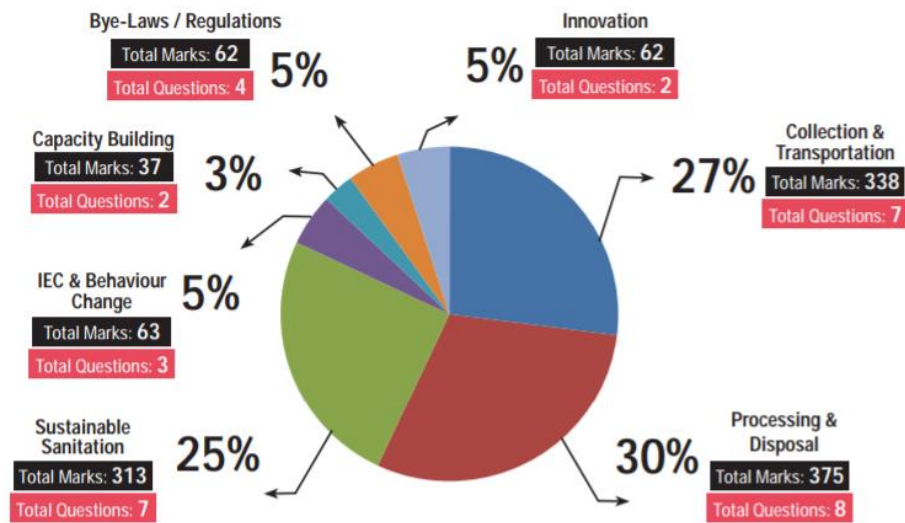


Figure 8 Swachh Survekshan- 7 Thematic Areas

Source: Swachh Survekshan Report 2020, MoHUA, Govt of India

The below given table gives a summary of the criteria based on which the urban local bodies are evaluated. To decide the award winners, 20 indicators are considered from service level progress, direct observation and citizen feedback are assessed and evaluated. Further, the total sum of marks from each sector obtained are measured for ranking.

Service Level Progress	Direct Observation	Citizen Feedback
<ul style="list-style-type: none"> • Door to Door Garbage collection • Source Segregation • ICT based Monitoring Mechanism • Cleanliness of Areas – Sweeping, GVP Transformation, Cleaning of storm water drain, Beautification of Slums/Old City etc. • Bin Free- Removal of secondary garbage storage points • Processing of Wet Waste & Dry Waste • Management of 'Construction & Demolition' Waste • Remediation of existing dumpsites • Sanitary Landfill/ Zero Landfill • Operational cost of sanitation & SWM covered through Property Tax • Bulk Waste Generator practicing Onsite processing of organic waste • Home Composting 	<ul style="list-style-type: none"> • Cleanliness of Residential and Commercial area • Cleanliness and functionality of Community & Public toilets • Cleanliness of Vegetable/ fruit/meat markets • Cleanliness of catchments of Railway/Bus/Airport 	<ul style="list-style-type: none"> • Cleanliness in City • Appropriate litter bins in commercial and public areas • Segregated collection of waste

Figure 9 Indicators of Swachh Survekshan Assessment – Solid Waste Management

Source: Swachh Survekshan Report 2020, MoHUA, Govt of India

The cities that manage sustainable sanitation services are recognized to encourage them. The evaluation of this award was done by considering few categories namely certification status of ODF, the feedback from the citizens if they are able to access clean toilets or urinals in public areas, and other related indicators of SLP are mentioned below:

- The commercial establishments/community toilets/public toilets/households that are connected a sewerage network.
- Management of faecal sludge in a scientific way.
- The water availability in the individual household toilets.
- The number of public toilets that are uploaded as SBM toilets on the google maps.
- The opening hours of CTs/PTs.
- The construction sites that have toilet facilities where there are more than 25 number of workers.
- If the O&M expenses costs of the CTs/PTs and FSTP are retrieved through the streams of revenue namely user charges, property tax that is specific to sanitation etc.

In order to rank the ULBs and further award them the total sum of all the indicators and sources that are mentioned above was measured. (Swachh Survekshan 2020, 2020)

2.4 Budget and Accounting Disclosures

Efficient and transparent finance is important for a well-functioning city and enables it to provide adequate and reliable civic services to its citizens. Use of public money requires a certain level of transparency and thus law mandates that local governments need to actively publish their budgets and get regular audits done.

PMC (Pune Municipal Corporation) has been ISO certified due to its distinction performance of the obligations of the corporation. The Pune Municipal Corporation was awarded the ISO: 9001:2008 accreditation under the Food Safety and Standards Act, 2006, (Pune Municipal Corporation lab gets ISO accreditation, 2013). Pune was also awarded the Platinum certificate i.e., ISO 37120 on City data by the World Council, (Council on City Data, n.d.). There has been constantly surplus in revenue fiscal in the PMC. There is revenue surplus in PMC. It indicates robust revenue stream of the Corporation. Also, it indicates the solid ability of leveraging the finance by raising funds externally.

Also, the Pune Municipal Corporation is accomplishing its fiscal capacity by allocating funds of ₹50 Cr every year under the smart city mission for the next five years.

2.5 Green Municipal Bonds

Green bonds are the kind of financial instruments or bonds that are standard and fixed-income and here the earnings are solely used for financing projects or programs that are related to climate change adaptation or mitigation. At present, there is no standard definition for what programs or projects are eligible for Green bonds. Green bonds are generally issued for climate associated projects or programs as asset-backed securities, self-labelled corporate bonds, supranational or international bonds, green project bonds, municipal and government bonds etc.

Few important benefits of the Green bonds for several stakeholders that are related to renewable energy are mentioned below:

Lenders/Banks	Developers	State	Green Bonds Investors
<ul style="list-style-type: none"> • Releases capital for re-financing new projects - Asset liability mismatch can be corrected - Economic value from sponsoring IDF/sale of loan portfolio 	<ul style="list-style-type: none"> • Long-term, low cost debt - will improve equity returns - Potential exit for part/full equity, investors; thus, can scale up faster - Encourage emergence of development and construction finance options and risk mitigation products 	<ul style="list-style-type: none"> • Help scale-up RE investments - meet NAPCC targets - Tap long term foreign investors- positive impact on foreign reserves - Ability to work well with emerging climate regimes and funds - Energy Security 	<ul style="list-style-type: none"> • Low operational risks in the invested RE assets - Liquidity - Fulfillment of green targets - 'Value' of assets improve with time, as RE becomes more competitive vis-à-vis conventional energy

Figure 10 Benefits of Green Bonds for Different Stakeholders

Source: The Green Municipal Bonds Report – NIUA, GIZ

There is a multiplier effect for implementation of renewable energy in India with the enactment of green bonds due to the improved capital inflow, lower costs, and access to finance at different stages of the lifecycle of the project. Green bonds help in implementation of larger projects as they can accelerate the access to capital for different stages of development for IPPs and project developers such as pre-construction, construction, and post commissioning.

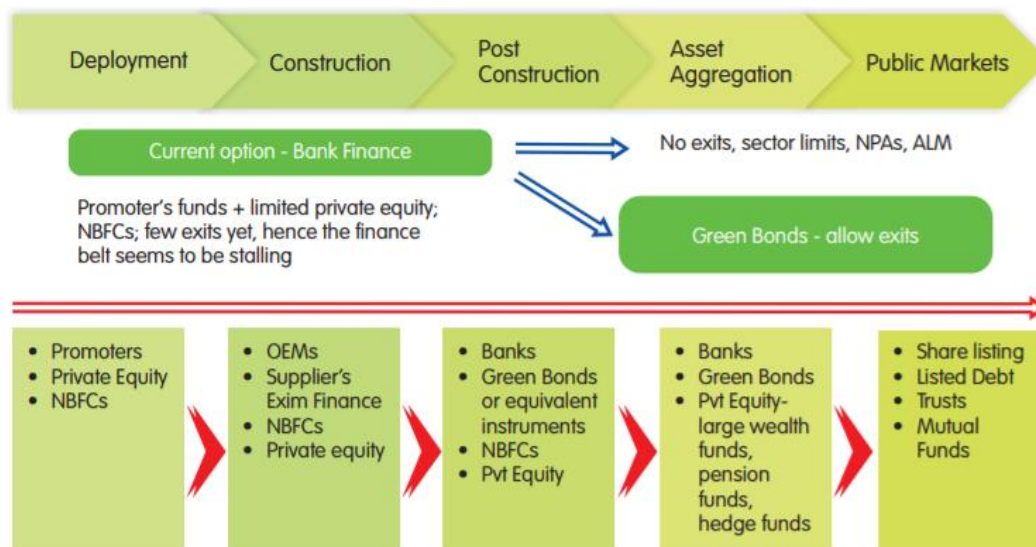


Figure 11 Financing Conveyor Belt depicting access to Capital at different Stages of development.

Source: The Green Municipal Bonds Report – NIUA, GIZ

2.5.1 Important Benefits for the State

The government of India will need huge investments for the renewable energy sector with the target of achieving 165 GW of installed renewable energy by 2022. Thus, it is important to explore options that are beyond traditional and conventional sources of funds. In this case, green bonds will help in attracting the capital and further scale renewable energy investments of India to achieve the goal set for the National action plan on climate change. There will also be an increase in the foreign reserves at the same time offsetting the energy import of India and further improving the security of energy if there is a foreign capital inflow in large-scale. (Issue Paper: Green Bonds in India, 2015)

2.5.2 Opportunities for Municipalities in Green Bonds Market

At Present, to a large extent, municipalities depend on grants from upper tier governments (central and state) for revenue. This demonstrates a strong need for use of market financing instruments for raising capital by ULBs to meet up the urban development requirements. Moreover, with the launch of national missions such as Smart Cities Mission, Swachh Bharat Mission, and National Solar Mission, the pervasiveness of projects that would be eligible for green bonds would increase. Given that the Municipal Corporations would also be partially responsible for execution of projects under these Missions, the need for utilization of market instruments for raising capital is high. (NIUA, 2017)

2.6 Municipal Credit Rating

Municipal bodies have been dependent on both internal and external sources to fund expenses. Internal sources comprise tax and non-tax revenue, whilst external consists of grants and transfers from governments, loans from organizations and concessional finance from multilateral agencies. The emerging scenario suggests that budgetary resources and recourse to institutional finance may not be adequate to meet up the requirements for urban infrastructure, including critical services such as water supply and sewage. Therefore, municipal bodies will need to explore alternatives such as encouraging private sector participation in core services and accessing capital market to fund critical infrastructure projects.

Over the years, National programmes are introducing Municipal credit rating as reforms. The AMRUT and SMART cities programmes have introduced components for credit rating of Municipalities. SEBI guidelines for Municipal bonds also require municipality to not have a negative net worth in each of the three previous years in addition to having a rating above the investment-grade for the public issue of municipal bond.

CRISIL was first in Asia to award a rating to municipal bond published by an Indian municipal body in February 1998 and subsequent issuances by municipal bodies using this methodology.

As an example, CRISIL's rating methodology for municipal bodies involves an assessment of the following key factors:

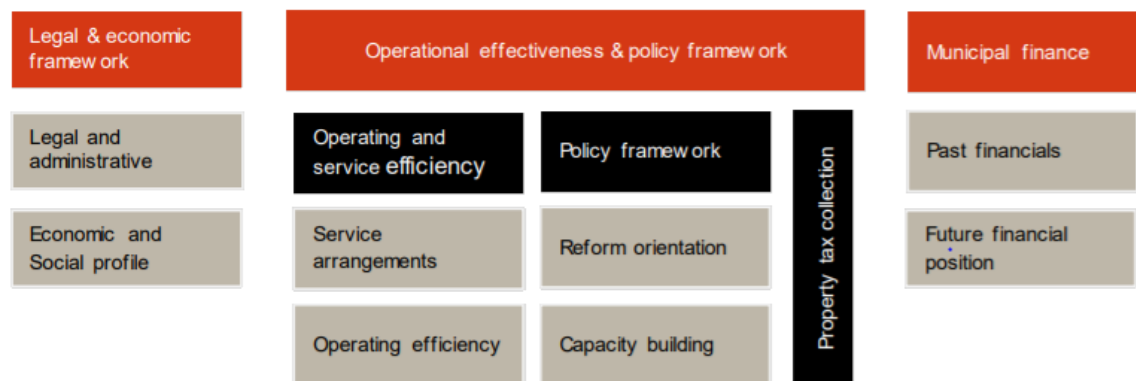


Figure 12 CRISIL's Rating methodology for municipal bodies

Source: Municipal Credit Rating - CRISIL

2.7 ESG Framework for Corporate Sector – KPMG

The responsibility of the corporates is not given priority in the importance list of most of the boards as it is politically diverging question and an abstract. However, there lies operational and strategic issues in this question which are crucial in value creation on long-term basis. Whereas these issues are interesting the consumers, investors, and various stakeholders. The company's driving factor on the focus of ESG is expectation from cite stakeholders which is accounted for 56%. (KPMG Board Leadership Center Survey, 2017) The list of ESG issues differ in every company. The ESG factor in KPMG is focused more on the factors which are important for investors and various stakeholders and these are generally mentioned in the report of sustainability and corporate responsibility.

Following are the examples of ESG factors for the three pillars of ESG:

- Environment – Climate Change, Scarcity of Natural Resources, Water and wastewater management, Supply chain management
- Social – Diversity and Inclusion in workplace, Management of Talent, Human Rights, Employee Relations, and Health
- Governance – Practices of Labour, Political Contributions, Execution Compensation, and Board Independence

KPMG has prepared a five-part framework in order to assist the boards comprehend and form the impact of the strategy and operations of the company externally on the company's customers and employees, the environment, the communities where the company functions, and other various stakeholders. It also assesses the impact internally on the performance of the company.

The framework of five-part of KPMG is as follows:

1. **The setting of level:** Arrive at a common definition of ESG and its significance to the company.
2. **Assessment:** In this process, the ESG opportunities and risks are determined which are of strategic importance for the company.
3. **Integration of ESG into Business:** ESG issues of strategic significance are integrated with the business strategy of the company.
4. **Stakeholder communications:** Here, the important ESG messages of the company are presented to investors and various stakeholders in the perspective of the strategies and creation of value on long-term basis.

- 5. Board oversight:** In order to administer ESG in the perspective of the strategies and creation of value on long-term basis, it will be ensured if the board has the right structure, composition, and processes planned.

2.8 Good Governance Index

The Good Governance Index (GGI) is an all-inclusive index that was created with a purpose of creating a tool that can be utilized consistently across all the states, and in due course to the district-level, to evaluate the governance status and also assess the effect of several intrusions that are taken by the State and the Central government comprising the Union Territories (UTs).

GGI is a complete and implantable framework which is used to evaluate the standing of governance in all the UTs and states and further a comparative picture is provided by ranking the different states and districts.

Good Governance comprise of ten sectors and these sectors further consist of 51 indicators.

Various frameworks available that comprises the Constitution of India and other existing



Figure 13 Ten Sectors of Good Governance Index

Source: The Good Governance Index - DARPG

Governance models are being adopted in terms of both the vertical and horizontal coverage in order to prepare the framework of GGI. This methodology was used in order to save

effort and time and also to prevent the project from reinventing. (Good Governance Index - Assessment of State of Governance, 2019). For the preparation GGI, the following below mentioned approach was considered:

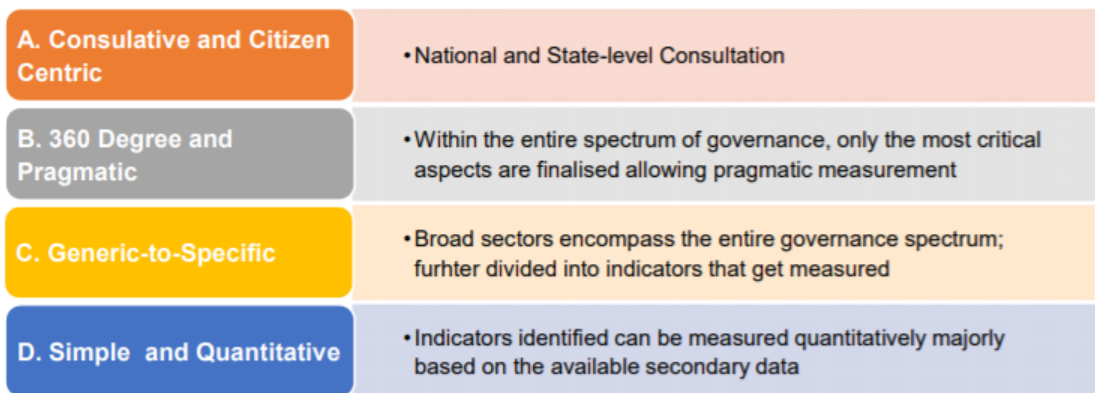


Figure 14 Approach for the Preparation of GGI

Source: The Good Governance Index - DARPG

The Good Governance Index consists of a certain 10 broad sectors which further consist of certain set of indicators. In order to rank the states and districts based on the finalized sectors and indicators, two approaches were considered:

1. Ranking of states was done based on their current status, where a cumulative effort over the years by the state since their time establishment was considered.
2. Also, the rapid progress achieved, and the efforts made for greater achievements in current years by the State was assessed.

Both the above-mentioned approaches were considered in all the stakeholder consultation in detail. Further, based on the consensus, ranking was to be done considering both:

1. Absolute which considers the Present status.
2. Growth which considers the incremental improvements.

However, based on the objectives of undertaking the State rankings, the index implementing agency may determine the rank of the states by considering either of the methodologies.

2.9 Human Development Index

The evidence of inequalities can be seen everywhere and so is the evidence of concern. All the people across the world from any political belonging believe that the inequality of income should be reduced in their country. In order to achieve the 2030 Agenda for

Sustainable Development, these inequalities existing in the human development area barricade.

Firstly although, many people are achieving more than the minimum levels set, yet extensive inequalities still remain. Secondly although, many 20th century inequalities are declining, there is an emergence of sever inequalities of new generation in human development. Thirdly, with frequent discrimination by imbalances in deep power, inequalities in human development can exist throughout life. Fourthly, revolution in metrics is weighed by assessing the inequalities in human development. Fifthly, if we decide to act now, before the economic imbalances of power turn into political dominance, the 21st century inequalities in human development can be solved.

Thus, Human Development Index has developed a new framework that solves the above-mentioned issues by the analysis of inequalities which are beyond income, averages, and today.

Beyond Income: Income and wealth must be considered by any comprehensive assessment, but it also must go beyond the money i.e., rupees or dollars in order to recognize the disparities of human development in other aspects and the processes that have led to them. Along with economic inequality, there also exists other human development inequalities such as education, health, dignity, and respect for human rights. These inequalities cannot be determined by considering inequality of income and wealth alone. A human development index methodology considers people-centric view which is about people's capabilities to pursue their aspirations in life and thus practice freedom.

Beyond Averages: Generally, the discussion regarding inequality is oversimplified which relies on the inequality summary measures and inadequate data which provides an incomplete and misleading picture both in terms of inequality and the people affected. Thus, the analysis must go beyond the averages that explains the information of single number distribution and look at the ways in which the inequalities play in different places and at different period of time throughout the entire population. Complete inequality gradient matters the most for every factors of human development.

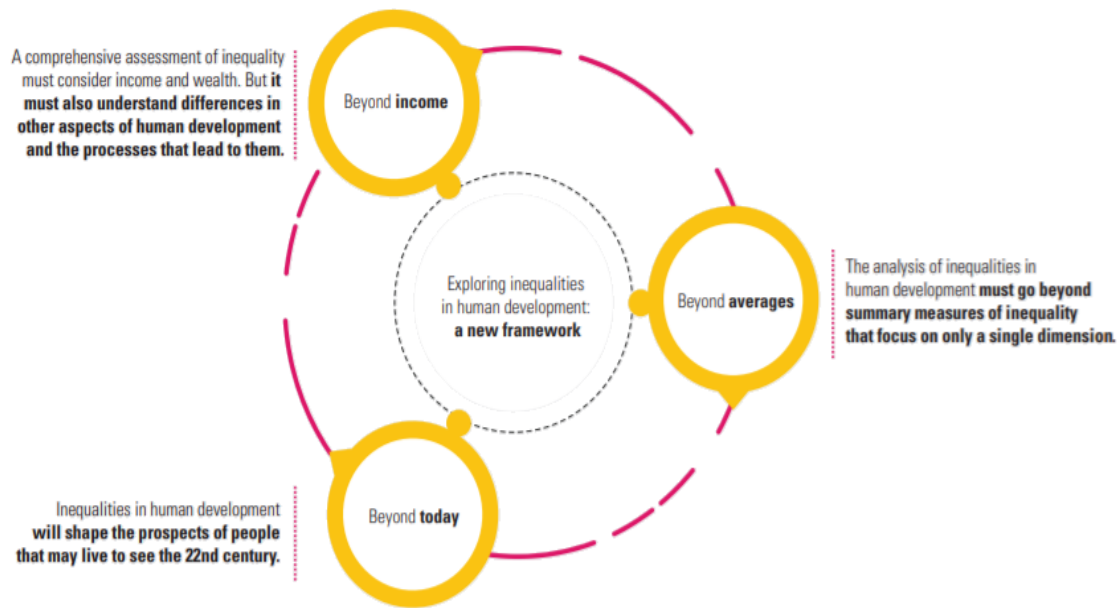


Figure 15 Framework for assessing Human Development Index

Source: The Human Development Index, 2019 - UNDP

Beyond Today: Generally, analysis is concentrated on the past or on the present, but a continuous changing would require the analysis regarding the inequality in the future. In addition to the existing inequalities, new forms of inequalities will keep adding with major environmental, social, and economic forces to the present young people and children. Technological transformations and climate change are considered to be two major shifts that will have an effect on the 21st century. The crisis of climate change is affecting the poor population largely and the technological transformation such as artificial intelligence, machinery may exclude the people and even the countries that are creating an ambiguous future under this category.

3. Designing the Research

3.1 Significance of the Study

A push from MoHUA for cities to raise their own funds in the market, has encouraged cities to build their credentials for potential investors. Due to the amendment made to the Companies' Act 2013, made in April 2014 that makes CSR (Corporate Social Responsibility) mandatory and India is the first country to have made CSR mandatory. As a part of any CSR compliance, the businesses or companies can invest their revenues in areas such as hunger, poverty, education, gender equality etc.

To help ULBs achieve in raising their own funds, the ESG assessment would help in attracting investors and gaining credibility. Currently, the data reporting system and all the indices assessing the ULBs are working in silos. There is a need of comprehensive framework to assess all the sectors together, as, in recent times, investors are increasingly applying non-financial factors to recognize growth opportunities and material risks. The ESG – Environment, Social and Governance criteria are the three important standards in measuring the impact of an investment on the society and the sustainability of an organization. They can be used as basis to assess an organization's operational integrity. Thus, the use of ESG criteria is more required in Urban Local Bodies, since Municipalities are mandated to operate in the interest of the public good as per 74th Amendment (services such as education, transportation, sanitation etc.), they are logical candidates for ESG assessments in order to identify improvement opportunities. With ULBs acting as the primary entity under consideration, flow of public finances towards sectoral public services is assumed to be representative of the investment cycle generally considered for ESG integration.

Thus, this research paper will explore the possibilities of using ESG criteria to evaluate the functional characteristics of Urban Local Bodies.

3.2 Aim and Objectives

As discussed above, urban local bodies are the logical candidates of ESG framework as the rationale being that since Municipalities are mandated to operate in the interest of the public good. Thus, the aim of this research paper is to explore the “Possibilities of using

Environmental, Social and Governance (ESG) framework for urban local government.”

The aim shall be achieved by considering three main objectives:

1. Assess and analyse the existing ESG frameworks and related parameters/indicators.
2. Testing the ESG framework with relevant indicators/parameters for few selected Indian cities.
3. Examine the possibilities of adaptation of the ESG framework in Indian urban local bodies (ULBs) with existing data reporting system.

3.3 Methodology

This section describes the process on a holistic level for this research.

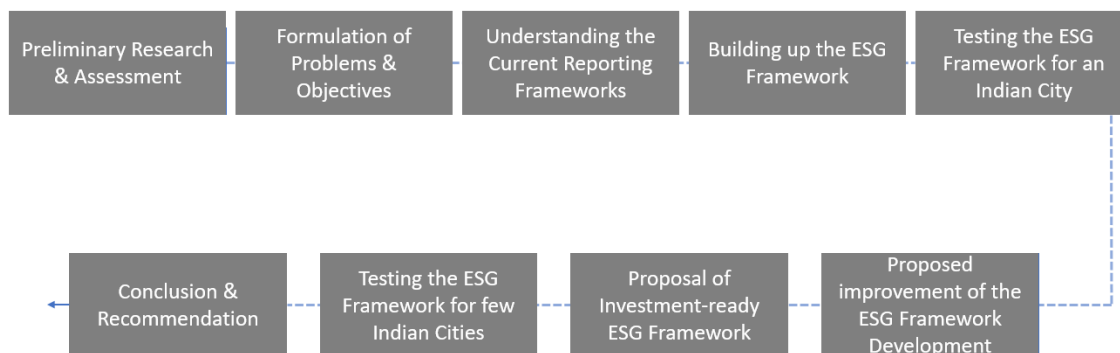


Figure 16 Methodology

In the early stage of the project, preliminary research and assessment was carried out related to the topic of the research i.e., “Possibilities of ESG Framework for Urban Local Bodies”. The preliminary research consisted of referring the documents related to ESG in banks, corporate sector and the obligatory functions defined for the ULBs. With the preliminary research, the problems were identified and further the objectives were identified which are listed in the section 3.2. Further, the current reporting frameworks such as Service level Benchmarking, Ease of living Index, Swachh Survekshan, Good Governance Index, Human Development Index, Green bonds, Credit rating for ULBs by CRISIL were referred to understand the functioning and applicability of current reporting frameworks. Further, with the understanding of problems and the current reporting frameworks, ESG Framework was built which would assess the environmental, social and governance part of the ULBs. Further, the ESG Framework was tested for an Indian city based on the data availability and the city of Ahmedabad and Indore were selected for the same due to the availability of the data. Based on the results of the ESG Framework and

the problems faced in the process of calculation of the index, few improvements were proposed in the framework and were corrected accordingly. Further, part two of the framework I.e., ESG Investment-ready Index was formulated so that this could be used by the funding agencies to take the decision of the investment readily. The part two framework was again tested for the city of Ahmedabad. Later, with the formulation of both the frameworks, few conclusions are drawn from the same and recommendations are given accordingly.

4. Developing ESG Framework to assess Urban Local Governments

4.1 Case Studies

4.1.1 City of Toronto, Canada and its Debt Issuance programme for improving ESG Outcomes

Toronto is considered as one of the world’s most diverse city and livable city and is leading economic engine of Canada. It is home for more than 2.9 million residents coming from diver backgrounds and experiences and Toronto is the fourth largest city in North America. The relationship of the city with Ontario government is defined by the legislation and the provincial regulations. The City of Toronto Act, 2006, is considered the most important one as it hands over the powers to the City for the provision of services, manage finances of the city, and create officers of accountability for the City.

Level of Government	Federal	Provincial	Municipal
Powers defined by	Constitution Act, 1867	Constitution Act, 1867	City of Toronto Act, 2006
Powers	National Defence and Canadian Armed Forces Postal service Banking Employment Immigration and citizenship Census Foreign affairs and international trade Agriculture and more	Health Education Driver and vehicle licensing Energy Human Rights Natural resources Environment Social services and more	Water treatment and sewers Parks and recreation centres Libraries Garbage collection Public transit Land use planning Traffic and parking Police and fire services Paramedics Homeless shelters Childcare and more

Figure 17 Functions of different level of Government – Toronto

Source: Municipality of Metropolitan Toronto, ESG Report, 2021

The City of Toronto is dedicated to integrating the ESG factors in the entire organization including all the investment decisions and activities. The city aims at responsible investing which takes into account the ESG factors in decision-making of investments and the

development of processes in order to monitor the performance of ESG of the investments. (Toronto ESG Report, November 2020)

The City issued a Program of Sustainable Debt Issuance for which the overall approach of Toronto towards Sustainable Finance includes the following:

1. Aligning with the Corporate Strategy Plan of the City.
2. Aligning the debt terms with the useful life of project.
3. Generation of impacts that are measurable. As sustainable financing is growing in the debt issuance program of the City if Toronto recently, it is important to build on the strength of the conventional bond issuance of the City.



Figure 18 Toronto's Debt Issuance Program

Source: Municipality of Metropolitan Toronto, ESG Report, 2021

The objective of the sustainable debt issuance program of the City is to improve ESG outcomes in Toronto by aligning with the strategic priorities of the City. Few examples include sustainable transportation, environment, access to essential services, environment, socioeconomic empowerment and advancement, and social and affordable housing.

The City of Toronto has issued Green Bonds of \$500 million since 2018 which was \$300 million in 2008 and in 2019, \$200 million was issued. Toronto is considered as the first Canadian government to have issued social bonds in 2020 and it still continues to be a pioneer in enhancing the ESG factors with the government of Canada. (Toronto ESG Report, November 2020)

The table shown below includes the ESG factors that are very significant to the City of Toronto. But, with the limited resources available, prioritizing the ESG aspects on the basis of their relative materiality will help the city to focus on the activities and resources that can provide a huge impact and provide value to both the City and the stakeholders involved. The social programs to address climate change and equity were recognized as the priorities for the City in 2020. Also, the City is planning to provide significant priority to the ESG factors that effect not only the City but also its stakeholders. Currently, the City is in the process of engagement of stakeholders and thereby planning to include a map of materiality for the future ESG report. The significance of every ESG factor to the City of Toronto and the stakeholders involved will be reflected in the Materiality Map. (Toronto ESG Report, November 2020)

Environmental	Social	Governance & Workplace Culture
Climate Change	Human Rights	Responsible Governance Practices
Resilience	Social Inclusion	Financial Governance
	Social Empowerment and Advancement	Conduct and Trust
	Economic Inclusion	Risk Management
		Cyber Security and Privacy
		Inclusion and Diversity
		Health and well-being
		Talent Attraction, Engagement and Retention
		Digital Enablement
		Responsible Procurement and supplier diversity
Socially Responsible Financing		
Socially Responsible Investing		

Figure 19 Material ESG Factors – Toronto

Source: Municipality of Metropolitan Toronto, ESG Report, 2021

4.1.2 Case of ESG in US Municipal Marketplace – ISS ESG Muni Quality Score (ACRe Data)

Case of ESG in US Municipal Marketplace – ISS ESG Muni Quality Score (ACRe Data)
 The ISS ESG Muni Quality Score (formerly ACRe Data) provides ESG scoring for the U.S. municipal market at the States, Cities, Countries, and School District level – 29,500 cities and towns across the United States of America.

It has the largest coverage in the marketplace and provides a level of transparency for the clients who are able to quickly risk in this very large marketplace. The client were also

able to build out their own ESG scoring solution, while utilizing the ESG Muni Quality Score as an internal benchmark.

The ESG Muni Quality Score provides a detailed assessment of socioeconomic risks faced by upwards of 29,000 U.S. cities/towns, 3,141 counties, 13,500 school districts across all 50 states.

Currently, by utilizing 72 scores from the respective datasets, the individual scores determine the ranking for each city or town, country, state, and school district, both state-wide, and nationally, for each data input.

4.2 Considerations for Responsible Investing

As different current reporting systems were discussed in the chapter 2, it can be seen all the existing frameworks have got their own system and methodology of building up the framework and assessing the cities based on the same. However, although ESG Frameworks seem similar to the frameworks mentioned in chapter 2, in terms of monitoring requirements, serve different purpose.

1. **Principles of Responsible Investment (PRI)** – The indicators used in the ESG Framework are in line with the principles of responsible investing as mentioned by the UNPRI (United Nations Principles of Responsible Investing). Thus, it helps the investors to make responsible investment decisions. PRI consists of a network of investors and thrives to promote sustainable investment by abiding by the ESG principles and is supported by UN. The investor across the world participates in UNPRI.
2. **Sustainable Development Goals (SDGs)** – Many ESG indicators are in line with the Sustainable development goals. Many funding agencies such as bi/multilateral banks, capital market or banks invest based on these criteria. Thus, the indicators will help in assessing the ULBs better and thus attract more investment.

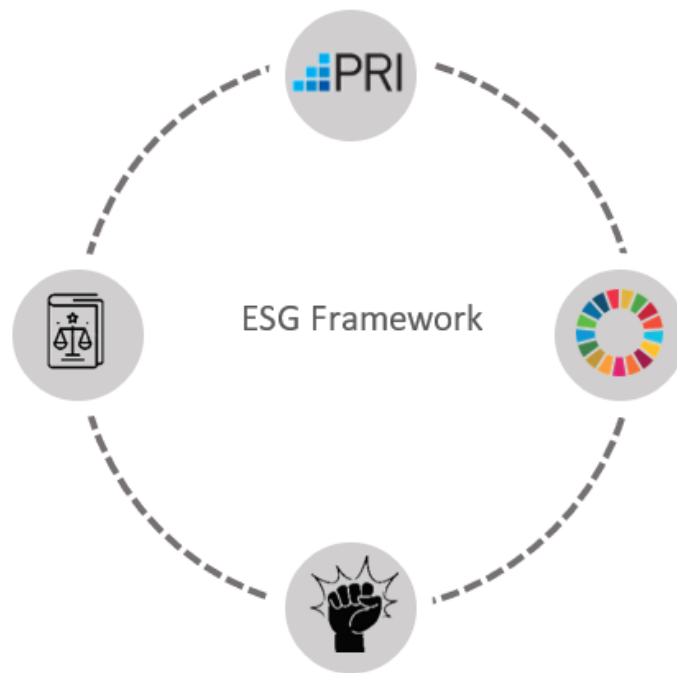


Figure 20 Unique Features of ESG Framework

Source: Anushri Alatagi, PG190163, MUI 2019-21, FP-CEPT

- 3. Hassle-free Projects** – Many projects in India are not being implemented due to the opposition by the activists and others. As ESG framework considers the involvement of stakeholders as well, thus it helps in the implementation of projects with less hassles and oppositions.

4.3 ESG Framework for Indian Urban Local Governments

Emphasis on Governance – As discussed in the previous of chapter of the functions of urban local bodies, it was seen that governance is the cross sectoral element as it is the main element of the sectors, it is emphasized more in the ESG Framework by giving it a weightage higher than the other pillars which is 40%.

4.4 Part 1 – ESG Assessment Framework

By referring the obligatory functions of Urban Local Bodies according to the 74th Amendment act, the obligatory functions were further divided across the three pillars of ESG Framework i.e., Environment, Social and Governance.

There are 18 identified sectors. 5 sectors in Environment, 6 in Social and 7 in Governance. The sectors of each of the pillars are as follows:



Figure 21 Part 1 - ESG Assessment Framework – Sectors

The ESG Framework examines the ULBs across a set of three pillars, which encompasses the various aspects the sustainable and societal impact on the city. The three pillars include a set of 18 sectors and 66 indicators.

The framework of the ESG Assessment for the ULBs is as follows. The detailed description of each of the indicators has been explained in further chapters while testing the framework for Indian cities.

	Sectors (18)	Indicators (66)
Environment (30%) (5 Sectors)	Emission & Pollution (3)	Water Quality Hazardous Waste Air Quality Index
	Natural Capital Endowment (5)	Tree Cover Water Supplied Swachh Survekshan Score Wastewater treated Sewerage Network
	Public Infrastructure Facilities(5)	Access to IHHL Underground Sewerage System Public Toilets used Road Density Public Transport
	Energy Consumption (2)	Energy Demand vs Supply Energy generated from Renewable Sources
	City Resilience (2)	Disaster Reduction Strategies No of deaths due to disaster
Social (30%) (6 Sectors)	Education (5)	Expenditure Literacy Rate Digital Education Gender Parity Index National Achievement Score
	Employment & Economy (3)	Unemployment Rate Credit Availability No of Incubation Centers
	Poverty & Inequality (2)	Beneficiaries under PMAY Slum Population
	Health (3)	Expenditure Accredited Public Health Facilities Prevalence of Diseases
	Social Infrastructure (2)	Open Space for Public Use Availability of Public Services
	Safety & Security (4)	Violent Crime Against Women Against Children Against Elderly
Governance (40%) (7 Sectors)	Human Resources (3)	Adequacy of ULB Staff Gender Equality Leadership Stability
	Governance Effectiveness (4)	Housing Police Personnel Citizen Charter Establishment Expenditure Efficiency
	Gender (2)	Women Police Personnel Economic Empowerment of Women
	Participation (3)	Voter Turnout Local Representation Community Involvement
	Transparency & Accountability(4)	Disclosure of Assets Budget Publication Corruption Performance Report Publication
	Planning (5)	CDP Plans available Town Planners Land related laws Plan Violation
	Financial Well-being (9)	Own Revenue Tax & Budget Efficiency Grants, Capital, Establishment Exp Efficiency Credit Rating

Figure 22 ESG Framework for Urban Local Bodies

The first pillar “Environment” is reflective of the ULB’s efforts in keeping the city clean, green, and sustainable and the efforts taken in tackling climate change and building resilience. It signifies whether a region can deliver its citizens with the basic needs of survival such as secure and livable housing facilities, better sources of water and sanitation. The second pillar, “Social” focuses on the diversity of the city’s residents and how the ULB is striving to invest in quality of life for all, that focuses on including economic and social well-being and inclusion of all. Lastly, the third pillar – “Governance” focuses on how the City Council and its staff members are creating value on long-term basis and their dedication to leadership in the corporate governance.

4.4.1 Scoring Methodology

This section outlines the methodology that will be adopted in calculating the ESG Framework Index and discusses the formulation of the survey. It carries a discussion on the means through which data will be collected, validated, and cleaned. It then delves into the ways in which scoring will v=be done for the various indicators and describes them in detail. Furthermore, it also outlines the challenges that will be encountered while calculating the index and the means to resolving them.

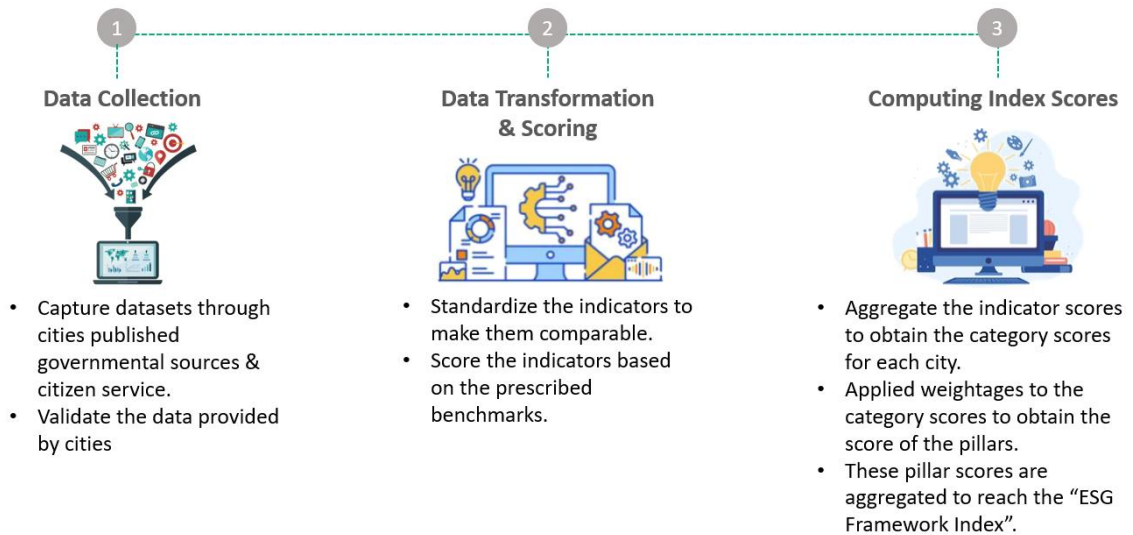


Figure 23 Methodology - Part 1: ESG Assessment Framework

The Scoring methodology of ESG Framework involves five steps as mentioned below:

- 1. Data Collection** - The methodology initiates with the process of data collection and validation. The data for all the indicators will be accumulated through two sources. First, cities will be required to submit the data. Second, data will be collected through publicly accessible government sources. This process will help out in validating the data submitted by cities.
- 2. Scoring** – As population sized and economic strength differs for every city, it is necessary to weigh the indicators for comparison. For percentages and ratios, no scoring mechanisms will be utilized but need to be standardized. Some indicators will carry binary marking, such as it will be a yes or no question. For example, the indicator evaluating if city incentivizes takes a similar form. For such a question, “yes” answer will have consequence in a marking of 1 and “no” response will result in a marking of 0. Few indicators have no optimal value or benchmarking that is predetermined. For instance, it is difficult to fix a certain value for health and education expenses for a house. In those cases, the average of all the cities will be considered and counted as a benchmark and further each city will be given the score based on the deviation from the benchmark.

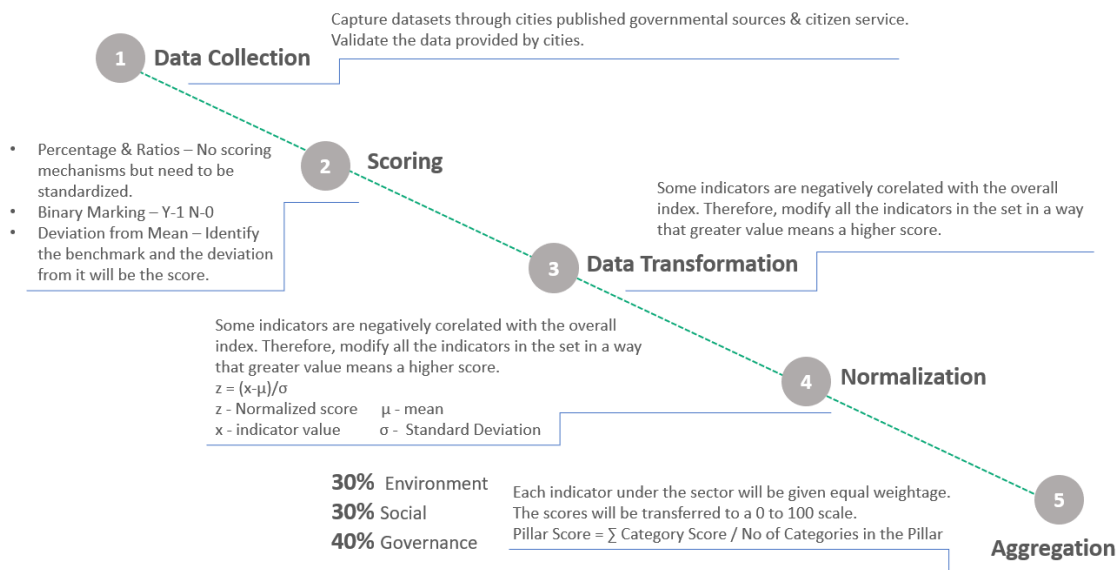


Figure 24 Scoring Methodology - ESG Assessment Framework

3. **Transformation of Data** - The set of indicators comprises few indicators that are positively correlated with the phenomenon that we are attempting to capture through the index while some other indicators that are negatively correlated with the overall index. For example, the accessibility of public transportation is positively related with the ease of living of citizens whilst the prevalence of crimes reflects the challenges faced by the citizens. Therefore, the first step is to adjust all the indicators in the set in a way that greater value means a higher score.
4. **Normalization** - It is the step essential in order to have a comparable set of indicators. It is necessary to normalize the data before making any data aggregation as indicators have various units. For instance, coverage of sewerage network is depicted as a percentage of the total road length while the pupil teacher ratio is a proportion. These indicators are not comparable by any standards. The normalization method is carried out to transform the all the data into dimensionless numbers. This is done using z-scores that can be put in a normal distribution.
5. **Aggregation** - The last step of aggregation method of the ESG Framework Index is created on three essentials i.e., indicators, categories, and pillars of the index.

Each indicator underneath the category will be given equal weightage. The values of the category are calculated by adding the weighted score of all the indicators using the below formula:

$$\text{Category} = \text{Sum of } (w_i \times \text{indicator})$$

The results of the categories for each pillar will be then aggregated to calculate the pillar score. The pillar score will be calculated using the below formula:

$$\text{Pillar} = \text{Sum of } (w_i \times \text{Category Scores})$$

4.4.2 ESG Framework Indicators

The Part 1 of ESG Assessment Framework comprises of three pillars – Environment, Social, and Governance. Each of these pillars further have certain set of sectors and indicators. The ESG Framework consists of a total number of 18 sectors and 66 indicators. The pillar of Environment consists of five sectors and the pillar of Social and Governance consists of six and seven sectors, respectively.

The Environment Pillar

The first pillar – “Environment” is a reflective of the city’s ability in thriving as a clean, green, and sustainable city. It indicates whether the city is taking required actions in tackling climate change and building resilience and if the city is working on multiple strategies to achieve these outcomes.

The Environment pillar carries a weightage of 30% of the total ESG score of the ULB. The Environment pillar consists of 5 sectors namely – Emissions & Pollution, Natural capital endowment and management, Public Infrastructure Facilities, Energy Consumption, and City Resilience. It indicates if the city can provide its citizens with the basic needs of survival such as good quality of air and water, improved sources of water and sanitation, access to public infrastructure facilities such as sewerage system, individual toilets, public toilets, improved roads, and access to public transport facility. The environment pillar also indicates if the urban local body of the city is able to meet the energy demand and if the city is making any efforts in generating energy from renewable sources. This would further suggest the efforts and strategies taken by the city corporation in making their city a sustainable one. The Environment pillar also considers if the city is resilient by looking at if the city has any strategies related to disaster reduction and the number of deaths caused

in the city due to disaster. The below figure depicts the sectors and indicators of the Environment pillar.
















Emissions & Pollution	Natural Capital Endowment & Management	Public Infrastructure Facilities	Energy Consumption	City Resilience
  	   % of Wastewater Treated icon" data-bbox="250 410 310 450"/> 	    % of access to Public Transport Facility icon" data-bbox="355 485 415 525"/>	 	 
Water Quality Hazardous Waste Generation Air Quality Index	Total Tree Cover Total Water Supplied Swachh Survekshan Score % of Wastewater Treated Coverage of Sewerage Network	Access to Individual Toilets Access to underground sewerage system Population using Public Toilets Road Density per 1000 sq.km % of access to Public Transport Facility	Energy Requirement vs Energy Supplied Energy from renewable sources	Disaster Reduction Strategies Number of deaths due to disaster

Figure 25 Environment Pillar - Sectors and Indicators

The data for the indicators of the Environment pillar can be obtained from CPCB (Central Pollution Control Board) regarding air and water quality. The data for the sector Natural capital endowment and management can be obtained from MoSPI (Ministry of Statistics and Programme Implementation), NFHS (National Family Health Survey), Swachh Survekshan Survey rankings and scores. Other data regarding energy and resilience can be obtained from Ministry of Power, CEA (Central Electrical Authority), and NCRB (National Crime Records Bureau). Other data relevant to wastewater treated and coverage of sewerage network can be obtained from the water and sewerage board of the Urban Local Body.

The Social Pillar

The second pillar, “Social” focuses on the urban local body’s ability to provide its citizens with the basic needs of survival such as safe and livable housing facilities, access to basic education and health facilities. The Social pillar also emphasizes on the economic building blocks of the city taking into account the economic well-being and the need for growth, creation of employment opportunities etc. Overall, the social pillar checks if the city is thriving to be a friendly and caring city which invests in social and economic well-being for all, inclusion and thus improving the quality of life for its citizens.

The social pillar holds 30% of the weightage of the total ESG score of the ULB. There are 6 sectors in the Social pillar namely Education, Employment & economic opportunities,

poverty and inequality, health, Social Infrastructure, and Safety and security. The Education sector considers the different aspects of education of the city such as literacy rate, household expenditure on education, gender equality in education, and national achievement score of the city. The economic opportunities consider the number of incubation centers present in the city that help providing an opportunity for the innovators, unemployment rate in the city, and how readily are the citizens getting credit. It also looks at poverty by measuring the slum population, and the number of beneficiaries under PMAY scheme. The social pillar also emphasizes on health, and safety and security by considering household expenditure on health and prevalence of diseases and the prevalence of violent crime in the city. The Social Infrastructure of the city is also looked by considering the open space available for public use, and availability of public services. The below figure (Fig. 25) indicates the sectors and indicators of the Social Pillar.

Education	Employment & Economic Opportunities	Poverty & Inequality	Health	Social Infrastructure	Safety & Security
Household expenditure on Education	Unemployment Rate	Beneficiaries under PMAY	Household Expenditure on Health	Open Space for Public Use	Prevalence of Violent Crime
Literacy Rate	Credit Availability	Slum Population	Accredited Public Health Facilities	Availability of Public Services	Extent of Crime recorded against Women
Schools with access to Digital Education	Number of Incubation Centers		Prevalence of Diseases		Crime recorded against Children
Gender Parity Index					Crime recorded against Elderly
National Achievement Score					

Figure 26 Social Pillar - Sectors and Indicators

The data for the indicators mentioned above of the Social pillar can be obtained from open public or government domains such as National Sample Survey Office, All India Survey on Higher Education, National Achievement Survey Scores, NCERT (National Council of Educational Research and Training), Atal Innovation Mission, PMAY (Pradhan Mantri Awas Yojana) mission details, NITI Aayog, Health Management Information Systems, Police Department of NCRB (National Crime Records Bureau). The data for few of the indicators such as open space available and the availability of public services can be obtained from Development authority of the city and the records available with the ULB.

The Governance Pillar

The Governance pillar examines the sectoral performances of the Urban Local Bodies across a set of 7 sectors, which encompasses its obligatory functionalities. The Governance sector examines that how committed is the Urban Local Body and its staff in corporate governance and creating value on long-term basis by considering the accountability, transparency, conduct, and culture of the ULB.

As governance is an integral part and is a cross-sectoral aspect of all the obligations of the Urban local Body as per the 74th Amendment act, it is thus given a higher weightage of 40% when compared to social and environment pillar. The 7 sectors of Governance are Human Resources, Governance effectiveness, Gender, Participation, Transparency and Accountability, Planning, and Financial well-being and budget. The indicators of Governance have been developed in such a way that it gives a holistic view of the governance i.e., managing and handling of all the sectors and the management of financial budget and well-being and the transparency that it provides to its citizens regarding the same. The Human resources assess the staff of the Urban Local body in terms of its adequacy, gender equality, and leadership stability. The governance covers the administrative aspects of the municipal body. The participation sector delves the involvement of citizens in decision making and voting, and local representation. The transparency and accountability sector evaluates the transparency in the governance by considering the disclosure of assets, budget, performance reports, and corruption against employees. The sector of planning evaluates urban local bodies on their preparation, implementation, and execution of urban planning. The financial well-being and budget assess the effectiveness with which the public funds are utilized and managed. The figure given below (27(a), 27(b)) represent the indicators and sectors of the governance pillar.













Human Resources	Governance Effectiveness	Gender	Participation
 Adequacy of ULB Staff	 Housing for All	 Proportion of Women Police Personnel	 Voter Turnout
Gender Equality 	Availability of Police Personnel 	Economic Empowerment of Women 	Local Representation 
Leadership Stability 	Citizen Charter 		Community Involvement 
	Establishment Expenditure vs Total Human Resources 		

Figure 27(a) Sectors and Indicators - Governance Pillar

Transparency & Accountability	Planning	Financial Well-Being and Budget
Disclosure of Assets	City Development Plan	Own Revenue vs Total Revenue
Budget Publication	Planning by Town Planners	Tax Collection Efficiency
Publication of Performance Reports	Land Related Laws	Budget Efficiency
Corruption against Employees	Plan Violations	Grants Expenditure Efficiency
		Capital Expenditure per Capita
		Establishment Expenditure per Capita
		Budget Deficit/Surplus
		Participatory Budgeting
		Credit Rating

Figure 28(b) Sectors and Indicators - Governance Pillar

The data sources for the indicators mentioned for the Governance pillar can be obtained from open government portals or domains such as baseline survey conducted by MoHUA (Ministry of Housing and Urban Affairs), information on police organizations in India published by Bureau of Police Research and Development, and the data related to employment which is, Annual employment – unemployment survey published by Ministry of Labour and Employment. For the data that are relevant to the respective Urban Local Bodies, such as its staff, gender equality etc. a baseline survey has to be conducted. Few of the indicators are YES or NO questions that carry binary marking such as if the ULB has published its budget and other performance reports. The data for the indicators of Financial well-being and budget can be obtained by looking at the budget and the account maintained by the Urban Local Bodies.

4.5 Part 2 – ESG Investment-ready Index

The Part 1 i.e., ESG Assessment Framework is carried out in order to declare the city as “ESG Compliant City” whereas the Part 2 ESG Investment-ready Index evaluates the attractiveness of investments i.e., if the urban local body of the city is capable of receiving the funding by evaluating few of the indicators. The difference between part 1 and part 2 is that the part 1 – ESG Assessment Framework evaluates the ULB across 3 pillars of Environment, Social, and Governance in detail whereas the part 2 ESG Investment-ready Index examines the urban local body on a broader sense with respect to priority values as announced by investors.

Many leading funding agencies such as MSCI (Morgan and Stanley Capital International), Coima, and UNPRI (United Nations Principles of Responsible Funding) give preferences to certain indicators before considering to fund any organizations. The UNPRI forms a foundation for all the other funding agencies to create their set of indicators for responsible investing. The principles of UNRI are accompanied by a set of 35 probable actions that institutional investors and asset managers can take to integrate ESG factors into their activities of investment. These actions are related to a variety of issues, including decision-making, transparency, collaboration, active ownership, and the achievement of broader support for these practices from the whole funding agencies, (UNPRI). The PRI's six core principles need organizational investors to:

1. Include ESG issues into analysis of investment and the processes of decision-making.
2. Incorporating ESG issues in the policies and practices of ownership and thus being an active owner.
3. Looking for suitable disclosure regarding the issues of ESG by the organizations where they invest.
4. Promotion of the principles of acceptance an implementation within the industry of investment.
5. Working together in order to improve the effectiveness and efficiency in the implementation of the principles.
6. Lastly, reporting on the progress made and activities done towards the implementation of the Principles.

Many funding agencies follow the same principles that UNPRI has declared as the Principles of Responsible Investing. For instance, Coima follows a holistic set of indicators that support responsible investing and are in line with the United Nations Principles of Responsible Investing, and eight of the United Nation's SDG (Sustainable Development Goals). It is called Coima's proprietary analysis tool that was developed by the Coima City Lab Charter which was established by the company in 2019 in order to provide quantifiable objectives and a scoring system that will help to track the project's performance. (Coima, 2019)

In order to evaluate the ESG performance, the charter has identified specific ESG objectives and metrics for each project that has been categorized as protection, inclusion, and growth which are similar to environmental, social, and governance pillars respectively

of the ESG Framework. The identified ESG objectives and metrics will be calculated through a rating system that further will be used to score the performance. Independent certifications are used by Coima to guarantee certain characteristics, such as air quality and energy efficiency, to help promote green and circular economy, (Coima, 2019). The below figure (Fig 29) depicts the objectives and metrics used by Coima in order to assess the responsible investing.

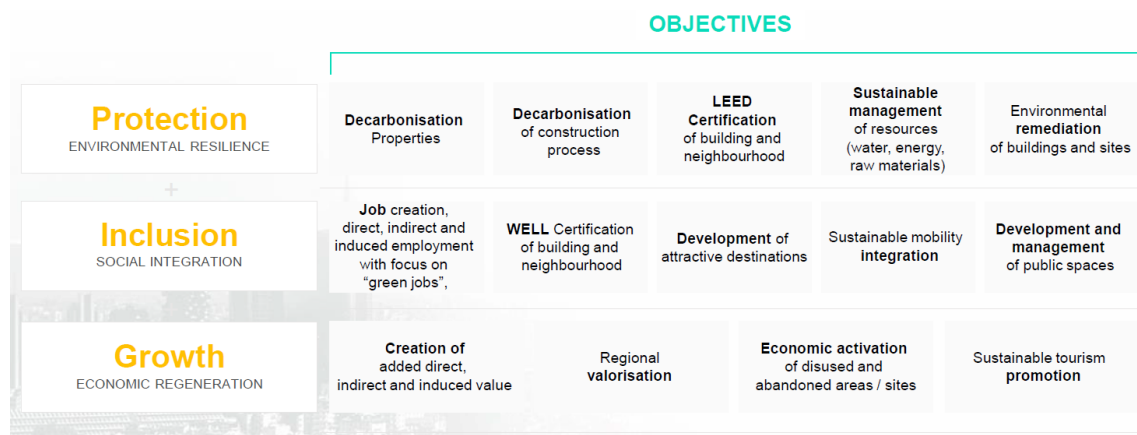


Figure 29 Responsible Investing - Coima and UNPRI

Source: COIMA ESG City Impact Fund, UNPRI, 2020

Thus, the indicators used by UNPRI and other funding agencies such as Coima, MSCI (Morgan and Stanley Capital) in order to make the relevant investment decisions were referred to frame the ESG Investment – ready Index, as these principles used by such important funding agencies will be similar in all the other funding agencies present worldwide. Thus, after referring and review the principles and indicators followed by few prominent funding agencies, the ESG Investment-ready Index was prepared which is mentioned below.

3 Pillars	10 Themes	Indicators
Environment	Climate Change	Financing Environmental Impact & Climate Change Vulnerability
	Natural Capital	Raw Material Sourcing to reduce water stress
	Pollution & Waste	Handling of Electronic Waste
	Environmental Opportunities	Opportunities in Renewable Energy
Social	Human Capital	Human Capital Development & Supply Chain Standards
	Product Liability	Privacy & Data Security
	Stakeholder Involvement	Reducing the controversies by making them involved
	Social Opportunities	Access to Healthcare
Governance	ULB Governance	Transparency & Accountability
	Governance Behavior	Lack of Corruption & Financial Instability

Figure 30 ESG Investment-ready Index

The ESG Investment – ready Index encompasses of three main pillars Environment, Social, and Governance similar to the Part 1 – ESG Assessment Framework.

The first pillar i.e., Environment comprises of four themes namely Climate Change, Natural Capital, Waste and Pollution, and Environmental Opportunities. Each theme is evaluated using single indicator. Thus, it can be seen that more in-depth evaluation is not carried out and it is only a yes or no question. However, due to this it is difficult to get high ratings as either the respective indicators have to be completely performed or nothing at all. The Environment pillar primarily focuses and aims at releasing the requirement for greener cities and a focus on reduction of energy consumption. It is necessary to consider these aspects as these can indicate the city’s effort in conserving and protecting the environment and the effort made in making the city sustainable.

The second pillar i.e., Social comprises of again four themes which are Human capital, liability of products, Stakeholder involvement, and Social opportunities. The social pillar primarily considers the efforts occupied by the city government in order to develop human capital, the privacy, and data security that the urban local body has, the extent of involvement of stakeholders in decision making in order to reduce further controversies, and access to public services such access to healthcare facilities.

Governance, which is the third pillar of the Index comprises of only two indicators. Although, the indicators are only two, but in order to evaluate them, many further subsets have to be considered. Governance consists of two indicators which are ULB Governance, and the behavior of the governance. The ULB governance evaluates the transparency and

accountability that urban local body has in terms of publishing the financial budgets, performance reports and the involvement of stakeholders in budget and important decisions for the city in order to ensure if the governance of the ULB is run smoothly and has no or very less obstructions or hindrances in carrying out the project. The second indicator i.e., governance behavior assesses if there is presence of corruption in the UB staff and the extent of financial instability that the ULB has by assessing the previous year's financial budgets of the Urban Local Body.

Thus, these 10 themes and indicators across three pillars of Environment, Social, and Governance help in determining if the Urban Local Body of the city is capable of accepting the funding from different funding agencies or from open market to upgrade the city in terms of facilities, infrastructure, etc.

4.6 Rating System

The rating system has been defined for both part 1 and part 2 frameworks which are ESG Assessment Framework and ESG Investment – ready Index, respectively. Thus, the rating system will help in evaluating and determining the place where the city stands in order to attract funding.

4.6.1 Part 1 – ESG Assessment Framework

As mentioned in the earlier chapter of 5.3, the ESG assessment framework comprises of 18 sectors and 66 indicators across the three pillars of ESG and the weightage of each pillar of ESG i.e., Environment, Social, and Governance is 30%, 30%, and 40%, respectively. After evaluating all the indicators with the given weightage, the total score or percentage will be considered in determining the rating system.

The ESG Assessment Framework is used to determine if the city is “ESG Compliant City”. Thus, if the score of the ESG Assessment Framework of the city is above 50%, then the city can be declared as “ESG Compliant City” which implies that the ULB of the city is performing and functioning considering the ethics of Environment, Social, and Governance. ESG Compliant cities will be eligible in receiving ESG related grants for the projects from the Central. For this, an ESG committee has to be established at the Centre that evaluates the ESG performance of the ULBs.

4.6.2 Part 2 – ESG Investment-ready Index

As mentioned in the previous chapter of 4.5, the ESG Investment-ready Index evaluates if the urban local body of the city is capable of receiving the funding by evaluating few of the indicators as mentioned in the framework of the ESG Investment-ready Index. The indicators in this index carry equal weightage and each indicator contributes to 10% of the total score.

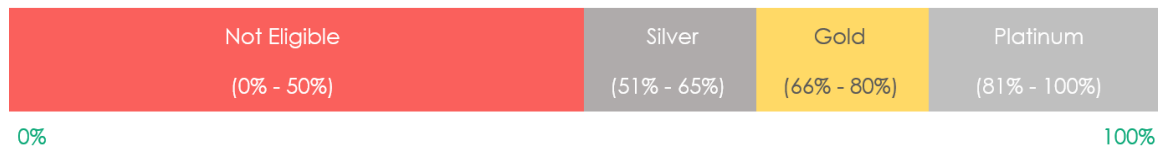


Figure 31 Rating System - ESG Investment-ready Index

According to the rating system of ESG Investment-ready Index, 50% is the minimum score in order to be eligible for the Index. After crossing the eligibility score, further the scores are divided into 3 categories. If the score lies between 51% - 65%, the city will be considered to be in the silver category. Further, for the city to be falling under gold and platinum category, the scores should be in the range of 66% - 80% and 81% - 100%, respectively. Higher the score, higher will be the chances of getting approval of investment from funding agencies.

5. Testing of ESG Frameworks

5.1 Ahmedabad, Gujarat

Further, both the ESG Frameworks prepared i.e., ESG Assessment Framework and ESG Investment-ready Index were tested first to the City of Ahmedabad due to more availability of data. The data for each of the indicators were taken from open Government portals which are openly available for public domain.

5.1.1 Part 1 – ESG Assessment Framework

The data for each of the indicators was obtained and was given scoring according to the scoring methodology designed. Later, all the scores were integrated and aggregated according to the weightage assigned for each of the pillars. The description of scoring of each indicator of all the three pillars are described below.

5.1.1.1 Indicator Description - Ahmedabad

Water Quality

Pillar: Environment

Sector: Emission and Pollution

Indicator	Average pH level of Water
Benchmark	6.5<pH<8.5
Source	Central Pollution Control Board
Indicator Value	7.2
Score	1.00

Hazardous Waste Generation

Pillar: Environment

Sector: Emission and Pollution

Indicator	Percentage of hazardous waste generation in metric tons
Numerator	Total quantity of hazardous waste generation in metric tons
Denominator	Total waste generation
Source	CPCB
Indicator Value	2,600/4000 = 0.65
Score	0.35

Air Quality Index

Pillar: Environment

Sector: Emission and Pollution

Description	AQI of SO ₂ , NO ₂ , PM ₁₀
Benchmark	Lowest city value
Source	AQI Bulletin, CPCB
Indicator Value	Moderate - 34(SO ₂), 22(NO ₂), 143(PM ₁₀)
Score	0.6

Total Tree Cover

Pillar: Environment

Sector: Natural Capital Endowment & Management

Description	Total Tree cover in sq.km / Total area of the city
Source	Environment & Forest, MoSPI
Indicator Value	18.56/464 = 4%
Score	0.04

Total Water Supplied

Pillar: Environment

Sector: Natural Capital Endowment & Management

Description	No. of HHs with improved drinking water source / No. of HHs in the city
Source	National Family Health Survey, Ministry of Health and Family Welfare
Indicator Value	11,25,551 / 11,79,823 = 95.4%
Score	0.95

Swachh Survekshan Score

Pillar: Environment

Sector: Natural Capital Endowment & Management

Description	Swachh Survekshan Score of the city / Score of the rank 1 city of that respective year
Source	Swachh Survekshan Survey
Indicator Value	5207/5647 = 92%
Score	0.92

Wastewater Treated

Pillar: Environment

Sector: Natural Capital Endowment & Management

Description	Amount of wastewater treated/Total water supplied to HHs
Source	The wastewater data received at treatment plants can be obtained from the ULB
Indicator Value	50/5000 MLD = 1%

Score	0.01
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Sewerage Network

Pillar: Environment

Sector: Natural Capital Endowment & Management

Description	No. of HHs with Sewerage Facility/No. of HHs in the City
Source	ULB / Water and Sewerage Utility
Indicator Value	10,85,437 / 11,79,823 = 92%
Score	0.92

Access to Individual Toilets

Pillar: Environment

Sector: Public Infrastructure Facilities

Description	Total HHs with access to individual toilets / Total no. of HHs
Source	Swachhata Status in India, MoSPI
Indicator Value	11,56,226 / 11,79,823 = 98%
Score	0.98

Access to underground Sewerage System

Pillar: Environment

Sector: Public Infrastructure Facilities

Description	Total HHs with access to underground sewerage / Total no. of HHs
Source	Swachhta Status in India, MoSPI
Indicator Value	10,97,235 / 11,79,823 = 93%
Score	0.93

Population using Public Toilets.

Pillar: Environment

Sector: Public Infrastructure Facilities

Description	Total HHs using public toilets / Total no. of HHs
Source	Swachhta Status in India, MoSPI
Indicator Value	5,54,516 / 11,79,823 = 46.9%
Score	0.47

Road density per 1000 sq.km

Pillar: Environment

Sector: Public Infrastructure Facilities

Description	Total road length / per sq.km
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Source	GIS data from the ULB
Indicator Value	5.15 km of road per sq.km
Score	0.26

Access to public transport facility

Pillar: Environment

Sector: Public Infrastructure Facilities

Description	Population using public transport/Total population of the City
Source	Road Transport yearbook, MoSPI
Indicator Value	41,90,909 / 8059441 = 51.99%
Score	0.52

Energy Requirement vs Energy Supplied.

Pillar: Environment

Sector: Energy Consumption

Description	The difference between required and supplied energy for the year
Source	Joint initiative of GoG & Gol, Ministry of Power
Indicator Value	Average power deficit/surplus (-/+) = -13%
Score	0.87

Energy generated from renewable sources.

Pillar: Environment

Sector: Energy Consumption

Description	Percentage of energy generated from renewable sources out of total energy generation
Source	CEA (Central Electricity Authority)
Indicator Value	5,286.54 / 25,174 MW = 21%
Score	0.21

Disaster Reduction Strategies

Pillar: Environment

Sector: City Resilience

Description	Check if the city has implemented local disaster reduction strategies (Y/N)
Source	Survey - Secondary Research / ULB
Indicator Value	Yes
Score	1

Number of deaths due to disaster

Pillar: Environment

Sector: City Resilience

Description	Number of deaths & directly affected persons attributed to disasters/Per lakh of population
Source	Accidental Deaths, NCRB (National Crime Records Bureau), Ministry of Home Affairs
Indicator Value	31.3 per lakh of population
Score	0.69

Household Expenditure on Education

Pillar: Social

Sector: Education

Description	HH expenditure on education/Total HH expenditure
Source	NSSO (National Sample Survey Office) - Pin code level
Indicator Value	Average of 8% of expenditure was on education
Score	0.08

Literacy Rate

Pillar: Social

Sector: Education

Description	Literacy Rate of the city population
Source	DISE (District Information System for Education) - District level Data / Census Report of the City
Indicator Value	88.29% as of 2011 Census
Score	0.89

Schools with access to digital education

Pillar: Social

Sector: Education

Description	Pupil-Teacher Ratio at the Tertiary Level
Source	AISHE (All India Survey on Higher Education) - District Level Data
Indicator Value	25% deviation from the benchmark
Score	0.75

Gender Parity Index

Pillar: Social

Sector: Education

Description	Ration of male and female who can access education
Source	AISHE (All India Survey on Higher Education) - District Level Data, MoHRD
Indicator Value	0.72 - as published by AISHE, 2016
Score	0.72

National Achievement Score

Pillar: Social

Sector: Education

Description	National Achievement Survey Scores for Class 3, 5 & 8
Source	National Achievement Survey Scores, NCERT (National Council of Educational Research and Training) - District level Data
Indicator Value	21.6 - as per National Achievement Survey Scores, NCERT
Score	0.21

Unemployment Rate

Pillar: Social

Sector: Employment and Economic Opportunities

Description	Percentage of unemployed population who are eligible of employment
Source	Employment & Unemployment Situation in Cities & Towns in India, National Sample Survey Report and MSME Census Report
Indicator Value	160 per 1000 population = 16%
Score	0.84

Credit Availability

Pillar: Social

Sector: Employment and Economic Opportunities

Description	Credit Disbursed/Per lakh Population
Source	RBI (Reserve Bank of India) - District Level Data
Indicator Value	6% of credit disbursed per lakh population
Score	0.06

Number of Incubation Centres/Skill Development Centres

Pillar: Social

Sector: Employment and Economic Opportunities

Description	No. of Incubation (or Skill Development) Centers/ Per lakh of population
Source	Atal Innovation Mission
Indicator Value	0.275 Incubators per lakh of population
Score	0.16

Beneficiaries under PMAY

Pillar: Social

Sector: Poverty and Inequality

Description	No. of beneficiary HHs under PMAY/No. of eligible HHs under PMAY
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Source	PMAY (Pradhan Mantri Awas Yojana)
Indicator Value	86,880 / 3,94,912 = 21.98%
Score	0.22

Slum Population

Pillar: Social

Sector: Poverty and Inequality

Description	Slum population of the city/Total population of the city
Source	ULB Records
Indicator Value	13,70,104 resides in Slum (17% of Total Population)
Score	0.83

Household Expenditure on Health

Pillar: Social

Sector: Health

Description	HH expenditure on Health/Total HH expenditure
Source	NSSO (National Sample Survey Office) - District level data
Indicator Value	Average of 15% of expenditure was on education
Score	0.15

Accredited Public Health Facilities

Pillar: Social

Sector: Health

Description	Total accredited public health facilities/Total no. of public health facilities
Source	Public Health, NITI Aayog
Indicator Value	Average of 38% of total hospital in Ahmedabad are accredited
Score	0.38

Prevalence of Diseases

Pillar: Social

Sector: Health

Description	Prevalence of: Water borne diseases (Jaundice, Typhoid) Vector borne Diseases (Malaria, Dengue) COVID -19 (Current Scenario)
Source	Disease Burden Profile, HMIS (Health Management Information Systems)
Indicator Value	33% of deaths were due to diseases
Score	0.67

Open Space for Public Use

Pillar: Social

Sector: Social Infrastructure

Description	Area open for Public use/Total area
Source	Land Use/GIS plans, Records available with ULB/Development Authority
Indicator Value	9.28 / 464 sq.km
Score	0.002

Availability of Public Services

Pillar: Social

Sector: Social Infrastructure

Description	Availability of Public Services such as: Music, Drama Centre, Cinema Halls Parks, Restaurants, Recreational Club, per lakh of population
Source	Urban Local Body and concerned authority
Indicator Value	30 per lakh population
Score	0.03

Prevalence of Violent Crime

Pillar: Social

Sector: Safety and Security

Description	Total Violent Crimes/Per lakh Population
Source	Police Department, NCRB (National Crime Records Bureau)
Indicator Value	189 Crimes per lakh population
Score	0.98

Adequacy of ULB Staff

Pillar: Governance

Sector: Human Resources

Description	Actual staff strength of ULB staff/ Sanctioned staff strength of ULB staff
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Average deviation of 17% was found from the sanctioned ULB staff strength
Score	0.83

Gender Equality

Pillar: Governance

Sector: Human Resources

Description	Percentage of women in municipality workforce
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Average of 37% of women workforce was found in the ULB staff strength
Score	0.37

Leadership Stability

Pillar: Governance

Sector: Human Resources

Description	Number of Commissioners in the last five years
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	3 Commissioners in last 5 years (11% of deviation from benchmark)
Score	0.89

Housing for All

Pillar: Governance

Sector: Governance Effectiveness

Description	Total demand for Houses/Total no. of HHs
Source	Baseline Survey by Ministry of Housing and Urban Affairs
Indicator Value	52% of affordable Houses
Score	0.52

Availability of Police Personnel

Pillar: Governance

Sector: Governance Effectiveness

Description	Actual filled strength of police/standard strength of police
Source	Data on Police Organizations in India published by Bureau of Police Research & Development
Indicator Value	Average deviation of 18% was found from the standard strength of police
Score	0.82

Citizen Charter

Pillar: Governance

Sector: Governance Effectiveness

Description	Whether ULB has a Citizen Charter? (Y/N)
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Establishment Expenditure vs Total Human Resources

Pillar: Governance

Sector: Governance Effectiveness

Description	Total establishment expenditure of ULB/Total human resources
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	1582 Rs in Cr - Establishment Expenditure (2019-20) - 33% of the total expenditures
Score	0.33

Proportion of Women Police Personnel

Pillar: Governance

Sector: Gender

Description	Actual filled strength of Women/Actual filled strength of Police
Source	Data on Police Organizations in India published by Bureau of Police Research & Development
Indicator Value	28% of Total Police strength was women force
Score	0.28

Economic Empowerment of Women

Pillar: Governance

Sector: Gender

Description	Total number of Female Labour Force
Source	Annual Employment-Unemployment Survey published by Ministry of Labour & Employment
Indicator Value	27% of Total Labour Force was women force
Score	0.27

Voter Turnout

Pillar: Governance

Sector: Participation

Description	Number of people who voted in the last municipal elections/No. of registered voters in the last municipal elections
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	53% of the Total registered voters had voted for the Municipal Elections
Score	0.53

Local Representation

Pillar: Governance

Sector: Participation

Description	No. of local officials elected/Per lakh of population
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Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	37 local officials elected per lakh population
Score	0.37

Community Involvement

Pillar: Governance

Sector: Participation

Description	No. of Municipal Ward Committees formed/Total no. of wards
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	26 out of 48 wards have Municipal Ward Committees
Score	0.54

Disclosure of Assets

Pillar: Governance

Sector: Transparency and Accountability

Description	Are the elected and government officials mandated to disclose their income and assets? (Y/N)
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Budget Publication

Pillar: Governance

Sector: Transparency and Accountability

Description	Has the municipality published its budgets and account in the last three years? (Y/N)
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Publication of Performance Reports

Pillar: Governance

Sector: Transparency and Accountability

Description	Are service-level performance reports regularly published publicly by the municipality every year? (Y/N)
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Corruption against Employees

Pillar: Governance

Sector: Transparency and Accountability

Description	No. of municipal employees charged under corruption cases in the last year/Total municipal employees
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	An average of 37% of total municipal employees were charged against corruption with more than a Crore
Score	0.43

City Development Plan

Pillar: Governance

Sector: Planning

Description	Does the city have an updated development plan? (Updated in the last ten years)
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Planning by Town Planners

Pillar: Governance

Sector: Planning

Description	Is the development plan preparation & implementation done by qualified town planners?
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Land Related Laws

Pillar: Governance

Sector: Planning

Description	Does the municipality have a land related law?
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Plan Violations

Pillar: Governance

Sector: Planning

Description	No of plan violations/Total plans sanctioned
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	44% of the total plans sanctioned were violated

Score	0.56
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Own Revenue vs Total Revenue

Pillar: Governance

Sector: Financial well-being and budget

Description	Own revenue of ULB/Total revenue of ULB including grants
Source	AMC Budget of last 5 years
Indicator Value	72% of the total revenue of the UB was generated on its own
Score	0.72

Tax Collection Efficiency

Pillar: Governance

Sector: Financial well-being and budget

Description	Total amount of property tax collected/Total amount of property tax billed by ULB
Source	AMC Budget of last 5 years
Indicator Value	83% of the total property tax billed was collected by the ULB
Score	0.83

Budget Efficiency

Pillar: Governance

Sector: Financial well-being and budget

Description	Actual revenue of the municipality/Budgeted revenue of the municipality
Source	AMC Budget of last 5 years
Indicator Value	81% of the AMC budget was found to be efficient
Score	0.81

Grants Expenditure Efficiency

Pillar: Governance

Sector: Financial well-being and budget

Description	Grant's expenditure efficiency/Amount of grants received
Source	AMC Budget of last 5 years
Indicator Value	69% of the AMC budget grant efficiency was found to be efficient
Score	0.69

Capital Expenditure Efficiency

Pillar: Governance

Sector: Financial well-being and budget

Description	Total capital expenditure efficient /Total capital Expenditure
Source	AMC Budget of last 5 years

Indicator Value	91% of the AMC budget capital expenditure efficiency was found to be efficient
Score	0.91

Establishment Expenditure Efficiency

Pillar: Governance

Sector: Financial well-being and budget

Description	Total establishment expenditure/Total establishment Expenditure
Source	AMC Budget of last 5 years
Indicator Value	76% of the AMC budget establishment expenditure efficiency was found to be efficient
Score	0.76

Budget Deficit/Surplus

Pillar: Governance

Sector: Financial well-being and budget

Description	Percentage of Budget deficit/Surplus
Source	AMC Budget of last 5 years
Indicator Value	64% of the AMC budget had deficit/surplus for the last 5 years
Score	0.64

Participatory Budgeting

Pillar: Governance

Sector: Financial well-being and budget

Description	Percentage of ULB budget allocated through participatory budgeting (direct citizen inputs)
Source	AMC Budget of last 5 years
Indicator Value	50% of Participatory budget was found
Score	0.5

Credit Rating

Pillar: Governance

Sector: Financial well-being and budget

Description	What is the credit rating of the municipality?
Source	CRISIL Credit Rating
Indicator Value	AMC is rated AA+
Score	0.8

The results of the ESG Assessment Framework for the city of Ahmedabad, Gujarat are shown as below:

Environment 59%		Social 44%		Governance 68%	
Emission & Pollution	63%	Education	62%	Human Resources	75%
Natural Capital Endowment & Management	32%	Employment & Economic Opportunities	35%	Governance Effectiveness	71%
Public Infrastructure Facilities	60%	Poverty & Inequality	53%	Gender	28%
Energy Consumption	54%	Health	34%	Participation	55%
City Resilience	85%	Social Infrastructure	2%	Transparency & Accountability	82%
		Safety & Security	81%	Planning	91%
				Financial Well-being & Budget	74%

Figure 32 Results of ESG Assessment Framework – Ahmedabad

ESG Assessment Score of Ahmedabad – 58.15%

It was observed that Governance pillar had the highest score with 68%, the lowest score was of the Social pillar with 44% and the score of Environment pillar was 59%. Ahmedabad was ranked the sixth position in Municipal Performance Index 2020 that includes and assess the ULB similar to the indicators included in the Governance pillar. Thus, it is evident from the score as the Governance pillar scored the highest. According to the rating system, as the score of ESG Assessment is above 50% that is 58.15%, Ahmedabad is eligible for the title “ESG Compliant City”.

5.1.2 Part 2 – ESG Investment-ready Index

Further, the Part 2 Framework i.e., ESG Investment-ready Index for Ahmedabad with data available from open sources to the public domain.

3 Pillars	10 Themes	Indicators	Situation in Ahmedabad
Environment	Climate Change	Financing Environmental Impact & Climate Change Vulnerability	✗
	Natural Capital	Raw Material Sourcing to reduce water stress	✓
	Pollution & Waste	Handling of Electronic Waste	✗
	Environmental Opportunities	Opportunities in Renewable Energy	✓
Social	Human Capital	Human Capital Development & Supply Chain Standards	✗
	Product Liability	Privacy & Data Security	✓
	Stakeholder Involvement	Reducing the controversies by making them involved	✗
	Social Opportunities	Access to Healthcare	✓
Governance	ULB Governance	Transparency & Accountability	✓
	Governance Behavior	Lack of Corruption & Financial Instability	✗

Figure 33 Results of Investment-ready Index, Ahmedabad

The following various news articles were referred in order to arrive at the scores for the ESG Investment-ready Index of Ahmedabad.

Figure 34 Sources referred for ESG Investment-ready Index, Ahmedabad.

Ahmedabad’s Score – 50%

It was observed that the score of each pillar was found to be 50% each and the total score was thus 50%. It was observed that Ahmedabad is doing really well in sectors such as managing natural capital of water by reducing stress, making use of renewable energy, privacy, and data security of people in the city and also in the ULB, healthcare facilities

and the governance of ULB in terms of transparency and accountability. Along with these, it was observed that Ahmedabad has the scope in improvement in the few sectors such as tackling climate change issues, handling of hazardous waste, development of human capital, stakeholder involvement in making ULB decisions to reduce the further controversies and obstacles in the project, and financial stability and corruption in the ULB. Thus, there is a room for improvement for the following sectors for the city of Ahmedabad.

According to the rating system defined, as the score of Ahmedabad is 50%, it is just eligible for the Investment-ready Index and falls in the silver category.

5.2 Indore, Madhya Pradesh

Further, both the ESG assessment frameworks were tested for the city of Indore, Madhya Pradesh. Indore was chosen as its population is comparable with Ahmedabad and comes under the category of tier – 2 city. Also, as Indore has bagged many awards and rankings for many other existing indices and frameworks such as Swachh Survekshan, Municipal Performance and Ease of Living, the city of Indore thus can be tested for the ESG Assessment frameworks and the results can be used to compare with Ahmedabad in order to get a good understanding of the cities and also the ESG frameworks.

5.2.1 Part 1 – ESG Assessment Framework

The data for each of the indicators was obtained and was given scoring according to the scoring methodology designed. Later, all the scores were integrated and aggregated according to the weightage assigned for each of the pillars. The description of scoring of each indicator of all the three pillars are described below.

5.2.1.1 Indicator Description – Indore

Water Quality

Pillar: Environment

Sector: Emission and Pollution

Indicator	Average pH level of Water
Benchmark	6.5<pH<8.5
Source	Water Quality Monitoring, CPCB
Indicator Value	7.3 pH (within the benchmark)

Score	1.00
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Hazardous Waste Generation

Pillar: Environment

Sector: Emission and Pollution

Description	Percentage of hazardous waste generation in metric tons / Total quantity of hazardous waste generation in metric tons
Source	National inventory of Hazardous waste generation, CPCB
Indicator Value	257/1115 MT = 0.236
Score	0.67

Air Quality Index

Pillar: Environment

Sector: Emission and Pollution

Description	AQI of SO ₂ , NO ₂ , PM ₁₀
Benchmark	Lowest city value
Source	AQI Bulletin, CPCB
Indicator Value	Moderate - 8(SO ₂), 8(NO ₂), 64(PM ₁₀)
Score	0.68

Total Tree Cover

Pillar: Environment

Sector: Natural Capital Endowment and Management

Description	Total Tree cover in sq.km / Total area of the city
Source	Environment & Forest, MoSPI
Indicator Value	100.7/530 = 19% (53% deviation from mean)
Score	0.47

Total Water Supplied

Pillar: Environment

Sector: Natural Capital Endowment and Management

Description	No. of HHs with improved drinking water source / No. of HHs in the city
Source	National Family Health Survey, Ministry of Health and Family Welfare
Indicator Value	5,84,586 / 6,49,540 = 90%
Score	0.9

Swachh Survekshan Score

Pillar: Environment

Sector: Natural Capital Endowment and Management

Description	Swachh Survekshan Score of the city / Score of the rank 1 city of that respective year
Source	Swachh Survekshan Survey
Indicator Value	5647/5647 = 100%
Score	1

Wastewater Treated

Pillar: Environment

Sector: Natural Capital Endowment and Management

Description	Amount of wastewater treated/Total water supplied to HHs
Source	The wastewater data received at treatment plants can be obtained from the ULB
Indicator Value	7.56/21 MLD = 36%
Score	0.36

Sewerage Network

Pillar: Environment

Sector: Natural Capital Endowment and Management

Description	No. of HHs with Sewerage Facility/No. of HHs in the City
Source	ULB / Water and Sewerage Utility
Indicator Value	5,97,576 / 6,49,540 = 92%
Score	0.92

Access to Individual Toilets

Pillar: Environment

Sector: Public Infrastructure Facilities

Description	Total HHs with access to individual toilets / Total no. of HHs
Source	Swachhta Status in India, MoSPI
Indicator Value	6,23,558 / 6,49,540 = 98%
Score	0.96

Access to Underground Sewerage System

Pillar: Environment

Sector: Public Infrastructure Facilities

Description	Total HHs with access to underground sewerage / Total no. of HHs
Source	Swachhta Status in India, MoSPI
Indicator Value	6,04,072 / 6,49,540 = 93%
Score	0.92

Population using Public Toilets.

Pillar: Environment

Sector: Public Infrastructure Facilities

Description	Total HHs using public toilets / Total no. of HHs
Source	Swachhta Status in India, MoSPI
Indicator Value	3,37,760 / 6,49,540 = 46.9%
Score	0.52

Road Density per 1000 sq.km

Pillar: Environment

Sector: Public Infrastructure Facilities

Description	Total road length / per 100 sq.km
Source	GIS data from the ULB
Indicator Value	35 km per 100 sq.km road
Score	0.41

Access to Public Transport Facility

Pillar: Environment

Sector: Public Infrastructure Facilities

Description	Population using public transport/Total population of the City
Source	Road Transport yearbook, MoSPI
Indicator Value	22,32,580 / 30,17,000 = 74%
Score	0.74

Energy Requirement vs Energy Supplied.

Pillar: Environment

Sector: Energy Consumption

Description	The difference between required and supplied energy for the year
Source	Joint initiative of GoG & Gol, Ministry of Power
Indicator Value	Average power deficit/surplus (-/+) = -8%
Score	0.92

Energy generated from Renewable Sources.

Pillar: Environment

Sector: Energy Consumption

Description	Percentage of energy generated from renewable sources out of total energy generation
Source	Power Madhya Pradesh, CEA (Central Electricity Authority)
Indicator Value	20% of the total energy was produced from renewable sources
Score	0.2

Disaster Reduction Strategies

Pillar: Environment

Sector: City Resilience

Description	Check if the city has implemented local disaster reduction strategies (Y/N)
Source	Survey - Secondary Research / ULB
Indicator Value	Yes
Score	1

Number of deaths due to disasters

Pillar: Environment

Sector: City Resilience

Description	Number of deaths & directly affected persons attributed to disasters/Per lakh of population
Source	Accidental Deaths, NCRB (National Crime Records Bureau), Ministry of Home Affairs
Indicator Value	43 people per lakh population
Score	0.82

Household Expenditure on Education

Pillar: Social

Sector: Education

Description	HH expenditure on education/Total HH expenditure
Source	NSSO (National Sample Survey Office) - Pin code level
Indicator Value	Average of 12% of expenditure was on education
Score	0.12

Literacy Rate

Pillar: Social

Sector: Education

Description	Literacy Rate of the city population
Source	DISE (District Information System for Education) - District level Data / Census Report of the City
Indicator Value	85.61% as of 2011 Census
Score	0.85

Schools with access to Digital Education

Pillar: Social

Sector: Education

Description	Pupil-Teacher Ratio at the Tertiary Level
-------------	---

Source	AISHE (All India Survey on Higher Education) - District Level Data
Indicator Value	26% deviation from the benchmark
Score	0.74

Gender Parity Index

Pillar: Social

Sector: Education

Description	Ration of male and female who can access education
Source	AISHE (All India Survey on Higher Education) - District Level Data, MoHRD
Indicator Value	0.67 - as published by AISHE, 2016
Score	0.67
Description	Ration of male and female who can access education

National Achievement Survey Score

Pillar: Social

Sector: Education

Description	National Achievement Survey Scores for Class 3, 5 & 8
Source	National Achievement Survey Scores, NCERT (National Council of Educational Research and Training) - District level Data
Indicator Value	34.52 - as per National Achievement Survey Scores, NCERT
Score	0.34

Unemployment Rate

Pillar: Social

Sector: Employment and Economic Opportunities

Description	Percentage of unemployed population who are eligible of employment
Source	Employment & Unemployment Situation in Cities & Towns in India, National Sample Survey Report and MSME Census Report
Indicator Value	90 per 1000 population = 16%
Score	0.29

Credit Availability

Pillar: Social

Sector: Employment and Economic Opportunities

Description	Credit Disbursed/Per lakh Population
Source	RBI (Reserve Bank of India) - District Level Data
Indicator Value	4% of credit disbursed per lakh population
Score	0.4

Number of Incubation Centres / Skill Development Centres

Pillar: Social

Sector: Employment and Economic Opportunities

Description	No. of Incubation (or Skill Development) Centers/ Per lakh of population
Source	Atal Innovation Mission
Indicator Value	0.162 Incubators per lakh of population
Score	0.09

Beneficiaries under PMAY

Pillar: Social

Sector: Poverty and Inequality

Description	No. of beneficiary HHs under PMAY/No. of eligible HHs under PMAY
Source	PMAY (Pradhan Mantri Awas Yojana)
Indicator Value	21,731 / 60,144 = 36.13%
Score	0.36

Slum Population

Pillar: Social

Sector: Poverty and Inequality

Description	Slum population of the city/Total population of the city
Source	ULB Records
Indicator Value	5,90,257 resides in Slum (29.6% of Total Population)
Score	0.74

Household Expenditure on Health

Pillar: Social

Sector: Health

Description	HH expenditure on Health/Total HH expenditure
Source	NSSO (National Sample Survey Office) - District level data
Indicator Value	Average of 18% of expenditure was on education
Score	0.18

Accredited Public Health Facilities

Pillar: Social

Sector: Health

Description	Total accredited public health facilities/Total no. of public health facilities
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Source	Public Health, NITI Aayog
Indicator Value	Average of 37% of total hospital in Ahmedabad are accredited
Score	0.37

Prevalence of Diseases

Pillar: Social

Sector: Health

Description	Prevalence of: Water borne diseases (Jaundice, Typhoid) Vector borne Diseases (Malaria, Dengue) COVID -19 (Current Scenario)
Source	Disease Burden Profile, HMIS (Health Management Information Systems)
Indicator Value	26% of deaths were due to diseases
Score	0.74

Open space for Public use

Pillar: Social

Sector: Social Infrastructure

Description	Area open for Public use/Total area
Source	Land Use/GIS plans, Records available with ULB/Development Authority
Indicator Value	21.2 / 530 sq.km
Score	0.004

Availability of Public Services

Pillar: Social

Sector: Social Infrastructure

Description	Availability of Public Services such as: Music, Drama Centre, Cinema Halls Parks, Restaurants, Recreational Club, per lakh of population
Source	Urban Local Body and concerned authority
Indicator Value	27 per lakh population
Score	0.27

Prevalence of Violent Crimes

Pillar: Social

Sector: Social Infrastructure

Description	Total Violent Crimes/Per lakh Population
Source	Police Department, NCRB (National Crime Records Bureau)
Indicator Value	342 Crimes per lakh population

Score	0.77
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Adequacy of ULB Staff

Pillar: Governance

Sector: Human Resources

Description	Actual staff strength of ULB staff/ Sanctioned staff strength of ULB staff
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Average deviation of 17% was found from the sanctioned ULB staff strength
Score	0.83

Gender Equality

Pillar: Governance

Sector: Human Resources

Description	Percentage of women in municipality workforce
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Average of 42% of women workforce was found in the ULB staff strength
Score	0.42

Leadership Stability

Pillar: Governance

Sector: Human Resources

Description	Number of Commissioners in the last five years
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	3 Commissioners in last 5 years
Score	0.86

Housing for All

Pillar: Governance

Sector: Governance Effectiveness

Description	Total demand for Houses/Total no. of HHs
Source	Baseline Survey by Ministry of Housing and Urban Affairs
Indicator Value	61% of affordable Houses
Score	0.61

Availability of Police Personnel

Pillar: Governance

Sector: Governance Effectiveness

Description	Actual filled strength of police/standard strength of police
Source	Data on Police Organizations in India published by Bureau of Police Research & Development
Indicator Value	Average deviation of 22% was found from the standard strength of police
Score	0.78

Citizen Charter

Pillar: Governance

Sector: Governance Effectiveness

Description	Whether ULB has a Citizen Charter? (Y/N)
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Establishment Expenditure vs Total Human Resources

Pillar: Governance

Sector: Governance Effectiveness

Description	Total establishment expenditure of ULB/Total human resources
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	1134 Rs in Cr - Establishment Expenditure (2019-20) - 33% of the total expenditures
Score	0.34

Proportion of Women Police Personnel

Pillar: Governance

Sector: Gender

Description	Actual filled strength of Women/Actual filled strength of Police
Source	Data on Police Organizations in India published by Bureau of Police Research & Development
Indicator Value	31% of Total Police strength was women force
Score	0.31

Economic Empowerment of Women

Pillar: Governance

Sector: Gender

Description	Total number of Female Labour Force
Source	Annual Employment-Unemployment Survey published by Ministry of Labour & Employment
Indicator Value	37% of Total Labour Force was women force
Score	0.37

Voter Turnout

Pillar: Governance

Sector: Participation

Description	Number of people who voted in the last municipal elections/No. of registered voters in the last municipal elections
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	66% of the Total registered voters had voted for the Municipal Elections
Score	0.66

Local Representation

Pillar: Governance

Sector: Participation

Description	No. of local officials elected/Per lakh of population
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	42 local officials elected per lakh population
Score	0.42

Community Involvement

Pillar: Governance

Sector: Participation

Description	No. of Municipal Ward Committees formed/Total no. of wards
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	69 out of 69 wards have Municipal Ward Committees
Score	1

Disclosure of Assets

Pillar: Governance

Sector: Transparency and Accountability

Description	Are the elected and government officials mandated to disclose their income and assets? (Y/N)
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Budget Publication

Pillar: Governance

Sector: Transparency and Accountability

Description	Has the municipality published its budgets and account in the last three years? (Y/N)
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Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Publication of Performance Reports

Pillar: Governance

Sector: Transparency and Accountability

Description	Are service-level performance reports regularly published publicly by the municipality every year? (Y/N)
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Corruption against Employees

Pillar: Governance

Sector: Transparency and Accountability

Description	No. of municipal employees charged under corruption cases in the last year/Total municipal employees
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	An average of 21% of total municipal employees were charged against corruption with more than a Crore
Score	0.79

City Development Plan

Pillar: Governance

Sector: Planning

Description	Does the city have an updated development plan? (Updated in the last ten years)
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Planning by Town Planners

Pillar: Governance

Sector: Planning

Description	Is the development plan preparation & implementation done by qualified town planners?
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Land related laws

Pillar: Governance

Sector: Planning

Description	Does the municipality have a land related law?
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	Yes
Score	1

Plan Violations

Pillar: Governance

Sector: Planning

Description	No of plan violations/Total plans sanctioned
Source	Baseline survey conducted of the ULB - Secondary Research
Indicator Value	39% of the total plans sanctioned were violated
Score	0.61

Own revenue vs Total Revenue

Pillar: Governance

Sector: Financial well-being and Budget

Description	Own revenue of ULB/Total revenue of ULB including grants
Source	AMC Budget of last 5 years
Indicator Value	76% of the total revenue of the UB was generated on its own
Score	0.76

Tax Collection Efficiency

Pillar: Governance

Sector: Financial well-being and Budget

Description	Total amount of property tax collected/Total amount of property tax billed by ULB
Source	AMC Budget of last 5 years
Indicator Value	87% of the total property tax billed was collected by the ULB
Score	0.87

Budget Efficiency

Pillar: Governance

Sector: Financial well-being and Budget

Description	Actual revenue of the municipality/Budgeted revenue of the municipality
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Source	AMC Budget of last 5 years
Indicator Value	82% of the AMC budget was found to be efficient
Score	0.82

Grants Expenditure Efficiency

Pillar: Governance

Sector: Financial well-being and Budget

Description	Grant's expenditure efficiency/Amount of grants received
Source	AMC Budget of last 5 years
Indicator Value	68% of the AMC budget grant efficiency was found to be efficient
Score	0.68

Capital Expenditure Efficiency

Pillar: Governance

Sector: Financial well-being and Budget

Description	Total capital expenditure/Total Capital Expenditure
Source	AMC Budget of last 5 years
Indicator Value	92% of the AMC budget capital expenditure efficiency was found to be efficient
Score	0.92

Establishment Expenditure Efficiency

Pillar: Governance

Sector: Financial well-being and Budget

Description	Total establishment expenditure/Total Establishment Expenditure
Source	AMC Budget of last 5 years
Indicator Value	78% of the AMC budget establishment expenditure efficiency was found to be efficient
Score	0.78

Budget Deficit / Surplus

Pillar: Governance

Sector: Financial well-being and Budget

Description	Percentage of Budget deficit/Surplus
Source	AMC Budget of last 5 years
Indicator Value	69% of the AMC budget had deficit/surplus for the last 5 years
Score	0.69

Participatory Budgeting

Pillar: Governance

Sector: Financial well-being and Budget

Description	Percentage of ULB budget allocated through participatory budgeting (direct citizen inputs)
Source	AMC Budget of last 5 years
Indicator Value	55% of Participatory budget was found
Score	0.55

Credit Rating

Pillar: Governance

Sector: Financial well-being and Budget

Description	What is the credit rating of the municipality?
Source	CRISIL Credit Rating
Indicator Value	IMC is rated AA
Score	0.7

The results of the ESG Assessment Framework for the city of Indore, Madhya Pradesh are shown as below:

Environment 65%		Social 47%		Governance 69%	
Emission & Pollution	69%	Education	64%	Human Resources	74%
Natural Capital Endowment & Management	58%	Employment & Economic Opportunities	23%	Governance Effectiveness	68%
Public Infrastructure Facilities	57%	Poverty & Inequality	73%	Gender	34%
Energy Consumption	51%	Health	30%	Participation	63%
City Resilience	91%	Social Infrastructure	2%	Transparency & Accountability	80%
		Safety & Security	68%	Planning	92%
				Financial Well-being & Budget	74%

Figure 35 Results - ESG Assessment Framework - Indore, Madhya Pradesh

ESG Assessment Score of Indore – 61.19%

It was observed that in case of Indore as well, Governance had the highest score of 69%, Social had the lowest score of 47% and the score of the Environment pillar was 65%. It was observed that when these scores of Indore were compared with Ahmedabad, the city

of Indore was found to be performing better than Ahmedabad in terms of all the three pillars. It is also evident since the city of Indore is performing better from other indices and frameworks such as Swachh Survekshan, Municipal Performance, and Ease of Living. According to the rating system, Indore is eligible for the title “ESG Compliant City” as its score is 61.19% and is above 50%.

5.2.2 Part 2 – ESG Investment-ready Index

Further, the Part 2 Framework i.e., ESG Investment-ready Index for Indore was tested with data available from open sources to the public domain.

3 Pillars	10 Themes	Indicators	Situation in Indore
Environment	Climate Change	Financing Environmental Impact & Climate Change Vulnerability	✓
	Natural Capital	Raw Material Sourcing to reduce water stress	✗
	Pollution & Waste	Handling of Electronic Waste	✓
	Environmental Opportunities	Opportunities in Renewable Energy	✓
Social	Human Capital	Human Capital Development & Supply Chain Standards	✗
	Product Liability	Privacy & Data Security	✓
	Stakeholder Involvement	Reducing the controversies by making them involved	✗
	Social Opportunities	Access to Healthcare	✓
Governance	ULB Governance	Transparency & Accountability	✓
	Governance Behavior	Lack of Corruption & Financial Instability	✗

Figure 36 Results of Investment-ready Index, Indore

The following various news articles were referred in order to arrive at the scores of ESG Investment-ready Index for the city of Indore.

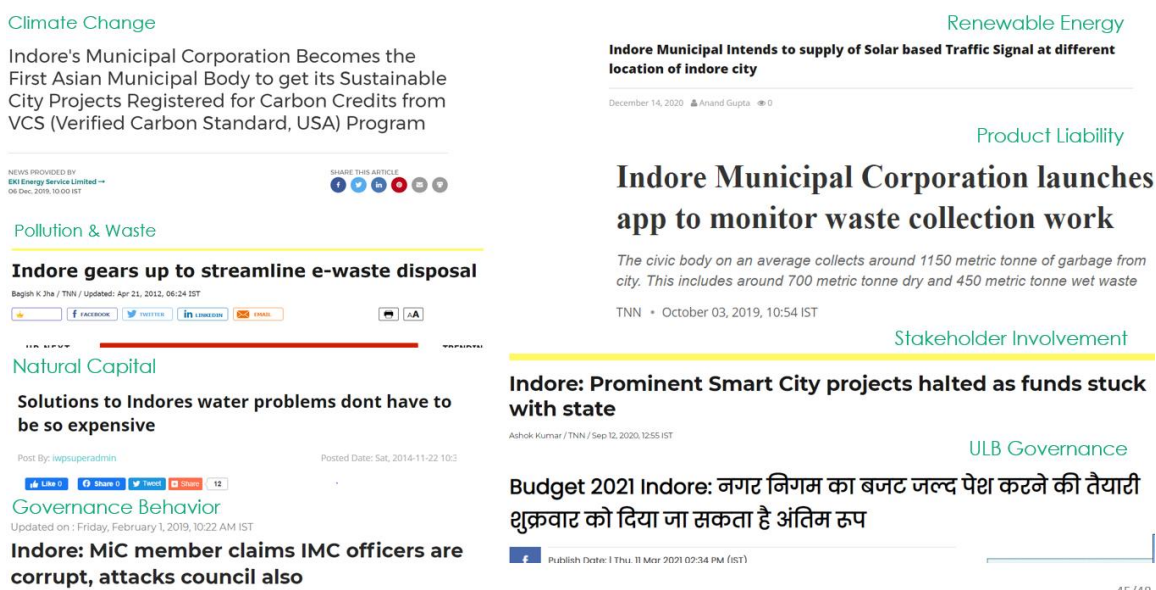


Figure 37 Sources referred - ESG Investment-ready Index, Indore

Indore's Score – 60%

It was observed that the score of the pillars – Social and Governance was found to be 50% each and that of Environment pillar was 75% and the total score was thus 60%. It was observed that Indore is doing really well in sectors such as working towards environmental impact and climate change, making use of renewable energy, handling of waste, privacy, and data security of people in the city and also in the ULB, healthcare facilities and the governance of ULB in terms of transparency and accountability. Along with these, it was observed that Indore has the scope in improvement in the few sectors such as reducing water stress, development of human capital, stakeholder involvement in making ULB decisions to reduce the further controversies and obstacles in the project, and financial stability and corruption in the ULB. Thus, there is a room for improvement for the following sectors for the city of Indore.

According to the rating system defined, as the score of Indore is 60%, it is eligible for the Investment-ready Index and falls in the silver category.

6. Proposed Application Methodology

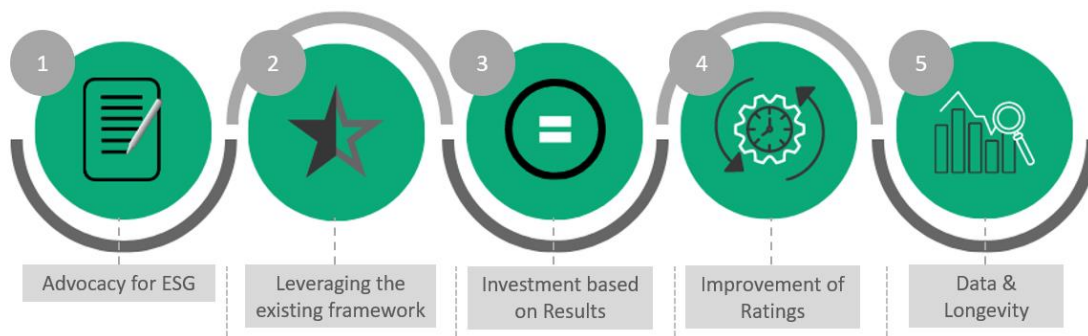


Figure 38 Mainstreaming - Making ESG part of Indian ULBs.

The following five step methodology has been proposed in order to make ESG a part of Indian Urban Local Governments and further mainstream it in the system of Indian urban local bodies. The stakeholders involved in the methodology will be the urban local governments, the ESG committee at the Centre, the private companies, and the funding agencies. An ESG Committee should be formed at the Centre which will play a major role in carrying out the Survey and further making appropriate decisions. The five-step application methodology will be as follows:

- 1. Advocacy for ESG:** Every year, it should be made mandatory to conduct “ESG Compliance Survey” by the ESG Committee that will be formed at the Centre. The ESG Compliance Survey will be similar to the Swachh Survekshan Survey and the Ease of Living Index survey that are carried out annually for all the Urban Local Governments. Over the years, it should be seen that the number of cities participating in this survey should gradually increase.
- 2. Leveraging the existing Framework:** Further, the private companies can be allowed to pitch in to carry out both the part 1 – ESG assessment framework and part 2 – investment-ready Index and the ULBs will be given the ratings as per the assessment carried out. Further, these results should be handed over to the ESG Committee of the Government to proceed to the next steps.
- 3. Investment based on Results:** Based on the results of the ULBs, the eligible ULBs according to the rating system, the ULBs will be granted the following by the ESG Committee. If the ULB is eligible for the part 1 of the ESG assessment, then ESG grants will be released by the ESG Committee at the Centre and if the ULB is found eligible for the part 2 i.e., investment-ready index, then the ULB be eligible for the higher investment from International funding agencies.

4. **Improvement of Ratings:** Further, the ULBs that are not eligible according to the rating system, they will be encouraged to improve. These ULBs can thrive to improve their ratings by improving the performance of the obligatory functions by making efficient use of funds or grants released by State or Central Schemes.
5. **Data and Longevity:** The ESG score results i.e., both part 1 and part 2 of the urban local governments will be valid for a year as the performance of each indicator keeps varying every year and the performance reports and municipal budget are published every year. This will also provide time for the ULBs to further improve their ratings for the period of a year.

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