

# Learnings from Sustainable Infrastructure Analysis



## Summary

The National Bank of Public Works and Services, S.N.C. (Banobras) performs a sustainability<sup>1</sup> analysis on some infrastructure projects based on the [methodological framework developed by the Inter-American Development Bank \(IADB\)](#). The objective of the analysis is to promote the incorporation of sustainable practices in the structuring and development of projects. After analyzing an approximate sample of 130 projects, some learnings were found that are useful for the aforementioned objective.

In this sense, throughout the document 8 lessons learned are presented by the Project Information Office, responsible for the Mexico Projects Hub platform, based on the sustainability analysis, which highlights the importance of information disclosure and other considerations that may represent the first steps towards sustainable infrastructure development. These learnings are based on the experiences acquired and do not generate any value judgment regarding the performance of specific projects, but they do denote the areas of opportunity identified in a general way based on the sample.

It is expected that, based on the consultation of this document and the tools developed by Banobras in matters of sustainability, the actors of the infrastructure ecosystem will have relevant information for decision-making, as well as an overview of the current situation of the Projects. This information represents a starting point for the attention of relevant topics in the current context and is applicable to projects at any stage in their life cycle. Therefore, in the same way that the development of capacities in sustainable infrastructure is expected, more tools and materials will be developed to encourage good practices in the matter.

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<sup>1</sup> Sustainable Infrastructures are built or natural systems that provide services in a manner that ensures economic and financial, social (including gender), environmental (including climate resilience), and institutional sustainability in line with the Global Goals and over the entire infrastructure lifecycle". Global Solutions Initiative, Emergin Markets Sustainability Dialogues, Global Leadership Academy, Deutsche Gesellschaft für Internationale Zusammenarbeit (2020) The Solutions Lab: Scaling for Sustainable Infrastructure.

## Introduction

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Sustainability has become a key factor for the development of countries since, based on inclusive economic growth, care for the environment and natural resources, provision of quality services that meet the needs of all sectors of the population and the strengthening of governments and institutions, fostering an environment with greater opportunities, transparency and adaptation to change, which mitigates risks and fosters a long-term vision. In this context, Banobras carries out a sustainability analysis on some of the infrastructure and energy projects included in the México Projects Hub platform. The intention of the analysis is to provide a general vision of the situation of the projects in relation to the best sustainability practices identified in the methodology document of the Inter-American Development Bank (IADB) "[Attributes and Framework for Sustainable Infrastructure](#)".

The analysis is presented in a sustainability fact sheet per project. This fact sheet includes a set of criteria that represent good practices in sustainability in accordance with the IADB methodological framework. In turn, these criteria are grouped into four pillars, on which the outstanding practices in each project are also identified.



The results shown in the sustainability sheet are derived from the public information available about the project \*. From the application of this sustainability analysis to an approximate sample of 130 projects, some learnings are collected. In this sense, this document is directed to some of the actors of the infrastructure and energy ecosystem (generators, structurers, developers and project investors) to generate knowledge and encourage the application of sustainability practices from their respective roles, in order to contribute to the development of better structured projects.

\* To find out how the information classification is carried out with respect to the good practices of the four pillars, you can consult the [Information Classification document in Tiers](#).

## Learnings from Sustainable Infrastructure Analysis

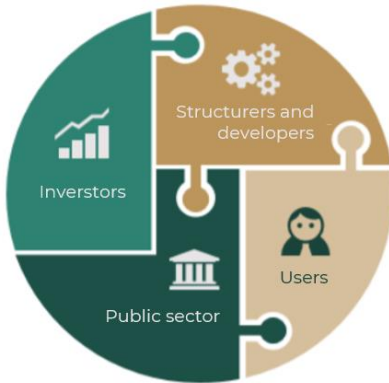
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### 1) Sustainability benefits many actors

When there are infrastructure projects that meet good sustainability practices in the four pillars throughout the life cycle of the projects, better risk management and better service provision are promoted and various factors that are not always obvious are taken into account. but necessary for a better structuring of projects. In this sense, conducting a sustainability analysis is relevant for a large group of actors in the infrastructure ecosystem, given that well-structured projects generate great benefits from different perspectives:

**Investors' Perspective.** A sustainable approach to projects can help reduce the probability of the occurrence of various risks since, from the perspective of the IDB's sustainable infrastructure, factors beyond the financial environment are considered, which, if addressed in the early stages and throughout the investment cycle. life of the projects, are usually decisive in the development and profitability of a project.

**Structurers' and developers' perspective:** Carrying out studies and identifying possible negative and positive impacts in the development of the project, as well as including mitigation measures and providing the highest quantity and quality of information possible, can positively impact the proposals of the developers, since they are more in line with the real needs of the project. Likewise, establishing monitoring and follow-up mechanisms strengthens the capacities of developers and developers, since better risk mitigation mechanisms for future projects can be created from the information collected. In this sense, there



is a clear relationship between the implementation of sustainability practices by the structurers and the developers, where the actions of one group can favor or affect the other.

**Project sponsors' perspective (Public sector):** Sustainability in the public sector is essential, since the objectives of public infrastructure are to provide a service that meets the needs of the population, can be maintained in the long term and not generate negative impacts. In this sense, considering sustainability practices contribute to the achievement of these objectives.

**Users' perspectives:** Having quality services that meet needs and improve living conditions are not only consequences, but also objectives of sustainable infrastructure. Therefore, the perspective and participation of users throughout the life cycle of projects is of great importance.

## 2) Sustainability is applicable beyond the obvious sectors.

When talking about sustainable infrastructure, we generally think of projects that involve renewable energy or water treatment. Although the nature of these projects points to sustainable practices, it is important to clarify that sustainability is applicable to other sectors that are not necessarily obvious or, on the contrary, sectors that are apparently sustainable may not have a good performance in the four pillars. Therefore, it must be remembered that sustainability involves not only the environmental pillar so that its incorporation is not enough to consider a sustainable project.

To exemplify that sustainability is applicable to several sectors, it is enough to see separately the criteria that make up the four pillars of sustainability. In this way, if we consider the detailed risk analysis of the economic-financial pillar, we can see that risks exist and can be identified, mitigated and monitored both in a port and in a social rehabilitation center, the same happens with the control of pollutants that it can be present both in a hospital and in a gas pipeline; in the integration of people with disabilities on a road or in a photovoltaic plant; in the inter-institutional coordination for a border crossing or a railway project.

Specifically, three cases of projects are presented in different sectors that have actions related to sustainability in the four pillars:

### HIGHWAY PROJECT IN SONORA



- Presents significant savings in travel times and vehicle operating costs for users
- It identifies the existing fauna and performs vegetation samples, seeks to reduce emissions of combustion gases, particles and noise.
- Considered the surrounding community
- Integrates with urban development and transportation plans at the federal and municipal levels

### GAS PIPELINE IN THE NORTH

- It includes a Quality Management System for the maintenance of assets.
- Consider using technology and designing specialized equipment to minimize emissions to the atmosphere.
- It contemplates soil restoration measures so as not to affect livestock activities in the area.
- It has a monitoring plan to verify compliance with environmental policies



### WIND PROJECT IN YUCATÁN



- It seeks the creation of high productivity jobs, as well as the growth of the region.
- It contemplates recycling measures for natural resources and construction materials from the construction stage to dismantling.
- It considers a social investment plan, with resources for community improvement actions and the empowerment of women.
- Aligns its activities to the fulfillment of international commitments such as the SDGs.

### 3) There are areas of opportunity for the implementation of sustainability practices in projects

With the approximate sample of 130 projects, it was detected that the information available regarding the sustainability pillars has not incorporated all the elements of sustainability in their structuring and development, and if they have, the information that allows identifying these practices has not been disclosed, as well as monitored. In this sense, there is a gap where projects only report general information regarding sustainability practices when they could implement and disseminate these practices with a level of detail that consistently reflects strategic planning, resources for implementation and monitoring around The sustainability.

Derived from the above, it is considered that carrying out the sustainability analysis of a project is very useful to identify the points that should be addressed to improve performance in sustainability aspects, given the areas of opportunity that have been identified. To the extent that projects go from considering some criteria in a general way to planning and implementing, considering detailed procedures and monitoring mechanisms, the gap will narrow.

### 4) Disclosure is an easy good practice to do.

As mentioned in the previous learning, information is not always disclosed regarding practices that are carried out in projects. An example of this is that, in the economic and financial pillar, where projects usually have a greater amount of information and studies, the classification of not available (N/A) exceeds 50%. In this sense, it is important to note that an initial step to address sustainability in projects is to disclose the information, firstly, to identify the real situation of the project and secondly, to identify the real gaps between what is being executed and what could be achieved.



Additionally, sharing information leads to a series of benefits:

**Low Cost:** It is simple and does not require significant additional investments to include a sustainability section on the project developers' websites, which must be updated periodically.

**Transparency:** Providing information is very important to generate confidence and certainty regarding projects. The information is also very useful for all the actors in the infrastructure ecosystem, but in particular, it facilitates the process of accountability between the public and private sectors, as well as users.

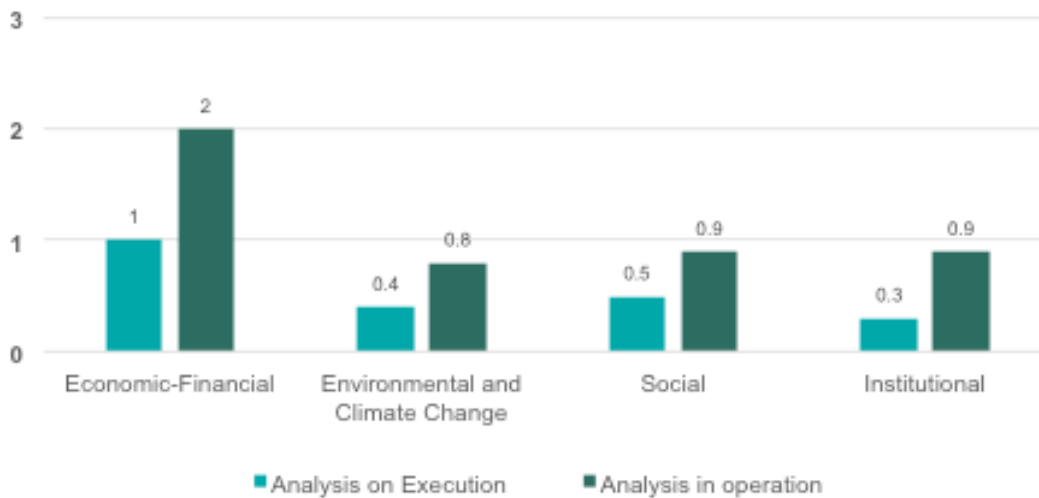
**Monitoring and improvement:** To know the performance of a project, identify risks, as well as areas of opportunity, the disclosure of information is of great importance. Creating indicators and monitoring mechanisms is what allows, on the one hand, to act as planned and to identify in early stages if there are deviations to be addressed and on the other, to know areas of opportunity or spaces for improvement in project performance.

An analyzed case where the disclosure of information by the project generator allowed to have complementary information that reflects its real situation is that of the Maintenance, Rehabilitation and Operation Project (MRO) of the Central Gulf Highway Package. For this, a first analysis was carried out in the execution stage, later additional information was identified, which was made public, which allowed a second analysis in the operation stage, but now with more precise information.



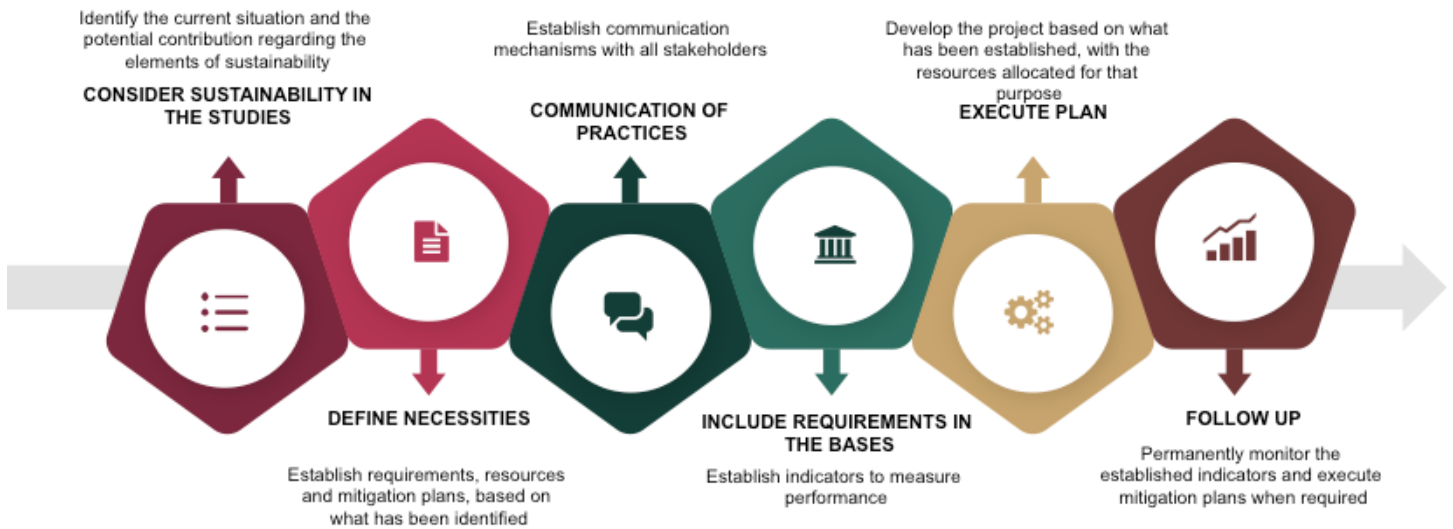
Based on this action, the classification in all the pillars was increased, which shows that part of the gap mentioned in the third learning can be attributed to the aspect of dissemination. However, there is always space or additional information that can be incorporated and that enrich the analysis. The results of the analysis in both stages are presented below.

**Tier average comparison, by pillar, in the Golfo Centro project**



**5) Establish mechanisms to incorporate sustainability practices in early stages facilitate their permanence throughout the life cycle of projects.**

An additional action to the dissemination of information is to establish mechanisms for the incorporation of sustainability practices in the early stages of the project. Although an approach to sustainability can be carried out at any stage, considering it from the preinvestment facilitates its incorporation throughout the life cycle of the projects. The following figure shows, in an illustrated way, how the incorporation in early stages gives the guideline for planned and coordinated actions, in the complete life cycle of the project, that meet previously identified needs. For the first step, it is suggested to consult the document [Classification of Information in Tiers](#), where the sustainability criteria and the questions that must be resolved to address them are shown in detail. This would serve as a checklist of the aspects to consider.

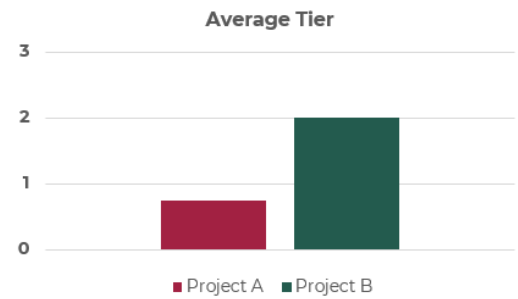


An exercise was carried out in road projects where the identification of sustainability practices in one of the projects served to incorporate sustainability actions into other projects, in early stages. In this way, the actions suggested, implemented or disseminated allowed a better result from one project to another..

Pillar	Actions	Results						
<b>Economic-Financial</b>	<ul style="list-style-type: none"> <li>Provide elements so that social profitability can be monitored (follow-up to Cost Benefit Analysis)</li> <li>Estimate job creation and request a scheduled program</li> <li>Monitor the economic viability of the project throughout the life cycle and make this information public.</li> </ul>	<p><b>Average Tier</b></p> <table border="1"> <tr> <th>Project</th> <th>Average Tier</th> </tr> <tr> <td>Project A</td> <td>2</td> </tr> <tr> <td>Project B</td> <td>2.5</td> </tr> </table>	Project	Average Tier	Project A	2	Project B	2.5
Project	Average Tier							
Project A	2							
Project B	2.5							
<b>Environmental and Climate Change</b>	<ul style="list-style-type: none"> <li>Estimate the impact on reducing Greenhouse Gas (GHG) emissions from preventive maintenance of the pavement</li> <li>Define the public spaces and green areas to be preserved</li> <li>Specify the components of the Environmental Management Plan</li> </ul>	<p><b>Average Tier</b></p> <table border="1"> <tr> <th>Project</th> <th>Average Tier</th> </tr> <tr> <td>Project A</td> <td>1.5</td> </tr> <tr> <td>Project B</td> <td>2</td> </tr> </table>	Project	Average Tier	Project A	1.5	Project B	2
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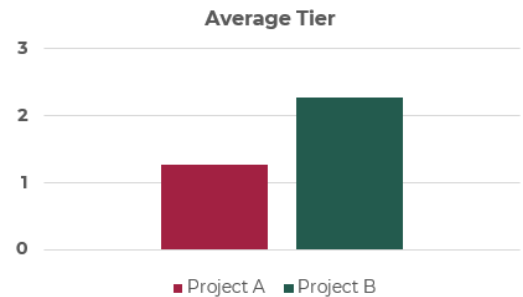
### Social

- Identify the degree of marginalization in the surrounding communities and the potential impact of the project on their development.
- Include the Labor Equality and Non-discrimination policy in the performance program
- To satisfactorily equip and uniform staff
- Communicate and promote the project with users



### Institutional

- Promote the sectorial and institutional integration with the list of agencies approved by the project
- Promote social and environmental policies to follow
- Publish the results obtained by compliance with the Performance Standards in matters of corruption on the FONADIN website
- Ask the developer for training in environmental matters



## 6) The legal framework of the projects intervenes, but it is not everything.

In general, it was possible to identify that the legal framework of the projects is related to the implementation of some of the good practices. For example, projects carried out under the Public Private Partnership scheme have greater availability of information, since they publish feasibility studies indicated in Article 14 of the Law of Public-Private Associations. However, no project is exempt from having areas of opportunity simply by complying with the requirements of the legislation through which it is created. Therefore, the legal framework can only be taken as a reference to know some practices that projects must carry out on a mandatory basis.

In addition to the above, the availability of information is in many cases linked to sector legislation. For example, the energy sector must present the Social Impact Assessments (EVIS) on a mandatory basis, which has not been identified in another sector. However, the fact that there are practices typical of one sector does not mean that they should be exclusive, so identifying them is very useful to promote their implementation in other sectors. In this way, all sectors would be encouraged to have mechanisms to incorporate sustainability actions based on the experience of different sectors.

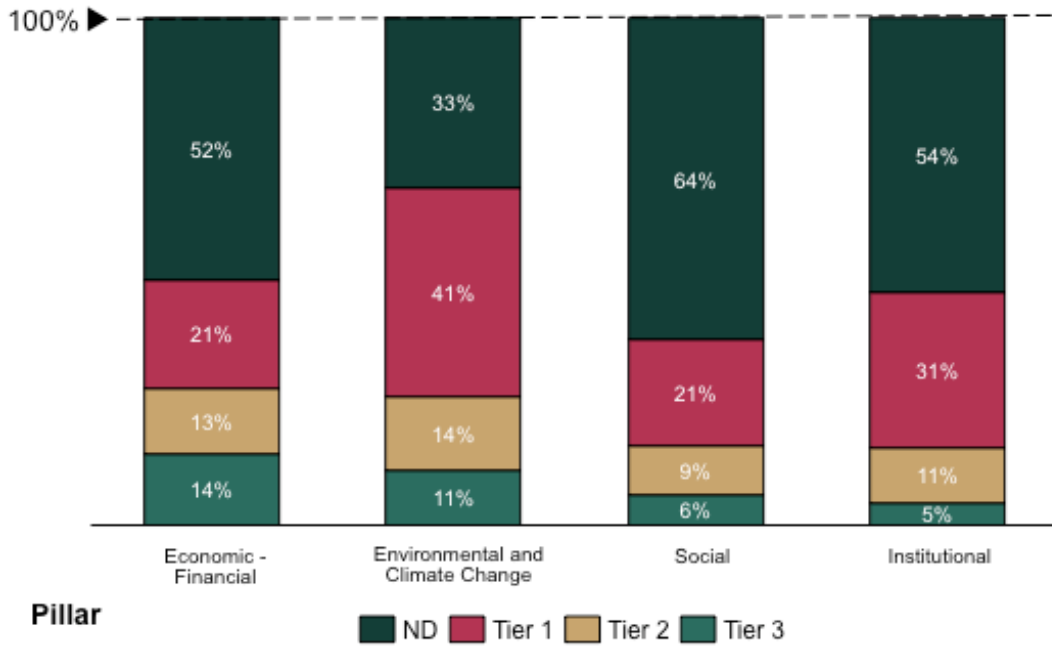
## 7) Capacity development allows to integrate sustainability more effectively.

Based on the team's experience, it was possible to identify that the development of capacities in the personnel allows a deeper knowledge of the projects, where their risks and impacts are considered and, with which, it is easier to identify both good practices and areas of opportunity. Therefore, if these capacities are developed in the teams of project generators (public sector) and structuring, as well as in those of developers and operators, the application of these good practices can be carried out in a timely manner, where they also teams can carry out the follow-up that allows the permanence of these capacities. In this sense, both this document and the one on [Classification of information in Tiers](#) provide the first elements for the development of capacities for the incorporation of sustainability practices in the infrastructure.

## 8) Findings from data.

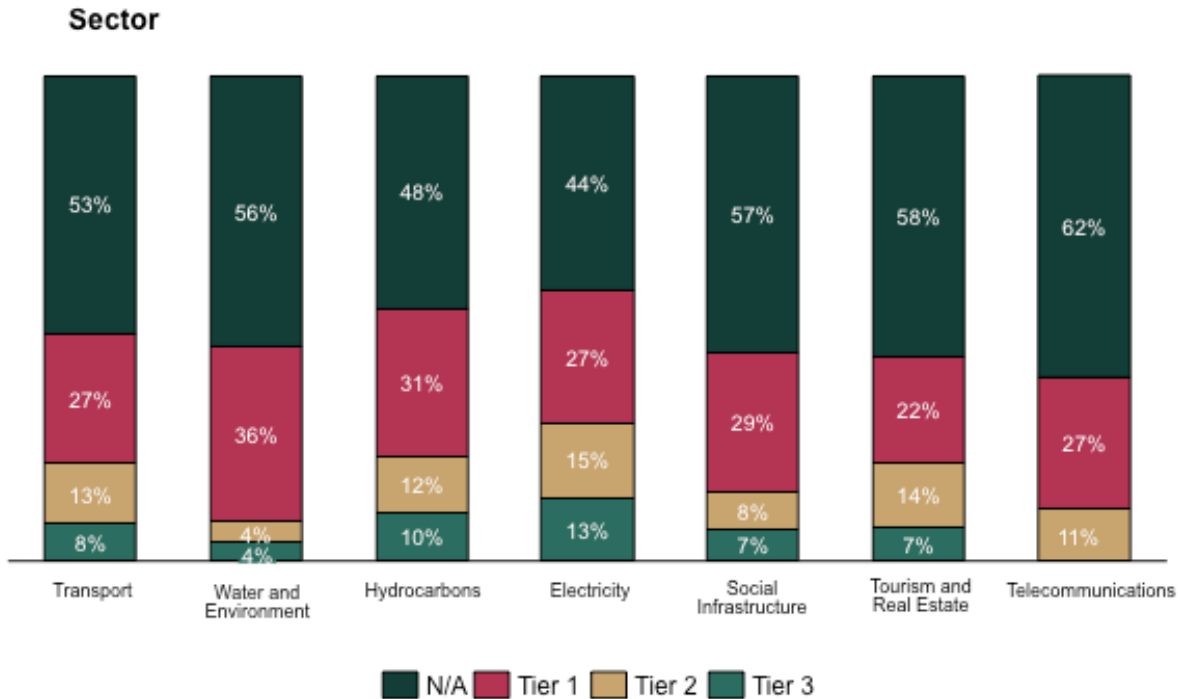
**Finding A** The economic-financial pillar is the one with the greatest depth of information, but not the one with the greatest amount of information.

**Finding B** The pillar that has the greatest area of opportunity both in quantity and in depth of information is the social pillar.



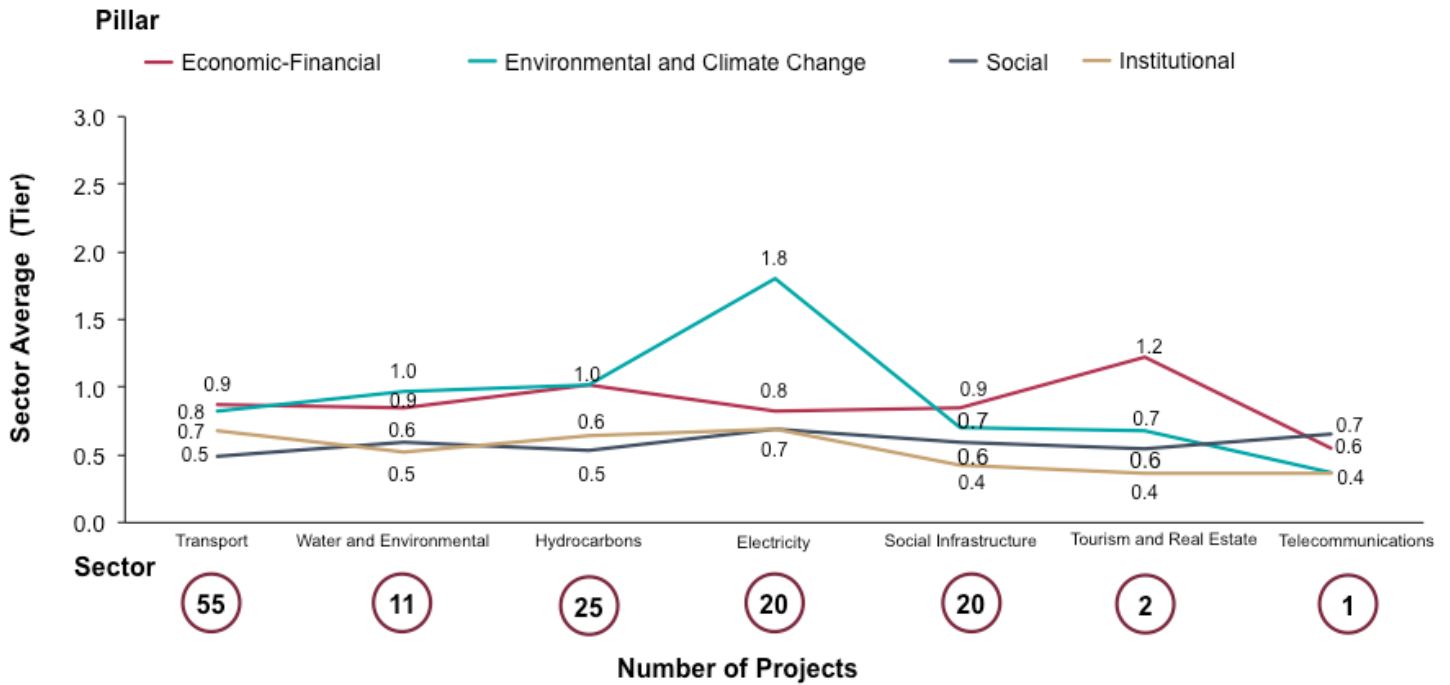
**Finding C** The sector with the greatest depth and quantity of information is electricity. (related to learning 6)

**Finding D** In the water and environment sector, contrary to expectations, the available information on sustainability is scarce and shallow (related to learnings 3 and 4).



**Finding E** In general, the results of the projects do not exceed the Tier 1 classification, which is why an important opportunity area is identified for the development of best practices in sustainability issues. (related to learning 3)





## Conclusion

Infrastructure development is expected to result in projects with greater resilience, higher quality services, positive impacts on society, and better opportunities to adapt to change. Since this benefits both the users and the project generators and investors themselves, by mitigating risks and reducing costs derived from them.

To achieve this, it is considered that, with the aforementioned learnings, simple steps can be identified to start with the incorporation of sustainable aspects. These steps are applicable to both existing and new projects, considering that the infrastructure has a long-term useful life and, therefore, its impacts are as well.

Based on this document, as well as the other exercises carried out by Banobras in matters of sustainability, tools are provided so that the different actors, from their roles, can deepen the subject and thereby implement best practices that address the areas of opportunity for infrastructure projects.