

Sustainable Infrastructure Financing: Adopting Consistent Sustainability Measurements is the Key to Attracting Private Capital

By Scott Miner, Chairman of Investments and Global Chief Investment Officer, Guggenheim Partners

Introduction

Sustainable infrastructure development is at the heart of achieving the United Nations Sustainable Development Goals (SDGs). Achieving the SDGs, which aim to improve conditions for our planet and its people, can only be achieved by executing capital projects such as roads, mass transportation hubs, water treatment and sanitation facilities, administration infrastructure, and more. The more than \$4 trillion in annual investment needed to meet these goals will require a combination of public and private investment.

The good news is that sustainable infrastructure is becoming an increasingly attractive asset class to institutional investors, particularly as they focus their capital allocations through the lens of Environmental, Social, and Governance (ESG) criteria. Driving demand is the long-lived nature of the asset class and its potential to have a positive economic, environmental, and social impact on our societies.

The past few years have witnessed an awakening in the finance sector around the roles and responsibilities of asset owners and managers in prioritizing investments to secure a healthy and stable planet and global economy. This has been most pronounced with respect to addressing the climate crisis and the “E” in ESG. Now this trend must be placed in the context of responding to the COVID-19 crisis. While individual countries and the international community have struggled to meet their immediate health system needs, attention has now firmly turned to the “S” in ESG—to health security, to job preservation and creation, and to restarting global and local economies in a just and equitable manner. With low interest rates and huge commitments of public-private partnerships for funding economic stimulus, spending on infrastructure is likely to expand significantly. This creates an even more urgent case for developing clear and widely accepted sustainable infrastructure standards so these investments can support the transition toward climate-positive, safe and equitable economies and societies.

Tools for structuring institutional investment exist—such as conventional project finance instruments, public-private partnerships, or innovations such as Build America Bonds, where securities issued by state and local municipalities have federal subsidies. But the key to unlocking significant amounts of institutional capital for sustainable infrastructure development projects is establishing and adopting a set of consistent methodologies and metrics for measurement and accounting. The challenge we face is that the accounting and assessment tools for sustainable infrastructure investing is relatively underdeveloped compared to more mature asset classes.

Guggenheim has been at the forefront of the efforts to meet this challenge. As part of our work we developed what we call the [Sustainability Quotient](#), which identifies the four characteristics that a sustainable infrastructure project must possess before institutional capital would be committed—financial return, positive social impact, environmental responsibility, and transparent governance.

To advance the Sustainability Quotient and the expansion of sustainable infrastructure into an institutional asset class, in 2018 we commissioned, with the World Wildlife Fund, a study by the Stanford Global Projects Center that identified and analyzed the extant infrastructure sustainability standards. This landmark study established a base from which we launched a series of three additional reports on infrastructure sustainability metrics, which were published in 2020. The balance of this paper summarizes these studies:

- [State of the Practice: Sustainability Standards for Infrastructure Investors \(2018\)](#)
- [Measuring Sustainability in Infrastructure Investment: A Case Study Assessment of Selected Standards and Tools \(2020\)](#)
- [External Sustainability and Resilience Appraisal of the Vertically Integrated Cargo Community at Los Angeles International Airport \(2020\)](#)
- [Social Impacts and the Practice of Direct Infrastructure Investment \(2020\)](#)

The key insights, conclusions and recommendations in these reports move us closer to adopting commonly used standards and measurements that must be in place before sustainable infrastructure investing becomes an institutional asset class. These papers demonstrate that there is more work to be done in these areas, but as the Stanford paper concludes, “[T]here have been significant steps made towards aligning the infrastructure investment community around a common language of reporting and set of international performance metrics. As the metric and reporting industry continues to develop in the sector, those specific indicators and metrics that emerge as international standards will enable wider adoption by more diversified investors.”



[State of the Practice: Sustainability Standards for Infrastructure Investors \(2018\)](#)

Authors

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Introduction

Infrastructure in the developed world is decaying, while much of the developing world is eager to build out its energy, transportation, communications, and housing infrastructure to drive economic growth. Addressing this need for investment requires a serious and concerted effort to establish standards that will guide the development of infrastructure to benefit everyone. Technological innovation, economic necessity, and environmental considerations all must be part of this conversation. At the same time, infrastructure is fast becoming an important asset class to the investment community, which is increasing its focus on environmental, social, and governance (ESG) criteria when making investment decisions. With this as backdrop, World Wildlife Fund and Guggenheim Partners commissioned members of the Stanford Global Projects Center to identify and analyze the

various metrics that have been established by multiple organizations to assess the sustainability of infrastructure investments.

Summary

A key question at the outset of this study was whether a consensus was forming within the infrastructure investment sector around a common set of standards the industry could use to evaluate and report on the sustainability of projects, in order to promote their adoption. This would enable key drivers of adoption—institutional investors and public sector project sponsors—to encourage downstream participants in the value chain to adopt some of the standards included in this study. That international consensus is not, at least in the near term, occurring, but that does not necessarily preclude the increased adoption of sustainability assessments by the industry. Several developments could better enable upstream members of the value chain to promote sustainability standards even as the specific metrics and tools to do so continue to evolve and increase.

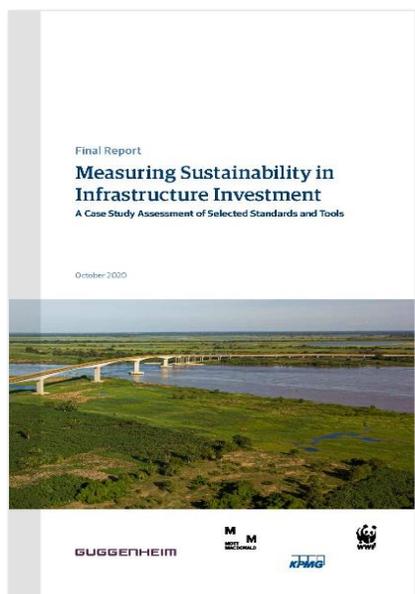
The initiative to develop higher-order metrics that can be gleaned from across the different assessment tools is one such development. Another would be the creation of a “clearing house” of tools and accounting metrics available to investors for different sectors, regulatory regimes and purposes. This would be another step in enabling upstream members of the infrastructure value chain to promote better evaluation and reporting of sustainability performance while empowering their service providers and asset managers to tailor their assessments to the local context of the projects they invest in.

Both of those initiatives would help upstream members of the infrastructure value chain push for more sustainable infrastructure projects, but further research could also help drive adoption downstream. During the interviews conducted to support this study, practitioners consistently highlighted the need to demonstrate the value of sustainability to the managers, engineers and contractors developing and operating projects on the ground. Demonstrating that more sustainable design processes and management practices will improve financial performance and reduce risk in the long-term is critical to engendering support for these programs. Future research can help here as well, particularly in the study of outcomes for projects that implement sustainable management practices through the tools and metrics included in this study. Sustainability and resilience are no longer just the concerns of future generations; they can have a material impact on the economic performance and risk profile of individual projects. The performance of projects that proactively address and measure sustainability will be an important opportunity for future research in this field. This is particularly relevant given the long-term nature of infrastructure as an investment asset class and the theoretically long-term investors that should be attracted to it.

Conclusion

The opportunity and need for data providers and data analysts in infrastructure sustainability reporting was evident in this review. With sustainability reporting being at an early stage of development, the increased adoption by investors and more standardized nature of the reporting will mean significant amounts of data will be produced in the field. Furthermore, as noted, the complexity of infrastructure projects and the increased use of technology sensors, means that vast amounts of performance and

other related data will likely be collected in the future. Specialists that can process and analyze the data to provide actionable insights will be crucial to the development of robust sustainability standard reporting. Increased adoption is thus a commonly cited challenge for the industry, but there is not consensus on a single path towards the broader use of sustainability tools for infrastructure investors. One way to promote adoption would be to improve the ties or information flows between the different accounting and project screening tools included in this study, which would thus improve the aggregation of data across investor or public sponsor portfolios of projects that complete assessments with different tools. Another way would be to improve the documentation or feedback loops for managers at the project level to better demonstrate how the use of sustainability metrics and assessment tools improve project outcomes, including financial or operational performance. Finally, adoption can be promoted by either reducing the costs associated with doing so for investors and project managers, or by winning mandates from upstream institutional investors or public sector sponsors of infrastructure.



[Measuring Sustainability in Infrastructure Investment: A Case Study Assessment of Selected Standards and Tools \(2020\)](#)

Authors

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Introduction

In this report, researchers from KPMG and Mott MacDonald applied a selection of ESG and sustainability standards to two different operating infrastructure assets: the Yatí-Bodega Road Interconnection in Bolivar, Colombia and the Carlsbad Desalination Plant in Carlsbad, California. The objective of the report is to assess the effectiveness and the practicalities of implementing these standards for investors. This report builds upon the 2018 study by Stanford University Global Projects

Center (SGPC), “State of the Practice: Sustainability Standards for Infrastructure Investors.”

Summary

Four of the 12 standards and tools reviewed by SGPC, Guggenheim and WWF in 2018 were selected to be assessed in this research: the International Finance Corporation (IFC) Performance Standards (PS) and Equator Principles (EP), Envision and the UN Sustainable Development Goals. In addition, the research assessed the use of impact measurement and valuation (IMV) as an infrastructure investment decision-making tool. These standards and tools were selected for the range of insights they might provide to investors and also for their geographical applicability. Further, the research set out to test the effectiveness of both established assessment standards and tools (i.e. IFC PS, EP and Envision) and to test the potential of less established ones (i.e. UN SDGs and IMV).

Each of the standards tested in this research provided a useful lens on the sustainability performance of infrastructure assets and each has its own strengths and weaknesses. A key recommendation from this

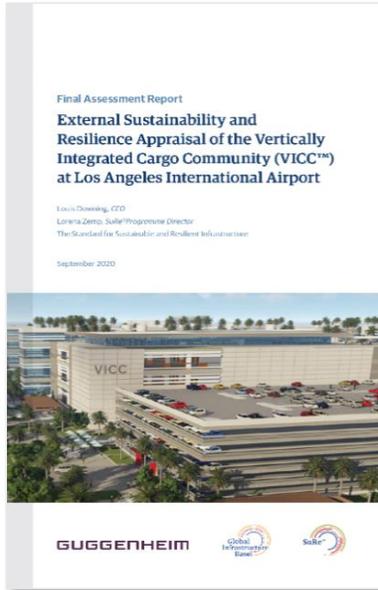
research is that investors, in order to identify the right standards and tools for their needs, need utmost clarity over their requirements – for example, they need to carefully consider their ambition levels and investment approaches. The framework of investor needs developed for this research may provide a useful starting point for investors to review and articulate their needs.

While many ESG standards and tools are already available for infrastructure investors and more are being developed and introduced every year, few have been developed specifically for investor needs. The sustainability tools and standards tested for this research only partially fulfilled the identified investor needs; none did so comprehensively. Furthermore, deriving these outcomes can be costly, time-consuming (especially when analysis is performed at a portfolio level) and key insights are often generated indirectly rather than directly.

The establishment of a task force to develop a standard approach for investors to assess the sustainability of infrastructure projects could be an option to close the current gap. An alternative initiative could be to establish a collaborative platform that aims to build on existing standards and tools and moves toward convergence. In some ways, the landscape of infrastructure sustainability assessment standards and tools mirrors the landscape of corporate sustainability reporting frameworks. Both are crowded spaces with many and various options open to reporters, which creates challenges for investors who need to interpret reported sustainability data and factor it into their analysis and investment decisions.

Conclusion

In order to develop a more efficient sustainability assessment process for infrastructure investors, it may be beneficial to refine existing tools, develop a new standard or tool specifically tailored toward the needs of investors, or to combine existing standards and tools so that they better fulfill investors' needs. Early application of ESG assessment standards and tools in project screening and design is important to optimal sustainability outcomes. Many of the assessments in this report pointed to the importance of early adoption and application of ESG standards and tools in the investment and even project development cycle for facilitating more sustainable project outcomes. Embedding sustainability at the project onset helps to identify and track necessary data throughout project development and operation and identifies more opportunities to avoid, mitigate and restore negative project impacts. The retroactive application of standards and tools in this research highlighted several shortcomings that could likely have been overcome had the standards or tools been adopted in the design phases of the projects. Further, early adoption is in line with investor considerations, which most often come into play in the initial stages of project planning.



[External Sustainability and Resilience Appraisal of the Vertically Integrated Cargo Community at Los Angeles International Airport \(2020\)](#)

Authors

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Introduction

External Sustainability and Resilience Appraisal of the Vertically Integrated Cargo Community at Los Angeles International Airport was prepared as part of the confidential external sustainability and resilience appraisal of the Vertically Integrated Cargo Community (VICC) at the request of the VICC project team and Guggenheim Investments, a potential investor in the project on behalf of its client

accounts. The assessment of VICC took place during the global pandemic of COVID-19 meaning that the findings presented in this report are based on virtual assessment activities. The report presents a background of the project, describes the assessment methodology, presents the results of the assessment, showcases key areas of high performance and provides recommendations for improvement. Once travel restrictions are lifted, Global Infrastructure Basel Foundation (GIB) plans to conduct an onsite assessment of the VICC project, after which, this report will be updated with any additional findings.

Summary

The report presents the results of an assessment of an existing infrastructure project using the SuRe® Standard—the Standard for Sustainable and Resilient Infrastructure. SuRe® is a third-party-verified, global voluntary standard that seeks to serve as a globally applicable common language tool for infrastructure project developers, financiers and public sector institutions. GIB works to advance the SuRe® Standard in cooperation with supporters and partners such as the World Wildlife Fund, Guggenheim Investments, and the European Investment Bank, the lending arm of the European Union. VICC is a pre-construction phase automated air cargo facility at Los Angeles Airport that is also conceptualized as a base for integrating retail, food and commercial activities. As part of the SuRe® certification process, the project is assessed to determine if it is compliant with the material SuRe® environmental, social and governance (ESG) criteria for the level of certification pursued (Bronze, Silver and Gold).

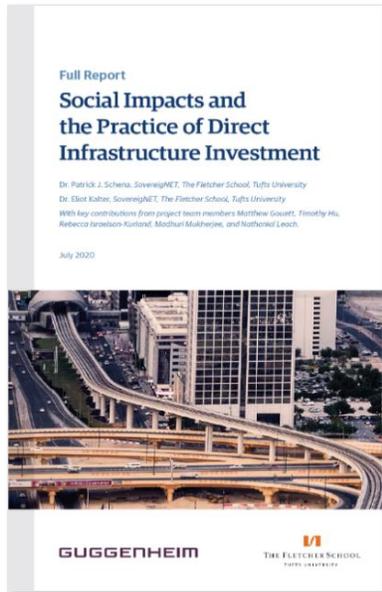
SuRe® certification is only awarded to projects that meet the following criteria: Go beyond local industry norms, have thoroughly identified and mitigated key Environmental, Social and Governance (ESG) risks, do not lead to a lock-in to unsustainable development pathways, implement best in class local and international practices, demonstrate significant contributions to International Sustainability Frameworks such as the Convention on Climate Change (UNFCCC), the Sendai Framework for Disaster Risk Reduction and others, demonstrate benefits to society, and demonstrate significant innovative practices.

The VICC appraisal was based on self-declarations by the project and found that 53 of the 61 SuRe® criteria were material to the project, and that 100 percent of these material criteria would likely be complied with. This result is considered outstanding: Based on the current compliance and commitments made by the project team, GIB concludes that the VICC™ would be likely to achieve the Gold certification level to the SuRe® Standard, if it were to seek formal certification at a more advanced stage of design.

The assessment was carried out virtually during the COVID-19 pandemic and has informed not only the evaluation of the current stage of design of the project but also improvements the project team is willing to implement to respond better to this and other unforeseen scenarios, such as *force majeure* events or conditions affecting project performance. Throughout the assessment, the project team also identified areas in which positive impacts of the project may be enhanced, for example through enhanced waste management systems, taking a proactive approach to planning for future climate change impacts beyond what is required by regulation and to include in design documents facilities and technology to respond efficiently to pandemics (such as thermal imaging and isolation facilities). Additionally, the project is advised to consider and monitor notable risks related to potential negative impacts of gentrification; abiotic depletion potential; and decommissioning considerations such as recyclability of highly durable materials.

Conclusion

The GIB assessment found that the VICC project had zero non-compliances with SuRe® criteria, which in of itself indicates a high quality of planning in designing for sustainability considerations from the conception stage. The project demonstrated important areas where it goes above and beyond regulation, for example by considering and designing for the needs of their workers and offering discounted services and amenities for their usage, including disadvantaged groups (women, veterans and others) in their hiring, vocational and business participation plan; by creating more than 19,000 jobs that will support and benefit the community; by having a governance structure that considers resilience and sustainability design as a key building block of their strategy, ensuring that the project is durable, efficient and is built better from the start; and by using the space efficiently and looking at ways to re-use and recycle the waste produced. Some areas of improvement for the project include the documentation and communication of all practices that go beyond regulation, the importance to plan for decommissioning; the mainstreaming of gender equality going beyond non-discrimination to achieve empowerment; planning for pandemics such as COVID-19 using technology such as thermal imaging and isolation wards, and by ensuring preemptive design for long-term climate impacts anticipated in Los Angeles. GIB concluded that VICC represented the gold standard for a sustainable and resilient infrastructure project.



Social Impacts and the Practice of Direct Infrastructure Investment

Authors

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Introduction

The objective of this paper is to assess the current state of practitioner experience when integrating social impacts and social risks in infrastructure investments. Its aim is to understand, based on the practice of institutional investors, the nature of social impacts arising from infrastructure investments, and how they are integrated into and optimized during the investment process and across the entire lifecycle of an infrastructure investment.

Summary

The study included a survey and detailed analysis of 23 standards and tools designed to meet the specific sustainability requirements of infrastructure as an asset class. These were evaluated based on several filtering criteria, most importantly their uptake by institutional investors. A parallel review of a large cohort of institutional infrastructure managers narrowed this analysis to four institutions, whose frameworks were most widely cited. These were tools and standards from the UN-supported Principles for Responsible Investment (PRI), Global Real Estate Sustainability Benchmark (GRESB), the Sustainability Accounting Standards Board (SASB), and the Global Impact Investing Network (GIIN). Institutional managers identify most closely with PRI protocols and have opted into the PRI in numbers. However, uptake of other tools and standards has been limited. This may in part be attributable to the issues of applicability, relevance, or that ESG factors generally—and social factors specifically—are not perceived to be material to asset pricing and investment performance.

Instead of broad adoption, GRESB, SASB, and GIIN metrics are often used to supplement and augment proprietary tools. For example, during pre-investment and due diligence, GRESB analytical tools and assessment protocols or SASB materiality-focused standards may be applied more directly to establish a baseline for risk for the project. Sector- and project-specific key performance indicators (KPIs) serve both as measures of performance and also as benchmarks deployed during the investment process. They leverage manager expertise in a particular asset type, while allowing for greater flexibility in risk management and impact monitoring. Equally important, well-structured KPIs focused on social factors allow investors to bridge the investment process via an ongoing flow of information and data that monitors feedback at each stage. Post-closing, KPIs serve as a baseline for risk and impact management. In order to ensure alignment around KPI monitoring, reporting and feedback systems are designed into the investment process and across an investment's lifecycle.

Social impacts and social risks are both critical elements of early stage screening. In fact, from the pre-investment stage, social risk assessments telescope across the full investment life cycle. They draw heavily on manager and partner experience and expertise to inform due diligence processes that more

fully analyze discrete risks and, when necessary, design mitigations to offset their potentially adverse consequences. As noted above, early stage screening is informed by investor-specific KPIs. For investors with discrete mandates that include a clearly defined social impact objective, early stage screening linked to bespoke KPIs is essential to ensure that the project can deliver required impact outcomes.

Conclusion

Social risks and social impacts are deeply integrated across the investment process in a continuous fashion that links investment objectives at the pre-investment phase with outcomes at the asset management phase through measurable and reportable metrics. For institutional managers, standards such as those related to ESG and sustainability, are important. However, for monitoring and measuring social impacts they are augmented by discrete KPIs that permit analysis of a greater degree of asset- and sector-specific detail. The most effective practices of direct infrastructure investors are grounded in the integration of social risk and social impact across the entire investment process, from sourcing and screening to due diligence and deal structuring and valuation. Due diligence is the fulcrum of the investment process and crucial for the identification of social risks and the design of mitigation measures that proactively engage local parties to drive positive social impacts to affected communities. Identification of social risks and the design of mitigation measures can also function as knowledge and capacity-building tools and serve as a medium for relationship building and enhanced manager-client engagement on social impact.