



FSC Case Study on Ecosystem Services

**Connecting companies
with forests to unlock
climate & business benefits**



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Table of Contents

- 03 Introduction**
Glossary of Key Terms
- 04 Executive Summary: Why the World Needs Verified Impact**
- 05 Conserving Huong Son's vast forest as an important carbon sink**
- 05 Project Context
- 06 Summary of Success
- 07 Large-scale Project Sponsorship
- 07 Mapping a Theory of Change
- 08 Management Activities to Drive Desired Outputs
- 08 Methodology used for Measuring Outcomes
- 08 Celebrating the Impact
- 09 Conclusion**
Find out More

Introduction

The Forest Stewardship Council™ (FSC®) is pleased to showcase the success of various collaborative projects under its Verified Impact solution. Verified Impact case studies illustrate how this solution has tapped into an intersection of business and environmental interests to bring benefits to both company sponsors and forest stewards.

These projects show that:

- Ecosystem services of sustainably managed forests can **help society fight the climate crisis and biodiversity loss.**
- The impact of ecosystem services is measurable, meaning **businesses can tangibly show a return on their investment** as sponsors of sustainable forestry projects.
- **Credible, quality data** around ecosystem services impact can contribute to companies' Corporate Social Responsibility (**CSR**) efforts or Environmental, Social, and Governance (**ESG**) strategies.
- Sponsorship of ecosystem services projects attaches much-deserved value to sustainable forestry, enabling forest stewards to continue their efforts to **restore and conserve the world's forests.**
- **Businesses of any size can participate** in ecosystem services projects, because different projects require multiple or single sponsors, or are ideal for support from larger corporates or smaller companies.

Glossary of Key Terms

ECOSYSTEM SERVICES are the positive benefits derived from forests, such as their ability to provide fresh air and water, regulate soil erosion, store carbon and more. These benefits extend to forests' importance for tourism, and the habitat they provide to wildlife, which is linked to biodiversity protection. Such services underpin how forests help battle some of the largest global issues – from the climate crisis to biodiversity loss.

VERIFIED IMPACT, formerly known as the Ecosystem Services Solution, is a collaborative offering by FSC that matches private- and public-sector businesses to ecosystem services projects in FSC-certified forests. FSC's Verified Impact framework empowers forest stewards to monitor, conserve, and improve the ecosystem services delivered by managed forests. In doing so, high-quality climate and nature data can be captured to show measurable impacts of valuable environmental and/or social change, incentivising sponsorship of the steward's efforts. The framework covers five types of ecosystem services, from which high-integrity data can be extracted for sponsors to use – carbon sequestration, biodiversity conservation, watershed services, soil conservation, and recreational services.

VERIFIED IMPACT CLAIMS are high-quality, data-led facts that show the measurable environmental and/or social impact of ecosystem services provided by responsible forestry projects. Through FSC's transparent Verified Impact solution, businesses can unlock these claims after being matched to ecosystem services projects in FSC-certified forests. The projects, run on the ground by forest managers and/or project developers, focus on monitoring, maintenance, and improvement of ecosystem services. The business, as a project sponsor, can use Verified Impact claims to provide credibility to their own brand's storytelling efforts, offer transparency for regulatory compliance, and motivate business investment.

THEORY OF CHANGE is a plan put forward by the forest steward, to map how they expect their management activities will contribute to a desired impact. Captured as a chain of results to be achieved over time, the plan comprises four pillars, each one following on from the last: management activities, outputs, outcomes, impact. Management activities are the actions that contribute to the proposed impact, while outputs are the immediate and direct consequences of management activities. Outcomes are the direct consequences of the outputs, building up to the impact, which highlights how the steward has maintained, conserved, enhanced, or restored identified ecosystem services. The plan is executed by the forest steward, with the impact audited for verification by an independent third party under FSC's Verified Impact solution.

Executive Summary

Why the World Needs Verified Impact

Both private- and public-sector businesses recognize their role in addressing society's biggest interlinked crises around climate change, biodiversity loss, and social inequality. Acting responsibly is not only a societal obligation but also crucial for remaining competitive in business. Stakeholders, from consumers to investors, are demanding proof of meaningful impact from the businesses they support.

Forests' ecosystem services are increasingly seen as part of the solution to our current crises. Healthy forests act as carbon sinks, mitigating climate change, while providing essential services like fresh air and water, regulating soil erosion, and supporting biodiversity. However, two obstacles hinder the business sector from fully embracing forests' holistic value: a perceived challenge in measuring the conservation impact to show a return on investment in sustainability initiatives, and operating within society's traditional industrialized economic framework that prioritizes unsustainable landscape conversion.

FSC helps address these obstacles with its data-driven Verified Impact solution, which incentivizes sustainable forestry and creates a credible market for certified forest managers' efforts. These efforts can now be measured to tangibly show environmental and/or social impact, with data on this impact independently audited for verification.

As part of the Verified Impact solution, FSC connects businesses with forest managers through a successful sponsorship model that delivers benefits to both project stakeholders. The forest manager has the necessary financial backing to continue making an impact, while the business can use credible claims about sustainable forestry in their own reputation-boosting storytelling efforts, to offer transparency for regulatory compliance, and to motivate investment in their own operations.

To illustrate how Verified Impact is realized in the real world, FSC is sharing case studies that have boosted the managed area's ecological health in a way that simultaneously furthers the partnered businesses' ESG strategies.

FSC Verified Impact Case Study: Viet Nam

Conserving Huong Son's vast forest as an important carbon sink

Key Takeaways

In one of the larger Verified Impact projects, FSC connected Viet Nam's Huong Son State Forest Company with **11 business sponsors**.



11 BUSINESS SPONSORS

The ongoing project aims to restore and conserve Huong Son Forest's carbon sequestration and storage capabilities across all **19,867.36 hectares**.



19,867.36 HECTARES

The impact that was audited and verified in 2021 revealed a **growth of 198,208 tons of carbon stock** between 2015 and 2020.



198,208 MORE TONS OF CARBON STOCK

This carbon-stock increase equates to **145,485 tons of CO₂** captured annually, which is the same volume of emissions from **32 137 cars every year**.



CO₂ CAPTURE EQUAL TO **32 137** CARS' EMISSIONS

Project Context

Huong Son State Forest Company ([licence code FSC-C131744](#)) is a government-owned forest concession located in Viet Nam's Huong Son district. It spans nearly 20,000 hectares of intact FSC-certified forest that hosts a rich biodiversity of more than 2,300 plant and animal species¹. The forest forms a contiguous connection between the Vu Quang National Park in Viet Nam and the Nakai-Nam Theun National Biodiversity Conservation Area in Laos (officially, the Lao People's Democratic Republic – PDR).

Carbon stocks have been monitored in Huong Son since 2016, because the site is considered to have great potential for carbon sequestration and storage due to its largely intact landscape. However, **illegal exploitation of environmentally and economically valuable tree species has been encroaching on the forested land, reducing its carbon stocks**. The concentration of such natural-resource exploitation is most pronounced along the Vietnam-Laos border, which makes Huong Son Forest a strategically significant site. Safeguarding this forest will contribute significantly to the overarching goal of sustaining the integrity and connectivity of the region's forest habitat.

Conserving the forest could also help mitigate the negative effects of flooding in Viet Nam, for which the country is at high risk². Such effects include increased soil erosion, and damage to roads and bridges that hinders access to the forest. The cumulative effect of flooding events could also cause a further decline in forest cover, negatively impacting carbon stocks due to tree mortality. Biodiversity loss and habitat destruction are additional concerns arising from deforestation and climate-change events such as flooding.

¹ Timmins, R.J., and Viet Cuong, T. (1999) An assessment of the conservation importance of the Huong Son (Annamite) Forest, Ha Tinh Province, Vietnam, based on the results of a field survey for large mammals and birds. Center for Biodiversity and Conservation. (Available at <https://www.amnh.org/content/download/37586/555649/file/timmins.pdf>, accessed 11 January 2024).

² World Bank Climate Knowledge Portal, nd, <https://climateknowledgeportal.worldbank.org/country/vietnam/vulnerability> (accessed 11 January 2024).

Location of Huong Son Forest






Summary of success

Under the Verified Impact solution, Huong Son State Forest Company focused on the ecosystem services (ES) of its management unit’s carbon sequestration and storage capabilities. Defined as “ES 2” under FSC’s Verified Impact solution, carbon sequestration is a crucial part of mitigating climate change.

Huong Son State Forest Company met its objectives, and its results were subsequently verified by an independent third party in 2021. See the Project Overview table below for the highlights, with an exploration of various steps taken outlined in subsequent sections.

Project Overview: Huong Son State Forest Company

Date ES was verified	24 to 26 November 2021
Verification validity period	5 years
Desired ES outcomes	<p>ES 2.1 Conservation of forest carbon stocks Outcome: maintain and conserve minimum forest carbon stock of 1,104,118 tons.</p> <p>ES 2.2 Increase the ability to absorb forest carbon stocks Outcome: Increase forest carbon stocks to 39,641 tons per year (equivalent to 145,485 tons of CO₂ sequestered per year).</p>
Results of ES, validated	<p> Increased forest carbon stock by 198,208 tons between 2015 to 2020.</p> <p> Equivalent to 727,425 tons of CO₂ successfully sequestered by the forest from the atmosphere between 2015 to 2020.</p> <p> ES 2.1 and ES 2.2 outcomes met.</p>

Large-scale Project Sponsorship

A key component of the Verified Impact solution is for FSC to connect interested businesses to aligned ecosystem services projects. There is a spectrum of projects addressing different ecosystem services across management units of varying sizes – from vast tracts of forest requiring large or multiple sponsors, to small and low-intensity managed forests ideal for a single small business to sponsor.

For this project in Viet Nam, which is one of the larger initiatives under the Verified Impact banner, Huong Son State Forest Company attracted 11 business sponsors. These sponsors are mid- to large-sized businesses based in Italy, and include a broadcaster, a textile manufacturer, sustainable engineering consultancy, and 4-star hotel. The multiple-sponsorship structure works well for Huong Son State Forest Company, who can continue their task of strengthening carbon sequestration and storage capabilities across their large management unit of 19,867.36 hectares.

Mapping a Theory of Change

By mapping-out a Theory of Change plan under the Verified Impact framework, Huong Son State Forest Company created a clear path for how to conserve the forest's carbon stocks and how to boost the forest's ability to absorb more carbon stock.

Huong Son State Forest Company's Theory of Change

2.1 Ecosystem Service 2.1

Management Activity 1:
Forest Patrol



Management Activity 2:
Monitoring the Evolution of Forest Resources



Output 1: Protection of sustainable forest practices across the entire 19,867.36 hectares.



Outcome 1: Conservation of a minimum of 1,104,118 tons of carbon stock.



Impact 1: Significant conservation of forest carbon stock, aligned with FSC Ecosystem Service 2.1.

2.2 Ecosystem Service 2.2

Management Activity 3: Enrichment Planting and Zoning for Natural Regeneration



Management Activity 4: Monitoring and Updating Carbon Development



Output 2: Expansion of forest carbon sequestration capacity for 39.84 hectares through zoning and 1,198.03 hectares through enrichment planting.



Outcome 2: Substantial increase in forest carbon stocks, amounting to a minimum of 39,641 tons per year (equivalent annual reduction of 145,485 tons of CO₂).



Impact 2: Increased ability to absorb forest carbon stocks, aligned with FSC Ecosystem Service 2.2.

Management Activities to drive desired outputs

For this project, the main challenge to increasing carbon stocks centred on illegal natural-resource exploitation. As such, Huong Son State Forest Company identified four key activities (bolded below) to safeguard and enhance the integrity of their managed forest area.

Through regular **forest patrolling** and systematic **resource monitoring**, the primary aim of these two activities was to safeguard the entire 19,867.36 hectares, protect sustainable management practices, and bolster overall forest-protection measures. The anticipated outcome of these two activities was to maintain and conserve a minimum forest carbon stock of 1,104,118 tons. This would promote the overall ecological health and sustainability of the managed forest area, in alignment with FSC's defined Ecosystem Service 2.1 (conservation of forest carbon stocks).

Huong Son State Forest Company also combined **enrichment planting and zoning** practices to encourage natural regeneration of the forest. A key focus was on stringent forest protection measures, ensuring zero exploitation of natural forests. Continuous **monitoring and updating of carbon development** within the managed forest area was implemented to inform decision-making and adaptive management. These two activities serve FSC Ecosystem Service 2.2 (increase the ability to absorb forest carbon stocks), with the desired outcome to increase the forest's carbon stocks to 39,641 tons per year (equivalent to 145,485 tons of carbon dioxide sequestered per year). Beyond numeric values, this impact contributes to the overall ecological resilience and climate-change-mitigation potential of the forest ecosystem.

Methodology used for measuring outcomes

Various methodologies were adopted by Huong Son State Forest Company to accurately collect and measure data between 2015 and 2020 for comparison of progress. Such methodologies for measurement included using the FSC Carbon Monitoring Tool and Guidance for Demonstrating Ecosystem Services Impacts (FSC-GUI-30-006) alongside a Participatory Carbon Monitoring Technical Manual from The Netherland Development Organization SNV. Huong Son State Forest Company also used its own GPS equipment, reviewed external sources from scientific literature, and conducted a sampling survey using ArcGIS software to investigate carbon stocks.

Celebrating the impact

Every year, carbon stocks have grown by an average of 39,641 tons in Huong Son Forest, which is the equivalent of storing 145,485 tons of CO₂. The verified results speak for themselves: consider that the same volume of CO₂ is emitted by 32 137 cars (US, 2018 data) each year, and you start to see where forests can have real-world impact in removing greenhouse gasses.

This case study exemplifies how FSC's Verified Impact translates into tangible results. By mitigating the imminent threat to nearly 20,000 hectares of forest land, the project not only contributes significantly to increased carbon sequestration and storage, but also safeguards biodiversity.

Huong Son State Forest Company was able to address identified challenges to sustainable forestry by implementing forest patrols, focusing on resource monitoring, and embracing strategic activities like enrichment planting, all of which showcases a comprehensive approach to fostering ecological health and sustainability.



Conclusion

Beyond the clear environmental gains made, businesses engaging in projects like these, as sponsors, enjoy a strategic edge. Verified Impact enables them to intertwine responsible practices into their brand's communications narrative, enhancing reputational value. It also enables them to meet regulatory demands around sustainability transparently and motivate for further investment in their own operations. These case studies signify not just a commitment to environmental stewardship, but also a smart business move that aligns ecological goals with corporate interests.

As we navigate a future where environmental responsibility is non-negotiable, Verified Impact projects showcase the potential for businesses, irrespective of size, to be proactive contributors to global environmental challenges. Beyond mitigating climate change and preserving biodiversity, such initiatives position businesses as champions of sustainability, resilience, and responsible corporate citizenship.

Find Out More

To learn how your business can benefit from our Verified Impact solution, contact FSC via ecosystems@fsc.org.

For more information on the business case for supporting Verified Impact, read our three-part blog series entitled "[Unite in the Forest Fight](#)".

