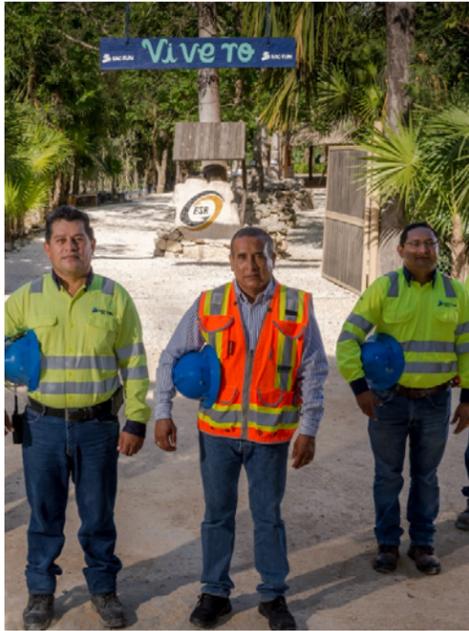




**ANNUAL**

**SUSTAINABILITY REPORT 2021**



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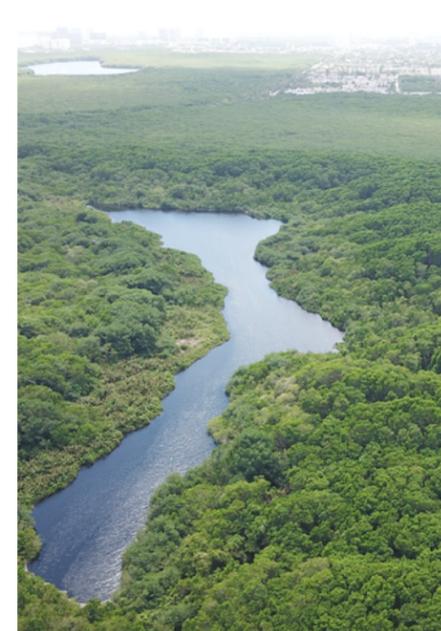
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# WHO ARE WE?

## A MESSAGE FROM OUR PRESIDENT

This is the second<sup>1</sup> in the series of SAC-TUN's annual reports designed to describe our expanded activities supporting environmental conservation and sustainable communities in Quintana Roo and along the Yucatan Peninsula, Mexico.

SAC-TUN (formerly known as CALICA) is a major quarry of the US-based Vulcan Materials Company, the leading producer of stone aggregates for construction – primarily crushed stone, gravel and sand – on the Gulf of Mexico coast.

As a part of Vulcan Materials Company, we have always placed great emphasis on environmental and social responsibility. We strive to ensure our operating standards exceed Mexican, as well as international, environmental regulations and norms in order to limit our impact and protect the natural environment.

Since we began operations in the late 1980s, one fifth of the natural lands-

capas on our properties are set aside for conservation. We continue to work hard to reclaim quarried areas so they blend seamlessly with the conservation zones to create an ecosystem where indigenous fauna and flora can thrive.

Towards the end of the last decade, we became aware of the rapid pace of climate change and recognised the increasingly urgent need to protect our region's priceless landscapes and conserve its beautiful natural ecosystems from human-induced negative effects.

Consequently, we remain conscious of the pressing challenges of global climate change and biodiversity loss which affects us all. On the 32nd anniversary of our operations in Quintana Roo, SAC-TUN commissioned an independent, external assessment of our environmental protection and sustainable activities to date. Based on the recommendations in this assessment, we

partnered with recognised national and local governmental and civil society organizations, as well as scientists and academic institutions, to develop a long-term environmental vision and strategy.

SAC-TUN Annual Sustainability Report 2021 looks back on year two of implementing our Environmental Strategy projects and examines the progress we have made. This report reviews the second year of the first three-year phase of our strategy (2019-2022). It includes an analysis of the most relevant issues of our activities and includes social, environmental, and economic aspects, stakeholder relations and the impact our environmental strategy has on our stakeholders. We also detail the management and performance of the SAC-TUN quarry.

SAC-TUN's Environmental Strategy is considered by state institutions, civil society organizations, and scientific and academic institutions, as a model

to be followed by other companies and industries operating in Mexico. This Annual Sustainability Report examines our sustainability activities during 2021. It not only synthesizes our actions and achievements related to the management and performance of our quarry, but also the implementation of the various environmental projects we carried out with our local partners.

The report includes an analysis of the most relevant social, environmental, and economic issues, as well as our stakeholder relationships.

This year we faced enormous challenges, mainly related to the COVID-19 pandemic, but we are excited and motivated that, despite everything, our environmental projects overcame obstacles and achieved very important milestones. This is why we recognize and value the dedication of our partners from civil society organizations, the communities where conservation projects

are carried out, and the government, scientific, and academic institutions we work side by side with during the year to produce environmental benefits in our region.

We will continue to lead the way in social and environmental responsibility and raising awareness of the importance of protecting and conserving our iconic natural environment in Quintana Roo.

We invite our neighbours, partners, and other private companies to join in our efforts to promote scientific research, conservation, and sustainable community projects in the beautiful region we proudly call home, the Yucatan Peninsula.



**Ernesto Enríquez Castillo**  
*President of the International Division of Vulcan Materials Company and President of SAC-TUN*

<sup>1</sup>SAC-TUN Informe de Sustentabilidad 2020 [https://sactun.com/wp-content/uploads/2022/05/SAC-TUN\\_INFORME-DE-SUSTENTABILIDAD-2020.pdf](https://sactun.com/wp-content/uploads/2022/05/SAC-TUN_INFORME-DE-SUSTENTABILIDAD-2020.pdf)

# ABOUT THIS REPORT

This is our second Annual Sustainability Report and its purpose is to share with the community and our shareholders the results, actions, and progress of SAC-TUN during the period from January 1 to December 31, 2021.

In this report we seek to share the company's efforts under the Environmental, Social and Corporate Governance (ESG) approach.

The topics we include in this report were chosen through a process of research and internal analysis of the most relevant issues of our activities, focusing on the ESG and including our relations with and impact on our stakeholders. This report details the management and performance of the SAC-TUN quarry.



# OUR PURPOSE

Our ESG strategy, objectives, and programs align with our local community integration strategy, our beliefs and values, and our people. Our goal is to create a more sustainable future with shared prosperity.

SAC-TUN's commitment to the community development and conservation of the environment prevails and continues to be reaffirmed through the sustainability model, which is part of our philosophy and is integrated into the company's strategies in a transversal (intersects) manner, seeking the involvement of interest groups.

In each of our operations we promote ethical performance, the integrity of our collaborators, the conservation of the environment, and the integral development of the communities and our interest groups. We do all this through Vulcan Materials Company's commitment to integrity and excellence.

Our sustainability model is based on three lines of action:

## LINES OF ACTION





## OUR MISSION

In the materiality study, developed in 2019, the SAC-TUN sustainability model's lines of action were established and allow us to adjust our strategy.

As a result, we determined the relevant issues which mark the objectives, actions, and performance indicators we will focus on during the following years.

In this sense, Vulcan Materials Company renewed its focus on Corporate Social Responsibility, reorienting it to an ESG management model to identify the main issues.

Thus, the main results in the priority axes focused on the renewed Vulcan ESG model and those corresponding to the SAC-TUN sustainability model will be focused on aligning and complementing each other in the following years.

To be an international producer of essential construction materials for the development and transformation of societies.

To this end, at SAC-TUN we:

- provide quality products and services that consistently meet the expectations of our customers;
- responsibly manage the safety and environmental impact of our operations and products;
- contribute to the well-being of the communities; and
- obtain superior returns for our shareholders.

We recognize how success in all our activities is directly related to the talent, dedication, and performance of all our employees.

## OUR VISION

To be a successful, profitable, and attractive company for our partners and employees, producing and marketing high-quality stone aggregates, oriented towards customer service and solid safety performance, acting responsibly for the environment, and promoting the region's socioeconomic development and well-being of the community.



# ABOUT SAC-TUN

Vulcan Materials Company is the leading producer of stone construction aggregates – primarily crushed stone, gravel and sand – in the United States. Established in 1986, near Playa del Carmen in the state of Quintana Roo, SAC-TUN (formerly known as CALICA), is an important quarry integrated with maritime-port logistics operations. SAC-TUN is segmented into three lines of activities.



## AGGREGATES – SAC-TUN QUARRY

*Materials produced from the SAC-TUN quarry can be found in most of the roads, highways, and hotels in the region.*

The production of stone aggregates is one of the main activities at SAC-TUN. Stone aggregates are integral to the construction and infrastructure industry. Since the creation of the company over 30 years ago, the quarry's production has been used for the construction of most of the roads, highways, and numerous hotels that constitute the backbone of the region's tourist industry, as well as the Cancun and Cozumel airports.

SAC-TUN's aggregates are also transported by ship to major markets along the US Gulf of Mexico coast for areas lacking this type of material. SAC-TUN's products are valued for their high quality.

## OUR PRODUCTS

Material	Usage
Aggregate for concrete	Ready mixed concrete
Asphalt aggregate	Asphalt mixtures
Bases	Lower layers of roads
Rocks	Chemical, electrical, cement, steel, and other industries
Stone dust	Concrete, mortar, and asphalt mixtures
Washed sand	Concrete and asphalt mixtures
Construction fill material	Platform leveling

## Marine Terminal Operations at Punta Venado

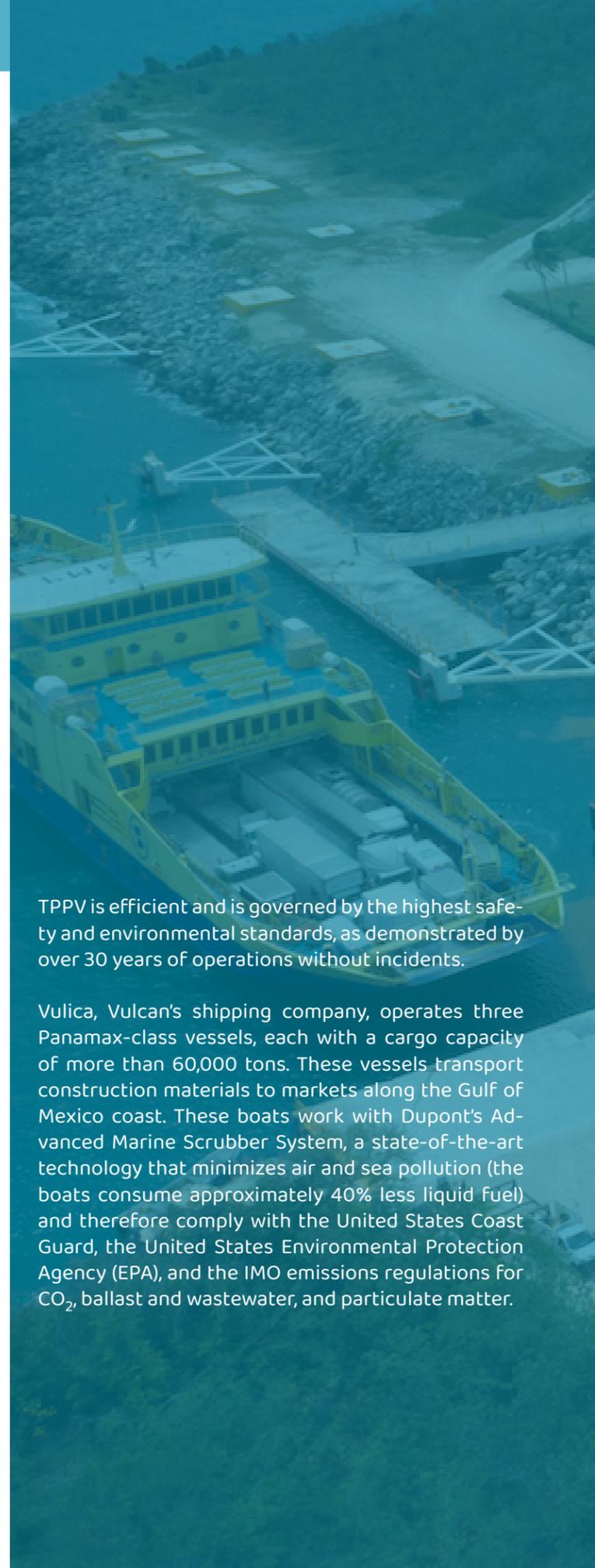
*The public maritime terminal brought positive impacts on the social and economic development of Quintana Roo.*

Our facilities consist of both public and private marine terminals. The private terminal receives bulk cargo ships with a draft of 13.80 meters, representing the largest draft on the Mexican Caribbean coast. The terminal is used to transport part of the material produced at SAC-TUN and receives cement freighters transporting similar raw material from other parts of the country.

Since 2004, the marine terminal has been certified by the International Code for the Protection of Ships and Port Facilities in Mexico; a certification issued by the International Maritime Organization (IMO).

In 1993, a second public marine terminal at Punta Venado was built for passenger, vehicle, and cargo ferries to the island of Cozumel. This terminal had a profound and positive impact on the social and economic development of Quintana Roo and, without a doubt, was a significant factor in transforming the island of Cozumel into one of the most important tourist destinations in Mexico.

Since 2002, the Punta Venado Public Terminal (TPPV) has provided port services for ro-ro cargo transportation companies (ferries) to the island of Cozumel. *Carga más por menos* and *Transbordadores del Caribe* currently have operating permits from the federal authority to carry out ro-ro transport services. These companies ferry an average of 116,000 passengers each year, in addition to transporting 9.25 million tons of food and supplies over the last decade, thus helping to inject millions of dollars into the local and regional economies.



TPPV is efficient and is governed by the highest safety and environmental standards, as demonstrated by over 30 years of operations without incidents.

Vulica, Vulcan's shipping company, operates three Panamax-class vessels, each with a cargo capacity of more than 60,000 tons. These vessels transport construction materials to markets along the Gulf of Mexico coast. These boats work with Dupont's Advanced Marine Scrubber System, a state-of-the-art technology that minimizes air and sea pollution (the boats consume approximately 40% less liquid fuel) and therefore comply with the United States Coast Guard, the United States Environmental Protection Agency (EPA), and the IMO emissions regulations for CO<sub>2</sub>, ballast and wastewater, and particulate matter.

# ENVIRONMENTAL

## OUR COMMITMENT

SAC-TUN aspires to be a leading company in terms of environmental responsibility, both in our core activity and among all companies in the Mesoamerican Reef region. We work with dedication to achieve the highest level of performance in the environmental area, with the full commitment and participation of all our leaders and collaborators.

We use resources responsibly and, with our expert partner organizations, we have implemented a robust environmental strategy as well as programs and actions that have benefited the environment.

In our process, we place a particular emphasis on making responsible use of natural resources and minimizing the impact on the environment. In addition, we actively work towards preserving biodiversity through a variety of conservation efforts on our property and in the Yucatán Peninsula.

This is reflected in our Environmental Policy. We have committed to reduce and control the environmental impacts caused during all stages of our production process, as well as continuously improving our environmental performance. We continue our commitment to complying with applicable legal requirements, often going above and beyond.

On six occasions we have received the Clean Industry Certificates granted by the Federal Attorney for Envi-

ronmental Protection (PROFEPA) of Mexico. Valid for two years, these certificates recognize how the company fully complies with national and international standards on best management practices and environmental practices.

We are also constantly exploring new technologies that allow us to further reduce our environmental footprint.

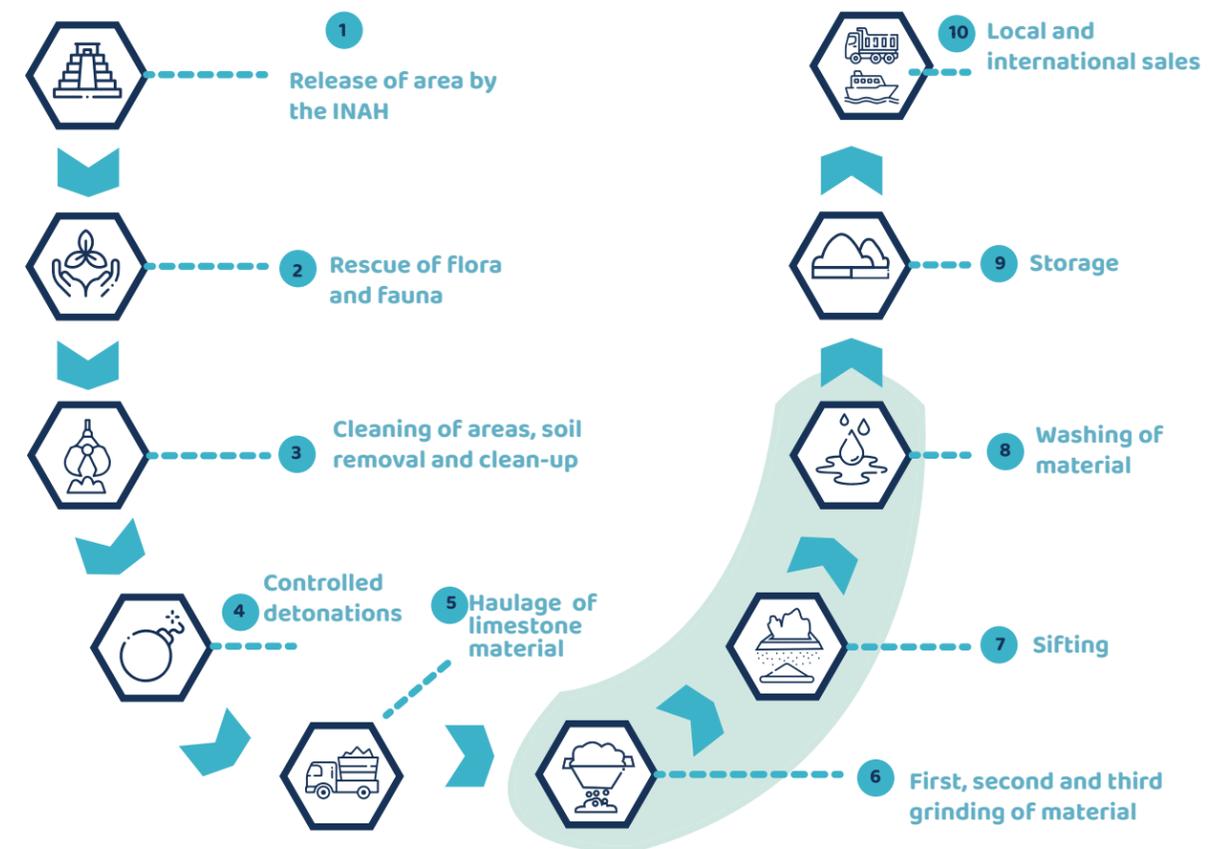
Several of our environmental regulations and standards exceed those established for the industry in Mexico (NOM-120-ECOL-1997 and NOM-120-SEMARNAT-2011) and follow the standards developed by the American Conference of Governmental Industrial Hygienists of the United States and the Best Practices of the National Stone Industry: Quarry Site Maintenance and Closure, from the Center for Clean Products of the University of Tennessee, in collaboration with the National Stone Council of the United States.

In addition, we have earned our Annual Operation Certificate, Environmental Performance Certificate, Environmental Operation Licence, and the state and federal authorizations of the Environmental Impact Assessment (EIA).

## Our Production Process

Before beginning the limestone extraction process, we conducted a timely assessment to identify environmental and safety risks that will need to be addressed during operations and after quarrying is complete and aquatic areas and land are being rehabilitated and restored. This risk assessment considers parameters such as dangerous alterations in the landscape (wells, excavations, etc.), the gradient, geological characteristics, erosion potential, and the groundwater system that maintains water quality (thus avoiding contamination of the water and soil).

We investigate wildlife populations to monitor potential threatened or endangered species in the area where the limestone will be extracted, and we ensure the aquatic ecosystems and freshwater sources are not affected.



The National Institute of Anthropology and History (INAH) carries out the exploration, mapping, registration and preservation of the Mayan archaeological remains located in areas where operations are planned. Once this mapping is completed, the company will be able to proceed with the plans.

*During all our operational activities, we make sure to maintain a strict regimen of compliance with the best work and environmental practices.*

Once the INAH has freed the area, we carry out the following practices:

- To the extent possible, we minimize removal of topsoil and native vegetation within the areas authorized for extraction; and avoid damaging trees and other protected vegetation in areas where limestone will be extracted.

- We try, as far as possible, to transplant ecologically important native plants and young trees from the limestone extraction areas for use in reforestation or restoration both on our land and off it.

- We extract a surface layer of soil about 10 cm deep and preserve it in specific areas where it will not be damaged or eroded. This is later used in the restoration and reforestation activities.

- We extract lower layers of soil from the areas where limestone is mined and store it in places where it will not be washed away by rain, will not obstruct the natural flow of bodies of water or affect natural vegetation, and where we can extract it for building up the slopes surrounding the artificial lakes that are formed after extracting the limestone.

- We apply strict and constant measures to avoid soil contamination with oil, grease, fuel and similar products.

- We maintain the maximum existing vegetation cover, especially in the conservation and mitigation areas indicated in our authorizations.

Caring for and respecting the environment is one of our priorities. To reduce the impacts of noise and vibrations on neighbouring communities, local wildlife, and Mayan archaeological remains, we apply best practices throughout our operations, including:

- Sirens signalling a warning before scheduled and controlled detonations, under military supervision.

- Using the minimum amount of explosive material, in combination with micro-sequenced detonations, depending on the hardness and location of the limestone, to reduce vibrations.

- Carry out the detonations when there are fewer employees working in the quarry.

- Requiring all people be located at least 500 meters from the area where explosives are detonated (the Mexican regulation establishes 300 meters<sup>3</sup>).

Thanks to these measures, preliminary observations during the detonations indicate the birds found in the conservation areas and in the reforested areas on the SAC-TUN lands are not affected. A wide variety of fauna species are commonly observed in the vicinity, including the Central American spider monkey (*Ateles geoffroyi yucatanensis*), the temazate (*Mazama pandora*), the Yucatecan coati (*Nasua narica yucatanica*), the eastern chachalaca (*Ortalis vetula*), and the black spiny-tailed iguana (*Ctenosaura similis*).

There are also no records of damage caused by SAC-TUN operations to sites with Mayan archaeological remains. We spare no effort for their protection and these sites are also regularly inspected by INAH experts to guarantee their optimal state of conservation.

## AT SAC-TUN WE PLACE SPECIAL EMPHASIS ON – AND RIGOROUSLY APPLY – GOOD MAINTENANCE PRACTICES TO ALL OUR FACILITIES.

### Our maintenance team is charged with:

- Maintaining all buildings, facilities, and equipment in optimal condition.

- Maintaining gardens and green areas.

- Maintaining roads and trails. All paths on our land and access roads to the quarry are regularly covered with recycled and compacted limestone and gravel.

- Water paths regularly to reduce the amount of dust. We have dust control trucks that constantly spray water on the gravel roads to dampen the dust.

- Install and maintain signage regarding, for example, driving precautions and wildlife crossings.

- Collecting and recycling trash from waste concentration areas and disposing of it off company property and in an environmentally friendly manner.

- Applying strict safety protocols.

- Disposing of motor oils, lubricants, grease, and other hazardous waste substances in strict compliance with environmental regulations. We place particular emphasis on the proper maintenance of fuel and lubricant storage places, taking all necessary precautionary measures to prevent spills and accidents that could damage the environment.

- Replacing and recycling (where possible) obsolete equipment and worn-out machinery parts. Obsolete equipment and other obsolete machinery parts are stored in specially designated areas before being sold for scrap to duly certified customers.



<sup>3</sup>Members of the Mexican army are present when explosives are detonated.



**Once the limestone has been extracted and goes through the crushing process:**

•We use limestone waste, as well as the earth and organic residues extracted at the beginning of the operations, to mold the land perimeter of the artificial lakes by covering it with a layer of superficial earth and creating stable slopes leading down towards the lakes to provide access for fauna to drink water.

•We design the slopes to have an angle of approximately 26.5°, which reduces erosion and sedimentation. This is more environmentally-friendly than slopes with angles of 30° to 45° as indicated by the EIA. This also has the advantage of allowing wildlife to move more easily between the forested areas and artificial lakes.

•We relocate extracted soil as soon as reforestation and restoration activities begin. This helps plants become better established and ensures the survival of invertebrates such as worms and other ecologically important soil-dwelling fauna. When this layer of soil is applied to small areas that are being rehabilitated, the depth of the soil is significantly greater than that of the area before limestone extraction. This increased topsoil thickness may be one of the reasons the trees in our reforested areas grow faster, and that we have been able to successfully establish forests in a relatively short period of time.

•We reforest the slopes with native vegetation, including trees, shrubs, seedlings, grasses, and the vegetative materials removed at the beginning of operations. This includes planting seedlings that we reproduce in our tree nursery, as well as branch cuttings obtained from older trees. Based on our experience, the latter is one of the best techniques for reforesting degraded areas. When we started reforesting degraded areas in 2005, we exclusively used seedlings of native tree species grown in our tree nursery. Later, we learned that branch cuttings from trees of various species, with regular maintenance and due care, can also be used as a successful reforestation technique.

•We plant an average of 2,885 trees per hectare, which far above the 500 recommended by the National Forestry Commission (CONAFOR). Our reforested area inventories show a survival rate of 88%, that is, 2,539 trees per hectare. We recognize some of these trees may have originated from seeds naturally dispersed by fauna and wind.

•We implement a program specially designed to care for and maintain trees and plants used in reforestation and restoration. This includes spraying seedlings and stakes regularly until they are firmly established.

•We monitor and evaluate the success of reforestation activities using native species and applying lessons learned to our current efforts.

•To connect the different sites where limestone has been extracted, we establish natural corridors interlinking the artificial lakes, cenotes, and other aquatic ecosystems on the SAC-TUN lands for the benefit of the region's fauna.

# CLIMATE CHANGE

We understand the effects of climate change and our impact on the environment. That is why at SAC-TUN we are in a process of aligning the corporate objectives with respect to climate change set out in Vulcan's 2021 ESG Report. Like Vulcan, we plan to position ourselves for success and continue to deliver high-quality building materials for decades to come, in a sustainable and responsible manner.

In order to increase our energy efficiency, we strive to improve our energy management. The SAC-TUN quarry has been designed to reduce the distance trucks travel to transport limestone to the crushing plant. To reduce fuel waste and gas emissions, engines of machines and vehicles are turned off when not in use.

We have a strict maintenance plan for our fleet of trucks and machinery and, to increase our energy efficiency and reduce our carbon footprint, we renew it on a scheduled basis with more advanced equipment.

Energy consumption in our operations represents the main input of the operation. In 2021, we consumed 385,303 gigajoules (GJ), which we use efficiently in our crushing plant and mobile equipment.

## ENERGY CONSUMPTION

Gigajoules	2020	2021
Fuels	310,551	287,756
Energy	102,361	97,547
<b>Total</b>	<b>412,913</b>	<b>385,303</b>

## COMBUSTIBLES IN GIGAJOULES

	2020	2021
Diesel	305,009	282,345
Gasoline	4,839	4,939
<b>Total GJ</b>	<b>309,848</b>	<b>287,284</b>

## TYPE OF EMISSIONS

Type of emissions	2020	2021
Range 1 (tCO <sub>2</sub> e)	23,344	21,631
CO <sub>2</sub> (tCO <sub>2</sub> )	22,981	21,264
CH <sub>4</sub> (tCO <sub>2</sub> )	1.4	1.2
N <sub>2</sub> O(tCO <sub>2</sub> )	1.2	1.1
Range 2 (tCO <sub>2</sub> e)	14,046	11,462
<b>Total</b>	<b>37,391</b>	<b>33,093</b>

SAC-TUN

# WATER

**WE MAINTAIN RIGOROUS CONTROL OVER THIS SHARED RESOURCE TO MAKE THE BEST POSSIBLE USE OF IT IN ACCORDANCE WITH THE REGULATIONS AND TERMS OF THE CONCESSIONS ISSUED FOR WATER EXTRACTION BY THE FEDERAL AUTHORITY**

Washing of crushed material is the main use of fresh and recycled water in our operations. In this process, the material is separated by means of screens and passes through a sprinkler system, with part of the used water being recovered through sumps before being sent to the first recycling tanks, where the quantity of suspended solids is reduced, Then the water goes on to another tank where fine sediments are removed by means of a centrifugation system. Subsequently, the cleaned water is recirculated with pumps back into the material washing process although, inevitably, a proportion of water is lost to evaporation.

We maintain rigorous control over this shared resource to make the best possible use of it in accordance with the regulations and terms of the concessions issued for

water extraction by the federal authority. We also use water to reduce dust generation by regularly spraying our facilities and quarry access roads.

In the same way, we protect and maintain the natural forests surrounding our quarry and reforest the slopes on its margins.

Sanitary wastewater is stored in septic tanks for later collection and disposal by a service provider authorized by the environmental authority. We also have a wastewater treatment plant which treats the water generated in the Punta Venado public terminal.

# BIODIVERSITY

UP TO 2020, SAC-TUN HAD PLANTED 18,500  
TREES ON 18.41 HECTARES

We apply detailed conservation plans to preserve the environmental resilience and stability of our land and the archaeological sites it contains. These plans, as per our Environmental Impact Authorization (EIA or equivalent) documents, establish that 20% of the land surface of SAC-TUN must maintain forest cover.

However, we protect far more than the required 400 hectares of forests on the company's land. We suspended all extractive operation plans on the parcel of property known as Punta Venado and, as a result, have allocated to conservation an area of natural forest including three sites with archaeological remains and four cenotes.

Since 2005, we have worked on the reforestation and restoration of the slopes connecting the forest areas designated for conservation and the perimeters of flooded areas where limestone has been extracted—the artificial freshwater lakes.

Over time, other areas will be reforested so that together they constitute a forest ecosystem connecting the artificial lakes with the cenotes and other sources of fresh water, enabling regional fauna to move freely between the different bodies of water.

Those reforested and rehabilitated portions of the quarry, together with the surrounding areas, will benefit the local community and the area's fauna and flora.



# THE SAC-TUN TREE NURSERY

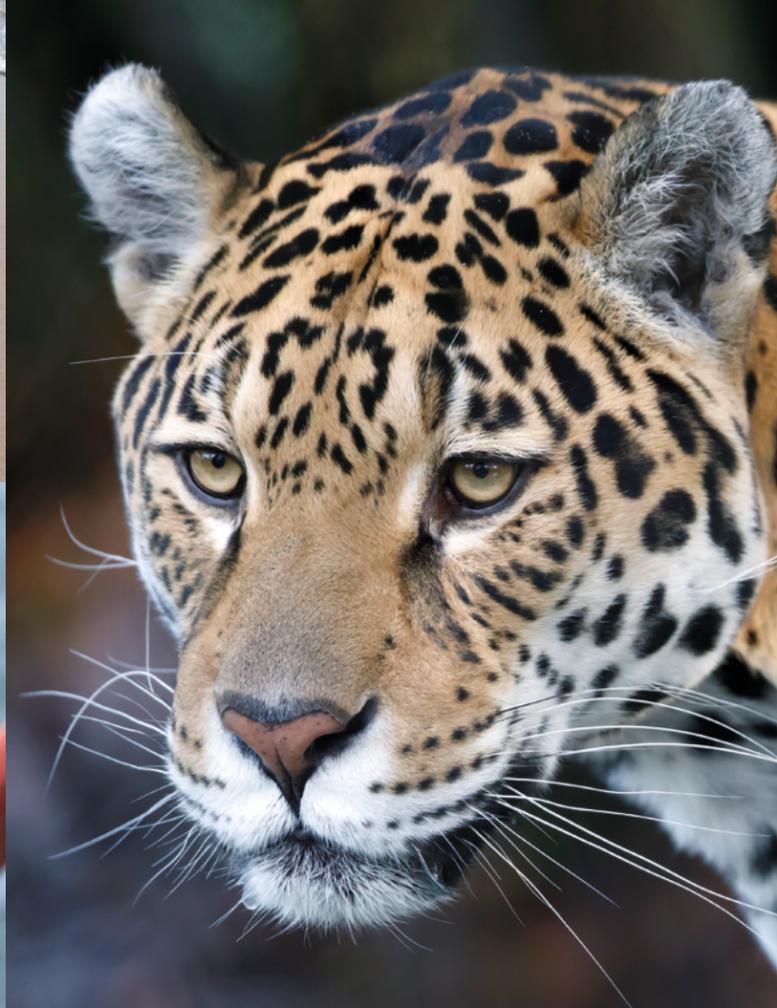
The trees for reforestation come in part from the tree nursery we established in 1990. The nursery currently reproduces 21 native species, including four endangered species protected by Mexican regulations. The nursery's objective is the identification, collection, transplantation, and protection of at-risk plant species for use in reforestation and restoration, both on our land and to donate them to the communities of Quintana Roo to help beautify schools, parks, municipal gardens, and other public spaces. Thanks to the efforts of all those involved, the forest nursery was certified as an Environmental Management Unit (UMA) by SEMARNAT.

**Currently, our forest nursery houses 21 species of native plants, including four species considered in danger of extinction.**

Over the years we gathered an abundance of information about local threatened tree species and the environmental conditions they need to thrive, as well as other flora and fauna living on our land. We have also supported scientific research on threatened tree species in the Yucatan Peninsula, and on methods to maintain and support reforested areas to ensure the survival of planted trees.

We are transforming the forest nursery into the *Wakah Chan* (Tree of Life) Botanical Garden, a space for scientific research and environmental education. As this garden develops, we intend to increase production of seedlings for reforestation to 200,000 per year, which will be used in reforestation both on the SAC-TUN lands and in other areas of the region.

When the Botanical Garden is completed, it will be open to the public and we will be offering guided tours for local schools, neighbouring communities, and other visitors.



# WILDLIFE HABITAT COUNCIL AWARDS

June 2021: The Wildlife Habitat Council's (WHC) mammal program recognized our **"Conservation of Biodiversity and Environmental Services in the Mesoamerican Reef"** program for our efforts made in the conservation of the jaguar.

December 2020: **The WHC certified SAC-TUN's new Environmental Strategy** as part of our "Conservation of Biodiversity and Environmental Services in the Mesoamerican Reef" program. This certification recognizes the specific efforts of SAC-TUN's strategy and commitment to environmental conservation on its land and beyond.

2016: Our forest nursery received the **prestigious WHC Species of Concern Project Award**, which recognizes excellence in corporate conservation. SAC-TUN received this award for its work rescuing species protected by Mexican wildlife legislation (NOM-059-SEMARNAT-2010), as well as for our long-term commitment to environmental protection.



*Currently, our tree nursery houses 21 species of native plants—including cedar, chit palm, kuka palm and nacach palm which are considered in danger of extinction. In the nursery, there is also a large-stemmed ceiba which we keep in recognition of the traditional sacred role of this tree for Mayan communities and for the purpose of collecting its seeds to propagate and use in our local reforestation project*



COMMITMENT AND ACTIONS BEYOND  
OPERATIONS:  
**SAC-TUN ENVIRONMENTAL  
STRATEGY 2019-2022**

## LEADING BY EXAMPLE IN ENVIRONMENTAL AND SOCIAL SUSTAINABILITY

Conscious of the pressing challenges of global climate change and biodiversity loss affecting us all, and with a desire to reinforce our role as a leader in social responsibility, in 2018 SAC-TUN invited an external and independent assessment of our actions and an exploration of new opportunities for sustainability initiatives to further mitigate the effects of our quarrying operations.

Based on this assessment and our decades of operational experience, we developed the first phase of SAC-TUN's Environmental Strategy for the period 2019-2022 which has been praised by local government authorities and civil society organizations as a model for other businesses and industries in Mexico.

We launched the first three-year phase of our Environmental Strategy in 2019 with four tiers of activities:

### ● FIRST:

We increased our environmental conservation activities to contour, rehabilitate, restore, and reforest already-quarried areas within our properties for the benefit of both wildlife and local communities.

### ● SECOND:

We took measures to limit the impact of new quarrying operations on fauna and flora by setting aside additional forested areas to become wildlife corridors where roaming species, such as jaguars and pumas, can move freely across all our properties and into adjacent territories.

### ● THIRD:

We aimed to become, and continue to strive to be, one of the leading companies supporting scientific research and conservation of the Mesoamerican Reef (the world's second most important coral reef), in particular of the Mexican Caribbean Biosphere Reserve and other associated priority protected areas.

### ● FOURTH:

We extended our range of environmental education, cultural, scientific research, and voluntary projects to support sustainable communities and encourage our neighbors to join us in becoming active participants in strengthening the management and conservation of the emblematic and beautiful federal and state protected areas of the Yucatan Peninsula.

In this first phase (2019-2022) our focus is on Quintana Roo, where the state government conserves 312,860 hectares in 10 protected natural areas, reserves, and conservation zones that contain a wide biodiversity in its jungles, wetlands, and coastal and marine ecosystems.

We provide our resources and support to educational institutions and civil society, scientific, and governmental organizations, as well as to the ejidos and indigenous communities, fishing cooperatives, and other actors who have been working for many years on projects and programs that are framed within the six objectives of the management plan for the Mexican Caribbean Biosphere Reserve and associated protected areas, in charge of the National Commission of Protected Natural Areas (CONANP).

Together we identified four priority areas where SAC-TUN's resources would be particularly beneficial:

- A. Conservation of endemic, threatened, or endangered fauna and flora species.
- B. Conservation of priority ecosystems and environmental services to strengthen the adaptation of human populations and nature to the impacts of climate change.
- C. Support for environmental education, citizen science, and sustainable fishing communities.
- D. Special Priority Projects.

**With the purpose of achieving tangible and demonstrable results, and with an initial investment of \$1.5 million for the first phase of this strategy, SAC-TUN directly supports the work of a group of civil society conservation organizations, scientific and academic institutions, and the environmental authorities of Quintana Roo, who have long dedicated themselves to caring for the region's rich and emblematic biodiversity.**

For this reason, we act together with Friends of Sian Ka'an, Community and Biodiversity (COBI), Pronatura Península de Yucatán, Autonomous University of Querétaro, El Colegio de la Frontera Sur (ECOSUR)-Chetumal and the Secretariat of Ecology and Environment (SEMA) of Quintana Roo and its Institute of Biodiversity and Protected Natural Areas of the State of Quintana Roo (IBANQROO) to identify priority projects, agreeing on specific goals for the first three-year work plan. Given the importance of protected natural areas to take care of biodiversity and ecosystem services, we decided to focus our efforts on these areas and, therefore, support the work of CONANP and SEMA.

Our first four projects focus on the protection of priority, emblematic species, namely:

-  •Jaguar and other felids (Autonomous University of Querétaro).
-  •Manatee (ECOSUR-Chetumal).
-  •Whale shark (Pronatura Yucatan Peninsula, AC).
-  •Marine turtles (Pronatura Yucatan Peninsula, AC)



We also have two other projects focusing on conserving priority ecosystems and developing sustainable communities, and include projects to:

-  •Protect the aquifers and cenotes along the Mayan Riviera (Friends of Sian Ka'an, AC).
-  •Develop protected fishing zones with community participation and citizen scientists in the coral reef zones (Community and Biodiversity, AC).

In our seventh project we are working closely with the SEMA to further strengthen management programs and support technical and legal studies, projects, and strategies for key protected areas, namely:

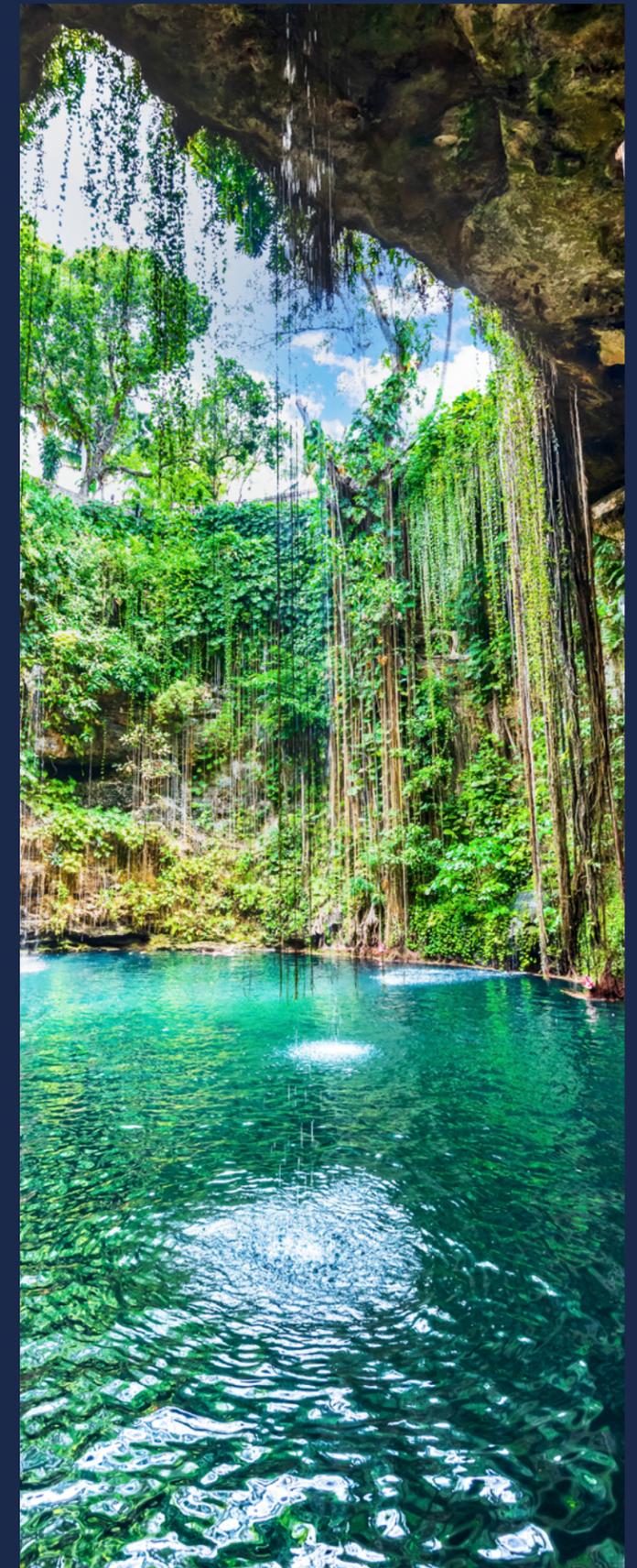
- The Manatee Lagoon Natural Protected Area and other coastal lagoons between the cities of Cancún and Isla Mujeres.
- The Bacalar Lagoon State Ecological Park and the proposed Bacalar Lagoon National Park.
- The Chacmochoch Lagoon System State Ecological Flora and Fauna Conservation Zone (between Benito Juárez and Isla Mujeres).

In our eighth project we are supporting public consultations and scientific research towards achieving:

- The declaration of the new Puerto Morelos Wetlands State Park.
- The declaration of the new Mahahual Wetlands (Othón P. Blanco).
- The widening of the X'Acacel-X'Acacelito Ecological Conservation Zone (Tulum).

In year two, we added a fifth and important priority area to our portfolio by supporting state and national environmental authorities, civil society organisations, and other stakeholders, including the German Cooperation Agency (GIZ), in developing a draft Coastal Policy for the State of Quintana Roo.

The wide-ranging results from SAC-TUN's first year of support were reported in the SAC-TUN Sustainability Report 2020.



# PARTNERS

SAC-TUN PARTNERS AND PROJECTS SUPPORTED UNDER THE IMPLEMENTATION OF OUR ENVIRONMENTAL STRATEGY 2019-2022

PARTNER	ENVIRONMENTAL STRATEGY COMPONENT
	<p>Conservation of key federal natural protected areas and priority species in Quintana Roo and the Yucatan Peninsula</p>
	<p>Strengthening a network of protected areas in Quintana Roo Strengthening the protected area of Laguna Manatee</p>
	<p>Community management and conservation of aquifers and cenotes in Maya Ka'an and the Riviera Maya cenotes, Quintana Roo</p>
	<p>Conservation of critical nesting habitats of marine turtles in the northwest Yucatan Peninsula Whale shark conservation and sustainable tourism in the Mexican Caribbean</p>
	<ol style="list-style-type: none"> <li>1. Jaguar habitat and movements in a human-dominated landscape in the Yucatan Peninsula</li> <li>2. Ecology and conservation of manatees in Quintana Roo</li> <li>3. Sustainable small-scale fisheries and community participation in the Mesoamerican Reef</li> </ol>
	<p>Design of a Coastal Policy for Quintana Roo</p>



# OUR ENVIRONMENTAL ACHIEVEMENTS IN 2021

## SUMMARY OF PROJECT PROGRESS



**Jaguar (*Panthera onca*) habitat and movements in a human-dominated landscape in the Yucatan Peninsula, 2019-2022**

Autonomous University of Querétaro

- Based on 1,766 satellite locations of the five felines tagged with radio transmitters, we obtained detailed information about their home environment in both rainy and dry seasons.

- Analysis of habitat use revealed that the five felines preferred to pass through one type of habitat despite the availability of other types of terrain.

- Our 28 camera traps placed in February 2020 and between 2020 and 2021 obtained 27,589 photographic records of wildlife belonging to 58 species: four reptiles, 25 birds, and 29 mammals. We identified 10 different jaguars by their spot patterns.

- Genetic analysis of fecal samples collected in 2020 and 2021 indicates the presence of four jaguars and four pumas.

- Analysis of the felines' diet indicates the presence of five prey species (cereque, coatis, deer, tepezcuintle and pecary). The deer samples analyzed belong to six species of temazates and two white-tailed deer.



**Conservation status of the manatee population in Quintana Roo and the connectivity of populations in the coastal zone, 2019-2022**

ECOSUR-Chetumal

- We obtained detailed information on the movements and sites visited by Pancho, the manatee that arrived in Chetumal Bay, Quintana Roo, from Florida in the USA. We now know that it frequents docks, marina canals, and other built-up coastal areas.

- We created a Facebook page to share activities and progress of this project with the public through information sheets and videos.

- We captured (and later released) nine manatees in the Bahía de Chetumal Manatee Sanctuary (SMBCH) and placed satellite transmitters on six for monitoring. Two of the transmitters became detached, one stopped operating, and three remain attached to the manatees.

- We performed blood tests on eight manatees captured at the SMBCH, all of which returned normal values.

- We developed maps recording Pancho's movements and those of the other six manatees tagged in the SMBCH.

- We have a database of morphometric data and the results of blood tests for all manatees captured.



**Contribution to the sustainable management of whale shark tourism in the Mexican Caribbean, 2019-2022**

Pronatura Yucatán Peninsula (PPY) 2019-2022

- In 2021, we counted a total of 121 whale sharks—the lowest number recorded for the three seasons that this project covers (2019, 2020 and 2021). This represents approximately 30% of the total number of sharks recorded in 2019 and 2020 (413 and 396, respectively).

- We counted 83 boats on average during each overflight, similar to the number registered in 2019 (79) but higher than the average per day for 2020 (38), which was an atypical year in terms of tourist visitation owing to the COVID-19 pandemic.

- We estimate an average tourist use area of 4.38 km<sup>2</sup>, a similar size to that registered in 2019 (3.96 km<sup>2</sup>) and in both cases larger than the estimated area for 2020 (2.2 km<sup>2</sup>). Like the number of vessels counted in 2020, the area of tourist use for that year may have been influenced by low tourist visitation numbers due to COVID-19.

- We calculated an average compliance with the rules established for observation and swimming with whale sharks of 79%, the result of 88 observations made between June and September 2021. The only rule with 100% compliance was for life-vest use. Rules regarding the number of boats and the number of swimmers interacting simultaneously with the same whale shark were fulfilled 61% and 51% of the time, respectively.

- After incorporating data from three seasons of observations, the results of calculations of tourist carrying capacity were similar for the two models evaluated. With Model 1, we calculated 1,099 tourists per day, equivalent to 110 boats. With the Model 2, the result was 1,072 tourists per day, or approximately 107 boats. The currently established loading capacity is 120 boats per day, approximately 1,200 tourists.



**Conservation of critical nesting habitats for sea turtles, their connectivity and population parameters in the northeast of the Yucatan Peninsula, 2019-2022**

Pronatura Yucatán Peninsula (PPY) 2029-2022

- From April-October 2021 we monitored 49 km of two of the world's most important nesting beaches for hawksbill and green sea turtles. We recorded 713 hawksbill and 3,152 green turtle clutches in El Cuyo. In Holbox, we recorded 1,409 hawksbill clutches (new all-time high) and 523 green turtles.

- We obtained 65 green turtle samples and 37 hawksbill samples at El Cuyo. In Holbox, we collected 35 green turtle samples and 33 hawksbill turtle samples. Together with those of 2020, we now have 207 samples for genetic and critical habitat connectivity analysis.

- We tagged 172 neophyte females and identified 25 previously tagged females, only one of which was not tagged by us.

- Data for females recaptured in this period indicate a strong fidelity to their nesting site, since 84% were tagged on the same beach in previous years. However, movements between beaches were also observed, mainly between El Cuyo and Las Coloradas, and Holbox and Las Coloradas.

- We recaptured three more turtles that were tagged between 1995 and 1998: a hawksbill turtle first tagged in Las Coloradas in 1998 that nested in El Cuyo this season; a green turtle observed in El Cuyo in 1998; and a green turtle tagged in El Cuyo in 1995 that has nested in Las Coloradas and El Cuyo.

- The ratio of female hawksbills tagged and recaptured was 3:1 in El Cuyo and 13:1 in Holbox. In green turtles, the proportion is 15:1 in El Cuyo and 11:1 in Holbox. This reflects the growth of reproductive populations, as the number of recaptures remains low.





**Community management and conservation of the aquifer and cenotes of Maya Ka'an and the Riviera Maya, Quintana Roo, 2019-2022**

**Friends of Sian Ka'an**

•In collaboration with the Secretariat of Social Development (SEDES), we began detailed socio-environmental diagnoses and technical surveys of the communities, consulted with experts to compile a catalogue of suitable eco-technologies to adopt, developed calculation reports, a training program for our collaborators and community promoters, and criteria to facilitate community adoption of the eco-technologies and began the construction of eco-technologies in eight communities.

•We began the implementation of the Strategy to Strengthen Community Water Governance in the communities of Yodzonot Nuevo, Yaxley, Dzaptun, San Antonio Segundo, Yaxche Chal, Santo Domingo, Tzukum and Sahcabchén.

•Despite the COVID-19 pandemic, we continued our environmental education actions to strengthen water culture, including participating in the *Friends of the Earth* rally and other events in which the project's target audience (teachers and students of the Maya Ka'an region), were represented by the Technological University of the Riviera Maya, the Technological Institute of Felipe Carrillo Puerto, the Mayan Intercultural University and the CECyTE Tulum. Educational institutions of upper secondary and higher level participated in this online forum, reaching almost 22,000 views on various social networks and digital platforms, at a regional, national and international level.

•In November, three Maya Ka'an schools resumed the Environmental Education Program for the Promotion of Water Culture and began the Citizen Science Program,

participating in environmental education and citizen science workshops to monitor the quality of the water in their communities. 38 students (50% young women and 50% young men) and three teachers participated.

•We established an alliance with the Secretariat of Tourism of the State of Quintana Roo (SEDETUR) to provide Training in Hygiene Protocols and Tourism Quality to 6 community companies from Maya Ka'an (Beéj Kaáx Ha Kantemo, Balam Nah, Síijil Noh Ha, Orchids of Sian Ka'an, Ubelilek and Vigia Grande Tourists). This increases the capacities of nature tourism companies for comprehensive management of cenotes, caves and springs. The participants designed a sanitary protocol that is adjusted to their nature tourism activities and aligned with water care, mainly in the proper and rational use of chemical products for cleaning and disinfection.

•We organized the second edition of the Diploma in Proper Management of Wastewater Treatment Plants as a tool to improve the health of the Mesoamerican Reef System. 29 treatment plant operators participated who, together with those of the first edition, add a total of 57 operators trained in the correct management of wastewater treatment plants.



**Sustainable fisheries through community participation in the Mesoamerican Reef System, 2019-2022**

**Community and Biodiversity (COBI)**

•From September-October 2021, we carried out our first field trip since the COVID-19 pandemic was declared 18 months ago, and were accompanied by 17 people (four women, 13 men) from two communities (Punta Allen and María Elena) in Sian Ka'an.

•We collected 12 more environmental DNA samples (for a total of 28 samples) and tagged 487 lobsters for genetic connectivity studies.

•Community partners integrated mixed work teams, sharing leadership in planning tasks, logistics, diving safety, data collection and equipment management, challenging social constructions of gender-based division of labor (e.g., a woman operates the tank compressor in the Punta Allen community).

•Community members successfully used state-of-the-art technology to study genetic connectivity and continue to be committed, proposing complementary activities that allow for expansion of the diversity of samples collected.

•We finalized the solutions documentation and published details of seven solutions on the *Global Panorama Solutions* platform. Four of these solutions include the experiences and lessons learned in the Mexican Caribbean. In addition, another 33 solutions are being curated at the national level, as well as 153 adaptation actions of fishing communities in the Mexican Caribbean (370 at the national level).

•After eight months of national consultations on the impacts of COVID-19 on fishing communities (including close to 1,500 interviews and 450 participants), we wrote and published the article entitled: *The voice of Mexican small-scale fishers in times of COVID-19: Impacts, responses, and digital divide* (Marine Policy journal), where we describe these impacts, the solutions implemented and the use of technology. We also collaborated in the publication of the article entitled: *Between uncertainty and hope: Young leaders as agents of change in sustainable small-scale fisheries* (Ambio), where we present the profile of the new generation of fishers in Mexico.





**Strengthening of the Manatee Lagoon Protected Natural Area, Quintana Roo, 2019-2022**

Institute of Biodiversity and Protected Natural Areas of the State of Quintana Roo (IBANQROO) of the Secretariat of Ecology and Environment (SEMA) of Quintana Roo

•We carried out a prospective study of fish diversity and abundance and recorded six species of fish in our samplings: *Mayaheros urophthalmus*, *Gambusia yucatana*, *Poecilia velifera*, *Megalops atlanticus*, *Oreochromis sp.*, and *Garmanella pulchra*, of which the first four were the most abundant.

•Following the national methodology of Nocturnal Visual Detection and the evaluation of crocodile habitat in accordance with the National Monitoring Manual, we monitored crocodiles and their habitat and found healthy populations of crocodiles, with average encounter rates of six individuals/linear km, which is above the national average of 3.3 individuals/linear km.

•We built a look-out tower 12 m high x 9 m<sup>2</sup> using hard wood from the region. We located the tower at the side of a rural access in a space that was previously an open-air waste dump.

•We drew up architectural plans, obtained all the requisite permits and built our 18 m<sup>2</sup> shed, complete with electrical and sanitary facilities.

•On a rainwater channel, we rebuilt a 7 m x 2.5 m pedestrian walkway to enable the safe entry of community members and operational personnel.

•The Manatee Lagoon and Chacmochuch River Participatory Vigilance Committee are our main social allies. In 2021 we worked with them for 240 hours, divided between surveillance activities, sanitation, attention to fauna, accompaniment in monitoring, training, and reflections on, and exchange of, experiences.

•We removed 63 m<sup>3</sup> of sludge, collected 1,450 kilos of solid waste, cleared five tons of sludge that obstructed the water flow, and removed five tons of the invasive exotic species *Eichhornia crassipes* and *Pistia stratiotes* that affect the communicating channels.



**Development of public policies in conservation spaces in the state of Quintana Roo, 2019-2022**

Secretariat of Ecology and Environment (SEMA) of Quintana Roo

**Management Programs**

**•Bacalar Lagoon State Ecological Park, Quintana Roo.**

The Management Program for this protected natural area was concluded, presented, and made available for public consultation on the electronic pages of IBANQROO and SEMA. We estimate that, once the consultation period is over, this management program will be formally published in February 2022.

**•Zone Subject to Ecological Conservation State Refuge of Flora and Fauna Chacmochuch Lagoon.**

The Management Program for this protected natural area was concluded and presented to the Sub-Council which, in terms of management and conservation, is considering implementing it as a program applicable to the two natural protected areas of the Chacmochuch Lagoon System and the Manatee Lagoon. The management program was validated, duly made available for consultation and comments from the public, and the legal procedure for its publication is ongoing. At the same time, these protected natural areas will be reclassified according to the current categories in the Law of Balance and the protection of the State Environment.

**New declarations of protected natural areas**

**•Puerto Morelos Wetlands State Park.**

The Preliminary Justification study for this proposed protected natural area was concluded, presented, and posted for public consultation, together with the Decree Proposal, on the web pages of IBANQROO and SEMA. We estimate that, once the consultation period is over, it will be formally published in February 2022. We agreed the strategy for reactivating the Trust under the charge of SEMA and IBANQROO.

**•Expansion of the Xcacel-Xcacelito Zone Subject to Ecological Conservation, Tulum.**

We continued to work with the University of Quintana Roo in preparing the Preliminary Justification Study for the expansion of this zone. In a session of the sub-council for the management of the area, we presented the proposed polygon that will be expanded by incorporating about 1,000 additional hectares to connect with the marine turtle sanctuary. This proposed expansion will be supported by the Preliminary Justification Study that is currently being prepared.

**•Social feasibility study for incorporating the wider Bacalar Lagoon area into the already existing Bacalar Lagoon State Ecological Park.**

We have the Preliminary Justification Study to support the declaration of a new Bacalar Lagoon National Park covering an area of 12,000 hectares. This study is serving as the basis for the formulation of the conservation strategy for the Bacalar Lagoon which is an important source of local economic initiatives. Derived from the results of the first workshop held in February 2021, a second face-to-face workshop has been scheduled to ensure the participation of the social sector and producers from the ejidos surrounding the Bacalar Lagoon. This workshop will address the viability of proposed strategies and actions, as well as their possible location in the geographical space of the lagoon's area of influence.





**Design of a coastal policy for the state of Quintana Roo**

- IBANQROO/SEMA, CONANP, Friends of Sian Ka'an, and The German Cooperation Agency (GIZ)

In 2021, we worked together to design a draft coastal policy for Quintana Roo that will promote the integrated management of the coastal zone through the application of different economic, social and environmental instruments.

We were led by SEMA and had the collaboration of more than 50 specialists from scientific research institutions, civil society organizations and different state and federal agencies who met in two workshops during 2021.

The document recognizes the recognizes the interdependence and connections between people and nature, specifically the geology, soil, cenotes, caves, atmospheric water cycle, underground hydrological structures, and the Caribbean Sea.

Promulgating a Coastal Policy will promote coastal planning and management increasing the sources of livelihoods for the people of Quintana Roo and reducing the risks of flooding, saline intrusion of aquifers, the pressures of rainwater in the sewage drainage and pollution of the sea by urban wastewater. The policy will also promote increased adaptation to climate change, and further protection of the coral reefs, mangroves, coastal dunes, sea grasses, sea turtles, fish, other forms of life, and the cenotes and marine habitat that attract millions of tourists to the state each year.

**The Coastal Policy is based on a governance process based on seven criteria:**

- 1 Integration of policies, processes and programs to achieve a common vision on the integrated management of the coastal zone.
- 2 Definition of short, medium, and long-term strategies at the local level.
- 3 Synergies with the actions of civil society organizations.
- 4 Incorporation of available scientific and technological information
- 5 Promotion of social and environmental research and follow-up actions.
- 6 Alignment with the National Policy of Seas and Coasts of Mexico.
- 7 Coordination and concurrence of actions between the three levels of government.





Channel cleaning



Pedestrian crossing reconstruction



Community Guardians



Cleaning and garbage collection



Viewpoint building



Signs for the Manatee Lagoon



Attaching satellite transmitter to a manatee



Night detection of crocodiles



Channel of Chunyaxch



Signs of "Área Natural Protegida"

# SOCIAL

## OUR EMPLOYEES

**SAC-TUN is the main company generating employment in the region in activities not related to tourism.**

For SAC-TUN, employees are the backbone of the company. That's why we invest in our people by providing the essential training, guidance, and supportive environment to thrive and excel. In 2021, the team at SAC-TUN Quarry included 401 workers and professionals.

### By age

Age range	Men	Women	%	Men	Women	%
20-29	114	1	28%	98	0	24%
30-39	111	2	28%	115	4	30%
40-49	97	6	25%	94	7	25%
50-59	62	6	17%	68	5	18%
60-69	8	1	2%	8	2	2%
70-79	1	0	0%	0	0	0%
<b>Total</b>	<b>393</b>	<b>16</b>		<b>383</b>	<b>18</b>	

### By category

Category	2020		2021	
	Men	Women	Men	Women
Operations	328	5	323	5
Administrative	62	9	57	11
Direction and management	3	2	3	2
<b>Total</b>	<b>393</b>	<b>16</b>	<b>383</b>	<b>18</b>

### Turnover rate

Category	2020			2021		
	Men	Women	%	Men	Women	%
20-29	9	1	2.4%	12	1	3.2%
30-39	7	0	1.7%	10	0	2.5%
40-49	7	0	1.7%	4	0	1.0%
50-59	2	0	0.5%	4	0	1.0%
60-69	0	0	0.0%	3	0	0.7%
70-79	0	0	0.0%	1	0	0.2%

\*We updated our turnover rate calculation with respect to our 2020 Sustainability Report.

Diversity and inclusion are important values for SAC-TUN. We are committed to creating an equal opportunity work environment by making every effort to ensure our employees enjoy a workplace free from discrimination. In 2020, we created the SAC-TUN Health Committee, with the objective to ensure compliance with its internal conciliation procedure for situations of harmful psychosocial factors, unhealthy environments, and workplace harassment. Within this framework, SAC-TUN will recruit, employ, train, and promote people in all labour categories without undue discrimination based on race, color, religion, gender, sexual orientation, gender identity, national origin, age, disability, genetic information, or any other characteristic protected by law. Our success depends on the superior personal merits of our collaborators.

In 2021, we were awarded Great Place to Work (GPTW) certification, a recognition achieved by companies demonstrating a good work culture. The evaluation consists of five dimensions: credibility, respect, impartiality, pride, and camaraderie. In 2021, SAC-TUN received its highest-ever evaluation in the pride dimension, which is the result of our achievements as a team, how proud we feel to belong, our shared values, and our dignified and fair treatment of each other that has enabled us to create a good workplace.



**Based on the Great Place to Work evaluation, SAC-TUN's Human Resources department identified opportunities for further improvement and is working with each department to create action plans to pursue those opportunities.**



# BENEFITS

We offer our employees various remunerations and benefits over and above those required by law, as appropriate, which include:

- Saving fund.
- Life insurance.
- Insurance for major medical expenses.
- Scholarship for children and grandchildren at the La Salle Playa del Carmen Institute.
- Transportation.
- Food service (breakfast and lunch) subsidies.
- Financing for medical services.
- Bonuses for production, assistance, safety, and management, among others.
- Educational reimbursement.
- Vehicle assignment to managers, directors and supervisors.
- Vacation bonuses above those established by law.
- Superior bonuses to those established by law.
- Rent support.
- Construction fill material.
- Sports facilities.
- Medical care.



# TRAINING

With the aim of improving knowledge, core competencies, and opportunities for employees to develop their full potential, SAC-TUN constantly invests in training opportunities. With our Annual Training Program, we ensure all employees receive the appropriate training. In 2021, we provided more than 13,000 hours of both face-to-face and virtual training, an average of 32 hours per employee. Compared to 2020, we provided an average of 33% more hours of training per employee.

The virtual training is carried out through SAC-TUN's on-line training platform with our group of Internally Qualified Instructors who developed our monthly materials for our mandatory Health and Safety Training.

## Training hours

Category	2020	2021
Operations	7,676	10,995
Administrative	1,882	1,527
Direction and management	103	123
Suppliers	589	660
<b>Total</b>	<b>10,250</b>	<b>13,305</b>



# SAFETY AND HEALTH

## At SAC-TUN, safety is part of our DNA

For SAC-TUN, safety has undoubtedly been, is, and will continue to be one of the core points to measure our operation's success. We promote a culture of safety and health at all levels. For this reason, carrying out constant training, providing personal protection equipment in accordance with the activities we carry out, as well as a health program is essential to our success.

Through the Occupational Health and Safety Self-Management System, we detect and prevent risks in a timely manner and work together to keep jobs safe and in compliance with Official Mexican Standards. We also comply with other applicable corporate regulations, such as MSHA (Mining Safety and Health Administration in the United States) and OSHA (Occupational Safety and Health Administration).

Our Safety and Hygiene Commission, required by regulation, is made up of workers and SAC-TUN management. The main objective of the commission is to prevent accidents and illnesses in the workplace. The Commission's primary functions are to:



- 1 Investigate causes of accidents and illnesses.
- 2 Propose measures to prevent them.
- 3 Follow up on the proposed measures and monitor their compliance.

As part of our emergency preparedness procedures, the first aid brigade participates alongside firefighting and height rescue teams in annual drills during which the local Civil Protection authority evaluates our emergency response procedures.

The members of the Commission participate voluntarily. The Commission consists of a coordinator, a secretary, union leader or representative of the workers, and members at large. The Commission has the power or ease of decision-making in the company so they can resolve conflicts and propose solutions. The main objective being to avoid accidents and illnesses within the workplace.

The Commission has an annual plan to conduct verification tours in different areas of the company. These tours are carried out monthly and all observations are documented and subsequently passed on to the person responsible for follow-up.

In addition to the Commission, SAC-TUN has its own first aid brigade made up of employees trained as paramedics. Those who have taken the six-month, in-person course and have completed the requisite ambulance hours as stipulated by the Red Cross, are issued the title of Paramedic.



# HEALTH PROGRAMS

At SAC-TUN our exhaustive health programs are carried out by the company's doctor. These annual health programs are established according to identified health risks that may result from the company's activities. The reviews and studies include an:

- Annual medical review (physical examination, taking vital signs, and detection of chronic degenerative diseases).
- Annual audiometry study.
- Noise exposure studies.

Having healthy workers and a safe work environment benefits everyone. In all our activities we maintain high safety standards to protect our workers, provide the Personal Protective Equipment (PPE) necessary to mitigate, isolate, and even avoid exposure to potentially toxic substances. During 2021, no cases of pathology were recorded due to exposure.

The SAC-TUN facilities medical office is equipped for consultations for general illness as well as minor injuries. We invest in our medical personnel so they can advance and excel, providing the essential training, guidance, and supportive environment they need to develop their skills.





# ANNUAL SAFETY WEEK

Every year, SAC-TUN organizes Safety Week, where we focus on sharing updated information with collaborators on security-related issues.

The Mexican Red Cross, Fire Departments, Civil Protection brigades, suppliers, and employees and their families regularly participate in Safety Week. Our objective is to educate our employees and their families on our culture of Safety and Prevention. In 2021, in our 27th Annual Safety Week, we focused on sharing health strategies for a safe return to work in the face of COVID-19.



# COVID-19

**The investment we made due to COVID-19 in 2021 was \$211,691.**

During 2021, SAC-TUN continued with necessary efforts to keep employees safe with a view to:

- Implement and update protocols and procedures for the detection, containment, and monitoring of people affected by COVID-19.
- Apply PCR tests to any person with suspicious symptoms and to all workers on return from out of state vacations.
- Conduct weekly random monitoring.
- Implement controlled access to the facilities, including measures such as the mandatory use of a mask, temperature measurement, and the work-from-home modality.
- In the event of a positive diagnosis for COVID-19, the patient is instructed to rest at home, as well as close medical monitoring of the infected worker's health condition, without prejudice to public health services.
- Promote vaccinations by providing all the necessary facilities.





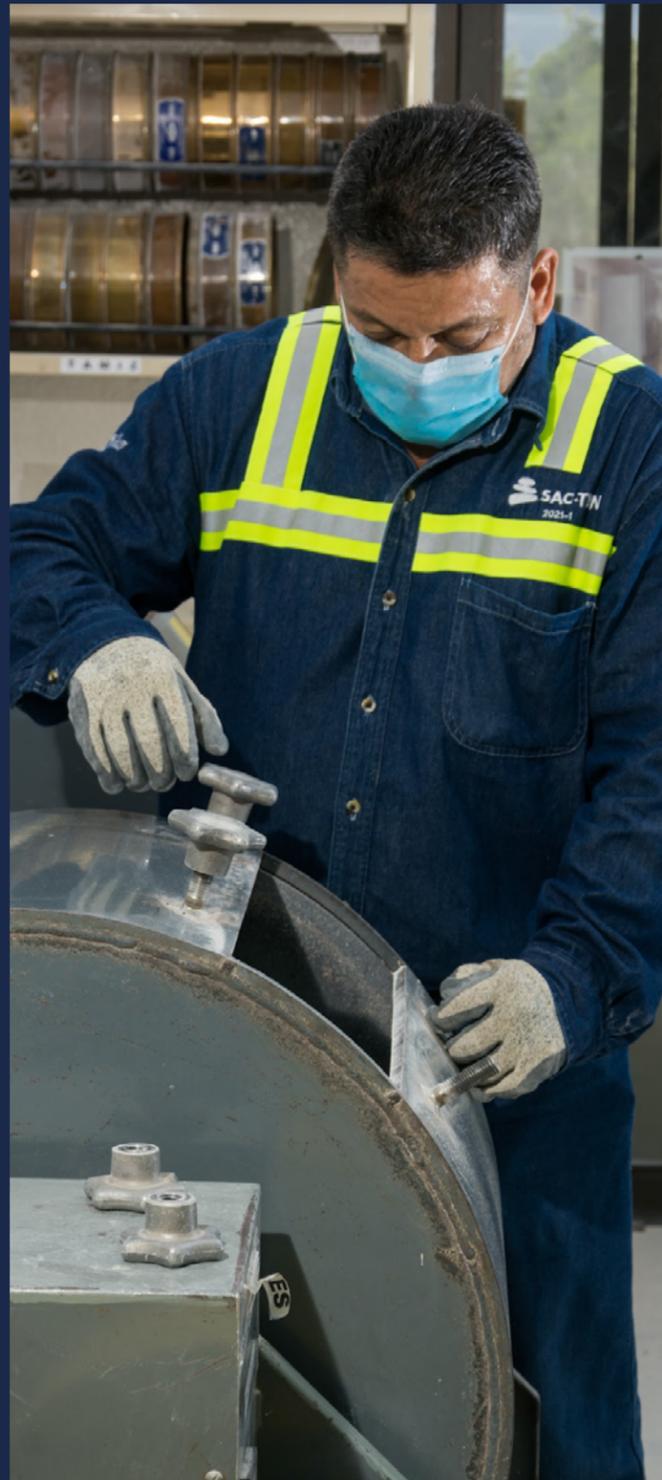
# HEALTH AND SAFETY PERFORMANCE

789,736 cumulative man-hours without disabling accidents in 2021.

In April 2021 we had a disabling accident and, as a result, took the necessary actions in training and root cause analysis to identify the cause and improve our conduct so to prevent it from happening again.

## Safety Performance

	2020	2021
Number of fatalities	0	0
Lost time Injury rate	0	0.18
Recordable accident rate	0.89	0.71



# OUR SOCIAL COMMITMENT

At SAC-TUN we prioritize social responsibility and are committed to reinvesting in the social and economic development of Quintana Roo.

In 2021, the Mexican Center for Philanthropy recognized SAC-TUN for its Social Investment policy of allocating at least 1% of profits before taxes to social benefit activities. For the second consecutive year, we received the distinction as a Socially Responsible Company (ESR) for our social and environmental commitment to our stakeholders.

Since its founding in 1986, SAC-TUN has been an important source of employment and a driver of social and economic development in Quintana Roo. When the company was formed, Playa del Carmen was a fishing town with fewer than 5,000 inhabitants. Today, 33 years later, it is a city with a population over 300,000.

Most of the city's growth was thanks to the expansion of the local economy, catalysed in part by SAC-TUN supporting the construction of large infrastructure projects and giving impetus to the installation of electricity and water supply. Our limestone products have been the primary construction material for most roads, highways, ports, and airports as well as many hospitals, public schools, hotels, parks, and churches.

At SAC-TUN we prioritize social responsibility and commit to reinvesting in the social and economic development of Quintana Roo. The investments we have made, and will continue to make, will last long after we have finished our quarry activities.





# Voluntarios



## SAC-TUN

## MORE THAN 10 YEARS WORKING VOLUNTARILY FOR THE BENEFIT OF THE COMMUNITY

SAC-TUN Volunteers are dedicated employees, family members, and friends who contribute their time to supporting projects related to the environment, education, art and culture, community, health and well-being, and social development – the main pillars of our volunteer program.

At SAC-TUN we put our philosophy into practice: doing the right things, in the right way at the right time. We generate social projects that integrate our dedication to service, as well as the search for development and well-being of the communities where we operate.

In these initiatives we partner with social and community groups, as well as with private and public companies, who share our philosophy of working together for the benefit of all.

At SAC-TUN we are united by the fundamental values of:

- Respect.
- Equity.
- Honesty.
- Solidarity.
- Empathy.

In 2021, the SAC-TUN Volunteers program commemorated its 10th anniversary by holding a virtual forum where companies, civil society organizations, and the public shared tools and experiences on the benefits of volunteering and what it represents for the community.

Our volunteer activities range from reforestation in areas outside the company's land to the collection of garbage on beaches and parks, improvement of infrastructure, donation of sports equipment to local groups and support of sporting events, activities benefitting children's health including the donation of construction materials for hospitals and concrete floors for indigenous community family homes. We are particularly proud to support our local Red Cross and Fire Department programs.





## MATERIAL DONATION PROGRAM

In 1995, we started our donation program of construction fill material which focuses on supporting civil society organizations, schools, and churches, among others, for the benefit of community members where we operate. In 2021, 1,678 tons were donated.

*The Teachers' Seminar, the SAC-TUN Volunteers program, and the construction material donation program are just three of the initiatives that make us proud and that demonstrate our long-term commitment to education and the sustainable development of Quintana Roo and our neighbours with whom we live and work.*

As required by our Environmental Impact Authorization and equivalent documents (AIA), conservation plans include the protection of archaeological remains present on our properties. All of the archaeological sites on Vulcan Materials Company property Mexico have been explored, mapped, monitored, and documented by the INAH. Each of these sites is protected. The INAH continues to have unrestricted access



## PROTECTION OF ARCHAEOLOGICAL REMAINS

to these sites, which are described in detail in a book by Luis Alberto Martos López, entitled *Por las Tierras Mayas de Oriente: Arqueología en el área de CALICA, Quintana Roo*, which was published in 2002 jointly by the INAH and CALICA (now SAC-TUN).

For many years SAC-TUN has supported, and will continue to support, the preservation and protection of these archaeological sites. The company works closely with the INAH in its research and education activities related to these sites. In coordination with the INAH, members of the communities use the P-1 complex on the Punta Venado land for their spiritual and religious ceremonies.



# SAC-TUN COMMUNITY



<https://sactun.com/comunidad/>



# INVESTING IN THE FUTURE

## -EDUCATION-

### Instituto Playa del Carmen de La Salle

**The Instituto Playa del Carmen de La Salle was the first bilingual school in the Riviera Maya, and offers its services to the children and grandchildren of SAC-TUN collaborators, and to the community of the municipality of Solidaridad.**

In the first years of the arrival of SAC-TUN in Playa del Carmen, specifically in 1989, the Instituto Playa del Carmen de La Salle was established. The first bilingual school in the Riviera Maya, it offers preschool, primary school, and high school educational curricula. It currently has a staff of 55 teachers and administrative staff who serve around 500 students.

The Institute offers its services both to the children and grandchildren of SAC-TUN collaborators and to the community of the municipality of Solidaridad.

This institute belongs to the Lasallian Antillas Mexico South District, present in more than 80 countries.

The Institute is administered by SAC-TUN as a non-profit organization and is operated by the Salesian Society of Catholic Schools. SAC-TUN continues to support investment, maintenance, and operation costs when necessary.

Currently, the Institute is recognized as one of the best primary and secondary schools in Quintana Roo. Its educational capacity, the experience and dedication of its faculty, and its facilities provide students with a cutting-edge, multidisciplinary program. English studies are conducted in cooperation with the University of Cambridge English Assessments program in the United Kingdom.

The high-performance robotics team achieved first place nationally for three consecutive cycles. Our students were special guests representing Mexico in the World Tournament to be held in Germany in 2022 and Chicago in 2023. They participated in virtual tournaments where students were given the opportunity to take robotics equipment home, in addition to receiving accompaniment and remote advice. The talent of our students and the accompaniment received was the key to these results.

We continue to collaborate with the Antillas México Sur district branch of the global La Salle organisation, actively participating in calls to promote La Salle education by talking at various venues about our experiences with the La Salle educational method. Our faculty have also participated in, and benefited from, La Salle Quality programs, covering such topics as safe communities and the mental health care of our employees, fostering agreements to carry out activities that favour healthy co-existence between students, faculty, and administration. We further strengthen our teachers and pastoral care through the online resources offered by the *Acordémonos*<sup>5</sup> community.

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**FOR SAC-TUN, EDUCATION IS A PRIORITY.  
WE BELIEVE THAT IN THE FUTURE OF  
GENERATIONS, IN THE VALUE OF TRAINING  
AND DEVELOPMENT OF ALL PEOPLE.**

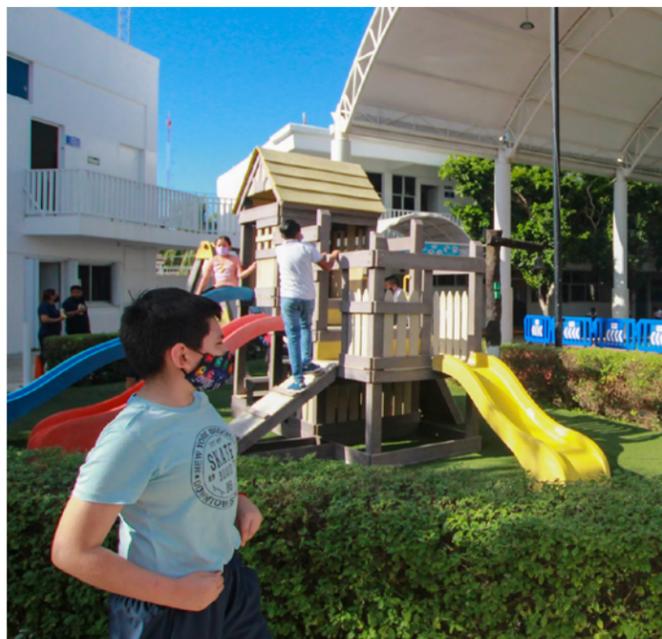
<sup>5</sup>Acordémonos.com is an online project that is designed to promote daily reflection through the publication of digital resources with easy access for the entire community. <https://acordemonos.com/>

## Teachers' Seminar

The popular SAC-TUN Teachers' Seminar has been held annually and without interruption since 1997. The Teachers' Seminar offers hundreds of local educators, mainly from public schools in north-eastern Quintana Roo, a forum to exchange views, catch up on advances in the field of education, and learn new pedagogical techniques to motivate and teach their students.

The Teachers' Seminar is organized with the University of the Americas of Puebla (UDLAP) and in collaboration with the Secretary of Education of Quintana Roo. Each year, six to nine recognized national and international education experts are invited to speak and coordinate workshops on the latest advances in educational technology, educational psychology, and teaching skills. Topics addressed in recent years include self-reflection on emotional intelligence, teaching using virtual platforms, and the comprehensive development of students through a humanistic approach.

In 2021, around 1,600 teachers from throughout the country signed up to reinforce their ability to analyze the effective application of information technologies and new pedagogical approaches to increase the quality and efficiency of education.



# CORPORATE GOVERNANCE

## ETHICS AND INTEGRITY

We reaffirm our commitment to ethics and integrity in the development of all our operations, promoting work environments meeting the highest standards of integrity, honesty, and compliance with the laws established with our employees, suppliers, and contractors. Our corporate regulatory framework includes the following policies:

- Whistleblower policy.
- Policy on the use of privileged information.
- Business conduct policy.
- Donation policy.

All employees are aware of the business conduct program policy. As part of SAC-TUN, employees comply with its provisions in order to avoid violations and report any violation of the policy. At SAC-TUN we conduct ourselves every day in accordance with our values of integrity, excellence, and people.

**WE CONDUCT OURSELVES EVERY DAY IN ACCORDANCE WITH OUR VALUES OF INTEGRITY, EXCELLENCE, AND PEOPLE.**

### Integrity

We consistently work to earn respect and trust by being consistent in what we say and do in our relationships with all those with whom we interact. We conduct ourselves in a fair and honorable manner. We act ethically by being balanced and equitable, obeying laws and regulations.

### Excellence

We are committed to carrying out all our activities with a high degree of excellence. We promote innovation with the contribution of new ideas and technology as tools for growth and development. We seek to maintain a leadership position in each of our activities, establishing quality, service, technical support, safety, and environmental standards.

### People

We respect individual dignity and interests, treating everyone who works in the company fairly. We strive to maintain an environment that encourages employees to develop their talents, exercise their creativity, and achieve superior performance. We keep our programs at fair and competitive levels. Employment and advancement are based on performance, performance, and the needs of the organization. We maintain a firm commitment to the health and safety of all.

## Stakeholders

SAC-TUN is aware of the importance of maintaining a good relationship with our various stakeholders where we operate, which is why we have developed different relationship mechanisms and different means of contact and dissemination of information such as our website, customer service line, social networks, press conferences, and sustainability reports, among others.

Some spaces for interaction with our various stakeholders carried out during 2021 were:

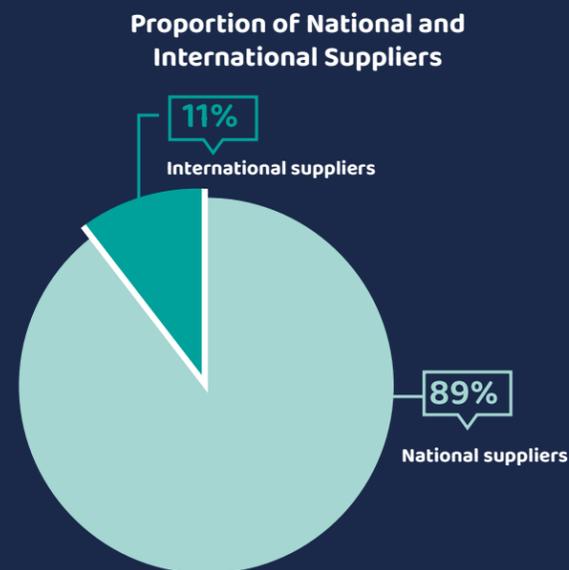
- Safety Week with suppliers and collaborators,
- XXV Edition of the Teachers' Seminar,
- SAC-TUN Volunteer Forum
- Press conference: Sustainability Report 2020
- Painting Contest, World Jaguar Day 2021



# VALUE CHAIN -SUPPLIERS-

## 89% of acquisitions and services performed at SAC-TUN are with national suppliers and contractors

We make sure to make strategic purchases, with the aim of having the necessary supplies and equipment to continuously carry out our activities, and 89% of the acquisitions and services that SAC-TUN carries out are with national suppliers and contractors. These organizations mainly provide us with fuel, machinery, spare parts, donating material, energy, and a variety of other products and services, for which our demand of these products to international suppliers is minimal.



*In 2021, we made purchases from more than 340 national and international suppliers.*



# ACKNOWLEDGMENTS



We are proud to have the work of SAC-TUN recognized by different international organizations and institutions in various fields such as:

- 1 Recognition by the **Wildlife Habitat Council** in the **Mammals Project** category, for the efforts made in the conservation of the jaguar, within the framework of the SAC-TUN program: **Conservation of biodiversity and environmental services in the Mesoamerican Reef.**
- 2 Third consecutive year as a **Socially Responsible Company**
- 3 **Great Place to Work** Certification
- 4 **Zero Fatalities**



# CONTACTS



SAC-TUN. 2021. SAC-TUN Sustainability Report 2023 SAC-TUN, Km. 282.6, Carretera Federal Chetumal Cancún, Punta Venado, CP 77600, Calica Plant, Cozumel, Quintana Roo, México.

## Sustainability

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<https://sactun.com/>

## WEB SITE

 Facebook: [SacTunMx](#)

 Instagram: [sac\\_tun\\_mx](#)





# SAC·TUN

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PHOTOS: SAC-TUN, AMIGOS DE SIAN KA' AN, COBI, ECOSUR, IBANQROO, PRONATURA, SEMA, SEQ.  
SOME OF THE PHOTOGRAPHS OF LANDSCAPES AND ANIMALS ARE FROM SHUTTERSTOCK\*