

CASE STUDY:

Activities by the Guatemala Sugar Agroindustry supporting the implementation of the Sustainable Development Goal 8 (SDG 8) of the United Nations 2030 Agenda for Sustainable Development.





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**PROMOTE SUSTAINED,
INCLUSIVE AND SUSTAINABLE
ECONOMIC GROWTH, FULL AND
PRODUCTIVE EMPLOYMENT
AND DECENT WORK FOR ALL**





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PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL



Target 8.1: Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries.

Target 8.2: Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors.

Target 8.3: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.

Target 8.4: Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead.

Target 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

Target 8.6: By 2020, substantially reduce the proportion of youth not in employment, education or training.

Target 8.7: Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms.

Target 8.8: Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

Target 8.9: By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.

Target 8.10: Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.

Target 8.a: Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-related Technical Assistance to Least Developed Countries.

Target 8.b: By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization.

Source: United Nations, 2015.



The volcanic soils of southern Guatemala are exceptional for the growth of sugarcane

THE GUATEMALA SUGAR AGROINDUSTRY

As of 2021, Guatemala was the third largest producer in Latin America and the sixth largest exporter of sugar in the world. Sugar is the second agroindustrial product most exported of Guatemala. The Guatemala Sugar Agroindustry generates almost US \$700 million in foreign exchange annually and provides more than 55,000 direct jobs and 278,000 indirect jobs in the country. Besides, the sector receives products and services from more than 6,000 small, medium-sized and large enterprises, which also generate more employment. Only 2.97% of the cultivable land in Guatemala is used for sugarcane production. Asazgua, the Association of Sugar Producers of Guatemala, was created in 1957 to coordinate the activities of the Guatemala Sugar Agroindustry. It includes 11 sugar producers and five technical organizations specialized in research, climate change, sugar exportation and social responsibility (Asazgua, 2020). In addition, since 2022, it counts with an organization specialized in innovation. The sugar producers that are members of Asazgua include: Pantaleón, Concepción, Palo Gordo, Santa Ana, Magdalena, Santa Teresa, La Unión, Madre Tierra, Trinidad (San Diego), La Sonrisa and El Pilar.

The Guatemala Sugar Agroindustry is committed to generating opportunities and prosperity for the people of Guatemala that support the country's sustainable development. It promotes decent and valuable jobs for the wellbeing of the population, while at the same time promoting environmental protection and conservation.

The Guatemala Sugar Agroindustry follows sustainable development principles as reflected by its strategic objectives and integrated actions and programs, supporting social wellbeing, economic growth, industrialization, and environmental protection. The activities of the sugar industry

in Guatemala are recognized as examples of "Good Practices" in the effective implementation of the United Nations 2030 Agenda for Sustainable Development and the Sustainable Development Goals.

Associated organizations supporting specific sustainable objectives of the Guatemala Sugar Agroindustry have been created in the last decades. In 1990 Fundazúcar was launched as the social branch for the development and implementation of programs and projects on health, education and development. In 1992 Cengicaña started research activities to develop new varieties of sugarcane, to have integrated pest management, to study land quality and to implement more efficient processes for the cultivation of sugarcane and for the production of sugar. In 1994 Expogranel, one of the most efficient boarding terminals for sugar export in the world, was launched to cover international markets in a more efficient and competitive manner. In 2010, the Private Institute for Climate Change Research (ICC) was created to perform research, activities and projects related to climate change. In 2022 the Innovation Hub was created to develop a program of innovative projects through the identification and optimization of products, activities, processes and business models of the Sugar Agroindustry.

At the international level, the Guatemala Sugar Agroindustry supports the work of ICC on climate change mitigation and adaptation with other countries of Central America. Also through Asazgua, it participates actively in the Global Network on Sustainable Water and Energy Solutions. This is an initiative led by the Division for Sustainable Development Goals of the United Nations Department of Economic and Social Affairs (UNDESA). The Network promotes integrated water and energy solutions that address climate change objectives worldwide.

SUSTAINABLE DEVELOPMENT STRATEGY

The Sustainable Development Strategy of the Guatemala Sugar Agroindustry is based on its vision, mission and objectives which promote a comprehensive and forward-looking transformative pathway to prosperity and peace for the people of Guatemala, at the same time supporting a healthy and sustainable planet. It follows an integrated approach based on transformation and adaptation to changes expected in the future due to new challenges. With its inclusive participation policy with multi-stakeholder

partnerships, the Sugar Agroindustry, through Asazgua, is committed to coordinating the work of enterprises, governmental entities and civil society to achieve the final goal of prosperity and sustainable development for Guatemala. The Guatemala Sugar Agroindustry is a global example of efficiency and technological advance representing a very relevant factor for the economy of Guatemala with important positive impacts also on the social and environmental dimensions of sustainable development.

Objectives

1. Increase productivity through development and improvements in the field and in sugar refineries
2. Provide technical training and capacity building for human resources
3. Develop projects and programs that increase the capacity of the production systems in the field and in sugar refineries, in distribution and commercialization of products, and of the export boarding systems.

One of the objectives of the Guatemala Sugar Agroindustry is to increase productivity through development and improvements in the field and in sugar refineries.



Vision

Before 2025 the Guatemala Sugar Agroindustry will be the most respected productive sector of the country due to diversification, competitive efficiency, generation of dignified jobs, and respect for the environment, suppliers and communities with whom it relates.

Given its policy of unified action, proactive attitude and strong socioeconomic support, the Sugar Agroindustry leads as a positive agent of change for integral development, boosting the progress of its members and the country.

Mission

The Guatemala Sugar Agroindustry mission includes the following: to act in united manner to cultivate and process sugarcane to produce sugar, electricity, ethanol and other products; to undertake other activities to increase the value of the associated enterprises with a positive impact on the integrated development of the country; to innovate constantly improving competitive efficiency; to facilitate national and international commercialization of sugar; and to ensure sustainability while building trust responsibly.



THE GUATEMALA SUGAR AGROINDUSTRY AND THE SDG 8

The Guatemala Sugar Agroindustry is committed to generating opportunities and prosperity for the people of Guatemala in support of the country's sustainable development. It provides decent and valuable jobs for the wellbeing of the population, while at the same time promoting environmental protection and conservation. Guatemala is the third largest producer of sugar in Latin America and the sixth largest exporter of sugar in the world. Sugar represents the fourth most exported product of Guatemala. Only 3% of the cultivable land in Guatemala is used for sugarcane production.

The Guatemala Sugar Agroindustry has been a strong engine for many decades in the country supporting economic growth and industrialization and building important infrastructure while fostering research, development and innovation. The Sugar Agroindustry has multiple initiatives in place with the aim of promoting sustainable economic growth and productive employment which are the main objectives of SDG 8. The most important activities of the sustainable development strategy of the Sugar Agroindustry supporting these objectives include: the comprehensive opportunities for Jobs and Economic Development, the export activities of EXPOGRANEL and the numerous innovative programs being implemented by Cengicaña for the production of sustainable sugarcane.

1. JOBS AND ECONOMIC DEVELOPMENT



In Guatemala, the Sugar Industry is responsible for the generation of more than 55,000 direct jobs that include cane cutters, industrial workers and experts in science and technology, among others.

1.1. Jobs and Economic Development

Objectives and Description

The Sugar Agroindustry is a strong engine for economic development and job generation in Guatemala. Its activities impact about 90% of the municipalities of the country. The Sugar Agroindustry generates more than \$700 million in foreign exchange annually. Each year it pays more than \$400 million in wages and salaries. The economic dynamics that are generated by the mills with suppliers in populations located in the area of influence provide additional economic growth. A considerable number of jobs and income go to people in poor and vulnerable communities contributing to poverty reduction objectives. The Sugar Agroindustry pays approximately \$30 million in taxes annually.

In Guatemala, the Sugar Industry is responsible for the generation of more than 55,000 direct jobs that include cane cutters, industrial workers and experts in science and technology, among others. It also generates 278,000 indirect jobs. The sugar industry touches many labor sectors and provides an opportunity for economic growth

and poverty eradication. The industry brings jobs to many rural communities, and the harvest season provides jobs for migrant workers from the northern regions of the country. In addition to jobs, the sugar mills and Fundazúcar implement programs that teach cane cutters the skills they need for personal advancement.

Related Targets

Jobs and Economic Development generated by the Sugar Agroindustry support most of the targets of SDG 8. These targets include: Target 8.1 on sustaining per capita economic growth; Target 8.2 on achieving higher levels of economic productivity; Target 8.3 on promoting development-oriented policies that support productive activities, decent job creation and innovation; and Target 8.5 on supporting the achievement of full and productive employment for all women and men.

Challenges

Given the fact that harvesting activities only last 6 months, a very challenging task is to be able to provide stable jobs in the long-term for seasonal activities within an integrated social framework that supports poverty eradication and sustainable development.

Another major challenge is the coordination of activities with the government given the commitment of the state to attract capital and boost investment projects that will help generate other sources of formal employment..

Lessons Learned

The experience of the Guatemala Sugar Agroindustry of many decades clearly shows that providing decent and valuable employment is key to achieving the sustainability of sugar production and the necessary economic growth that supports sustainable development.

Results

The Guatemala Sugar Agroindustry is a major source of job opportunities, economic development and prosperity for the people of Guatemala which is clearly helping to reduce poverty. Its program on Jobs and Economic Development supports the country's poverty eradication objectives and represents a strong engine for sustainable economic growth and productive employment generating over 320,000 direct and indirect jobs. It offers decent and valuable jobs for the wellbeing of the population, while at the same time promoting environmental protection and conservation.



2. EXPOGRANEL

Expogranel was named in 2015 the most efficient cargo terminal in the world sugar industry by a report of the International Service of Agriculture of the Department of Agriculture of the United States.

2.1. Expogranel

Objective and Description

EXPOGRANEL is the boarding terminal of the Guatemala Sugar Agroindustry responsible for receiving, inspecting, storing and shipping sugar from all sugar mills in Guatemala. It is located at Puerto Quetzal in the Pacific Ocean shore in the south coast of Guatemala about 100 kilometers away from Guatemala City. EXPOGRANEL uses very specialized equipment and has highly trained staff. It is considered one of the most efficient terminals for loading sugar in the world and unique in its class in Guatemala.

EXPOGRANEL was built in 1994, with the aim of being efficient and competitive in international markets. It has the capacity to store 407,020 metric tons of sugar in bulk and in sacks. It also has the capability of loading a ship at a rate of about 2,000 tons of sugar in bulk per hour on average. EXPOGRANEL was named in 2015 the most efficient cargo terminal in the world sugar industry by a report of the International Service of Agriculture

of the Department of Agriculture of the United States. EXPOGRANEL represents a very important infrastructure for Guatemala supporting the Sugar Agroindustry and providing jobs that induce economic growth and sustainable development for Guatemala.

EXPOGRANEL has a laboratory accredited at the international level that verifies the quality of the sugar received, stored and embarked. It is considered a high-technology laboratory that utilizes best practices providing services to other countries in the region.

Related Targets

EXPOGRANEL supports the objectives of Target 8.1 on sustaining per capita economic growth, Target 8.2 on achieving higher levels of economic productivity, Target 8.3 on promoting development-oriented policies that support productive activities, decent job creation and innovation, and Target 8.5 on supporting the achievement of full and productive employment for all women and men.

Challenges

A major challenge for EXPOGRANEL is related to its operation within the state-owned Quetzal Port. The infrastructure of this port has not been improved since 1994 and its limited maintenance makes the efficient operation of the EXPOGRANEL terminal more challenging.

Another challenge for EXPOGRANEL is to continue being for the long-term one of the most competitive and efficient boarding terminals for sugar export in the world. The technological systems and infrastructures need to be adapted according to the latest innovations and international standards in order to remain competitive providing optimum trading services.

Lessons Learned

A major lesson learned from the experience of EXPOGRANEL is the important role this boarding terminal is playing as logistic facilitator in the trading of sugar. It provides flexibility allowing the export of sugar in bulk or in sacks in containers as necessary.

Another important lesson from the experience of EXPOGRANEL is that building a sustainable, reliable and efficient infrastructure translates into important benefits not only for the Sugar Agroindustry but also for the people of Guatemala. EXPOGRANEL supports economic growth, job creation and prosperity that contributes effectively to the sustainable development of Guatemala.

Results

EXPOGRANEL is playing a key role in the successful exportation of sugar from Guatemala. Sugar exports from Guatemala reach the five continents and Guatemala is the sixth largest exporter of sugar in the world. The Guatemala Sugar Agroindustry generates more than \$700 million in foreign exchange annually.



3. CENGICAÑA



3.1 Cengicaña: Guatemalan Sugarcane Reserch and Training Center

Objectives and Description

The Guatemala Sugar Agroindustry conducts important activities designed to promote the sustainable production of sugarcane. Most of these activities are implemented by Cengicaña through all its research and development programs that promote economic productivity, decent job creation and innovation.

Cengicaña has created a research and technological development system for sugarcane. Thus, it has established policies, regulatory framework, plans, organization, quality management, and a technology management system. The center includes a number of facilities built to perform its activities related to research, demonstration and innovation. The activities by Cengicaña promote sustainable economic growth and productive employment based on creativity and innovation.

The main programs by Cengicaña related to the sustainable production of sugarcane include the programs on Sugarcane Varieties, Agronomy, Integrated Pests Management, Industrial

Research and Technology Transfer and Training. The Program on Sugarcane Varieties includes Plant Breeding, Plant Pathology and Biotechnology. The Program on Agronomy includes Fertilization and Crop Nutrition, Irrigation and Precision Farming.

The area of Plant Breeding is responsible for obtaining and developing new varieties of sugarcane with characteristics of economic importance: high sugar concentration, high sugarcane yield, good stunting ability, resistant to major pests and diseases and good adaptability to different climate conditions and soils of the Guatemalan sugarcane area. The breeding strategy consists of the enrichment of the genetic base by introducing varieties obtained by the exchange with other programs in the world and by crossbreeding to give rise to new complex hybrids. This strategy also includes the selection program and the release of new varieties and the necessary support to increase adoption. The Phytopathology area conducts studies of resistance and effect on disease production in varieties and is responsible for import

quarantine and export of varieties. In addition, the area offers analysis services for the detection of pathogens in seedlings. Cengicaña uses modern biotechnology techniques as tools that contribute to the genetic improvement process of sugarcane, through DNA and RNA analysis for disease diagnosis, genetic diversity analysis, assisted selection with markers and varietal identification.

The objective of the Fertilization and Plant Nutrition area is to generate recommendations for the optimal use of fertilizers and soil modifiers for the different environments in which sugarcane is grown in the region. The objective of the activities on Irrigation is to generate, validate and transfer technology to optimize the use of water for irrigation purposes through the management of water resources at the basin level. The activities help to determine the optimum time and amount of irrigation as well as the best methods. Precision Farming aims to identify homogeneous climatic and edaphological zones within the great variability of environments that exist in the region.

Related Targets

The activities by Cengicaña support the objectives of Target 8.2 on achieving higher levels of economic productivity, Target 8.3 on promoting development-oriented policies that support productive activities, decent job creation and innovation, and Target 8.4 on improving resource efficiency in consumption and production.

Challenges

One of the main challenges in the sustainable production of sugarcane is the continuous need to implement very innovative technologies and methodologies in different areas and processes following an integrated approach that allows the satisfaction of major objectives in the environmental, economic and social dimensions of sustainable development.

Lessons Learned

A major lesson learned from the implementation of the complex and integrated process for the sustainable production of sugarcane is that there should be a continuous and dynamic planning of activities and actions. Research, testing and demonstration of innovative technologies and methods are key activities to continue improving the efficiency and sustainability of sugarcane production. These actions are particularly important for the strengthening of capacities for adaptation to climate change impacts.

Results

The Sugar Agroindustry has been very successful in the last decades achieving high levels of efficiency and increasing sugarcane productivity as a result of numerous initiatives and programs with multiple benefits. The statistics demonstrate the effectivity of the programs on Plant Breeding, Plant Pathology and Biotechnology as well as on Fertilization and Crop Nutrition, Irrigation and Precision Farming. These programs demonstrate that Cengicaña promotes sustainable economic growth, industrialization, innovation and decent employment.

INTERLINKAGES WITH OTHER SDGs

There are strong interlinkages between activities by the Guatemala Sugar Agroindustry related to economic growth, productive employment and decent work (SDG 8) and other SDGs. One clear interlinkage is Infrastructure, Industrialization and Innovation (SDG 9) as these activities support economic development and employment. Other major interlinkages are in relation to poverty eradication (SDG 1) since many poor and vulnerable communities

benefit from these activities, and sustainable agriculture (SDG 2) since many of the research, development and innovative activities are designed to achieve the sustainable production of sugarcane generating economic growth and decent jobs in agricultural regions. These activities are also related to SDG 17, as multiple partnerships among different stakeholders are required in order to fully implement the Sugar Agroindustry's SDG 8 initiatives.



CONCLUSIONS

The Guatemala Sugar Agroindustry has important activities in its sustainable development strategy strongly promoting sustainable economic development, productive employment, decent work and innovation in Guatemala.



The Guatemala Sugar Agroindustry has important activities in its sustainable development strategy strongly promoting sustainable economic development, productive employment, decent work and innovation in Guatemala. These activities include the comprehensive opportunities for Jobs and Economic Development, the construction and efficient operation of EXPOGRANEL for the export of sugar, and the numerous advanced programs being implemented by CENGICAÑA for the

production of sustainable sugarcane, fostering innovation through the use of state-of-the-art technologies, methods and systems. These activities allow the Guatemala Sugar Agroindustry to be recognized as one of the most successful and efficient sugar industries in the world. The effort represents a critical part of the integrated approach followed by the Sugar Agroindustry in its social, economic and environmental strategy for the sustainable development of Guatemala.

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