

Jalisco's Production Chains with Zero Deforestation: The Case of Agave - Tequila

Case Study Database

A compilation of good practices and lessons learned to bring innovative subnational solutions to global problems

Introduction

According to the United Nations Environment Programme (UNEP), expansion for agricultural production is responsible for 70% to 80% of global deforestation.

Although deforestation rates have decreased over the last 10 years, according to the FAO Global Forest Resources Assessment 2020 (FRA), ten million hectares of forest are lost annually to agricultural production or other purposes.

Forest deforestation and degradation continue at an alarming level, playing a major role in the biodiversity and climate crises.

To deal with this, certification of sustainable, deforestation-free production is proposed as a tool to reduce these problems while maintaining the ability to produce and consume agricultural and forestry products.

Project Summary

The policy of zero deforestation production chains is part of a state government-designed strategy to reduce deforestation rates and improve good sustainability practices in the state of Jalisco.

The policy focuses on the certification of the sustainable agave-tequila production chain, ensuring there is no deforestation in the process.

The policy also aims to increase transparency and legality in the sector, as well as consumer security.

This experience has emphasized the coordination between multi-sectoral actors in order to promote the strategy and guarantee its implementation.

The protocols created in this policy include the entire production process and an integrated approach of biodiversity to preserve and integrate the forests of Jalisco.

Key Information

Location

Jalisco, Mexico

Areas of focus

Sustainable consumption, natural conservation, mainstreaming biodiversity and governance.

Founded in

2019

Aichi Biodiversity addressed	Targets
Strategic goals B and C	

Sustainable Development Goals addressed	Goals
SDGs 12, 15 and 17	

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“El Arenal, Jalisco” by Alejandro Hernández Osuna



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BACKGROUND AND CONTEXT

Today, deforestation is one of the most worrying problems the world faces. Forest loss represents a direct detriment to quality of life, diminishing the provision of environmental goods and services, as well as its contribution to climate change.

According to Mexico's National Forestry Commission (CONAFOR) and Jalisco's Ministry of Environment and Territorial Development (SEMADET), the loss of tree cover is in the order of 15,000 to 20,000 hectares per year in the last three years, of which nearly 7,000 ha are lost to become agave crops. In that sense, the state of Jalisco in Mexico has lost more than 729,200 hectares of temperate and tropical forests from 1993 to 2013.

There are three main productive activities responsible for the loss of forest cover: avocado crops, livestock production and the agave-tequila chain.

To reduce deforestation rates and improve good sustainability practices in Jalisco, the state government designed a strategy to incorporate biodiversity into the productive sectors. Framed in this strategy, Jalisco is implementing a policy of zero deforestation production chains, which aims to address these three products through zero deforestation certificates, which contain their own protocols.

Deforestation linked to livestock production is centered in the western region of Jalisco, where the protocol is being developed, which is currently at an advanced stage and is scheduled to end during 2023. This protocol includes all phases of this production chain: from the weaning of calves to the commercialization of meat, and it contemplates the strengthening of local projects for the provision of supplies such as nutritional supplements or plant production with young people and women.

Meanwhile, Jalisco is seeking the implementation

of the Rainforest Alliance certificate for avocados.

On the other hand, known worldwide, tequila is a unique and traditional spirit of Mexico that is obtained from the distillation of fermented agave juice from blue agave, or Agave tequilana variety "Azul de Weber" found in the central and western regions of Mexico, which is mainly located in the state of Jalisco but also in Guanajuato, Michoacán, Nayarit and Tamaulipas, which are recognized in the General Declaration on the Protection of the Tequila Denomination of Origin.

The status of geographical indication is regulated by the Tequila Regulatory Council. This body is responsible for ensuring the authenticity of the distillation and the practices of the producers/distilleries, and certifies compliance with the Mandatory Tequila Rules in the agave-tequila production chain.

The region near the city of Tequila was declared a World Heritage Site by UNESCO in 2006, due to its historical and cultural importance. Therefore, the area designated "Agave Landscape and Old Tequila Industrial Facilities" encloses a living and active landscape of blue agave fields with distilleries, factories and haciendas.

Today, agave-tequila represents a cultural tradition, a history and a national identity. In 2020 alone, 1 million 407 thousand tons of agave were consumed for the production of 374 million liters of tequila, of which 73% occurred only in Jalisco.

However, the growing international demand for agave has caused the techniques and processes to produce this liquor in Jalisco to be unsustainable.

Consequently, unsustainable forest management has adverse side effects on the region's ecosystems related to global warming and biodiversity loss. Levels

of greenhouse gas emissions released into the atmosphere have increased as a result, diminishing the potential mitigation role that forests play in carbon storage.

For these reasons, this case study addresses the most pressing problems of the region's ecosystems in order to develop innovative and sustainable practices in agriculture that cannot be achieved with a business-as-usual model.

The protocol includes an integrated approach to biodiversity to preserve and conserve Jalisco's forests, moving the industry towards a more sustainable responsible path.

A certification strategy that includes a zero-deforestation agave-tequila standard would not only promote legality and transparency in the sector, but also bring security to consumers.

Used correctly, the agave-tequila certification strategy would help reduce deforestation by incentivizing producers to voluntarily comply with certification and legal use of forest land.



KEY ACTIVITIES AND INNOVATIONS

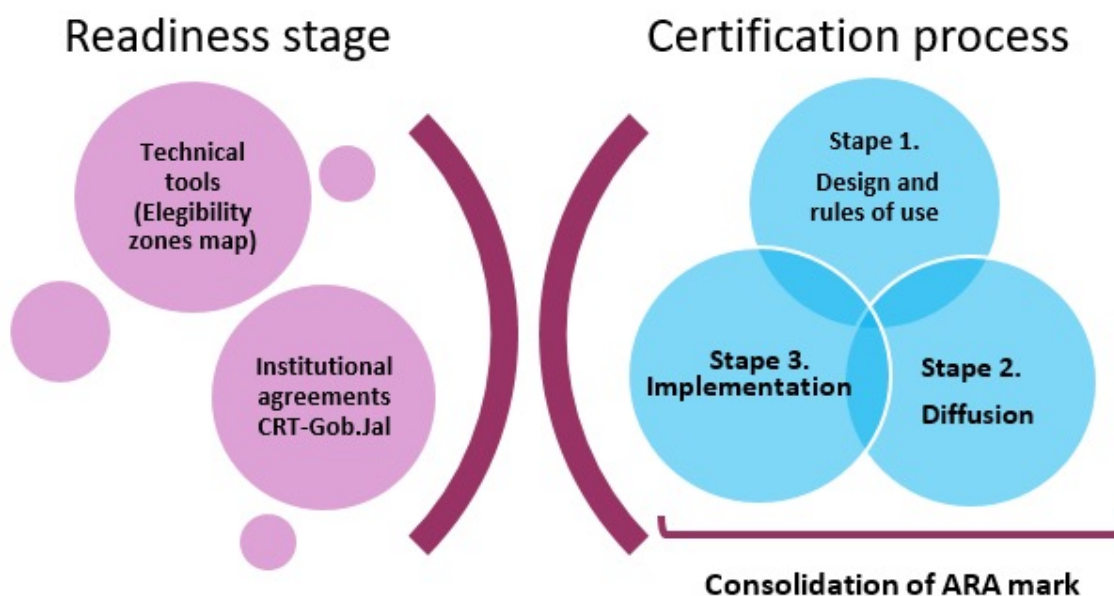
The core activities of the project are to highlight innovative ideas and good practices as well as establish a framework for the sustainable future of tequila production in Jalisco. In 2019, within the Conference of the Parties of the United Nations at its twenty-fifth session (COP25), an agreement was signed between the Tequila Regulatory Council (CRT) and the Government of Jalisco to contribute to the sustainability of tequila production and the agave industry.

The main objective of the agreement is to recognize tequila as a product from agaves grown in plots that have not caused deforestation in the process, considering 2016 as the baseline. This helps push producers in the right direction and the agave industry as a whole, in the search for a sustainable, innovative and environmentally positive way to meet global demand.

In addition, the government's ambition is that the offer of Agave tequilana-Variedad Azul de Weber destined for the production of tequila in Jalisco guarantees zero loss of natural forests by 2027.

Environmentally Responsible Agave (ARA, for its acronym in Spanish) is a certification mark that guarantees, through technical verification and an environmental standard, that tequila is a non-deforested product. Both SEMADET and the CRT exercise legitimate control over the brand.

Certification mark strategy



In addition, some tools were created to support ARA's operation, such as the 2016 baseline forest zones/non-forest zones map, and the certification mark protocol was defined with the CRT, adapted to the processes defined by the Mexican Tequila Standard for geographical indication (NOM-006).

The plots registered by the CRT for the cultivation of agave must be located within the areas identified by SEMADET in an area without use of forest land since 2016 in Jalisco and guarantee their traceability throughout the production process.

As a result, the final consumer will have the certainty that the production and commercialization of tequila is done with agave grown on farms that did not suffer deforestation in Jalisco as of 2016.

The agave-tequila certification strategy was designed in two phases: Readiness and Certification. In the first phase of the strategy, the agreement between the state government and the CRT was drawn up. The second phase had three elements: the design of the certificate and its rules of use, the promotion of the brand, and, finally, its implementation.

Beyond the economic importance of tequila in the region, it is expected that the certification will add to the actions already carried out by the tequila agribusiness in terms of sustainability, since the project aims to improve best practices and management throughout the industry.

Consequently, coordination between actors from all sectors (government, authorities, farmers, producers and the private sector) is crucial to promote the strategy and ensure commitment in its implementation. Different meetings and technical tables were held in which the authorities and agave producers participated in close collaboration with the CRT and the National Chamber of the Tequila Industry (CNIT).

Overall, the benefits of the certification are:

- Environmentally responsible companies and farmers
- Encouraging best practices to protect forests and biodiversity
- Compliance with the law and the rules of use
- Added value to the product, to serve a profitable niche market
- Low cost of certification



Project milestones:

2018. Strategy and project design

2019. Signing of the agreement between the Tequila Regulatory Council (CRT) and the Government of Jalisco

2020. Design of the ARA certification mark

2020. Registration and delivery of the certification mark and regulation of use in the Mexican Institute of Industrial Property (IMPI)

2020. Development of technical tools; Jalisco Forest Zone Eligibility Map / Non-Forest Zone Baseline 2016

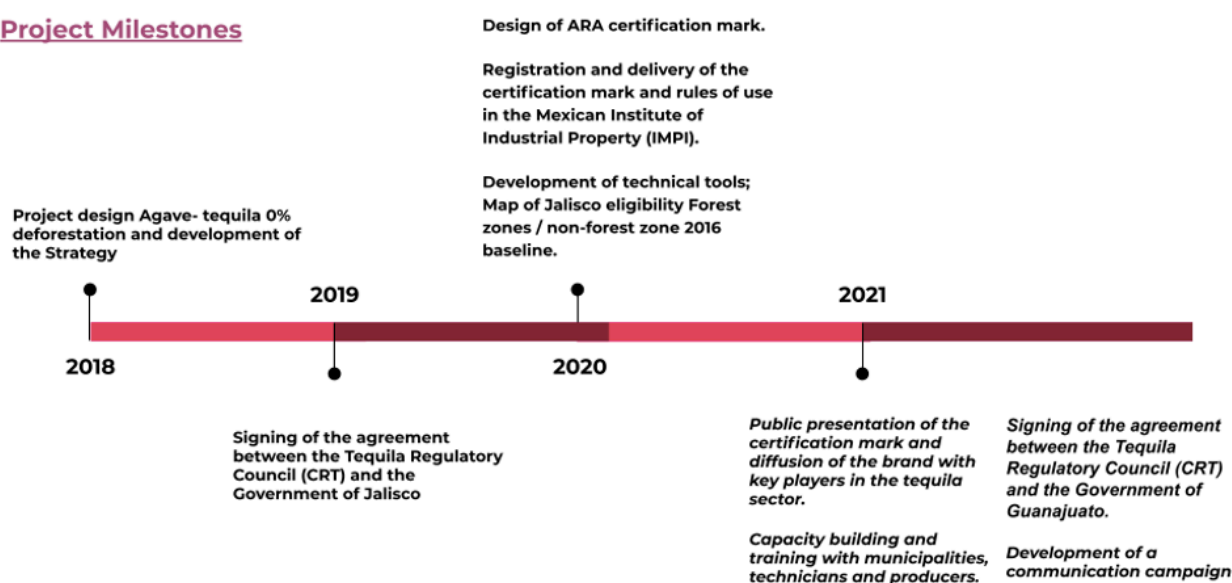
2021. Public presentation of the brand of certification and promotion of the brand with key players in the tequila sector

2021. Capacity building and training with municipalities, technicians and producers.

2021. Development of a communication campaign

2021. Signing of the agreement between the Tequila Regulatory Council (CRT) and the Government of Guanajuato

Project Milestones



ENVIRONMENTAL IMPACTS

The environmental impacts of the project and the certification mark, in general terms, are:

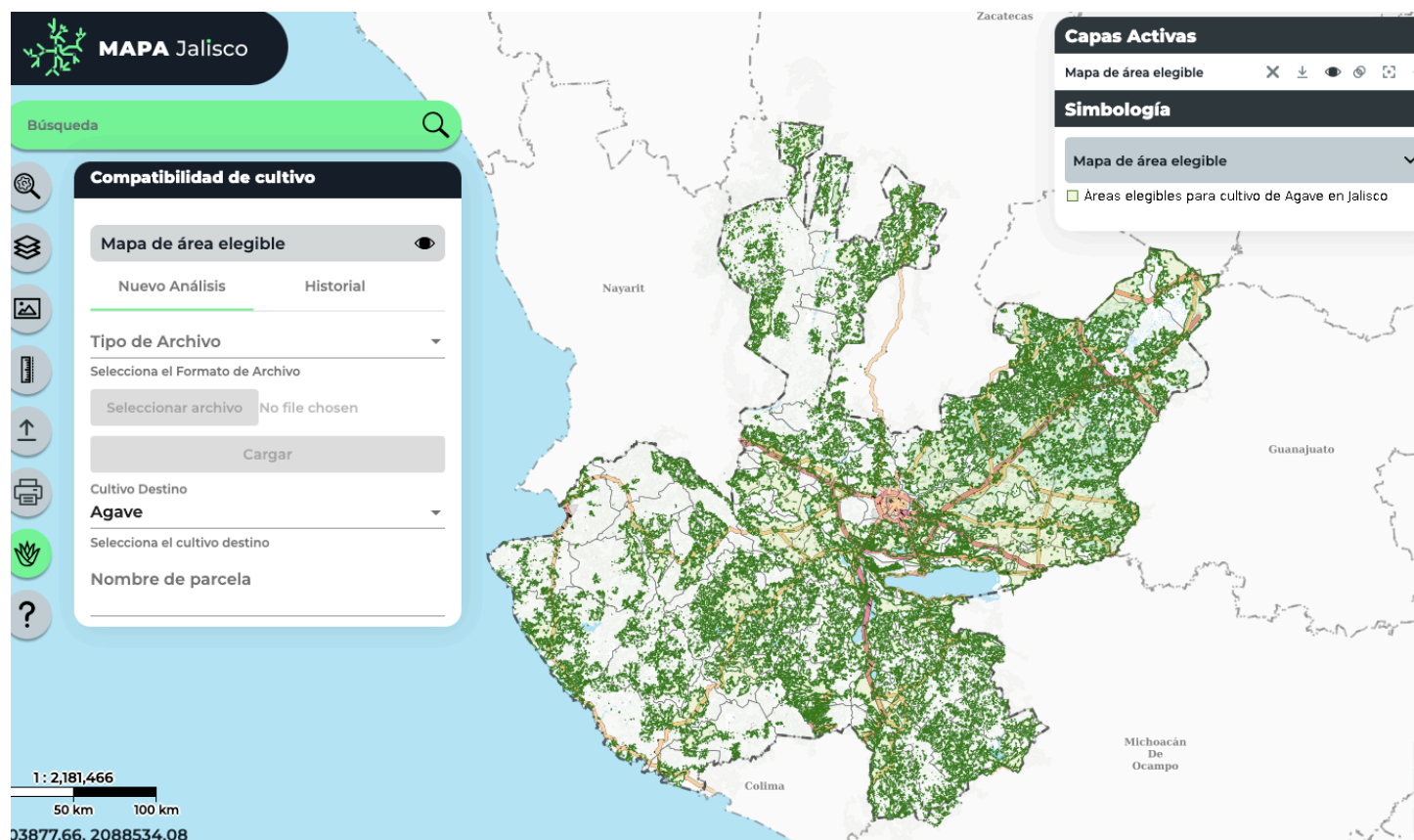
- Protection of biodiversity and forests
- Mitigating climate change by contributing to the increase in carbon stocks
- Land conservation and restoration in the region
- Preservation of natural resources

However, the results are not yet measurable, as the impacts would become effective in the medium term, considering the certification process and the planting of new agave crops in the eligibility zones. Hectares of forest loss are expected to shrink each year.

In addition, these actions are the result of the approaches made throughout 2019, between SEMADET and the Agave-Tequila sector, to address the problem of waste management from tequila production (vinasse and bagasse), as well as the impact of the establishment of agave plantations in areas associated with land use change processes.

At the same time, it contemplates the establishment of technical tables for innovation and technological solutions for a circular economy, the promotion of best productive practices for the conservation and restoration of biodiversity, contributing to improve the carbon footprint of the agave-tequila industry in Jalisco.

Map of the Jalisco territory showing the compatible areas for agave-tequila crops (baseline 2016)





“Tequila, Mexico” by Los Muertos Crew

SOCIOECONOMIC IMPACTS

The impact of tequila production on the economy of the region and the country is significant due to its high market value. In 2020, the tequila agribusiness consumed 1 million 407 thousand tons of agave to produce 374 million liters, of which 286 million were exported to 120 countries around the world. Tequila production in Jalisco contributes 12.5% of the Gross Domestic Product (GDP), employing seven million people in the agave-tequila sector.

The certification will allow Jalisco farmers to access a broader international market with the implementation of more sustainable practices that help the local economy. In addition, undeforested agave cultivation in eligible areas is expected to represent a higher opportunity cost for farmers and landowners. This means that the model could maximize the benefits gained from long-term forest landscape conservation

and restoration.

To support the certification mark, the Ministry of Agriculture and Rural Development of Jalisco (SADER) will not grant support or economic incentives for agricultural activities on land whose change of land use has not been authorized by the Secretariat for such activities.

Social benefits include:

- Environmental awareness of preserving and restoring natural forests from the market and the general public
- Prevention of biodiversity loss
- Implementing more sustainable practices with technical tools and innovation
- New income for local communities and farmers

POLICY IMPACTS

Jalisco's policy instruments are aligned with the global sustainability agenda, the achievement of the United Nations Sustainable Development Goals, the Aichi Biodiversity Targets and the development of a Post-2020 Global Biodiversity Framework.

This project was introduced within the framework of the state environmental policy strategy "Jalisco with forest" as one of the main public policies aimed at helping to stop the drivers of deforestation and forest degradation in the region. Likewise, the Jalisco Biodiversity Strategy was developed to contribute directly to environmental policy.

On a regional scale, this policy can be adopted by other states with tequila production to protect regional biodiversity and, in the future, design a national strategy between the state authorities involved and the tequila sector.

As for the legal framework, it also represents an innovation in the legislation, since the certification is complementary to the process within the Conformity Assessment Procedure based on the permanent and on-site verification of the production, packaging and marketing activities contemplated in the Official Mexican Tequila Standard.

FINANCIAL SUSTAINABILITY

The financial sustainability of the project is based on the low cost of the certification model. Therefore, the development of the strategy is the result of collaboration between the Jalisco state government and the tequila industry. However, the costs of trademark registration and regulation of use are financed by the CRT.

The CRT and the Government of Jalisco keep a record of the authorized users of the Certification Mark, and its application is included in the operating costs of both authorities.

In particular, fees for certification, verification techniques, royalties and related services are set by the Council.

The continuity of the project depends on the investment of agave producers and the private sector of tequila to make their supply chains more sustainable and comply with certification.

"El Arenal, Jalisco" by Alejandro Hernández Osuna



PARTNERSHIPS

Many stakeholders were involved in the design and implementation of the project. Partnerships between agave producers, tequila manufacturers, the private sector, suppliers and government authorities were crucial to the success of the certification. They collaborated closely to develop and integrate the agave certification mark, tools and legal framework in Jalisco.

One of the biggest challenges of the project is the commitment and active participation of these actors. A collaborative approach to the decision-making process was needed. In this sense, SEMADET plays a key role in ensuring the commitment of all actors involved in the agave-tequila production chain for the continuity of the project.

Likewise, the CRT and the National Chamber of the Tequila Industry (CNIT) are two important allies in promoting sustainable management standards and best practices in the sector. This includes the participation of the private sector that is interested in working to improve the environmental, social and economic sustainability of tequila.

Local farmers and producers are important allies in the fight against the illegal use of forest land by opting for sustainable production and zero deforestation.

Finally, inter-institutional collaboration with local government authorities, such as SADER and the Jalisco Ministry of Economy (SEDECO), is necessary to align comprehensive economic and environmental policies around certification.



REPLICATION AND APPLICABILITY

The demand for sustainably produced products has increased worldwide in recent years. Agri-food certification (e.g. cocoa, coffee, cotton, forestry, palm oil, soybeans, cane sugar and tea) has grown in popularity thanks to trends from consumers looking for environmentally conscious products.

As stated above, there is a greater awareness and interest of consumers to know the details of the sources of the products they consume. Alcoholic beverages have been no exception. Similar cases of the alcoholic beverage industry (spirits, wines and others) have already been successful in different countries. For example, the sustainability strategy of Scotch whisky in Britain is another one of the most popular certified products, with the same purpose to preserve the natural resources of the Scottish landscape.

Nowadays, the tequila sector is at the forefront of promoting the world's first certification on deforestation in alcoholic beverages. The ARA certification experience can be replicated in regions that use geographical indications (GIs) or appellations of origin (DOs) to improve sustainable practices in the production of local goods.

On a national scale, this policy can easily be adopted at the local level by other Mexican subnational governments in the states where agave-tequila crops are harvested. On a global scale, regions facing similar challenges can adapt this model to their circumstances. However, it is necessary to highlight the need for strong partnerships with the actors that are included in the production chain and other governmental agencies and institutions.

An agreement was recently signed with the Government of the State of Guanajuato to integrate the scheme and it is likely that other states will join the reproduction shortly.

FOR MORE INFORMATION

For more information about this project, please visit <https://www.jalisco.gob.mx/es/gobierno/comunicados/tequila-libre-de-deforestacion-acciones-ante-el-cambio-climatico>

You can also contact us at info@regions4.org to set up an informative meeting, solve doubts and get support in implementing similar projects.



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ABOUT

Regions4 (formerly known as the nrg4SD) is a global network that solely represents regional governments (states, regions and provinces) before UN processes, European Union initiatives and global discussions in the fields of climate change, biodiversity and sustainable development. Regions4 was established in 2002 at the World Summit in Johannesburg and currently represents over 40 members from 20 countries in 4 continents. Through advocacy, cooperation and capacity building, Regions4 empowers regional governments to accelerate global action.

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