



Fostering Resource Efficiency and Climate Action in Mexico

Context

The state of Guanajuato is among the most industrialized states in Mexico. The demand for resources has been growing rapidly in Guanajuato over the last couple of decades and, consequently, sustainable economic development, including the responsible extraction and utilization of resources, is part of Guanajuato's development plans.

The State's current long-term Development Plan Guanajuato 2040 (*Plan Estatal de Desarrollo Guanajuato 2040, PED 2040*) underscores the importance of a sustainable utilization of resources, of technological innovation and of capacity building; and highlights circular economy as central public policy for the industrial model of the state. The current government's political program 2018-2024 aligns with the PED 2040 and includes the objective to reduce climate vulnerability, to mitigate climate change, and to foster circular economy in cities and resource efficiency in enterprises.

Strengthening the development of integrated concepts for climate action and resource efficiency in the industry is a shared objective of the government of Guanajuato and GIZ's global project "Initiative Resource Efficiency and Climate Action".

For prioritizing effective and efficient actions fostering resource efficiency and climate action in enterprises, information on the current use of resources and projections regarding future use in key economic sectors of the State of Guanajuato is necessary. To this end, GIZ's global project, SMAOT and SDES commissioned the study "*Resource efficiency in key economic sectors (textiles and footwear) in the State of Guanajuato for Sustainable Development towards the year 2040*".

As resource efficiency in companies needs commitment from key actors from both, public and private sector, four private

Towards an integrated approach for Guanajuato's fashion cluster

In 2019, the "Initiative Resource Efficiency and Climate Action", a global project implemented by GIZ on behalf of the Ministry of the Environment of Germany (BMU) within the International Climate Initiative (IKI), and Guanajuato's Ministry of the Environment (*Secretaría de Medio Ambiente y Ordenamiento Territorial, SMAOT*) and Ministry of the Economy (*Secretaría de Desarrollo Económico Sustentable, SDES*) decided to cooperate in order to analyze the current resource use in key economic sectors of the state. The resulting study identifies opportunities, challenges and good practice examples for resource efficiency and provides Guanajuato's government with input for the introduction of targeted policy instruments that foster an efficient use of resources whilst promoting sustainable development.

sector associations were invited to participate actively in the elaboration of this analysis. Representatives of Guanajuato's chapter of the National Chamber of the Industry of Transformation (*Cámara Nacional de la Industria de la Transformación, CANACINTRA*), the Chamber of the Footwear Industry of the State of Guanajuato (*Cámara de la Industria*

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del Calzado del Estado de Guanajuato, CICEG), the Chamber of the Leather Tanning Industry of Guanajuato (Cámara de la Industria de Curtiduría. Guanajuato, CICUR), as well as the National Association of Footwear Suppliers (Asociación Nacional de Proveedores de la Industria del Calzado, ANPIC) were involved in the analysis of the industry's strengths, weaknesses, opportunities and threats, and in the elaboration of recommendations for fostering more resource-efficient, climate-friendly production processes.

Leather and footwear industry

Almost 70% of Mexico's footwear production is located in Guanajuato; the value chain leather-footwear-procurement generates about 130.000 jobs. So far, most of the micro, small and medium sized enterprises producing footwear concentrate their innovation mainly on design and do not invest in technological or administrative improvements. Due to increasing pressure from international competition, mainly through footwear producers from Asia and Brazil, Guanajuato's government and footwear industry have started to foster competitiveness and productivity in the sector, e.g. through a platform geared at ensuring the quality of Mexican footwear, implemented by CICEG.

In the tannery sub-sector, most medium and big enterprises do implement corporate environmental policies that match international requirements in this field; however, most of the many micro and small enterprises of Guanajuato's tannery industry do not employ any environmentally friendly production methods. At the same time, many of the Small and Medium Sized Enterprises (SMEs) seem to be aware of the adverse environmental impact of their production processes and are open to improvements, however minimal. Scant knowledge is seen as the most important limiting factor for the implementation of more sustainable, resource efficient and competitive production methods.

Textile and garment industry

Only a limited number of companies, most of them large, managed to join the new dynamics of the world textile trade caused by technological advances and an opening of the market since the 1990s, so that the sector contracted somewhat. Currently, the textile and garment industry contribute 2,4% of added value to Guanajuato's manufacturing sectors, and about 2900 companies are registered in this sector.

Guanajuato's fashion cluster

In 2013, actors from public and private sector founded Guanajuato's fashion cluster in order to foster the national and international competitiveness of the leather, footwear, textile, and garment industries, which are key to the state's sustainable economic development. Its objectives include the strengthening of cooperation amongst its members, as well as fostering capacity building and innovation in companies belonging to the fashion cluster's industries. For this, a specific service offer was created that includes, within others, programs for continuous improvement and productive innovation, for strategic management and competitiveness, and for certification; as well as digital platforms with information relevant to the cluster's industries, and for tackling problems related to supply chains.

The state's fashion cluster seeks to strengthen the sector's insertion into international trade flows, and to foster cooperation of companies from different subsectors in order to allow for more value added in the state through integration of larger parts of the textile-garment value chain. In addition, insertion into value chains of other industries also present in Guanajuato, such as automotive and aerospace, is promoted. Since 2017, services aimed at supporting micro, small and medium sized enterprises in integrating cutting-edge technology and innovation in their production processes are offered.

Key results of the analysis

The study analysed strengths, weaknesses, opportunities and threats (SWOT):

Strengths and Opportunities

► Both, the textile and the footwear industry, have a long tradition in Guanajuato and, therefore, an established market and customer base as well as a relatively skilled la-

bor force. Important steps to build innovation capacities in these industries have been taken, e.g. through the foundation of the Fashion Cluster.

- ▶ Public and private sector institutions and actors possess ample experience in industrial development as well as foreign trade and dispose of good commercial networks.
- ▶ So far, only a couple of companies seize the opportunities global trends for sustainable fashion present. However, their number is rapidly expanding. At the same time, global interest in sustainable and circular fashion is growing fast.
- ▶ The increasing digitization of production processes and global interconnectivity provide new opportunities for insertion into global markets.
- ▶ The integration into new value chains (e.g. within the automotive or aerospace industry) as well as the exploitation of so far unexplored market niches are incipient and can be strengthened.
- ▶ Guanajuato's geographic location allows for easy access to a market with a large population, purchasing power and high demand levels.

Threats and Weaknesses

- ▶ As Mexico in general, Guanajuato experiences economic and social instability that may have adverse effects on businesses.
- ▶ Mainly due to dated production processes, production costs are too high and, thus, not competitive. Imports of raw materials and finished products at costs lower than those of national production are growing.
- ▶ Business models with low value added and/or focused on maquila manufacturing dominate the sector. These offer little or no room for a competitive sustainable and resource-efficient production. Too few companies integrate their services in order to offer products with high value added in the state. In addition, the offer of products with high value added in Guanajuato is hampered by a lack of intermediate services and products necessary for integrating of greater parts of the value chain within the state.
- ▶ Knowledge of the competition and market research, especially at the international level, is missing. This, combined with low investment in research and development, results, among others, in outdated designs and limited diversification of products.

Good Practice Example: Renovare Ocean's eco-friendly footwear

In 2016, Renovare, of Leon/Guanajuato, launched its first footwear collection, utilizing clothing-grade textile fibers made of recycled plastic bottles, as well as solely water-based glues. In 2018, the company presented a shoe with a sole that contains, in addition to recycled plastic bottles, 100 grams of sargassum seaweed. Sargassum affected the coast of Mexican Caribbean for the first time in 2015, washing up on its popular tourist beaches each year and threatening the fragile coral reefs.

In addition, 10% of the profits of Renovare Ocean are directed towards supporting social and environmental projects, e.g. aimed at sargassum seaweed removal from Mexico's beaches.

Renovare Ocean defines itself as environmental company concerned with pollution and climate change and targets the marketing of its footwear to the growing group of consumers interested in sustainable, resource-efficient and circular products.

- ▶ The financial and technological requirements of participating successfully in sustainable, circular global markets and value chains are currently prohibitive for a large part of the companies in Guanajuato's leather, footwear, textile and garment industries.
- ▶ While efforts are made, e.g. through the fashion cluster, to foster cooperation and provide capacity building, so far, collaborative networks between large and small companies are missing and individualism reigns. Too little institutional support is offered, and there is a notable lack of incentives for resource-efficient and circular business models. The regulatory framework favors mainly linear production processes.



Recommendations: Towards a resource-efficient, climate-friendly production in Guanajuato's fashion cluster

A whole series of sector or production process specific findings, were discussed and noted for further use in the process of fostering resource efficiency in the fashion industry. General recommendations can be grouped into three main categories:

1. Production processes

- ▶ The adaption of innovative as well as of digital technologies aimed at more sustainable and resource-efficient production needs to be promoted
- ▶ Product as well as process design need to be optimized in order to reduce production waste
- ▶ Employees need to learn more about resource efficiency in production processes

2. Cooperation among stakeholders

- ▶ Cooperation amongst companies needs to be fostered
- ▶ Cooperation between companies and existing research facilities and centers fostering innovation needs to be improved
- ▶ Platforms that allow for a better flow of information, e.g. regarding materials, sub products and waste, as well as networks that enable a better use of synergies need to be installed; communication between all stakeholders needs to be improved

3. Public sector policies

- ▶ Public authorities need to become faster in order to react adequately to increasingly speedier changes in the business environment
- ▶ Regulatory instruments that provide incentives for circular business models need to be developed and implemented
- ▶ Install multi-disciplinary councils that provide a more direct link to all relevant actors and enhance the government's implementation capacity



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