

Ups and downs of **wood** products sector in Iran



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References to the wood products industry in Iran can be traced as far back as 4200 B.C. in the writings of historians such as Herodotus, Xenophon, and Quinte-Curce. In the period, native people of Iran used wood for wheels, carts, and agricultural tools. Later, in the Achaemenid dynasty, Xenophon describes wood used for battle weapons, buildings, ships, and bridges. Modern industrial use of wood in Iran emerged with the establishment of sawmills and match factories in the early 1900s and the manufacturing of plywood, fiberboard, particleboard, and furniture in the 1950s.

Iranian forest products industry is fragmented and faces a number of challenges that hinder success in domestic and export markets. The production and trade trends are evaluated here for each product, including different types of wood-based panels and furniture and the patterns are extracted.

Forest resources

Iran has a total land area of over 164.8 million hectares, of which 80 percent (131.5 million hectares) are designated as natural resources, according to Iran's Natural Resources and Watershed Management Organization. Natural resources are defined as any biological, mineral, or aesthetic asset afforded by nature without human intervention that can be used for some form of benefit, whether material or immaterial.

Examples of natural resource assets include forests, surface water, groundwater, and fertile lands or the soil and minerals within them.

Forests comprise about 8% of the country's total area and are one of Iran's most important natural resources. They are dense in the north, with the most valuable forests found in Gilan, Mazandaran and Golestan provinces. Forests are divided into two groups: forests in the north and forests outside the north. In addition to the forests of the north, sparse and scattered forests are found in the west, southwest and northeast regions of the country.

In terms of climate, forests are designated by five zones according to the Iran Natural Resources and Watershed Management Organization. Zagros forests have the largest share with 4.68 million hectares, and Arasbaran forests in northwestern province of East Azarbaijan have the smallest share with 132,398 hectares of forest area compared to the total forests of Iran. This classification of Iranian forests is based on climate of each type, but the species of the trees and their productivity are different. The only productive and industrially harvestable forest of Iran is Hyrcanian forest in the north.

Wood supply

Wood supply from natural forests was about 1.5 million cubic meters in 1995 and decreased to 0.87 million cubic meters in 2004. The Iranian government banned harvesting natural forests in 2017 for a minimum period of 10 years. As such, the wood supply from natural forests is near zero except for small volumes from illegal harvesting.

Currently, plantations are the main source of wood raw material for industry as they are not included in natural forests. Annual wood supply from this source is about 6 million cubic meters, including poplar, eucalyptus and wood from fruit gardens.

This is planned to double in volume by 2027, according a plan by Iran's Natural Resources and Watershed Management Organization. The investment for doing this plan will be covered by the government directly. Besides this, the government plans to promote plantations and support the private sector to develop plantations.

All these are planned to increase the wood supply for the Iranian wood industry. Another source of raw material for Iranian particleboard and medium density fiberboard (MDF) industries is sugarcane bagasse, which provides feedstock for the country's two particleboard plants, one MDF plant, and one paper plant in southern Iran.

Total wood imports to Iran are generally increasing and include mainly sawn wood (90%) and other forms of raw wood like roundwood, sleepers, and wood chips (10%).

The sawn wood imports to Iran are for the furniture and construction sectors. Total wood imports during the period of 2013–2022 showed 220% growth compared to the period of 1995–2004. The main source of wood imports to Iran is Russia, supplying more than 90% of total imports. Imports of wood raw materials for wood-based panels and pulp industries are essentially non-existent due to Iranian Plant Protection Organization regulations and a lack of logistics infrastructure. Because of the shortage of wood sources in Iran, the country does not export raw wood.

Wood product sectors

Due to long-term sanctions against Iran, access to new technologies is limited, and wood industry owners do not have easy and fast access to updated machinery and know-how to upgrade their production lines.

This is not limited to panel producers only. As a result, the industry faces problems in production quality control and management. Conversely, these sanctions limit the Iranian wood industries' access to the international markets due to many challenges in transferring money and trading with foreign countries.

Particle board

The country's particleboard consumption decreased by 42% two years ago compared to 2013, concurrent with a 24% decrease in particleboard production in this period. Stagnation in the country's construction sector combined with MDF substituting for particleboard and increased competition for limited raw materials are the main reasons for the decrease in the production and consumption of particleboard.

However, during the years 2013 to 2022, exports have been increasing, but imports have been decreasing since 2013. During the years 2013 to 2022, the import of particleboard to the country has decreased by more than 83%.

Medium Density Fiberboard (MDF)

Production and consumption of MDF from 2013 to 2022 are shown in Figure 7. With the increase in domestic production of MDF, the gap between the country's consumption and production has decreased significantly. In 2013, 33% of consumption was supplied by domestic production. Before 2004, all MDF consumed in the country was imported, and in 2005, only 13% of MDF consumption was produced domestically.

This trend can also be seen in imports and exports. Exports have been increasing, and imports have been decreasing. The high import tax for importing wood-based panels, including 10% for unfinished and 20% for worked or surfaced products, respectively, together with an unfavorable exchange rate and the increase in domestic production capacity are the main reasons for the decrease in imports in this period.

However, imports still play a significant role in supplying the country's MDF consumption. Efforts have been made to increase the production capacity of MDF with governmental support and investment.

Traditionally, the plants were located in northern Iran near natural forest resources and plantations, which are the main sources of raw material. Production facilities in the south of Iran use bagasse as raw material. More than 90% of Iranian wood-based panel enterprises are owned by private sector entities.

Most wood-based panels, both unfinished and surfaced panels in Iran are consumed by the furniture industry. Surfacing material shares of the total market are veneer (4%), high-pressure laminate (2%), PVC foil (10%), paper foil (4%), melamine paper (70%), printing (5%), and no additional surface material (5%).

