AFGHANISTAN’S NATIONAL EXPORT STRATEGY 2018-2022

MARBLE AND GRANITE SECTOR
The cornerstones of the Afghan economy
ITC is the joint agency of the World Trade Organization and the United Nations. As part of ITC’s mandate of fostering sustainable development through increased trade opportunities, the Chief Economist and Export Strategy section offers a suite of trade-related strategy solutions to maximize the development pay-offs from trade. ITC-facilitated trade development strategies and roadmaps are oriented to the trade objectives of a country or region and can be tailored to high-level economic goals, specific development targets or particular sectors, allowing policymakers to choose their preferred level of engagement.

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AFGHANISTAN
NATIONAL EXPORT STRATEGY
2018-2022
MARBLE AND GRANITE SECTOR
ACKNOWLEDGEMENTS

The Marble and Granite Sector Export Strategy forms an integral part of Afghanistan’s National Export Strategy (NES). It was developed under the aegis of the Islamic Republic of Afghanistan, the leadership of the Ministry of Industry and Commerce (MoIC) and the Afghanistan Chamber of Commerce and Industry (ACCI), in close collaboration with the Afghanistan National Standards Authority (ANSA). The Strategy builds on the work and priorities established by the Ministry of Mines and Petroleum (MoMP), and benefited from the contribution of sector stakeholders and associations. This Strategy was elaborated thanks to the technical assistance of the International Trade Centre (ITC) and falls under the framework of the European Union (EU)-funded ‘Advancing Afghan Trade: EU Trade-Related Assistance’ project.

This document reflects the ambitions of the public and private stakeholders who defined the enhancements and future orientations for the sector with a view to increasing export performance and social dividends.
Afghanistan’s NES was developed based on a participatory approach during which over 500 Afghan industry leaders, small business owners, farmers and public sector representatives held consultations to reach consensus on key sector competitiveness issues and priority activities. These inclusive consultations were held throughout the country, including in Mazar-e-Sharif, Herat, Kandahar and Kabul, with participation of stakeholders coming from Nangarhar Province.

Besides in-depth research and value chain analysis, these consultations were complemented by:

- **Factory visits** through which supply chain assessments were carried out to gain further knowledge on key issues such as quality procedures, technical skills, lean management, quality of raw materials, access to market, etc.
- **Interviews with domestic, regional and international buyers** to guide the NES with strategic insights and market intelligence as well as buyers’ requirements in terms of quality standards, food safety, packaging, buying cycles, distribution channels, prices, etc.
- **Donor coordination meetings** to identify synergies with ongoing/planned initiatives of development partners to eventually result in collaboration during the implementation phase.

**In spirit and in action:** The NES is aligned with existing national and sector-specific plans and policies and builds on ongoing initiatives in areas related to private sector development, regional integration, investment, and youth and women’s economic empowerment.

Equally important, the NES initiative already accommodates budgeting to support implementation of critical pilot activities identified during the design process. This will ensure that impact and momentum are generated from early on, and support further resource mobilization and confidence-building.
The principal outputs of the NES Afghanistan design initiative are endorsed, coherent
and comprehensive export Strategy documents with a five-year detailed plan of ac-
tion (PoA) and implementation management framework. These documents include:

1. A main NES document, which contains Trade Support Functional strategies,
   offering critical support across value chains and acting as enablers for sector
development.
2. Individual NES priority sector strategies packaged as separate documents but
   in alignment with the main NES findings and overarching strategic objectives.

NES Afghanistan

Main NES document comprising Trade Support
Functional Strategies:

- Quality management
- Trade facilitation
- Trade information and promotion
- Skills development
- Business and professional services
- Access to finance

Individual NES priority sector documents:

- Saffron
- Fresh fruits and vegetables
- Dried fruits and nuts
- Carpets
- Marble and granite
- Precious stones and jewellery
EXTRACTING FACTORS DRIVING GROWTH

- Short-term: polish product quality and cultivate relationships with leading importers
- Long-term: capitalize on established brand and advance up the value chain

THE PHILOSOPHER’S STONE: VISION AND STRATEGIC OBJECTIVES

VISION

STRATEGIC OBJECTIVES

- Strategic objective 1: Improve supply-side capacity and quality management to ensure adequate volume and supply consistency.
- Strategic objective 2: Improve the business environment and reduce costs of doing business
- Strategic objective 3: Improve market access by providing market intelligence

LEAVING NO STONE UNTURNED: MOVING TO ACTION

KEY REQUIREMENTS FOR EFFECTIVE IMPLEMENTATION

STRATEGIC PLAN OF ACTION

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<td>ACCI</td>
<td>Afghanistan Chamber of Commerce and Industries</td>
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<td>ACIM</td>
<td>Afghanistan Chamber of Industries and Mines</td>
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<td>AMGPA</td>
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<td>AMIA</td>
<td>Afghanistan Marble Industry Association</td>
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<td>ANSA</td>
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<td>EPAA</td>
<td>Export Promotion Agency of Afghanistan</td>
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<tr>
<td>EU</td>
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<td>ITC</td>
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<td>MENA</td>
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<td>MoCI</td>
<td>Ministry of Commerce and Industries</td>
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<tr>
<td>MoCIT</td>
<td>Ministry of Communications and Information</td>
</tr>
<tr>
<td>MoF</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>MoFA</td>
<td>Ministry of Foreign Affairs</td>
</tr>
<tr>
<td>MoMP</td>
<td>Ministry of Mines and Petroleum</td>
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<td>NES</td>
<td>National Export Strategy</td>
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<td>PoA</td>
<td>Plan of Action</td>
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<td>R&amp;D</td>
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<td>SMEs</td>
<td>Small and medium-sized enterprises</td>
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<tr>
<td>TVET</td>
<td>Technical and Vocational Education and Training</td>
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<tr>
<td>UAE</td>
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</table>
Afghanistan’s marble and granite sector possesses significant potential to stimulate national-level development. With rich deposits of exquisitely coloured stone scattered throughout the country, the sector has access to a natural resource that is highly prized (and highly priced) around the world. With this in mind, the NES has designated marble and granite as a priority sector. Notably, achievements in this sector are expected to generate spillover effects in the production and exports of other promising dimension stones, such as onyx and travertine.

While Afghanistan is blessed with vast reserves of high-quality natural stone, there are still several deposits remaining untouched and even undetected. Further, extractive and processing companies are not operating to their full capacity. To date, several constraints including lack of investment, regulatory framework, security concerns and weak infrastructure, have kept the sector in an underdeveloped state. The majority of high-quality crude marble and granite is sold without any value addition. For the sector to achieve its full potential, there must be a concerted effort to upgrade Afghanistan’s stone processing capacity and diversify the sector’s product basket. Besides the sale of unprocessed stone, the sector should also endeavour to meet demand for semi-processed stone, fully processed retail-ready tiles and slabs, home decor products (e.g. vases, mosaics and carved decorative items), and marble and granite powder.

Recognizing the existing opportunities and challenges, public and private sector stakeholders in Afghanistan’s marble and granite sector have joined forces to develop this sector strategy. The Strategy lays out a highly localized and practical road map to revitalize the marble and granite sector, spur small and medium-sized enterprise (SME) competitiveness, and raise the standard of living in the communities engaged in the sector’s value chain. This Strategy complements and supports the government’s ongoing efforts to improve the performance of Afghanistan’s minerals and hydrocarbons sector through the recently developed Mining Sector Roadmap (2017).

Accordingly, the Strategy aims to achieve the following impact, with the overarching goal of strengthening the Afghan marble and granite value proposition to international buyers:

- Increase marble and granite production and export in terms of volume and value;
- Gradual migration from medium/low-quality unprocessed material to the production of high-quality processed stone;
- Positioning of Afghan marble and granite as a high-quality product with a lasting brand in international markets.

This Strategy is driven by the following overall vision:

“Marble and granite: the cornerstones of the Afghan economy”

To achieve this vision, the Strategy will pursue measures to reduce binding constraints on trade competitiveness, along with capitalizing on unrealized opportunities for sector enterprises. In the short-to-medium term, the Strategy will assist Afghan exporters to boost exports by offering value-added products in current markets and penetrating promising new markets. In terms of long-term capacity-building, structural reforms and technology upgrades that will further enable sector enterprises to increase their ability to export processed marble, and granite and penetrate new markets will be implemented.

The Strategy focuses on three strategic objectives.

**STRATEGIC OBJECTIVE 1: IMPROVE SUPPLY-SIDE CAPACITY AND QUALITY MANAGEMENT TO ENSURE ADEQUATE VOLUME AND SUPPLY CONSISTENCY.**

Increasing the available supply of high-quality marble and granite is a critical step towards boosting the sector’s export performance. To achieve this end, steps must be taken to upgrade facilities and machinery used in the sector, in order to put Afghan enterprises on a par with their international competitors. Improvements in technology in the quarrying and processing stages and the adoption of quality standards will gradually translate to increased exports of higher quality semi-processed and finished marble, and granite products.
STRATEGIC OBJECTIVE 2: IMPROVE THE BUSINESS ENVIRONMENT BY STREAMLINING PRODUCTION AND EXPORT PROCEDURES

The Afghan marble and granite sector currently faces significant regulatory and administrative hurdles when it comes to opening and operating quarries and processing facilities. These impediments can be addressed with the launch of a one-stop shop, operated by the Afghan Government, that is dedicated to providing administrative and regulatory compliance support to marble and granite enterprises.

Afghan marble and granite products face higher costs and uncompetitive prices in the domestic and global markets. Consolidating mining and processing facilities at large-scale industrial parks will contribute to attracting investment, due to cost savings achieved through economies of scale. Once productivity is increased, there remains the challenge of delivering Afghan marble and granite to international buyers. This can be addressed, in part, by reviewing export procedures on the Afghan side and simplifying them.

With increased transparency provided by the one-stop shop, and with convoluted export procedures streamlined, the sector as a whole will become more appealing to investors. This is critical for the sector’s development, as the relatively small number of enterprises has resulted in oligopoly-like market conditions that keep prices high and deter further growth.

STRATEGIC OBJECTIVE 3: IMPROVE FIRMS’ ABILITY TO ACCESS MARKETS THROUGH TRADE INTELLIGENCE

While Afghanistan’s marble and granite enterprises have already established market links with regional buyers, there is still significant potential to increase export volumes to these markets. There must also be a concerted effort to penetrate untapped markets, with the goal of diversifying marble and granite export destinations. To succeed in this area, exporters must improve their ability to navigate regional and international markets and connect to potential buyers. Promotion programmes and marketing strategies will raise awareness of Afghan marble and granite, and spread the benefits of using them in related industries. Enhancing the capacity of industry associations will allow exporters to better respond to the needs of marble and granite enterprises and produce/disseminate actionable market intelligence.

Figure 1 captures the marble and granite sector vision and strategic objectives.
EXECUTIVE SUMMARY

Figure 1: Theory of change

VISION
“Marble and granite: The cornerstones of the Afghan economy”

1. Improve supply-side capacity and quality management to ensure adequate volume and supply consistency
2. Improve the business environment by streamlining production and export procedures
3. Improve firm’s ability to access markets through trade intelligence

Compete
- Limited domestic availability of critical machinery and tools
- Low productivity and low volume of production
- Severe quarrying and processing losses
- Limited access to credit and government support schemes
- Poor production management practices

Connect
- Poor logistics and trade-related infrastructure
- Limited coordination and dialogue among value chain actors
- Underdeveloped marketing and branding
- Weak market intelligence provision
- Weak market mechanism limiting ability to connect with foreign buyers

Change
- Weak access to working and investment capital
- Poor investment in R&D
- Lack of expertise in marble and granite production
- Limited access to quarry and land permits
- Weak management skills

SITUATION ANALYSIS

A high-potential sector needing support to unlock untouched, redundant resources through modernization and technological upgrades in quarrying and processing

STRATEGIC OBJECTIVES

- Increase marble and granite production and export in terms of volume and value
- Gradual migration from medium / low quality unprocessed material to the production of high-quality processed stone
- Positioning of Afghan marble and granite as a high-quality product with a lasting brand in international markets

STRATEGIC THRUSTS

- Increase absolute volumes while improving quality levels
- Enable strong market links with global distribution channels
- Establish a strong Afghan brand for marble and granite
- Attract investment and support through the Government
- Upgrade technology
MARBLE AND GRANITE’S PRESTIGIOUS POSITIONING IN THE GLOBAL STONE SECTOR

PRODUCT MAP

Since ancient times, marble has been a symbol of beauty and wealth. Its colour ranges from plain white to blue-grey, red, yellow, green and deep black. The very tight crystal-line structure allows marble to be finely polished, making the stone a popular material for architectural and sculptural uses. Marble has more flexible applications than granite, as it can be formed into various shapes and slabs due to its softer composition.

Marble is widely used for decorative and structural purposes, ranging from outdoor sculptures to walls, veneers, flooring, ornamental features, stairways and walkways. Beyond construction and architectural uses, smaller marble pieces can be further processed to produce handicrafts. Tiles and mosaics made of marble are used for decorative purposes. Marble powder, which accrues as waste when cutting the stone, can be applied in both chemical and artificial stone production; as a pigment for whitening in paint or paper; as a calcium feed supplement for animals; and as lime for agricultural soil treatment.

Granite is another popular building substance and is entirely made of crystals. Granite is more durable than marble and less prone to scratches and chipping. Such features make granite more suitable for areas exposed to higher wear and tear, while marble is more often applied for decorative purposes. Granite’s durability makes it particularly suitable for creating workstations, such as kitchen countertops.

Granite is also commonly used in the construction of walls, paved paths and bridges. Roughly cut granite blocks are relatively inexpensive and provide a rugged-yet-elegant appearance. Due to its high durability and aesthetic appeal, granite is also often used for street kerbing and monuments.

Box 1: Main industries related to marble and granite

- Construction
- Architecture and interior design
- Sculpture and decorative stones
- Do-it-yourself projects (e.g. tiles and mosaic)
- Agriculture (marble powder)
- Paint and coatings (marble powder)
- Lime and chalk (marble powder)
- Animal feed (marble powder)
- Artificial stone production (marble and granite powder and shredded stones)
GLOBAL PLAYERS

GLOBAL EXPORTERS

Natural marble and granite deposits are located in Italy, China, Turkey, the Philippines, France, Brazil, the United States of America, India, Morocco, Australia, the Russian Federation, Japan, Portugal, Greece, the Islamic Republic of Iran and Spain. Despite a lot of untapped resources, marble is not an infinite resource, given that it is formed through slow compression by gravity layer upon layer. The world’s biggest producers of marble and granite are China, India, Turkey, Italy, the Islamic Republic of Iran, Spain and Brazil. These seven countries are responsible for approximately 71% of all natural marble and granite produced internationally. In the following section, the most important players in the global marble and granite industry are profiled. On the export side, countries with exports worth more than US$1 billion are considered for further investigation.

China

Responsible for approximately 26% of global marble and granite production, China is the world’s leading marble and granite exporter. In 2016, China recorded US$5.6 billion in exports of marble and granite. In the last 10 years, China has nearly tripled its export volumes. Recent increases in export volumes are most likely the result of the easing of restrictions on foreign investment. This has created the appropriate conditions for Chinese and Taiwanese firms to participate in joint ventures with Italian firms. This increased investment has pushed the Chinese marble and granite sector up the global value chain. Almost 60% of Chinese exports in the sector consist of granite that has been processed to some degree, i.e. cut, polished and/or otherwise worked. Other main exported goods of the Chinese natural stone industry are cut and sawn granite and marble, as well as polished marble.

Besides exports of processed domestic stone, China also imports stone in raw and unprocessed form from Turkey, India, Brazil, Italy and other countries for further processing and re-exporting. As a re-exporter, China imports US$1 billion of unpolished, roughly cut marble and US$807 million in crude and roughly trimmed granite for further processing. In 2016, China’s primary export markets were the Republic of Korea (US$1.1 billion), the United States (US$551 million), Japan (US$483 million), Viet Nam (US$343 million) and Saudi Arabia (US$242 million).

Despite having the facilities and logistical know-how to supply distant consumers, China has had little success penetrating European markets. While natural stone as a construction material is considered more sustainable than many alternatives, the EU follows sensitive sustainability policies in relation to the production of natural stone. It pays very close attention to the quarrying and processing practices of exporting countries. Countries that neglect internationally recognized occupational health and safety standards may find themselves on EU blacklists for certain product categories, and these policies have served as a trade barrier for Chinese supply. The same applies for quarrying and processing practices involving discrimination, child labour, substandard wages, and restriction of freedom of association and collective bargaining. Countries ignoring environmental standards also risk their exports being refused by the EU. The Centre for Research on Multinational Corporations detected such issues in the Chinese natural stone sector. Although the Chinese marble and granite industry shows great potential for future growth regarding its natural stone reserve, the country still faces hurdles to supply world markets and to keep up with other competitors in the industry.

2.– Ibid.

<table>
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<th>Deterring factors</th>
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<td>High untapped reserve</td>
<td>Sustainability issues are a barrier to the EU market</td>
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<td>Diverse variety of natural stone</td>
<td>Comparatively young sector still lacks knowledge and production experience</td>
</tr>
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<td>Strong growth of the marble and granite sector</td>
<td></td>
</tr>
<tr>
<td>Proximity to fast-growing markets</td>
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<tr>
<td>Large supply of affordable natural stone varieties</td>
<td></td>
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<tr>
<td>Asia’s main re-exporting hub</td>
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<td>Availability of high-tech processing technology at a reasonable price</td>
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Italy

Italy is positioned as a key marble producer and exporter. Italian marble is internationally renowned for its brilliance and high quality. As far back as the Renaissance, Italy’s white marble had been carried to distant places and found admirers far from its origin. Insatiable demand, especially from the Arab Gulf states, currently fuels Italy’s booming marble trade. Italian natural stone enjoys a high reputation for its quality, which is furthermore promoted by a joint trademark, ‘Pietra Naturale’, representing more than 30 prominent players in the Italian stone industry. The ‘Made in Italy’ brand protects as well as manages the industry’s know-how and tradition in order to maintain its high reputation and compete against foreign suppliers. Italy’s natural stone sector is highly professional and highly developed, and enjoys strong business ties with buyers of premium-quality stone from around the world. Italy is the world’s second-largest exporter of stone. In 2016, Italy recorded US$ 1.4 billion in exports of marble and US$ 504 million in exports of granite to world markets. Italy also imported US$ 352 million of mainly raw and unprocessed marble and granite from Brazil, India, Mozambique and other countries. Considering that Italy’s main export consists of finished and semi-finished stone, imports of raw and unpolished stone indicate further processing and re-exports to world markets. High value addition takes place within Italy and contributes to 80% of the total value of Italian stone exports. High processing quality is the driving force behind the Italian sector’s strong performance.

As a result of a reduction in imports of raw granite and the ever-increasing specialization of the global industry in finishing marble, (re-)exports have been declining over the past 10 years. In 2016, Italy’s primary destination market was the United States (US$ 458 million), followed by Germany (US$ 160 million), China (US$ 147 million) and India (US$ 90 million). High brand recognition and high quality make Italy capable of exporting marble and granite to more than 140 countries around the world.

Turkey

Turkey contains a mass of natural stone deposits between Anatolia and the Thrace region. According to some estimates, Turkey may control as much as 40% of global marble reserves. This abundant supply puts Turkey in a leading position in world exports. Historically, Turkey’s location in the world’s richest natural stone area meant that the country was the largest marble exporting country in the world, but China took over Turkey’s position in 2009. Turkey’s total reserves – which include visible, probable, and possible sources – are estimated at around 5 billion square metres. The Turkish natural stone sector exported US$ 1.8 billion in 2016, making it the third-largest world exporter. Turkey’s marble and granite sector is expansive, consisting of approximately 1,000 active quarries, more than 7,000 workshops and 1,500 stone processing factories. Large-scale private companies have invested in processing plants, which has pushed forward technological development in the industry. The Turkish natural stone sector exported US$ 1.8 billion in 2016. Considering that exports stood at US$ 998 million 10 years earlier, the sector shows impressive annual growth, establishing Turkey as the third-biggest world supplier of marble and granite. Turkey’s global importance as a natural stone producer is not only reinforced by its reserves and export share but also by its technological prowess.

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Closely connected to global shipping lanes, Turkey is easily able to send its stone around the world by cost-effective sea freight. The main importers of Turkish marble and granite are China (US$ 728 million), followed by the United States (US$ 280 million), Saudi Arabia (US$ 117 million), Iraq (US$ 69 million) and India (US$ 55 million). Turkey’s main stone export products are raw, simply sawn, or merely cut marble blocks. Granite makes up only 1% of Turkish stone exports.

### Enabling factors
- High reputation for quality
- Great variety of stone types and colours
- Extensive experience in extraction and processing
- Favourable geographic location with international markets accessible by sea
- Large reserves of untouched stone
- Use of the world’s most advanced, fully electronic and completely automatic machines

### Deterring factors
- Severe competition from nearby European countries, such as Italy, Spain and Greece, as well as China and India

**India**

Indian marble and granite is characterized by an astonishing array of colours, ranging from white to pink, yellow, green and red-to-black. In the global marble and granite market, India has been able to improve its comparative advantage based on superior-quality stone and low prices. As a result of rapid adoption of advanced mining technology and a concomitant increase in its processing expertise, India has established itself as one of the most dynamic stone producers and traders in the world.

The Federation of Indian Granite and Stone Industry has been a critical entity contributing to the sector’s growth. The Federation has supported R&D efforts while also serving as a bridge between industry and Government. These interventions have resulted in a sector with higher processing efficiency, fewer regulatory barriers to production, and outputs that are consequently lower in cost.

As a result of India’s development of the value chain in recent years, a majority of exported Indian marble and granite has been processed, involving some degree of cutting and polishing. In 2016, India exported US$ 1.5 billion of natural stone, with 93% of that volume consisting of granite products. The primary destinations for Indian stone have been China (US$ 383 million), the United States (US$ 228 million), Germany (US$ 60 million), Turkey (US$ 55 million) and Viet Nam (US$ 54 million).

### Enabling factors
- Cost-effective provider of natural stone
- Wide variety of stone types and colours
- R&D supported by a strong industry association
- Government-backed promotion of the industry, improved regulatory framework and infrastructure facilities, including warehouses; technology development; and sector development through institution-building, marketing, financial and technological support
- Adoption of the latest technology for mining
- Active participation in international fairs and exhibitions, and aggressive promotion of Indian stone

### Deterring factors
- Serious competition from China, which offers lower prices in the granite market, and Spain, which has invested in infrastructure and machinery

**GROWTH OF ASIA AND THE MIDDLE EAST AS IMPORTING REGIONS**

While worldwide imports of marble and granite stood at US$ 11 billion 10 years ago, this number climbed to US$ 13 billion in 2016. Asia, the United States and Europe account for 94% of imported marble and granite worldwide. Resulting from development in the construction industry and awareness about the benefits of marble and granite, Asian and Middle Eastern countries have displayed a growing appetite for these materials in the past few years.

The greatest growth in demand is driven by Asia, encompassing countries such as China, the Republic of Korea, Viet Nam and India. These aforementioned countries in particular, and the region as a whole, have experienced notable economic and population growth over the course of the last decade. The outlook for the Middle East is also promising; the value of natural stone imports to the Middle East increased from US$ 444 million to almost US$ 1.5 billion.
in the 10 years leading up to 2016. During the same period, Europe and the United States decreased their marble and granite imports in terms of dollar value. The decrease in import value in Europe and the United States is likely the result of greater availability of low-cost stone from developing countries. This has put pressure on the prices of traditional suppliers of marble and granite.

The United States, which alone accounts for nearly 18% of global imports, is the largest importer of natural stone. United States imports, however, have been declining over the past 10 years. Current growth rates suggest that China is likely to overtake the United States as the leading importer of marble and granite in the near future. This appears to be part of a global trend of marble and granite demand shifting from the West to the East. In 2006, the top importing countries were the United States, Japan, Germany, Italy, Spain, and the United Kingdom of Great Britain and Northern Ireland. By 2016, China, the Republic of Korea, Viet Nam, India and the United Arab Emirates (UAE) had become leading importing nations.

Figure 4: Imports by world regions, 2006 and 2016 (US$ millions)


Figure 5: Top 10 importing countries by imported value in 2006 and 2016 (US$ millions)

GLOBAL TRENDS

CRACKING THE GROWTH OF GLOBAL DEMAND

Natural stone is becoming ever more popular for different applications, from use in large-scale construction projects to small do-it-yourself home renovations. In addition to traditional markets already accustomed to using natural stone, new markets in the Middle East and Southeast Asia are now increasingly aware of the benefits of marble and granite.

Not only are houses of worship and other ceremonial structures using natural stone in construction, but also modern office complexes, hotels and airports. The use of natural stone increases aesthetic appeal, improves structural durability and is increasingly affordable as prices go down. The natural stone sector is also benefiting from the increasing popularity of natural stone baths and pools, spurred by the growth of the wellness and relaxation sector.

With greater availability of different varieties and the rise of new stone suppliers from Asian countries such as China and India, the price of natural stone has dropped significantly. Natural stone used to be a luxury material only accessible to the wealthy. With the decrease in marble and granite prices and the growing number of middle- and high-income households in Asia and the Middle East, the potential customer base for natural stone has increased dramatically.

While more households may have the budget to use marble and granite for home decor, natural stone has sustained its prestigious image. Elegant bathrooms and kitchens accented with marble are no longer unattainable dreams. With the increased use of floor heating, marble and granite have become attractive alternatives to traditional flooring material such as carpets. The decline in prices has also led to a wider range of quality and price distinctions between and within various varieties of marble and granite on the international stone market.

With high-end marble and granite being substituted with cheaper alternatives from new suppliers, the global volume of the natural stone trade is increasing, while the dollar value of world exports has plateaued at around US$50 billion. The demand for marble is significantly higher than for granite; in 2016, the value of marble imports reached US$43 million, while granite imports represented less than a quarter of that amount, with US$8 million. Until then, marble and granite had shown steady growth, reaching US$51 billion of exports in 2016, whereas exports in the natural stone sector stood at US$27 billion in 2005. World granite exports stood at US$6 billion in 2006 and developed into a US$8 billion export industry in subsequent years. Marble showed stronger growth than granite over the past 10 years, from US$23 billion to US$43 billion in 2016, indicating a greater demand for marble than granite. The greater popularity of marble can be traced back to its more diverse applications in the form of blocks, tiles, mosaic and powder in various industries.

Figure 6: World exports of marble and granite, 2005–2016 (US$ millions)

Box 2: Marble and granite forecast

Marble: an increasingly accessible luxury

Greater availability
Marble’s variety and beauty has attracted builders from different cultures (and historical eras) around the world. The stone has been used to create iconic structures such as the Taj Mahal, the Parthenon and the United States Supreme Court, along with abundant use in churches, cathedrals, mosques and tombs across the world. With more quarries in developing countries being discovered and exploited, the range of marble varieties on the international market has increased steadily.

Decreasing prices
Greater availability of marble has led to spirited price competition. Although marble has historically been associated with wealth and extravagance, with greater price competition resulting in lower prices, marble has become an affordable luxury suitable for a greater audience and additional applications.

Diverse applications
Due to its attractive appearance and high resistance to water damage, the construction industry has shown greater interest in marble as prices have gone down and incomes have risen. Demand has been especially strong for marble in the construction of high-end hotels, theatres, temples, churches, memorial buildings and tombs in developing countries. Strength and robustness also allow marble to serve less glamorous purposes; its powdered form can be used as a filler for concrete in the construction of stairs, pavements, floor coverings and external walls.

Increasing use of marble slab and powder
Marble slabs can be shaped and moulded into tiles, mosaics and blocks for application in the construction industry. Marble powder, a waste by-product of stone cutting, has proven to be a valuable input in the paint and coating industry as a whitening agent. It is also directly employed in the pharmaceutical and agricultural industries. All of these industries are growing, especially in developing countries, indicating that demand for marble powder will likely continue to grow in the future.

Granite: providing durable elegance to the construction industry

Benefits in construction
After a period of stagnation caused by the 2008 global financial crisis, construction activity is picking up in both developed and developing countries. In the Asia–Pacific region – the largest and fastest-growing market worldwide – demand for granite is especially strong. Rapid urbanization and continued industrialization is a positive indicator for granite sales, as it is highly favoured by the construction industry. This has certainly been the case in China, India, Thailand, Indonesia and other South-East Asian nations, where residential and infrastructure construction activities have stimulated growth in granite sales.

Considering that further economic growth is likely to continue in populous China and India, the demand for granite will almost certainly grow in parallel with the rise of national income levels in these countries. Changing attitudes towards indoor and outdoor decor represent further opportunities for growth in the region.

Box 3: Implications for Afghanistan

- The position of Afghanistan can improve with increases in worldwide demand for marble and granite, but production levels must be increased.
- To enter more markets, processing is a crucial element to be considered and improved.
- Proximity to growing importers such as South-East Asia and the Middle East will be an important advantage.
- Afghanistan is home to high-quality stone that is in demand from the luxury goods industry, which may allow for premium pricing of marble and granite products.
**SIGNIFICANT COMPETITION FROM REGIONAL QUARRIES**

**Immediate regional competitors**

Pakistan is one of Afghanistan’s immediate regional competitors in natural stone exports. Pakistan, like many new entrants to the natural stone industry, still relies on uncontrolled blasting at its quarries, which causes quarry loss of up to 70%. Irregular shapes and cracks in the blocks hinder the export of around 20% of mined products. Only three quarries in Pakistan use modern mining techniques that meet international standards. Pakistan has not invested in modern machines, indicating a lack of attention to the sector by the Government and private investors. The country also lacks strong sector associations that could support R&D activities and promote Pakistan’s stone in international markets.

The Pakistani marble and granite industry is driven by local consumption and is highly dependent on the domestic construction industry. The marble and granite sector has thus suffered in parallel with the recent decline of that industry. The scattered distribution of quarries and processing facilities cannot ensure regular supply and consistency in grade, shade, colour of material and size of stone. This is mainly due to poor infrastructure and low-capacity processing facilities. Despite these shortcomings, Pakistan’s exports of natural stone were higher in 2016 than the year before, reaching US$51 million. The vast majority of these exports (78% total) made their way to China.

After China, Pakistan’s main buyers of natural stone are the Republic of Korea (US$3 million), the United States (US$1.8 million) and Lebanon (US$1.3 million). Unprocessed marble dominates Pakistan’s natural stone trade. Pakistani crude and merely cut stones are shipped to China, Asia’s re-export hub, for further processing. Considering Pakistan’s great untouched reserve of up to 160 million tons of natural stone, Afghanistan’s neighbour will remain an immediate competitor in the region for the foreseeable future.

Another immediate regional competitor is the Islamic Republic of Iran, which exported natural stone worth US$146 million in 2016. The Islamic Republic of Iran is also a major exporter of crude and unprocessed stone, supplying the main global re-exporting hubs of China, Italy and Turkey, where Iranian marble and granite are further processed. Almost 90% of exports of Iranian natural stone consist of marble. Besides sales to re-exporting hubs in China (US$96 million), Italy (US$10 million) and Turkey (US$1.3 million), the Islamic Republic of Iran exports to India (US$5.5 million), Kuwait (US$3 million) and Kazakhstan (US$2 million).

The Islamic Republic of Iran faces similar issues to Pakistan and Afghanistan in the production of marble and granite, in terms of underdeveloped mining and processing capacity. However, based on better technology and stronger trade links, the Islamic Republic of Iran has achieved a higher export performance than its regional peers. Due to its immediate proximity and easy access to shipping by sea, the country is a formidable competitor for Afghanistan.

**Competition from the Middle East–North Africa (MENA) region**

A high performer in the MENA region is Egypt, which exported marble and granite worth US$226 million in 2016. While this is certainly an impressive figure, the export performance of Egypt’s marble and granite sector has declined since 2013. More providers of low-cost natural stone are entering the market from different corners of the world, and Egypt has also found itself outpaced by competitors in South and East Asia who have invested heavily in technical capacity. Nevertheless, Egypt is the most successful natural stone exporter in the MENA region, with millennials of experience quarrying and processing stone. Marble is responsible for 99% of Egyptian exports of natural stone.

While crude marble exports declined steeply over the last decade, from US$85 million in 2006 to US$6 million in 2016, exports of semi-processed and processed marble have increased significantly. This would indicate that Egypt possesses a competitive edge in the export of value added stone. Egypt’s top export destinations in 2016 were Libya (US$55 million), China (US$50 million), Lebanon (US$15 million) and Kuwait (US$10 million). Besides exports of semi-processed marble to China, Egypt’s natural stone enjoys an excellent reputation in Africa and the Middle East.

While Egypt may become a serious competitor to Afghanistan as the former moves up the marble and granite value chain, at present, they are not in the same league of production because Egypt’s expertise in stone processing is more sophisticated. Egypt should rather be seen as a possible destination market for processing and re-export, as well as a role model as Afghanistan explores ways to enhance its processing capacity.

Like Egypt, Oman has been transitioning from raw to semi-processed and processed marble exports over the last decade. Oman’s exports of natural stone reached US$113 million in 2016. Since 2014, Oman’s industry has experienced a slight decline in export value, with the recent market entrance of Asian suppliers. Oman predominantly supplies semi-processed and processed marble to Middle Eastern and Asian countries.

Oman is rich in marble quarries but does not have many granite deposits. The largest export destination for Omani stone is Saudi Arabia, with an exported value of US$33 million in 2016. Other top destination markets for Oman are the UAE (US$27 million), India (US$11 million) and the Republic of Korea (US$8 million). Oman is geographically closer to Afghanistan than Egypt and has the potential to become a serious competitor when Afghanistan shifts towards exporting greater quantities of value added stone. At present,
because of its sophisticated processing technology, Oman should be viewed less as a competitor and more as a re-exporting partner for Afghan stone.

The UAE is another Middle Eastern competitor of Afghanistan, mainly exporting semi-processed stone to regional markets. The UAE’s top export markets include Oman (US$12 million), Qatar (US$8 million), India (US$6 million) and Saudi Arabia (US$5 million). In total, the UAE exported US$41 million in natural stone in 2016. The UAE predominantly exports semi-processed marble and granite and enjoys strong export ties with other Middle Eastern countries. The value of UAE natural stone exports has been slightly declining since 2013, due to increasing competition from other suppliers in the MENA region. As Afghanistan looks to boost its sales of semi-processed stone, it is likely to come into direct competition with the UAE in the medium term.

**Figure 7: Performance of regional competitors of Afghanistan, 2005–2016 (US$ millions)**

![Graph showing performance of regional competitors of Afghanistan, 2005–2016 (US$ millions)](image)


**RE-EXPORT STIMULATED BY WORLDWIDE DEMAND FOR HIGH-QUALITY STONE**

Trade data indicate that semi-processed and processed stone dominate exports in the natural stone industry. The increasing volume of exports of value added marble and granite reveals higher demand for high-quality, processed products. With rapid economic development and population growth in South-East Asia and the Middle East, high-quality stone for the construction and luxury goods industries have contributed to this boost in demand. Many exporting countries have moved up the value chain by concentrating on the production and export of value added, processed products such as polished granite and semi-processed stone cut with a flat surface.

Developing countries using outdated extraction and processing technologies are the main suppliers of unprocessed stone in global markets, while traditional suppliers (and China) concentrate on value added products. Suppliers from European countries and Turkey are among the few exporters of further processed, chipped and powdered marble and granite. Data reveal that stone chips and powder, which are by-products from cutting and processing stone blocks, are less commonly used as export products from developing economies.
Unprocessed marble and granite are predominantly shipped to re-exporting hubs in China and Italy – where the most advanced technology is available – for value addition. China is the main re-exporting hub in Asia, possessing advanced cutting, polishing and processing technology and machines. Turkey is the largest exporter of natural stone to the Chinese market, predominantly supplying raw uncut stone. China also receives crude stone from India, Brazil and Italy. The majority of Chinese exports consist of polished and processed marble and granite, which are re-exported to developed economies in Europe, Japan, the Republic of Korea and the United States. China emerged as the world’s dominant marble and granite (re-)exporter by investing in technology that improves product quality while simultaneously reducing price.

The European (re-)exporting hub is Italy, which is the world’s second-largest exporter of high-quality marble and granite. Italy receives raw and unprocessed stone from African countries, India and Brazil. Imported and domestically extracted raw stone is processed using Italy’s world-leading technology and expertise. After undergoing value addition, finished stone is shipped to European countries, the United States, Canada and the UAE.

Another smaller (re-)exporting hub is Turkey. Turkey predominantly exports semi-processed and processed marble and granite from domestic quarries, although it does import some crude stone from the Islamic Republic of Iran and Macedonia for value addition and re-export. While Turkey’s processing capacity does not match that of China or Italy, Turkey is nevertheless able to apply a high level of value addition at low cost.
BRICKS AND CLICKS: EMERGENCE OF E-COMMERCE AS A DISTRIBUTION CHANNEL

One of the challenges that marble and granite exporters have typically faced is accessing end users in the international market. E-commerce may offer a partial solution to this challenge, driven by the increasing popularity of do-it-yourself home renovations. Individual consumers – especially high-income consumers – are more aware of the use of natural stone in kitchens, bathrooms and flooring, thanks to the rise of the luxury spa and the wellness industry. To promote affordable luxury to a greater range of consumers, traditional natural stone powerhouses such as Italy and China have found it convenient to open up a new sales channel by selling their tiles, mosaics and natural stone products online.

Despite the weight of marble and granite, along with their need for gentle handling during shipping, the online market is particularly suitable for the natural stone industry. This is mainly due to the increase in choices that consumers have when shopping online, in terms of the quality, shape and colour of different types of stone. The major re-exporting hubs, having received and processed raw stone from around the world, are in the best position to present seemingly endless options to online shoppers.

While natural stone for national monuments and other iconic structures may be quite costly to ship, this is less the case with household stone products like tiles and mosaics. Recognizing the opportunity, an increasing number of e-commerce services have been launched that specialize in natural stone sales. Such online intermediaries offer special care in the transportation of heavy and/or delicate marble and granite products. Many interior design retailers have also started to offer marble and granite products in their own online marketplaces.
This Strategy aims to achieve the following goals:

- Increase volume of production and exports
- Gradually upgrade the quality of quarrying and processing to step up from unprocessed to semi-processed and finished stone exports
- Optimize time of entry in key markets
- Improve overall marketing of Afghan marble and granite
- Position Afghan natural stone as a middle- to premium-quality product, reclaiming its brand and reputation in international markets.

Global trends indicate a promising outlook for the Afghan marble and granite sector. Global demand for affordable marble and granite is expected to grow with the continued expansion of the construction and luxury goods industries in rapidly developing economies around the world. Geographical proximity to high-growth economies in Asia and the Middle East, where demand for natural stone is rising fastest, favours Afghanistan’s marble and granite sector. Accessibility to European and Asian markets is going to improve with the opening of air cargo corridors through India, which itself is also an important destination for Afghan natural stone. The new corridor will not only enhance timely delivery but also reduce damage to products.

Despite positive growth prospects for the Afghan natural stone industry, sector enterprises must temper expectations to an extent, considering the dominance of certain players in the international market. Moreover, the global marble and granite market is entering a new era, where recent entrants such as China and India are processing a wide variety of stone and selling at low prices, thereby stimulating intensive price competition. In the midst of this highly dynamic, highly price- and quality-sensitive market, Afghanistan may benefit from concentrating on specific market segments, such as the mass market or premium segment.

In terms of mass marketing, it is unlikely that Afghanistan will be able to beat other suppliers on price, considering its technological and infrastructural weaknesses. China is the strongest player in the low-price market segment and was able to carve out this position for itself without sacrificing the quality of its products. China uses sophisticated technology to process raw stone from various countries while keeping its own operating costs low. Italy, another important player, is an established supplier of premium products and benefits from the renowned ‘Made in Italy’ brand. While China and Italy are providers of semi-processed and finished products, immediate competitors such as Pakistan and the Islamic Republic of Iran are exporters of crude stones.
Box 4: Quality and price determinants of marble and granite

Pattern, colour and the glaze of the stone determine the quality and price of marble, and granite, which also applies to other dimensional stones, such as onyx and travertine. Colour plays a dominant role in the determination of quality and price. Stone infused with rare colours achieves high prices on the international market due to its limited availability. Other determinants of quality and marketability are homogeneity of pattern, and glaze. Stone with homogeneous pattern, rare colour and fine glaze achieves the highest price. Stone with rare colours and heterogeneous patterns still places in the medium category, as the uniqueness of colour dominates other categories.

<table>
<thead>
<tr>
<th>High quality / high price</th>
<th>Medium quality / medium price</th>
<th>Low quality / low price</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Homogeneous pattern</td>
<td>• Homogeneous / heterogeneous pattern</td>
<td></td>
</tr>
<tr>
<td>• Rare colours</td>
<td>• Rare / common colours</td>
<td></td>
</tr>
<tr>
<td>• Fine glaze</td>
<td>• Fine glaze</td>
<td></td>
</tr>
<tr>
<td>• Heterogeneous pattern</td>
<td>• Common colours</td>
<td></td>
</tr>
<tr>
<td>• Common colours</td>
<td>• High glaze</td>
<td></td>
</tr>
</tbody>
</table>

Afghanistan, controlling quarries with high-quality stone of unique colours, should position itself as a middle/high-end premium stone supplier in the long term, to counter structural cost disadvantages that decrease its price competitiveness. When thinking about Afghanistan’s positioning in world markets, it is important to keep in mind that large-scale investments in technology upgrades, which would improve value addition and reduce production losses, are less appealing in Afghanistan compared with other countries involved in natural stone production. Investment attractiveness is diminished by a number of factors, including weak protections for investors, burdensome regulatory and tax regimes, high costs of electricity (when it is available), and the fact that most production is small-scale. With such hurdles, Afghanistan is unlikely to succeed in price competition and become a mass producer. Afghanistan does, though, have the potential to meet high-end buyer needs, as it is home to varieties of stone with unique colours that garner high prices in the international market.

To achieve maximum potential, Afghanistan must shift away from lower tech and poorly planned quarrying methods to market-led and consistent production by promoting specialization in highly appreciated marble and granite varieties. Natural stone production in Afghanistan currently relies on trial and error methods instead of systematic extraction of stone designed to meet market needs.

Regarding destination markets in the short-term, Afghanistan has the opportunity to strengthen regional exports and ship to re-export hubs. In the long run, Afghanistan should focus on steady capacity-building that will lead to higher exports of semi-processed and finished marble and granite products. This would have spillover effects on related industries, such as onyx and travertine. Taking this approach, Afghanistan can concentrate on strengthening existing trade ties while taking deliberate steps to increase its expertise in natural stone processing.
PRODUCTION CRAVING FOR ROCK-SOLID INVESTMENTS

Both quarrying and processing of marble and granite require high initial investment in equipment and machines, with years of effort required to reach maximum capacity. Access to capital, especially in the form of large, long-term credit, is difficult to secure in Afghanistan. Quarrying starts with an initial R&D investment to detect potential deposits containing high-quality stone. When no sophisticated soil research has been conducted – as is the case in Afghanistan – this process is based on trial and error. Without sufficient government support and private sector investment, costly initial quarry detection serves as a barrier to entry for the industry.

After detection of quarry sites, production of marble and granite requires access to land for processing facilities close to the source. Accessibility of such land is an obstacle, as few sites are connected to public utilities such as electricity and water, or linked with the ground transportation network. On top of that, producers must obtain the consent of local communities. Processing plants are also not located in a single cluster and are therefore not able to take advantage of economies of scale. This makes the production of natural stone in Afghanistan more costly and inefficient.

As per Natural Stone Processing Company, a major investor in Afghanistan, capital required for quarrying activities is around US$ 500,000, and between US$ 2 million to US$ 8 million for processing plants. With this amount, sector enterprises could access state-of-the-art extraction and processing technologies, and be able to export the product to international markets.

Access to high-quality mining equipment is therefore crucial for effective mining and reducing product damage. This again requires high investments, not only in the hardware itself but also to train workers capable of correctly operating these machines.

The structural integrity of crude stone is particularly important for the ensuing processing stage, as quarrying methods directly contribute to the quality of finished marble and granite. US$ 400,000 of investment in processing facilities allows purchases of advanced machinery, which is almost 10 times more productive than that currently used in Afghan processing plants. This creates a competitive edge for the investor. Besides financial investment, production requires a minimum time of six months to set up machines and build offices on quarry sites until production can finally start.
The marble and granite industry is one of the fastest-growing sectors in Afghanistan. With marble or granite quarries in almost every province, the country is rich in natural stone varieties. Not all marble and granite deposits in Afghanistan have been discovered or surveyed properly. The size of granite reserves in Afghanistan are estimated to be around 2.4 billion m³. According to the MoMP, there are about 40 types of marble alone 40 different colours in Afghanistan. Granite deposits have been identified mainly in Bamyan, and in Nooristan, Badakhshan, Panjsher, Jalalabad, Herat and Konar. On the other hand, the size of marble reserves in Afghanistan are estimated to be roughly 1.3 billion metric tons, valued at approximately US$ 150 billion. It is worth highlighting that vast areas of potential resources in Afghanistan remain unknown.

Approximately 60% of marble production is concentrated in extraction hubs in Jalalabad, Wardak and Herat. Other marble extraction sites are in Kabul Province, Logar, Badakhshan, Bamiyan, Nangarhar, Ghazni, Samangan, Faryab, Pakhtia and Parwan. Accurate data on production of granite in Afghanistan is unavailable. Marble and granite extraction starts with the discovery of deposits of natural stone that are sufficient for quarry investment. Afghanistan is naturally rich in marble, and granite, as well as other dimensional stones such as onyx and travertine.

Note: important machines for processing of slab and tiles represent between 40 to 50% of total cost of establishment of Marble and Granite Factory. The investor should consider allocating between 50 to 60% of investment capital for establishing the structure of the factory including foundations for stone machines.

Investments in transportation are also critically needed for the Afghan marble and granite sector, as even raw uncut stone can be damaged if not handled with care. Once the stone is cut out of a quarry, blocks are transported to processing facilities. In Afghanistan, stone cut from quarries in rural areas must get to processing sites over unpaved roads, which is not ideal. Bumpy roads and poorly equipped vehicles can both contribute to costly damage to the raw stone. For Afghan natural stone enterprises to become reliable, consistent suppliers to international buyers, there must be further investments in both vehicles (by the enterprises) and roads (by the Government).

### CASTING THE FIRST STONE: A VALUE CHAIN WITH HIGH POTENTIAL

#### A BRICK-AND-MORTAR PRODUCTION

<table>
<thead>
<tr>
<th>Standard machinery required for quarrying</th>
<th>Important machinery for processing plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Pneumatic steel drills for vertical, horizontal or inclined drilling, manual or mounted on special devices (US$2,000–US$3,000)</td>
<td>• Gang saws 80 blade (for cutting marble blocks into slabs) (US$300,000 to US$400,000)</td>
</tr>
<tr>
<td>• Pneumatic down-the-hole hammer drills to make vertical holes for introducing the diamond wire (US$10,000)</td>
<td>• Semi/Automatic 14 to 18 polishing head for slab (US$400,000 to US$800,000)</td>
</tr>
<tr>
<td>• Large and small diamond wire machines for cutting primary large blocks and secondary cuts</td>
<td>• Marble Bridge Cutting Machine for cut to size (US$110,000 to US$140,000)</td>
</tr>
<tr>
<td>• Chainsaws for fast, straightforward vertical and horizontal cuts on large quarry fronts (US$10,000–US$15,000)</td>
<td>• Block Cutter for marble (US$110,000 to US$130,000)</td>
</tr>
<tr>
<td>• Hydraulic cushions for enlarging space between cut benches or for splitting up narrow openings (US$40,000–US$50,000)</td>
<td>• Semi/Automatic 12 to 14 polishing head for polishing of tiles maximum size 6 cm wide (US$220,000 to US$230,000)</td>
</tr>
<tr>
<td>• Hydraulic jacks for moving blocks and hydraulic splitting wedges for splitting up drilled sections (US$100 per piece)</td>
<td>• Cross Cutter for tiles (US$30,000 to US$50,000)</td>
</tr>
<tr>
<td>• Derrick cranes to handle blocks or heavy equipment (US$40,000–US$50,000)</td>
<td>• Calibrating/chamfering line for marble tiles (US$65,000 to US$75,000)</td>
</tr>
<tr>
<td>• Stationary wire saw machines for block-squaring (US$8,000–US$15,000)</td>
<td>• Overhead crane for moving processed slab (US$50,000 to US$100,000)</td>
</tr>
<tr>
<td>• Front-loaders (T-lift blocks) (US$60,000–US$80,000), excavators (for cleaning and excavating) (US$50,000–US$90,000) and dump trucks (US$30,000–US$50,000)</td>
<td>• Arm Caren for lifting slab to polishing machine (US$5,000 to US$7,000)</td>
</tr>
<tr>
<td>• Pneumatic down-the-hole hammer drills to make vertical holes for introducing the diamond wire (US$10,000)</td>
<td>• Water Recycling System or Water Treatment Plant (US$200,000 to US$400,000)</td>
</tr>
<tr>
<td></td>
<td>• Air compressor (US$15,000 to US$20,000)</td>
</tr>
<tr>
<td></td>
<td>• Multi wire for cutting granite (US$350,000 to US$700,000)</td>
</tr>
<tr>
<td></td>
<td>• Semi/Full Automatic 14 to 20 Head Polishing Machine for Granite (US$450,000 to US$800,000)</td>
</tr>
</tbody>
</table>
According to MoMP, there are approximately 60 marble quarries in the country, operated by around 24 extractive companies in four provinces. These extractive companies are categorized by MoMP in terms of quality, technical and financial capacity. Only four – two in Herat and two in Wardak – comply with all the requirements to be considered category A companies, among others to possess certain specific machinery, at least 5 technical staff, and adequate financial, marketing and human resources in place. Five companies belong to category B and fifteen to category C.

Extraction of marble in Afghanistan is taking place below its maximum capacity. It is estimated that in Afghanistan, extraction companies have the capacity to produce 30,000 tons of marble per month. Nevertheless, they produce only 3,000 tons of marble per month. Moreover, some quarries rely on outdated technologies for excavation, loading, hauling and dredging. Afghanistan imports the majority of available channelling machines and wire saws for cutting, as well as crusher and hammer mills for mining. Due to this lack of modern equipment, a considerable segment of the sector still relies on outdated mining practices. When this occurs, poor extraction methods relying on explosives significantly reduce the quality of Afghan unprocessed marble and granite, which results in important wastage at the extraction stage. Following this process, a large share of the rough-hewn marble blocks are illegally exported to Iran and Pakistani processing factories at very low prices.

Domestic processing factories add a total value of around US$105 million to the marble and granite. It is important to highlight that processing companies operate below their potential. Estimates indicate that processing companies are expected to produce 248,720 m² per month. However, their actual production is of 130,000 m² per month. A total of 130 companies operate in the marble industry in Afghanistan, which have invested a total of about $70 million. Marble processing companies in Afghanistan are also divided into three categories in terms of quality, financial and technical capacity. Three companies currently belong to category A. To belong to this category, these enterprises meet certain requirements, among others, an investment of minimum US$2 million, to count with at least 10 technical and professional staff and to possess certain specific machinery. On the other hand, 37 processing companies belong to category B and approximately 90 belong to category C.

After the extraction of large blocks of stone, crude marble and granite pieces are transported to processing facilities. As specialized cranes are required for loading and unloading stones, this is a costly and tedious process. Materials for processing, such as special cutting and polishing sand, edge-polishing machines, polishing powder and stone cutters must be imported.

Blasting at the extraction stage produces small and irregular pieces and causes microfracturing, leading to higher rates of product loss during the processing phase. Loss occurs when parts of fractured raw blocks break up during the cutting and polishing stages. Besides high incidences of microfracturing during extraction, product loss is also incurred due to poor treatment of stones as well as lack of knowledge about processing and how to operate machinery. Inefficient processing practices result in relatively poor-quality stone with a comparatively high unit cost of production. The finished good is checked for quality and sorted according to variety before packaging. Powder and slurry waste from cutting can be further processed and sold as sand and other materials, although this additional step is still uncommon in Afghanistan.

**PEBBLY DISTRIBUTION**

Afghan natural stone is sold to both domestic consumers and international buyers. As the following brief sections reveal, sales performance is lacklustre in both areas. Afghan stone is soundly outperformed in the domestic market by Pakistani stone, and its international sales have not yet broken the US$1 million mark.

**Domestic markets**

Domestic consumption of finished marble in Afghanistan currently stands at approximately 270,000 tons. Due to lack of both quality and sufficient supply of marble and granite, many natural stone enterprises are forced to supplement their business by importing marble produced or processed in neighbouring countries. According to some estimates, Pakistani stone has captured as much as 85% of the Afghan market, although much of that volume is believed to be Afghan stone that has undergone value addition in Pakistan before being shipped back. Marble and granite are mostly used in counter-insurgency-related construction projects, Afghan Government projects, private businesses, homes, farms and military projects.

**International markets**

In 2016, Afghanistan exported US$979,000 in marble, with top export destinations including Italy (US$499,000), Pakistan (US$341,000), India (US$73,000), China (US$32,000), Turkey (US$21,000), Spain (US$15,000) and the United Kingdom (US$15,000). Notably, informal trade of unprocessed marble reaches the Iranian and Pakistani markets, where they are further processed and exported. Thus, a considerable amount of Afghan exports of this product goes unreported. This situation is expected to improve, as the Afghan Government has taken measures to prevent and ban this illegal practice. Afghan marble has lately caught the attention of the European market. Italy has shown particular interest in Afghanistan’s white marble for sculptures and art projects. Available data did not reveal any granite exports to international markets in 2016.
Figure 11: Current value chain
PROMISING EXPORT PERFORMANCE

A 2009 United States geological survey estimated the value of marble reserves in Afghanistan to be around US$200 billion. The majority of exported stone from Afghanistan consists of crude marble, which can be found in almost all Afghan provinces. Granite has thus far played a minor role in Afghan exports of natural stone. To date, 66 marble and granite deposits have been positively identified in Afghanistan.©

6– Ibid., p. 8.

Box 6: Quarries in Afghanistan

Kabul Province
- Proterozoic marble quarries are in Ghazak, Karez-e-Mir, Tarakhel, Hazara-e-Baghal, Pul-e-Charkhi, and Qalamkar
- Ghazak marble, known as ‘Black Ghazak’, is located 32 km east of Kabul
- Karez-e-Mir marble consists of granular white and, rarely, grey-yellow marble, and is situated 40 km north of Kabul City
- In total, there are 13 marble deposits in Kabul Province

Logar Province
- Proterozoic marble is quarried in Awbazak, Dehnow, and Mohammad Agha
- Awbazak marble is bioclastic and brown
- Dehnow marble is brecciated and brown
- Mohammad Agha marble is black and white

Wardak Province
- Proterozoic Wardak marble (grey and dark grey marble) is deposited near Maidan-Shar
- In total, there are six well-known marble quarries in Wardak, which have been quarried for the past 40 years

Badakhshan Province
- Bini Kama deposits, consisting of medium and coarsely crystalline marble belonging to the Silurian and Devonian eras (420–450 million years ago)
- This deposit of marble is estimated to be 1.3 billion tons

Herat Province
- Proterozoic Chesht-e-Sharif deposits are located 120 km east of Herat City
- Its marble is finely crystalline, with colour ranging from white to light green
- The deposits are estimated to be 30 million tons

Nangarhar Province
- Proterozoic Khogyani marble deposit located 35 km south-west of Jalalabad City
- This marble is known as the ‘Afghan white marble’

Note: the box shows state-of-the-art geological survey information, which needs to be updated

Production and exports have both shown a steady increase in value, with average annual growth between 2012 and 2016 standing at 13%. However, as information from desk research and consultations revealed, trade to Iran and Pakistan is underreported and actual growth is expected to have been much greater in 2016. Ten years ago, Afghanistan’s exports of natural stone were marginal, with Pakistan as the sole destination for what little did leave the country. Afghanistan rapidly started to realize opportunities in the marble and granite sector with its gradual accession to regional markets and global re-exporting hubs, where Afghan stone is further processed.

Exports of marble and granite experienced a temporary decline with the NATO invasion of 2012. With larger and more frequent shipments heading to the re-export hubs of Pakistan, Italy, and China, Afghanistan’s marble and granite industry has experienced a revival in exports after a decline in 2012. This success has led to a positive trade balance in natural stone, beginning in 2013. Before 2013, processed natural stone used as a construction material was imported from foreign countries, as the volume of domestically processed stone was negligible. Afghanistan imported semi-processed and finished marble from China and Italy, as well as Pakistan, India and Turkey.
During the last five years, Afghanistan has not only significantly expanded its export volumes but also diversified its destination markets. Pakistan has been the most important export destination for years, where the majority of value addition to Afghan stone takes place. Over the last five years, the volume of Afghan natural stone exported to Pakistan has more than quintupled. Exports to Italy and India have also increased significantly during this five-year time frame. China is a comparatively new export destination, which has added Afghan marble to the diverse array of stone from around that world that it processes and re-exports. Afghanistan has also been serving Central Asian countries such as Kazakhstan, with steady demand over the last several years. Aside from regional markets, Afghanistan entered the Republic of Korea and Japan recently, although the export volume remains low.
POLISHING THE KNOWLEDGE OF KEY COMPETITIVENESS CONSTRAINTS

The following section analyses sector challenges on three levels – firm capabilities; institutional and trade support; and national environment, policy and regulations. For this analysis, the issues that are crucial for the competitiveness of Afghan exports can be sorted into three dimensions.

- **Compete**: Issues limiting the sector’s capacity to compete in national and foreign markets. This includes challenges related to access, inputs, productivity, quality management and complying with standards, and national infrastructure.

- **Connect**: Issues restraining connectivity to suppliers, markets and clients. This dimension includes challenges related to market information, marketing and trade promotion, branding, and trade agreements.

- **Change**: Issues limiting the sector’s capacity to change, innovate and tap into emerging trends. This dimension relates to challenges accessing trained/skilled labour, intellectual property protection, institutional support to innovate, investment promotion and protection, corporate social responsibility, and youth/women’s employment.

**COMPETE**

Outdated production lines and low levels of technology for quarrying and processing of marble and granite are major drags on the competitiveness of the industry

The potential of Afghanistan’s marble and granite sector is limited by the low availability of modern quarrying and processing technology. By relying on outdated, low-tech methods and machinery, Afghanistan’s natural enterprises have lower output with lower quality than their global competitors. Most distressingly, the inefficiency of Afghan enterprises results in higher per-unit costs for both crude and processed stone, which makes sales difficult in a highly price-sensitive global market.

For Afghan natural stone enterprises interested in ramping up production with the help of advanced machinery, a critical challenge is accessing capital. All machines and tools required to produce natural stones are costly, with prices on the rise due to the frenzied increase in natural stone production over the last decade. On top of the list price, an additional cost is shipping, as any modern machinery must be imported from abroad. Because the country is landlocked, delivery of heavy shipments to Afghanistan is both time-consuming and expensive.

In terms of access to finance, high collateral requirements mean that loans from Afghanistan’s commercial banks are not an option for most Afghan natural stone enterprises. Two Afghan commercial banks, the First Micro-Finance Bank and the Afghanistan International Bank, do offer credit-backed loans to SMEs, in partnership with the non-profit Afghan Credit Guarantee Foundation. Whether or not Afghan natural stone enterprises qualify for the available credit-backed loans must be investigated further.

With difficulty accessing loans, and with foreign investors hesitant to sink money into a country characterized by security challenges and weak investor protections, the natural stone sector in Afghanistan has become dominated by a handful of enterprises. The oligopoly-like conditions further contribute to sluggishness in development and lack of international competitiveness.

<table>
<thead>
<tr>
<th>Value chain segment</th>
<th>Inputs/production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity</td>
<td>● ● ● ● ●</td>
</tr>
<tr>
<td>PoA reference</td>
<td>Activities 1.2.5./1.3.1./2.3.1.</td>
</tr>
</tbody>
</table>

Economies of scale are difficult to achieve due to low levels of coordination among actors in marble and granite production

In Afghanistan, known natural stone deposits often remain untouched due to the lack of investment necessary to launch a quarrying operation. When quarries are opened, stone that is extracted often ends up reaching international markets in an unprocessed state without any value addition. This is more prone to happen when there are few (if any) processing facilities in regions close to the quarries. Even when processing facilities are available, the number of sites and capacity of each site is insufficient to achieve maximum potential value addition.
This is not particularly surprising, as extremely high investments are required to prepare a deposit for quarrying, as well as establish complementary processing sites. The high capital requirements necessary to increase production could be mitigated, to a certain extent, with increased coordination and cooperation among industry players. If the costs of developing a new quarry could be shared across several enterprises, with a result of much higher outputs in both crude and processed stone, then the financial equation becomes much more favourable as economies of scale are achieved.

Uncompetitive prices resulting from higher extraction and processing costs compared with regional and global competitors, despite competitiveness in colour, uniqueness and quality of raw stone

Afghan marble and granite is not price-competitive on the global market due to the high cost of production compared with regional peers. This is the result of a number of factors, one among them being the high cost of energy. Afghan energy prices are the highest in the region and supply from regional power grids is erratic. In order to continue work during power blackouts, Afghan natural stone enterprises must invest in industrial generators and keep them fuelled.

Other factors leading to high production costs relate to human resources. The shortage of skilled labour means that existing quarrying and processing sites are likely not operating at optimal capacity. For those enterprises that have invested in advanced machinery, hiring qualified technicians is expensive due to a scarcity in the Afghan labour market. If technicians cannot be recruited from the Afghan labour market, then additional budget must be allocated for the recruitment and salary of foreign experts. In terms of the unskilled or minimally skilled labour requirements of the sector, the gruelling work handling heavy stone day in and day out does not make such employment particularly appealing. This leads to high turnover, which in turn results in few experienced workers and additional costs accrued in training new hires.

Another factor leading to high production costs is the time and human resources involved in launching a quarrying or processing operation. When a natural stone deposit is identified, marble and granite enterprises looking to exploit it face an array of administrative requirements and permit applications that must be addressed prior to the launch of operations. The lengthy process involved in achieving regulatory compliancy requires inordinate amounts of time, during which enterprises must invest in administrative staff to process paperwork and nudge applications along.
Figure 14: Compete problem tree
Connect

Critical factors constraining the marble and granite sector’s capacity to connect with international buyers include the poor promotion and branding of Afghan marble and granite in global markets. As a result, the sector’s exports predominantly flow to a handful of regional and global re-export hubs, particularly Pakistan and Italy.

**Dependence on foreign processing inhibits the ability of Afghan firms to connect directly with international buyers**

Foreign processing facilities – primarily in Pakistan – cut and polish Afghan stone and send it along to international buyers. One consequence is that Afghan marble and granite enterprises have very limited sales networks and often few (if any) connections with international buyers outside the region. A second consequence is that the development of an Afghan brand for marble and granite has been stunted. Pakistani (or Turkish, or Italian) processing facilities do not promote the Afghan origin of the finished stone they sell. Finally, without direct communication with international buyers, Afghan natural stone enterprises are not able to gain feedback about trends in the global market and adapt their production outputs accordingly.

**Afghan marble and granite shipped to re-export hubs is processed and relabelled, losing opportunities to build an Afghan brand**

As a result of the limited processing facilities available in Afghanistan, a large share of Afghan crude marble and granite is sent to Iran and Pakistan and other re-export hubs for finishing. This stone is often labelled as a product of the country where the processing takes place. While deceptive, there is nothing that indicates that this practice violates international commercial laws. The proliferation of smuggling of Afghan natural stone along both the Afghan–Pakistani border and the Afghan-Iranian border, further prevents inquisitive buyers from knowing the true origin of Afghan natural stone traded in the global market. This makes it difficult for the Afghan marble and granite sector to build a globally recognized brand.

**Insufficient in-market support to create and maintain relationships with international markets**

Additional institutional support is required to help marble and granite producers connect with international buyers and maintain commercial relationships. Given that there is a large quantity of Afghan marble and granite being sold as a product of the re-export hubs, it is crucial for Afghan exporters to introduce their products directly to international buyers. Afghan marble and granite enterprises have had minimal exposure at international natural stone exhibitions and fairs, in part due to the difficulties Afghan traders face when it comes to obtaining short-stay visas for business purposes.

Besides difficulties making initial contacts with international buyers, Afghan natural stone enterprises are also poorly informed about the state of the global marble and granite industry. Critical support is needed to collect and disseminate market intelligence regarding industry trends and consumer preferences in target markets. Marble and granite exporters need increased support to sell their products directly and connect with buyers by participating in trade fairs and exhibitions.

**Poor infrastructure and weak institutional support degrades the ability of enterprises to get Afghan stone into international markets**

Sector development also requires increased institutional support to facilitate the movement of goods across borders. Afghan marble and granite exporters struggle to access distant markets due to underdeveloped transportation and logistics facilities. This makes the process of building relationships with international buyers more difficult, as buyers from developed economies expect timely delivery and have plenty of alternative sources if a seller proves unreliable.

Due to the weight of the stone, most marble and granite exports are delivered by road or sea freight. For Afghanistan, this is extremely discouraging, as transit agreements with neighbouring countries have been ratified on paper but have not proved useful in practice. With an underdeveloped domestic logistics industry, many Afghan stone enterprises have decided to dump both crude and processed marble and granite in the Islamic Republic of Iran and Pakistan rather than take the time (and risk) of subjecting their shipments to additional land border crossings or arranging sea transport at the Bandar Abbas Port in the Islamic Republic of Iran or Karachi Port in Pakistan.
Weak organization among stakeholders and limited services provided to members

The weak organization among marble and granite producers limits not only their opportunities to achieve economies of scale but also their ability to pool resources to support technical training, market intelligence gathering and other activities that would elevate the sector as a whole. An industry association is the conventional platform for organizing such activities, but in Afghanistan, forming effective natural stone associations has proven difficult.

There are natural stone associations currently operating in Afghanistan but there have been complaints that these associations favour the dominant players at the expense of new entrants to the sector. There is also a focus among the associations on short-term increases in production output rather than on building long-term technical capacity, promoting the Afghan natural stone brand and producing market intelligence to help Afghan enterprises penetrate new markets.
Connect: Afghan marble and granite is unrecognized and unbranded in the international market

- Dependence on foreign processors inhibits the ability of Afghan firms to connect directly to international buyers.
- Afghan marble and granite labelled as foreign suppresses national capacity to build a brand in foreign markets.
- Insufficient in-market support to create and maintain relationships with international markets.
- Poor transportation infrastructure and logistics limit the ability of exporters to ship goods to overseas customers.
- Weak organization among stakeholders and limited services provided to members.

Critical inputs such as machinery are imported from foreign countries, tying Afghan traders to foreign merchants.

Loss of connection with international buyers due to Afghan products being finished and branded as foreign.

Processing outside Afghanistan in Pakistan and other countries enables adulteration of origin denomination.

Insufficient border procedures allow for smuggling of products or a lack of information collected at the border.

Weak market information services.

Difficulty in getting visas to explore and participate in international markets.

Limited market penetration.

Poor road infrastructure.

No streamlining of export clearance in cross-border trade.

Insufficient transportation and logistics facilities.

Procedures to form associations are highly bureaucratic.

Geographical distance between countries enables Afghan traders to directly sell their products under the Afghan-made label.

Domination by existing elites and monopolies in the sector makes formation of associations more difficult.

- Weak dissemination of market information (i.e., trends, prices).
- Limited market intelligence provided to stakeholders (e.g., new markets, trends).
- Weak participation in trade fairs and exhibitions for stakeholders to directly sell their products under the Afghan-made label.

Cargo is delayed and disrupted due to paperwork issues.

Lack of permanent business centres in client countries limits the ability to stock products in advance.

Lack of storage for finished goods in key international markets.
The Afghan marble and granite industry does not use modern processing methods for various reasons, such as capital constraints that limit investment in advanced machinery. There also appears to be little high-level interest from government institutions in building the capacity of the sector.

**Limited available capital for investment constrains the sector’s ability to upgrade quarrying and processing methods**

The sector’s ability to upgrade its quarrying and processing methods has been constrained by limited capital to invest in machinery, tools and training. The lending terms and conditions offered by Afghanistan’s commercial banks are not applicable to the sector (high collateral requirements and short repayment periods), while outside investors are hesitant to invest in a country with weak investor protections, legal ambiguity related to land ownership, difficulty obtaining permits to establish quarries and processing sites, and weak property rights. That the Afghan Government is also fighting armed insurgent groups in many areas close to deposit sites is another barrier to investment.

More efforts are required to promote investment in machinery for quarrying and processing, which may include incentives offered by the Afghan Government. Such incentives could include government funding for industrial parks and pledges to construct roads connecting quarries, processing sites and urban centres.

**Sector enterprises have weak management skills, limiting their ability to expand their business**

Afghan sector enterprises frequently lack management skills to run their businesses effectively. On top of that, management and marketing skills are also often lacking among exporters, in addition to language and computer (Internet) skills to be able to contact and maintain relationships with international buyers.

**Advanced geological research is needed to identify marble and granite deposits**

While geological studies have been conducted in Afghanistan, further research is needed to identify high-value quarries, what stone varieties exist therein and their approximate value. Such efforts would lead to significant increases in quarry output volumes as well as output quality. If undertaken by the Afghan Government, such research would drastically reduce costs and risk for potential investors in the sector, thereby making investment prospects much more appealing. Were such research conducted, transparency in disseminating findings would be critical, along with information on how to apply for permits to exploit confirmed deposits. Moreover, existing studies undertaken by foreign competitors and relevant ministries, as well as development partners and research institutes, have been insufficiently disseminated among key stakeholders throughout the value chain.

**Obstacles to obtaining quarry permits and land hinder sector development**

There is plenty of marble and granite in Afghanistan. However, accessing these resources is a huge challenge, limiting the opening of quarries as well as the development of consolidated production sites, such as the construction of industrial parks. The non-existence of a one-stop shop for administrative purposes hinders the expansion of the sector into additional processing activities such as the establishment of cutting and polishing facilities, which would add value to Afghan marble and granite products. The current system lacks clear property rights and a transparent licensing process, while land conflict resolution remains weak. Moreover, land ownership is highly informal, as public documents are virtually absent.
Figure 16: Change problem tree

Change: Constrained sector capacity to innovate and upgrade to modern technology and into value addition

- Low levels of investment in quarrying and processing
  - Security concerns
    - Lack of confidence and capacity in investment protection system
  - Poor enabling infrastructure (high costs of electricity and poor road infrastructure)
- Insufficient application of marble and granite research in Afghanistan
  - Poor dissemination by training and research institutions of new marble and granite research
- Limited access to landholders sector development
  - Lack of clarity on property rights (land ownership, tenure, missing public documents)
- Weak abilities of sector exporters to expand businesses and develop relationships with international buyers
  - Limited language skills and computer literacy
- Weak management and marketing skills
  - Limited coordination between relevant ministries and related organizations
  - Old system and bureaucratic procedures

Limited level of enforcement of contracts
Low level of investment in research of Afghan marble and granite
Poor cooperation with foreign research institutes and development partners
High levels of corruption
Low effort in offering extra measures to reassure investors
Lack of confidence in investment protection system
Lack of clarity on property rights (land ownership, licensing, tenure)
MARKET POSITIONING: THE REAL GEM IN PREMIUM AND HIGH-QUALITY SEGMENTS

Afghanistan has significant potential to become a premium natural stone supplier by strategically marketing its diverse and colourful marble and granite varieties. To this end, the sector must take short-term and long-term steps to increase production volumes while simultaneously moving up the value chain.

SHORT-TERM PRIORITIES (1-3 YEARS): INCREASE PRODUCTION QUALITY AND VOLUME OF EXISTING PLANTS

Afghanistan can position itself to compete on quality even in the short-to-medium term by investing in quality management across existing institutional and enterprise levels. For traditional buyers of marble and granite in the global market, especially those in European countries, quality is a critical factor in purchasing decisions. In order for Afghan natural stone to build a reputation for quality – and consequently attract international buyers who will pay premium prices – Afghan enterprises must take steps to improve quality control of their shipments.

In the short term, Afghanistan can enhance production in existing quarries and processing plants by introducing clear quality standards for exported stone. Blasting and other outdated quarrying techniques damage the stone (in ways that are often invisible to the naked eye), cause excessive product loss and decrease saleable output. Training of human resources and upgrades in technology would not only improve the quality of quarried stones but also decrease stone damage and waste.

MEDIUM-TO-LONG-TERM PRIORITIES (+3 YEARS): MOVE UP THE VALUE CHAIN

Through a concerted effort to increase, aggregate, modernize and scale up production sites, the Afghan marble and granite sector will be able to increase its absolute value. Once the country is capable of processing high-quality stone domestically in sufficient volumes for export, there will be less dependence on sales to regional and global re-exporters, who currently capture much of the profit from Afghan stone through value addition.

Technology improvements would allow the sector to diversify its product range by offering value added semi-processed and finished stone to global markets. Moreover, waste from the quarrying and processing stages, such as loose stone and stone powder, is currently not recycled. This is an opportunity cost for natural stone enterprises that must be remedied. More variety in product lines would also increase the ability of Afghan marble and granite enterprises to enter new markets and build the reputation of Afghan natural stone. For handicrafts made of marble and granite, such as mosaics and tiles, Afghan traders may also find it viable to reach consumers directly using e-commerce platforms.
EXTRACTING FACTORS DRIVING GROWTH

The following section divides the proposed Marble and Granite Sector Export Strategy into two broad phases; the first related to the short-term outlook and the second to the medium-to-long term outlook.

By the latter period, it is expected that a significant portion of the NES and the sector PoA will have been implemented. This two-phased approach aims to stage interventions in alignment with the evolving capacities of sector enterprises and trade and investment support institutions as NES implementation moves forward.

The following product–market combinations are further prioritized. These recommendations should not deter individual enterprises from acting on their own strengths and weaknesses; in fact, they are likely to benefit equally from the support and structural improvements to the value chain which should result from implementing this Strategy.

SHORT-TERM: POLISH PRODUCT QUALITY AND CULTIVATE RELATIONSHIPS WITH LEADING IMPORTERS

Domestic market

According to the Afghanistan Investment Support Agency, Pakistani marble dominates almost 85% of the Afghan domestic market, totalling between 920,000 and 1,230,000 tons annually. Of this amount, 270,000 tons are finished marble. The dominance of Pakistani stone is due to the lower prices and higher processing quality of Pakistani marble, despite abundant reserves of untouched high-quality marble in Afghanistan. Domestic quarries in Afghanistan can only produce between 184,500 and 246,000 tons per year, of which some is exported to Pakistan for processing. No data is officially available regarding granite production. The majority of Afghan-produced natural stone is consumed locally, as the local supply of marble remains less expensive than imported varieties.

In recent years, domestic demand for marble and granite has increased significantly. This demand was first driven by the NATO-led reconstruction effort but is now sustained by advancements in the construction sector, resulting in more interest in higher-quality building materials. Unfortunately, the processing capacity of Afghan marble and granite enterprises is not able to meet domestic demand, in terms of both quantity and quality. This has led to the aforementioned reliance on Pakistani suppliers of processed stone. With the adoption of advanced quarrying and processing technology, Afghan marble and granite enterprises should be better positioned to compete with their Pakistani rivals on price and quality, and thereby capture an ever-increasing share of the domestic market.

Strategy for the domestic market

- Increase market share of domestic stone by improving production capacity and quality.
- Adopt policies to promote use of domestic marble and granite.
- Encourage purchase of Afghan marble and granite over imported varieties in Government-related construction projects: an ‘Afghan product first’ policy would increase Afghan stone consumption and ensure sustainable expansion of the Afghan marble and granite market.

Regional markets

Immediate regional market – Pakistan: Pakistan is the largest export destination for Afghan marble and granite, with an exported value of US$3.7 million in 2015. This figure is likely much higher, due to rampant smuggling along the Afghan–Pakistani border. Only two countries – China and India – supplied more stone to Pakistan than Afghanistan. Almost 100% of Afghan stone reaching Pakistan is raw marble exported directly from quarries.

Pakistan remains an important export destination, especially in the short term, while Afghan natural stone enterprises work on increasing the quantity and quality of their outputs. With Afghan enterprises years away from upgrading their processing capacity, an immediate option is to increase exports of crude marble and granite to Pakistan and accept that Pakistan will be capturing a large share of the profit from the stone following value addition and re-export (often back to Afghanistan).

Heavy two-way trade in natural stone between Afghanistan and Pakistan has an additional, so far unexplored potential benefit for Afghan natural stone enterprises. As two countries in the same region with similar developmental challenges, Pakistani natural stone enterprises are an excellent model for their Afghan peers. At present, Pakistan is far ahead of Afghanistan in production volumes, processing quality and cost-effectiveness. In all of these areas, Afghanistan has a lot to learn from its neighbour.
Strategy for the Pakistani market
- Stabilize exports of crude marble and granite to supply Pakistan’s growing construction sector.
- Learn from Pakistani processing technology through trade in order to substitute Pakistani imports with domestic supply in the long run.

Greater regional market – India: India was the third-greatest export destination for Afghan marble and granite in 2016, with an exported value of US$ 73,000. India also prefers imports of unprocessed stone, in order to capture profits gained through value addition. Unlike the long export relationship with Pakistan, exports to India only started in 2008. Since then Afghan supply to India has increased steadily. Exports peaked in 2011 at US$ 283,000. Demand for marble and granite in India is only expected to grow as the rapidly growing economy spurs construction. With the expansion of the Indian middle class, more and more people are building homes with luxury construction materials such as marble and granite, which have suddenly become popular (and affordable) for home decor. Exports of crude Afghan marble and granite to India for processing and domestic consumption are likely to grow at a faster pace as Afghan–Indian trade passing through the Islamic Republic of Iran’s Chabahar Port increases and shipping costs decline.

Strategy for the Indian market
- Increase supply of crude and merely cut marble, and stabilize supply of large amounts for the growing Indian market, which prefers bulk imports.
- Promote Afghan marble as a brand for unique and high-quality stone.
- Directly target growing Indian construction and luxury goods industries.

Re-exporting markets
Re-exporting hub in Europe – Italy: Afghanistan began exporting crude marble to Italy in 2009, with export value reaching US$ 499,000 in 2016. Italy imports crude marble from around the world, applies advanced value addition, and then re-exports the processed stone to a wide network of global buyers. As most processing takes place in Italy, the finished stone products take the ‘Made in Italy’ label. While an honour of sorts, the Afghan marble and granite sector gains little from this, aside from the revenue generated from the sale of the crude stone. Italy captures the profits from the value addition and the Afghan origin of the stone may or may not be promoted during the sale of the stone to the end user. Although Afghanistan’s trade relations with Italy may not provide much in the way of long-term marble and granite sector development, the revenue generated from the sale of crude stone has the immediate effect of helping maintain positive cash flow for sector enterprises, as well as the long-term potential of generating enough profit to upgrade processing capacity.

Re-exporting hub in Asia – China: In the Asian market, China plays a similar role to Italy in that it imports crude stone from developing countries, processes it at a very advanced level and then re-exports it around the world. Afghan supply of crude natural stone to China, compared with its supply to Italy, is marginal; 2016 export figures show only US$ 23,000 of Afghan marble shipped to China. Chinese demand for Afghan stone is likely to increase, though, with the rise of household incomes in China and the global increase in marble and granite demand. When global demand increases, China, as a major re-exporter, will require more and more crude stone to fuel its processing facilities. It is estimated that Afghan annual exports of marble to China can reach up to US$ 500 million. In the long term, the Afghan marble and granite sector can aspire to supply Chinese construction firms directly with processed stone. In the short term, Afghan natural stone enterprises must cede the profits from value addition to the Chinese and focus on increasing exports of crude stone.

Strategy for re-exporter markets
- Use networks of re-exporters: linking with retail distribution networks through branded chain networks in Europe and Asia.
- Spread the Afghan brand and promote the unique colour and high quality of Afghan stone in European and Asian markets.
- Learn about Italian and Chinese processing technologies through trade links.

LONG-TERM: CAPITALIZE ON ESTABLISHED BRAND AND ADVANCE UP THE VALUE CHAIN

Middle Eastern market
The Middle East (including the Islamic Republic of Iran) has the most rapidly growing demand for marble and granite in the world, making it a long-term export target for Afghan
stone. Geographic proximity and strong economic growth, particularly in the Islamic Republic of Iran and the Arab Gulf states, indicate that sustainable demand for Afghan natural stone is likely.

The Islamic Republic of Iran: Iranian marble and granite imports were worth US$59 million in 2016. Despite the adverse effects of sanctions, the rapid growth of the Iranian economy has led to parallel growth in demand for marble and granite to satisfy the needs of the Iranian construction and luxury goods industries. According to reported figures, Afghanistan exported US$2.5 million of crude and merely cut marble to the Islamic Republic of Iran in 2016. The figure is likely far higher, due to smuggling along the porous Afghan-Iranian border.

UAE: The UAE imported US$392 million of marble and granite in 2016. After a severe recession following the 2008 global financial crisis, the UAE is once again flourishing, with construction and luxury goods enterprises buying increasing quantities of premium-quality natural stone to meet the needs of their clientele. The Afghan marble and granite sector has a long way to go to fully capitalize on the UAE’s increasing appetite for natural stone; in 2016, Afghan exports to the UAE totalled just US$26,000. This leaves plenty of room for improvement, and further research must be conducted to identify the causes of – and solutions for – the current low export volume.

Strategy for Middle Eastern markets
- Promote the Afghan brand based on the unique colour and high quality of Afghan stone.
- Directly target the growing Middle Eastern construction and luxury goods industries.
- Concentrate on increasing supply to the rapidly growing economies of the Middle East.
- Use existing export relationships in the Middle East to increase export volume and penetrate new markets in the region.

East Asian market
East Asia is another region replete with booming economies and consumers with fast-growing tastes for luxury goods and high-end household decor. Auspiciously, Afghanistan was able to send its first shipments of natural stone to the Republic of Korea and Japan in 2015. These markets increasingly demand products for luxurious natural stone interiors, handicrafts and do-it-yourself home renovations. Tiles and mosaics for households are predominantly sold online, where many different stone varieties and colours are demanded. Afghanistan’s market share for marble and granite sales in the Republic of Korea and Japan may be marginal at present but prospects for future growth are positive. The difficult first step of establishing market links has been accomplished, and increased access to shipping by sea through the Islamic Republic of Iran’s Chabahar Port should translate to lower prices offered by Afghan traders.

Strategy for the East Asian market
- Strengthen trade relationships with the Republic of Korea and Japan to further increase export volumes and export value.
- Establish the Afghan brand in the attractive East Asian market by promoting the unique colour and high quality of Afghan stone.
- Target households directly in the popular do-it-yourself home renovation market.
- Use growing trade ties in East Asia to better understand trends and identify niches for Afghan natural stone.

Kazakh market
Afghanistan first accessed the Kazakh market in 2014, and export volumes remain minimal. This could change in the years to come, considering that Kazakh officials agreed in August 2017 to expand trade with Afghanistan and improve transit relations between the two countries. This has significant long-term implications for the Afghan marble and granite sector, considering the sheer size of the Kazakh market. In 2016, Kazakhstan imported US$59 million in natural stone, predominantly from China, Italy, Turkey and the Russian Federation. In order for Afghanistan to increase market share in Kazakhstan, transit agreements on paper must be applied in the real world to ensure reliable product delivery.

Strategy for the Kazakh market
- Strengthen the export relationship with Kazakhstan to increase exported volume and value.
- Establish the Afghan brand in the Central Asian market by promoting the unique colour and high quality of Afghan stone.
- Use momentum from recent agreements between Afghanistan and Kazakhstan to explore how closer government-level cooperation can facilitate increased exports on the ground.

8.– TradeMap (2016), direct data of Afghanistan.
THE PHILOSOPHER’S STONE: VISION AND STRATEGIC OBJECTIVES

VISION

The following vision has been developed to increase the export competitiveness of Afghanistan’s marble and granite sector.

"Marble and granite: the cornerstones of the Afghan economy"

The Afghan marble and granite sector has the potential to carve out a lucrative place for itself in the global natural stone market but remains hampered by constraints in several areas. The comparative advantage held by Afghanistan in terms of the quality of Afghan natural stone is in danger of being overshadowed by its limitations in logistical infrastructure, limited technology, high production costs, weak marketing and lack of global recognition. Significant improvements are required to compete against other international suppliers.

STRATEGIC OBJECTIVES

The strategic objectives are structured around a specific set of activities that are intended to address the wide range of issues confronting the marble and granite sector. The impact of implementing these activities can also spillover to related mining sectors such as the mineral industry, including talc production. Independent, yet mutually supporting, activities will bolster specific areas of weakness. The coordinated resolution of such weaknesses will be the foundation for value added interaction between functional areas. This, in turn, will lead to the realization of the strategic objectives and, ultimately, the sector vision.

Each of the strategic objectives relies on a set of operational objectives. The operational objectives are intermediate achievements that must be reached to realize the strategic objective. On the most basic level, the operational objectives are realized through various concrete activities, each of which supports a specific priority area within the relevant operational objective. Ideally, each activity will be translated into a project of its own.

The scope for improvements is immense and extends across the value chain. In some cases, the scope involves the strengthening of existing links, while in other areas there is a need for structural modifications. Both dimensions of improvements must lead to:

- Market penetration – increasing exports in existing markets
- Market development – increasing exports of existing products in new markets
- Full diversification – increasing exports of new products in new markets.

To fulfil this ambitious vision and the bottom lines described above, the following strategic objectives have been identified. These objectives provide a framework for developing solutions over the next five years. The strategic objectives agreed on by stakeholders to uphold the vision are as follows.
STRATEGIC OBJECTIVE 1: IMPROVE SUPPLY-SIDE CAPACITY AND QUALITY MANAGEMENT TO ENSURE ADEQUATE VOLUME AND SUPPLY CONSISTENCY.

This strategic objective has the overall goal of increasing quality consistency and production volumes. This objective will be realized through the following activities:

- Help quarries and processing factories upgrade equipment and production lines through technology transfer initiatives, increased access to capital and long-term credit, and R&D activities.
- Support product diversification by commercializing stone powder and scaling up production of stone handicrafts.

On the supply side, improving the availability of high-quality marble and granite will be key for the industry’s export performance. By introducing improved quality management methods and applying modern technology, damage to stone will be reduced and overall production levels will rise.

This objective can be achieved through investments in technology, and by facilitating product diversification to make use of smaller stone waste and powder produced during the quarrying and processing stages. These activities aim to achieve a consistent supply of construction-grade stone and stone by-products to target markets, with premium pricing.

A key activity necessary to boost sector growth is raising awareness about modern technology and methods, and the importance of R&D to ensure long-term growth. Upgrading equipment is easier said than done, as the costs involved in launching existing quarries and processing facilities has left many Afghan natural stone enterprises with little additional capital for further investment. Because of these high start-up costs, as well as the high cost of upgrading existing sites, special attention must be given to the issue of financing. Afghanistan’s commercial banks cannot be forced to approve loans that they believe are excessively risky but they can be given more access to credit-backed SME lending programmes that already exist in Afghanistan. This would require making contact with the Afghanistan Credit Guarantee Foundation, with the Afghan Government pledging tangible support for the sector (e.g., provision of roads and electricity) in order to reduce the risk to lenders.

Another potential source of finance is equity investment in new and existing natural stone enterprises. Again, the Afghan Government has a critical role to play in this effort by pledging to streamline compliance procedures and preparing a package of investment incentives (again, this relates mainly to provision of roads and electricity). If finance for technology upgrades and exploitation of new quarry/processing sites can be secured, the time frame for exploiting Afghanistan’s many untapped natural stone deposits can be sped up considerably. Launching a targeted initiative to attract investment in the sector will further support this objective.

Finally, product diversification must be encouraged to increase revenue streams. This includes ramping up production of high-quality semi-processed and finished stone, as well as utilizing production waste for use in handicrafts and as stone powder. By selling a wider array of products, Afghan natural stone enterprises have the opportunity to grow their network of buyers in different markets, thereby contributing to market penetration.
Figure 17: Future value chain, strategic objective 1

Strategic objective 1: Improve supply side capacity and quality management to ensure adequate volume and supply consistency.
A strategic objective is to improve the business environment and reduce costs of doing business. This objective focuses on creating a more favorable environment for Afghan natural stone enterprises. The following areas are key:

- Lower the barrier for opening and operating new quarrying and processing sites by introducing one-stop shops to streamline application processes (among other functions).
- Encourage focused, tangible government support to the sector in the form of industrial parks, connection to power grids and transport infrastructure.
- Develop the capacity of trade and investment support institutions and other support services to provide essential services to the sector.
- Strengthen competition within the sector and reduce the negative impact of existing oligopoly-like conditions.

In parallel, a more investment-friendly regulatory environment, achieved in part through the introduction of a one-stop shop for applying for quarrying and processing licences, would greatly enhance growth prospects for the sector. The one-stop shop would increase transparency in the sector and reduce both compliance costs and the time between initial investment and revenue generation. All of these benefits would reduce risk for both investors and lending institutions, thereby increasing available capital for sector expansion. While the one-stop shop would be a tangible institution, a complementary form of support would be the provision of information and export guides online. This could be done under the umbrella of the one-stop shop or managed by a separate entity.

The strengthening of industry associations is another means to raise the capacity of the sector as a whole. The sector stands to benefit from improved coordination between various actors involved in the value chain, thereby bolstering business-to-business (B2B) links between quarries, cut-and-polish service suppliers and traders. Trade fairs and exhibitions organized by or in close collaboration with industry associations are further opportunities to bring stakeholders together. Industry associations could also address the oligopoly-like conditions in the sector that stunt growth and deter outside investment. Reforms to existing associations, such as the implementation of transparent internal voting procedures for consequential industry-wide decisions, would be a positive step forward. Allegations of price-fixing by dominant players in the sector must also be addressed, preferably by the associations themselves.
Strategic objective 2: Improve the business environment by streamlining production and export procedures.

Figure 18: Future value chain, strategic objective 2
STRATEGIC OBJECTIVE 3:
IMPROVE MARKET ACCESS BY PROVIDING MARKET INTELLIGENCE

Once the sector is able to increase output volume and quality, it will have to expand beyond its established base of re-export clientele. At present, Afghan exports of natural stone are limited to a small handful of regional and global re-exporters. This degrades the ability of Afghan exporters to negotiate prices and also leaves the sector vulnerable to regional decreases in demand. To address these issues, this Strategy proposes the following activities:

- Coordinate marketing and business development efforts to raise awareness in specific target markets of both Afghan marble and the benefits of using marble in construction.
- Support export market diversification through research initiatives and strengthening trade and investment support institutions.

Several factors contribute to the limited links between Afghan marble and granite enterprises and international buyers, such as the lack of opportunities to connect with potential buyers and limited marketing expertise. One means to address this issue is developing and disseminating profiles of target markets, as well as conducting marketing training for sector enterprises.

Building the capacity of industry associations is another element of the equation, in particular strengthening their ability to gather and disseminate actionable market intelligence information (e.g. global prices, global trends in consumer preferences and potential target markets).

After years in which Afghan stone was shipped to re-exporters, processed and labelled as a product of the processing country, focus needs to be placed on the promotion of an Afghan brand for marble and granite. Participation in trade fairs and exhibitions, with support from a systematic campaign to highlight the attractive qualities of Afghan natural stone, are both potential activities to achieve this end. Any campaign to promote Afghan marble and granite should consider the growing importance of online marketing and sales. The launch of an online hub for the promotion of Afghan natural stone is an option, with links to the websites of Afghan enterprises that have set up their own e-commerce sites.
Strategic objective 3: Improve firms’ ability to access markets through trade intelligence

Production
- Input Supply
  - Raw materials
  - Machining machines for cutting
  - Couplers for mining
  - Hammer mills for milling
  - Wire saws for cutting
  - Water for cooling during cutting
  - Weighing scales
  - Sand for cutting and polishing
  - Edge-polishing machine (many sources)
  - Polishing powder
  - Stone cutters
  - Ladder forms specialized in stone cutting and processing

Assembly
- Quarrying (drilling)
  - Site selection
  - Drilling / blasting
  - Excavation, tunneling, ventilating

Processing
- Transportation to Processing Facility
  - Domestic factories
  - Processing / shaping / finishing

Distribution
- International market
  - Country-specific market
  - Export of finished goods

Domestic market
- Domestic demand
  - Consumer household products
  - Industrial products

Future value chain, strategic objective 3

Awareness of benefits of markets and exports

Figure 19: Future value chain, strategic objective 3
LEAVING NO STONE UNTURNED: MOVING TO ACTION

KEY REQUIREMENTS FOR EFFECTIVE IMPLEMENTATION

The development of the future value chain for the marble and granite sector is a five-year project defined through a consultative process between Afghan public and private sector stakeholders. Achieving the strategic objectives and realizing the future value chain depends heavily on the ability of sector stakeholders to start implementing and coordinating the activities defined in the Strategy’s PoA.

The Strategy in and of itself will not alone be sufficient to ensure the sector’s sustainable development. Such development will require the coordination of various activities. While the execution of these activities will allow for the Strategy’s targets to be achieved, success will depend on the ability of stakeholders to plan and coordinate actions in a tactical manner. Apparently unrelated activities must be synchronized across the public sector and private sector, non-governmental organizations and local communities in order to create sustainable results.

To ensure the success of the Strategy, it is necessary to foster an adequate environment and create an appropriate framework for implementation. The following section presents some of the key success conditions considered necessary for effective implementation.

ESTABLISH AND OPERATIONALIZE A PUBLIC AND PRIVATE COORDINATING BODY AND EXECUTIVE SECRETARIAT

Marble and granite sector steering committee

A key success criterion for the Strategy is the ability to coordinate activities, monitor progress and mobilize resources for implementation. It is recommended that a steering committee comprised of the key public and private sector entities be formed or supported (if such a committee already exists). This will function as a platform with balanced representation of all major marble and granite sector stakeholders to share information in open communication.

Overall it is proposed that the steering committee be responsible for the following tasks related to Strategy implementation:

- Coordinate and monitor the implementation of the Strategy by the Government, private sector, institutions or international organizations to ensure implementation is on track;
- Identify and recommend allocation of resources necessary for the implementation of the Strategy;
- Assess the effectiveness and the impact of the Strategy;
- Ensure consistency with the Government’s existing policies, plans and strategies, and align institutions’ and agencies’ internal plans and interventions with the Strategy PoA;
- Elaborate and recommend revisions and enhancements to the Strategy so that it continues to best respond to the needs and long-term interests of the national business and export community;
- Propose key policy changes to be undertaken based on Strategy priorities, and promote these policy changes among national decision makers;
- Guide the sector secretariat in monitoring, coordination, resource mobilization, and policy advocacy and communication to enable effective implementation of the Strategy;
- Provide the sector secretariat with the mandate and the necessary resources to fulfil its functions in an effective manner.

Composition of the steering committee

It is recommended that the steering committee be comprised of key entities involved in the sector, with special focus on ensuring equitable involvement of both the public and the private sector.

Secretariat

A secretariat will assist the steering committee by acting as an operational body responsible for the daily coordination, monitoring and mobilization of resources to implement the PoA. It is proposed that it takes on this role with technical support from key ministries and technical agencies. The secretariat will be composed of 1–2 technical operators.
The core responsibilities of the sector secretariat should be to:

- Support functioning of the steering committee;
- Collect and manage data to monitor the progress and impact of Strategy implementation;
- Liaise with and coordinate development partners for Strategy implementation;
- Elaborate project proposals and build partnerships to mobilize resources to implement the Strategy;
- Follow up on policy advocacy recommendations from the steering committee;
- Ensure effective communication and networking for successful Strategy implementation.

Both the steering committee and its secretariat will work hand-in-hand with existing entities established to streamline Government operations and enhance donor operations. These include the NES secretariat and others. It is possible that the secretariat would be accommodated as part of an existing entity, with an extended mandate and resources allocated to it.
STRATEGIC PLAN OF ACTION
**Strategic objective 1: Improve supply-side capacity and quality management to ensure adequate volume and supply consistency.**

<table>
<thead>
<tr>
<th>Operational objectives</th>
<th>Activities</th>
<th>Priority 1 = high 2 = med 3 = low</th>
<th>Implementation period</th>
<th>Targets *</th>
<th>Lead and supporting implementers</th>
</tr>
</thead>
</table>
| 1.1. Sensitization and capacity-building on the implementation of standards and product diversification | 1.1.1. Enhance the sharing of research on marble and granite to equip stakeholders with relevant information about the sector.  
- Conduct an inventory of existing research projects undertaken by relevant stakeholders – e.g. universities and private companies – on marble and granite production at the national, regional and international levels (e.g. Italy, China, Turkey).  
- Disseminate research findings and provide access to relevant stakeholders through a variety of mediums (brochures, pamphlets).  
- Establish peer-learning platforms for quarrying and processing facilities at the local level to initiate knowledge-sharing regarding existing market opportunities and quarrying/processing processes.  
- Organize regional networking events among key value chain stakeholders to facilitate the establishment of business relationships among possible new trading partners.  
- Upgrade/establish new marble and granite fairs to facilitate business relationships. | 2 | 2017, 2018, 2019, 2020, 2021, 2022 | • One major list of relevant research created, including all relevant information based on the result of the inventory on existing research projects  
• One major peer-learning platform established, allowing access to the list of relevant research and increased capacity for additional knowledge-sharing  
• Regional networking events in provinces with stakeholders twice a year | MoMP, EPAA, MoCI, Ministry of Communications and Information Technology (MoCIT), universities |
| 1.1.2. Sensitive firms on the importance of international marble (ASTM C503/C503M-15) and granite standards (ASTM C615/C615M-11) through awareness-raising campaigns, capacity-building and certification programmes, workshops and providing information on how quality management affects produced volume and supply consistency induced from losses of products due to poor quality management causing cracking/splitting/breaking of stones. | 1 | | | • One common standardized certificate introduced for firms successfully completing the workshop | ANSA, MoMP, AMIA, AMGPA |
| 1.1.3. Promote market-led product diversification by conducting technical studies on improved methods and inputs to be used in production of marble and granite.  
- Facilitate collaboration between national and foreign research institutions on research into upgraded methods and inputs to be used in cut-and-polish processes.  
- Conduct technical studies on improved methods and inputs to be used in post-quarrying processes.  
- Disseminate recommendations to marble and granite producers and associations through short courses. | 3 | | | • Collaboration with three leading foreign research institutions (e.g. Italian, Chinese, Turkish) established  
• Recommendations based on technical studies disseminated  
• One standardized short course developed to inform stakeholders about recommendations, and short courses implemented twice a year in main processing hubs  
• One major technical study carried out on improved methods and inputs to be used | MoMP, AMIA, AMGPA |
| 1.2. Upgrade the machinery and production lines in quarries and cutting factories. | 1.2.1. Establish a governmental guarantee scheme for industrial loans given by banks (especially Islamic loans) by raising a higher priority on the Government’s support scheme agenda, to enable companies to upgrade their machinery, production lines and expansion activities. | 3 | | | Bank associations, Ministry of Finance (MoF), Da Afghanistan Bank, ACCI, Afghanistan Chamber of Industries and Mines (ACIM) |
| 1.2.2. Assist banks in developing a baseline model to assess business proposals from value chain stakeholders.  
- Conduct workshops to sensitize bank officers to sector financial needs and encourage them to develop new loan instruments.  
- Assist banks in developing financial products tailored to sector stakeholders.  
- Deploy affordable leasing options and credit for machines and tools to quarry and processing organizations through commercial banks. | 2 | | | • Baseline model developed and workshops conducted twice a year with leading banks (Afghanistan International Bank, Afghanistan Commercial Bank, Ghanzar Bank, Afghan United Bank, And Bank, Bank-e-Mille Afghan, First MicroFinance Bank, New Kabul Bank, Pashtany Bank, Baktar Bank) | Bank associations, MoF, Da Afghanistan Bank, ACIM |

* Targets are indicative only and will be the subject of further refinement at beginning of the implementation management stage. Similarly, the lead and supporting implementers column remains indicative as the implementation will require collective efforts, for which additional institutions may be added.
### Strategic objective 1: Improve supply-side capacity and quality management to ensure adequate volume and supply consistency.

<table>
<thead>
<tr>
<th>Operational objectives</th>
<th>Activities</th>
<th>Priority</th>
<th>Implementation period</th>
<th>Targets</th>
<th>Lead and supporting implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2. Upgrade the machinery and production lines in quarries and cutting factories.</td>
<td>1.2.3. Launch a targeted initiative to attract investment to the sector.</td>
<td>1</td>
<td>2017</td>
<td>• A list of investment attraction opportunities developed</td>
<td>MoCI Exhibition Directorate, MoCI Investment Promotion Directorate, bank associations, AOM, MoF, MoMP</td>
</tr>
<tr>
<td></td>
<td>• Develop a shortlist of investment attraction opportunities.</td>
<td></td>
<td>2018</td>
<td>Sector-specific investment promotion programmes developed</td>
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<tr>
<td></td>
<td>• Develop and implement sector-specific investment promotion programmes targeting local, regional and international investors.</td>
<td></td>
<td>2019</td>
<td>One common promotion material developed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Create promotional material, such as market factsheets, and awareness-raising programmes to promote investment in the sector.</td>
<td></td>
<td>2020</td>
<td></td>
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<tr>
<td></td>
<td>• Organize investment missions and exhibitions (e.g. Italy, China, Turkey) to showcase sector potential and facilitate investment opportunities.</td>
<td></td>
<td>2021</td>
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<td></td>
<td>2.4. Enhance aggregation of processing facilities.</td>
<td></td>
<td>2022</td>
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<td></td>
<td>• Support and enable the formation of sector associations:</td>
<td></td>
<td></td>
<td>Workshop twice a year in each of three extraction hubs in Jalalabad, Wardak and Herat</td>
<td>MoMP, AMIA, AMGPA</td>
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<td></td>
<td>– Conduct awareness-raising workshops at the district level to encourage the formation of associations and cooperatives.</td>
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<td></td>
<td>Rental list of available machines and tools developed</td>
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<td></td>
<td>– Leasing equipment initiative: Facilitate machine and tool rental to explore the possibility of cooperation to cover each other’s weakness by sharing machines and tools.</td>
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<td></td>
<td>– Investigate opportunities for economies of scale by specializing each facility in a specific processing step to increase volume, share knowledge and fulfill contracts.</td>
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<td></td>
<td>2.5. Improve access to quality cutting and processing machines.</td>
<td></td>
<td></td>
<td>Standards for cutting and processing machines developed</td>
<td>MoMP, ANSA, MoF</td>
</tr>
<tr>
<td></td>
<td>• In collaboration with the private sector and key ministries, develop standards for cutting and processing machines.</td>
<td></td>
<td></td>
<td>A machine certification agency established</td>
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<tr>
<td></td>
<td>• Establish a lead implementing agency for machine certification and technical procedures to inspect and certify the quality of machines.</td>
<td></td>
<td></td>
<td>One focal point for information on machines and extraction tools established</td>
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<td></td>
<td>• Set up a focal point in MoMP to provide information on machines and extraction tools (quality, accessibility, price etc.).</td>
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<td></td>
<td>• Develop and introduce requirements for the certification of imports of machines.</td>
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<td></td>
<td>• Introduce governmental support schemes for facilities using certified machines.</td>
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<tr>
<td></td>
<td>• Enhance financing of certified machines when opening a new quarry or processing site through investment support from the Government and banks, by lowering the threshold for financial requirements.</td>
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<tr>
<td>1.3. Diversify the range of products.</td>
<td>1.3.1. Develop new products made from powder/slurry (stone sludge, waste), which will be a strategic project that enables companies to benefit from millions of tons of this waste and help protect the environment. This activity should be rolled out in the following steps:</td>
<td></td>
<td></td>
<td>Feasibility study on factory for new products and production add-ons in existing factories and new product development carried out</td>
<td>Sector enterprises, AMIA, AMGPA, Ministry of Economy, National Environmental Protection Agency</td>
</tr>
<tr>
<td></td>
<td>• Conduct a technical and financial feasibility study to identify potential secondary products that could be developed based on powder and waste, taking into account national and international market demand.</td>
<td></td>
<td></td>
<td>Special loan/grant scheme for companies integrating secondary products to their production line established</td>
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<tr>
<td></td>
<td>• Based on the results of the feasibility study, promote and facilitate the establishment of a manufacturing company by creating a special grant/loan scheme for companies adding secondary products to their production line (or a consortium or a cooperative based on shared interest between companies focusing on new products).</td>
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<td></td>
<td>1.3.2. Organize a training programme for interested companies to develop new products (handicrafts, sculpture, special items, antique products, talc, etc.), which are demanded by international markets.</td>
<td></td>
<td></td>
<td>Fifty trainees</td>
<td>Sector enterprises, Afghanistan Women Chamber of Commerce and Industry, AMIA, AMGPA</td>
</tr>
</tbody>
</table>
### Operational objective 2: Improve the business environment by streamlining production and export procedures.

#### 2.1. Lower the barrier for opening and operation of new quarrying and processing sites.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Priority</th>
<th>Implementation period</th>
<th>Targets</th>
<th>Lead and supporting implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1. Undertake an independent study to identify the main gaps and flaws to obtain licenses and establish quarrying and processing sites in the main production provinces. Assess the level of service support, technical capacities and activity implementation, level of transparency among others of the Ministry of Mines and Petroleum, and other relevant institutions. Develop policy measures and tailored capacity-building workshops for key government officials to address these gaps.</td>
<td>1</td>
<td>2017</td>
<td>An independent study is carried out and recommendations are integrated into industrial parks’ operations</td>
<td>MoMP, AMIA, AMGPA, ARIA, AGIM, Afghani EPAA</td>
</tr>
<tr>
<td>2.1.2. Simplify and accelerate public procedures for tendering processes. Activity to be rolled out through the following steps:</td>
<td>1</td>
<td>2018</td>
<td>New quarry licensing procedure established</td>
<td>MoMP, ACIM, Afghanistan Geological Survey, Afghan</td>
</tr>
<tr>
<td>• Expand existing work (i.e. Afghanistan Geological Survey) to search for marble and granite mineral deposits, consolidate information and make it available. Conduct environmental impact assessments in identified sites. Based on study from activity 2.1.1., modify quarry licensing procedures (Mineral Law, currently under revision) with the objective of streamlining and increasing transparency of tendering processes.</td>
<td></td>
<td>2019</td>
<td>Annual information sessions to inform stakeholders about licensing procedures in three main extraction and processing hubs in Afghanistan</td>
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<tr>
<td>• Hold training and information sessions for companies, sector associations and other related stakeholders in order to introduce the new licensing procedure.</td>
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<td>2020</td>
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<tr>
<td>2.1.3. Establish an industrial area and industrial parks supported by the Government to gather stone companies in one place, to facilitate their businesses and reduce the cost of investment by offering the necessary infrastructure; and to develop new activities and new products. Further components are as follows:</td>
<td>2</td>
<td>2021</td>
<td>One industrial area and industrial park established in each of three extraction hubs in Jalalabad, Wardak and Herat</td>
<td>MoMP, AMIA, AMGPA, AOM</td>
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<tr>
<td>• Conduct a survey to identify the site with the most potential.</td>
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<td>2022</td>
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<tr>
<td>• Apply for approval for an industrial area for marble and granite.</td>
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<tr>
<td>• Establish a development company for site infrastructure/public goods (roads, electricity networks, etc.).</td>
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<tr>
<td>2.1.4. Establish a new industrial licensing system (one-stop shop) in order to encourage investment and to facilitate doing business to reduce administrative, cost and time burdens. Activity to be rolled out through the following steps: Establish a coordination network of all relevant ministries delivering industrial and quarry licences and permits.</td>
<td>1</td>
<td></td>
<td>One-stop shop licensing system established</td>
<td>MoCI, MoMP, MoF, AOM</td>
</tr>
<tr>
<td>• With the aim of increasing transparency, stipulate that:</td>
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<td></td>
<td>Ten staff trained on the implementation of the one-stop shop procedure per year</td>
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<tr>
<td>• Announcements of bidding be published on the MoMP’s website in English, Dari and Pashto. Make all processes to be open bidding processes, except for reconnaissance licences.</td>
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<td>• Standardize financial terms through all contracts.</td>
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<td>• Tender documents request bidders mandatorily to disclose of the beneficial ownership of each company and the names of all its shareholders.</td>
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<tr>
<td>• Identify other best practices on rules for open and fair bidding at the regional and international level. Assess recommendations made by the Afghanistan Extractive Industries Transparency Initiative. Introduce corrective measures and policies, as required.</td>
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<tr>
<td>• Establish a one-stop shop at MoMP to deliver all the relevant services and formalities for all relevant ministries and agencies in the network.</td>
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<tr>
<td>• Train relevant departmental staff in ministries to streamline applications for quarry and facility licences/permits.</td>
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<tr>
<td>• Promulgate a regulation on streamlining licensing procedures and establish a one-stop shop for licensing formalities. Hold training and information sessions for companies, sector associations and other related stakeholders to introduce the one-stop shop for licensing.</td>
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<tr>
<td>2.1.5. Create an export one-stop shop to deliver all the services and formalities to exporters to reduce costs and time, particularly through the following measures:</td>
<td>2</td>
<td></td>
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<tr>
<td>• Create an exporters’ website containing information about a step-by-step export process, indicating and explaining requirements and delivery times at each step, and containing an entry point to all border agencies and relevant ministries, with all the documentation needing to be completed by exporters downloadable in electronic format.</td>
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<tr>
<td>• Provide training for relevant departmental staff.</td>
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<tr>
<td>• Promulgate a corresponding regulation in the local language and English regarding the simplification, streamlining and transparency of export procedures, and the establishment of the exporters’ one-stop shop, according to international standards on transparency and access to information for trade facilitation purposes.</td>
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</tbody>
</table>
### Strategic objective 2: Improve the business environment by streamlining production and export procedures.

<table>
<thead>
<tr>
<th>Operational objective</th>
<th>Activities</th>
<th>Priority</th>
<th>Implementation period</th>
<th>Targets</th>
<th>Lead and supporting implementers</th>
</tr>
</thead>
</table>
| 2.1. Lower the barrier for opening and operation of new quarrying and processing sites. | 2.1.6. Review taxation for the industry.  
- Facilitate a discussion on taxation of the industry.  
- Provide a discussion draft table with relevant information and materials. | 2 | 2017-2022 |  
- Two round tables to discuss tax regulation opportunities in a year  
- Tax data collected and one analysis of available data | MoF, MoMP |
| 2.2. Develop the capacities of trade and investment support institutions and other support services to provide essential services to the sector. | 2.2.1. Establish shared service centres to overcome the lack of organization and associations in the stone sector, as well as the lack of processing facilities, by providing stone evaluation, sourcing, transportation and processing to producers' associations in major marble and granite production areas.  
The following will apply to operations within the centres:  
- Conduct feasibility studies to select areas in which to establish these centres, considering access to water and electricity in addition to strategic location vis-à-vis the rest of the supply chain (e.g., close to many quarries).  
- Facilitate access to processing technology for small operators; develop cutting and polishing facilities to improve the quality of final products and reduce waste.  
- Potentially, these shared service centres could also offer cutting and polishing facilities.  
The centres could also provide:  
- Showrooms to enable processors to promote their products.  
- Storage facilities for finished products and raw materials. | 1 | 2017-2022 |  
- One service centre established in each of three extraction hubs in Jalalabad, Wardak and Herat | MoMP, AMIA, AMGPA, ANISA |
| | 2.2.2. Collaborate with the Central Statistics Office and other relevant organizations in order to capture data on marble and granite producers, miners, mines, production hubs, workshops and other related stakeholders with aim of getting a better picture and greater overview of the sector.  
Improve data availability of the sector facilitate gap analysis/needs analysis and impact measurement of activities | 2 | 2017-2022 |  
- Comprehensive database available through the MoMP's website | MoMP, MoCI, and CSO |
| | 2.2.3. Cultivate mining support companies and professional consultants who can help companies overcome technology barriers, and provide solutions to minerals exploration process.  
- Create a short course tailored for the Afghan mining context aimed to raise their level of service delivery to international standards. Take into consideration findings from Activity 2.1.1. | 2 | 2017-2022 |  
- One annual short course | MoMP, AMIA, AMGPA, ANSA, Afghanite |
| | 2.2.4. Facilitate B2B links between quarries, cut-and-polish service suppliers and traders through the organization of fairs and exhibitions to bring together suppliers and interested parties. Develop a directory of quarries, cut-and-polish service suppliers, and traders. | 2 | 2017-2022 |  
- Four fairs and exhibitions per year to bring industry stakeholders together | MoMP, AMIA, AMGPA, EPAA |
| | 2.2.5. Provide packaging training for exported stone to prevent damage and losses during transportation. | 1 | 2017-2022 |  
- One to two annual trainings in each extraction hub in Jalalabad, Wardak and Herat | ANSA, MoMP, EPAA |
| 2.3. Strengthen competition within the sector and introduce market mechanisms by breaking down the current oligopoly structure. | 2.3.1. Equalize the influence of members of marble and granite associations by introducing a voting system where each member represents one vote, to limit the market power of big producers, especially through the following measures:  
- Reorganize associations and introduce a voting mechanism for decision-making.  
- Make decision-making processes transparent by sharing information.  
- Devise a mechanism by which MoMP can be an observer, to ensure the equality of member votes is accepted. | 2 | 2017-2022 |  
- Voting system introduced in existing associations | AMIA, AMGPA, MoMP |
### Strategic objective 2: Improve the business environment by streamlining production and export procedures.

<table>
<thead>
<tr>
<th>Operational objective</th>
<th>Activities</th>
<th>Priority</th>
<th>Implementation period</th>
<th>Targets</th>
<th>Lead and supporting implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3. Strengthen competition within the sector and introduce market mechanisms by breaking down the current oligopoly structure.</td>
<td>2.3.2. Share information on international and domestic market prices publicly to avoid price-setting by marble and granite market leaders.</td>
<td>1</td>
<td>2017</td>
<td>• Information on international and domestic market prices is shared four times a year through various media channels</td>
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<td></td>
<td>• Establish a focal point for market information in MoMP.</td>
<td></td>
<td>2018</td>
<td>• A focal point for market and information is established in MoMP by the end of 2018</td>
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<td></td>
<td>• Inform stakeholders about international and domestic market prices online and through local newspapers, radio, and regular brochures and pamphlets.</td>
<td></td>
<td>2019</td>
<td>MoMP, MoCIT, EPAA, ANSA</td>
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<td></td>
<td>• Actively encourage and share market research on marble and granite through sector association cooperation and Government-led information-sharing initiatives.</td>
<td></td>
<td>2020</td>
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<td></td>
<td>2.3.3. Incentivize firms to focus on long-term plans for growth and increasing market share instead of short-term profit.</td>
<td>3</td>
<td>2021</td>
<td>• Government-led market research is conducted and disseminated</td>
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<tr>
<td></td>
<td>• Share information about international markets for marble and granite.</td>
<td></td>
<td>2022</td>
<td>MoMP, MoCIT, EPAA, AGM</td>
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<td></td>
<td>• Advertise Afghan marble and granite internationally through campaigns and missions, to better integrate into international markets through higher visibility of Afghan stone.</td>
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<td></td>
<td>2.3.4. Increase the competitiveness of domestic input materials by fixing legal barriers concerning raw materials and other input goods.</td>
<td>1</td>
<td></td>
<td>• Control 70,000 tons of Pakistani marble entering the Afghan market</td>
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<td></td>
<td>• Strengthen Customs controls on products from neighbouring countries, in particular products from Pakistan.</td>
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<td>• Fifty Customs officers on the border with Pakistan trained by equipping them with sector-specific knowledge and establishing a Customs control scheme controlled by the Government</td>
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<td></td>
<td>• Facilitate access to domestically provided raw materials.</td>
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<td></td>
<td>• Two round tables held per year to discuss unauthorized illegal entry of sector-related input goods</td>
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<tr>
<td></td>
<td>• Set up a round table to discuss unauthorized illegal entry of sector-related input goods. Introduce corrective measures as required.</td>
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</table>
### Strategic objective 3: Improve firms' ability to access markets through trade intelligence.

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>3.1. Raise awareness of Afghan marble and granite market, and the benefits of using marble and granite in construction.</td>
<td>3.1.1. Develop marketing and promotional strategies for Afghan marble and granite to target current markets through:</td>
<td>1</td>
<td>2017-2022</td>
<td>Participation in fairs/trade delegations and B2B meetings at least every three months with at least 10 Afghan companies One official vendor and buyer matching website and one export platform approved by MoMP established At least 20 sector-specific trade attachés trained</td>
<td>MoMP, EPAA, MoCIT</td>
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<td></td>
<td>• Participation in fairs, trade delegations and B2B meetings. • Establish new distribution channels in order to increase sales in these markets. • Establish a vendors and buyers matching website and a B2B export platform for Afghan marble and granite producers and exporters. • Increase product variety and quality, consistency of supply and the price competitiveness of current exporters.</td>
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<td></td>
<td>• Train and introduce sector-specific attaches promoting Afghan marble and granite in foreign target markets based on samples.</td>
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<td></td>
<td>3.1.2. Develop a marble and granite online and printed catalogue to be disseminated among potential buyers. The catalogue should be designed cooperatively between the Government and sector associations to reflect both sides' interests. Catalogue to include:</td>
<td>2</td>
<td></td>
<td>Print catalogue developed and disseminated to 100 potential buyers</td>
<td>MoMP, Ministry of Foreign Affairs (MoFA), EPAA</td>
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<td></td>
<td>• Leading Afghan marble and granite varieties and products • Regions of production • Certifications available • Afghan exporters' directory • Publish individual booklets and brochures for marble and granite varieties in Afghanistan.</td>
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<td>3.1.3. Create awareness of marble and granite in general to increase the consumption of stone in future target markets. Promote the benefits of using marble and granite in order to penetrate untapped markets. Select regional and international key and emerging markets to carry out a campaign to promote consumption and knowledge of Afghan marble and granite to construction and luxury industries as well as end consumers.</td>
<td>2</td>
<td></td>
<td>Campaign established to promote Afghan marble and granite in 10 potential markets (construction and luxury industry) each year</td>
<td>EPAA, MoFA, MoMP</td>
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<td></td>
<td>• Conduct a study to analyse the current domestic market. Develop a study to analyse the potential untapped market and corresponding product development alternatives for marble and granite domestic consumption.</td>
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<td></td>
<td>3.1.4. Promote programmes to increase domestic demand for marble and granite. Through the rollout of communication campaigns, encourage national demand for marble and granite. Conduct a study to analyse the current domestic market. Develop a study to analyse the potential untapped market and corresponding product development alternatives for marble and granite domestic consumption.</td>
<td>3</td>
<td></td>
<td>One official domestic communication campaign developed One analysis on the current domestic market conducted and the results distributed Domestic promotion campaign carried out in all 34 provinces in Afghanistan</td>
<td>MoMP, sector enterprises, MoCIT</td>
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<td>3.2. Facilitate the diversification of target markets.</td>
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<tr>
<td>3.2.1. Undertake international market diversification into dynamic and thus promising markets (the Middle East and Asia) through the following steps:</td>
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<td>• Conduct market studies, in particular for the Middle Eastern and Asian markets. • Organize B2B meetings in the Middle East and Asia, alongside participation in construction fairs. • Identify the best distribution channels through which to enter those markets (excluding opportunities arising from recent online channels).</td>
<td>1</td>
<td></td>
<td>One market study conducted for India, Italy, China, UAE, the Islamic Republic of Iran, Republic of Korea, Japan and Kazakhstan At least one B2B meeting organized in the Middle East and/or Asia, with at least 10 Afghan firms participating</td>
<td>EPAA, MoFA, MoMP</td>
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<td>3.2.2. Facilitate SME decision-making processes by enhancing their business and marketing capacities. Organize training sessions for companies on:</td>
<td>1</td>
<td></td>
<td>Annual training sessions organized for exporters in three main exporting hubs (Kabul, Kandahar, Mazar-e-Sharif) and more offered depending on needs</td>
<td>EPAA, MoFA, MoMP, AMIA, AMGPA</td>
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<td></td>
<td>• Marketing and business skills • Export procedures and related documentation. • Financial skills • International level negotiation, trading, contracting and dispute resolution • How to analyse trade intelligence and adjust business strategies accordingly. Focus on interpretation of market information. • How to pitch to international investors.</td>
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### Strategic objective 3: Improve firms' ability to access markets through trade intelligence.

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<tr>
<td>3.2. Facilitate the diversification of target markets.</td>
<td>3.2.3. Develop market profiles for target markets. Information to include: - Mandatory requirements (e.g., quality, shipping, contracts) - International trade agreements with selected target markets, if applicable - Market prospects and emerging trends - Risks of entering the market - Distribution channels and directory of main buyers in target markets - Trade fairs available in-country - Contact details of trade attachés. - Implement mechanisms to actively disseminate trade information via various channels of communication (print, television, Internet). Institutionalize partnerships with delivery providers.</td>
<td>1</td>
<td>2017-2022</td>
<td>- Market profiles developed for eight target markets (India, Italy, China, UAE, the Islamic Republic of Iran, Republic of Korea, Japan, Kazakhstan) - A single list of trade attachés created and publicly accessible</td>
<td>EPAA, MoFA, MoMP, MoCI, ACIM</td>
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<tr>
<td>3.2.4. Based on the assessment in activity 3.2.3, undertake corrective measures in terms of service offerings, staff training, resource mobilization and overall capacity-building. Further components include: - Establish a consultancy unit and hire a manager for it. - Sign memorandums of understanding with similar international institutions (Italian, Chinese, Turkish, Indian) to help staff learn from their experience. - Assist application of its strategic plan (under preparation).</td>
<td>3</td>
<td></td>
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<td>EPAA, MoFA, MoMP, MoCI, ACIM</td>
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<td>3.2.6. Establish an export readiness programme for the marble and granite industry. The programme will conduct export readiness assessments and provide technical assistance and capacity-building to sector exporting enterprises and potential exporters in specific technical areas related to marketing and promotion. This will be achieved by creating a sector-level vocational training and certification programme on export marketing management for stone exporters to build their marketing, promotional, negotiation and export capacity.</td>
<td>3</td>
<td>2017-2022</td>
<td></td>
<td>EPAA, MoFA, MoMP, MoCI</td>
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<td>3.2.7. Train enterprises on how to prepare for market development and participation in trade fairs by: - Preparing promotional materials in the language and culture of the host country - Presentation and visibility (including digital marketing) - Managing supply and demand - Identifying and targeting potential buyers.</td>
<td>2</td>
<td></td>
<td></td>
<td>MoCI, MoMP, MoFA, EPAA</td>
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<td>3.2.8. Facilitate approval of visas for business purposes in key markets.</td>
<td>1</td>
<td></td>
<td></td>
<td>MoFA, MoCI</td>
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<td>3.2.9. Explore e-commerce development possibilities.</td>
<td>3</td>
<td></td>
<td></td>
<td>EPAA, MoFA, MoMP, AMIA, AMGPA, sector enterprises, information technology enterprises</td>
<td></td>
</tr>
</tbody>
</table>


Pakistan, Small and Medium Enterprise Development Authority (n.d.). *Marble and Granite Sector Development Plan*.


