

Chemist



iKMİB's Complimentary Magazine | Issue: 2024/2

A STRONG PLAYER IN
THE ECONOMY WITH ITS
DYNAMIC STRUCTURE

The pharmaceutical industry



The Turkish Paint Industry Aims
To Become A Global
Power

Turkish Economy Continues To
Grow With
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Turkish Chemical Industry
Gaining Momentum In The
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ADİL PELİSTER
President of İKMİB

As the chemical industry, we have secured the second position in the country's exports on a sectoral basis. We take great pride in achieving this together with our 16 partner sectors, ranging from plastics to paint, cosmetics to pharmaceuticals, and the medical field.

“WE CONTINUE TO PRODUCE AND EXPORT FOR OUR COUNTRY”

Hello, dear readers...

During these exceptionally hot summer days, we are reminded of the importance of environmental values and how global warming could affect our future. The comprehensive set of “Environmental” rules and norms, which has been addressed for a long time by both the European Union (EU) and the United Nations (UN) and has entered our lives through various regulations, has been codified into law through many national agreements, bringing the concept of “Sustainability” focused on “Environment, Society, Economy, and Technology” into our lives. As İKMİB, we have shared our Sustainability Action Report specific to the chemical sector with the public, in line with the recommendations and rules of our public administration. Following this, we continue our efforts in sustainable technology development and digitalization. We have no doubt that our Chemical Technology Center will be groundbreaking in this regard.

We support all developments related to the Green Economy and renewable energy models, hydrogen technologies, and environmental impact that will shed light on our future and enhance our sustainable economic development. In this context, we are particularly involved in efforts that will nourish our chemical industry and increase our exports.

As chemical manufacturers and exporters, we tirelessly explore the world. I can confidently say that there is no market left that does not have our locally and nationally branded chemical products marked “Made in Türkiye.”

In 2023, we increased our chemical

exports to over \$30 billion with your support. We hope to exceed \$35 billion in 2024. Our target for 2030 is to achieve over \$50 billion in chemical sector exports and to raise our export value per unit to over \$2.

Our future vision is to advance artificial intelligence software in tandem with digitalization following the fourth industrial revolution (Industry 4.0) to support our industrial development. Our Chemical Technology Center, with its start-up hub, will also serve our country in this field.

We aim to expand digital applications and e-export and follow every technological advancement that can be adapted to our chemical sector. Our goal is to contribute to our country's economic and technological growth while not ignoring environmental renewal. Through this path, we continue to produce and export for our country to support its growth and development.

As a sector, we have achieved second place in our country's overall exports. We take rightful pride in this achievement, which we have accomplished together with our 16 stakeholder sectors, ranging from plastics to paints and from cosmetics to pharmaceuticals and medical fields.

In 2025, we plan to organize a major international Chemical Summit to present our “Chemical Industry and Export Strategy.” Our aim is to develop policies that will direct and guide our economic development while also elevating the perception of the chemical sector to a new level.

Preparations are underway. We will keep you, our esteemed friends, informed of developments in the coming days.

With the phrase “Türkiye Grows with Chemistry,” I conclude my remarks and wish you all healthy and successful days.

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Chemist

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İKİMİB AIMS TO INCREASE EXPORTS THROUGH ORGANIZED EVENTS

ABD Tucson ECRM Cosmetic Trade Delegation

ABD Chicago / IHS 2024

ABD Las Vegas / NAHB IBS 2024

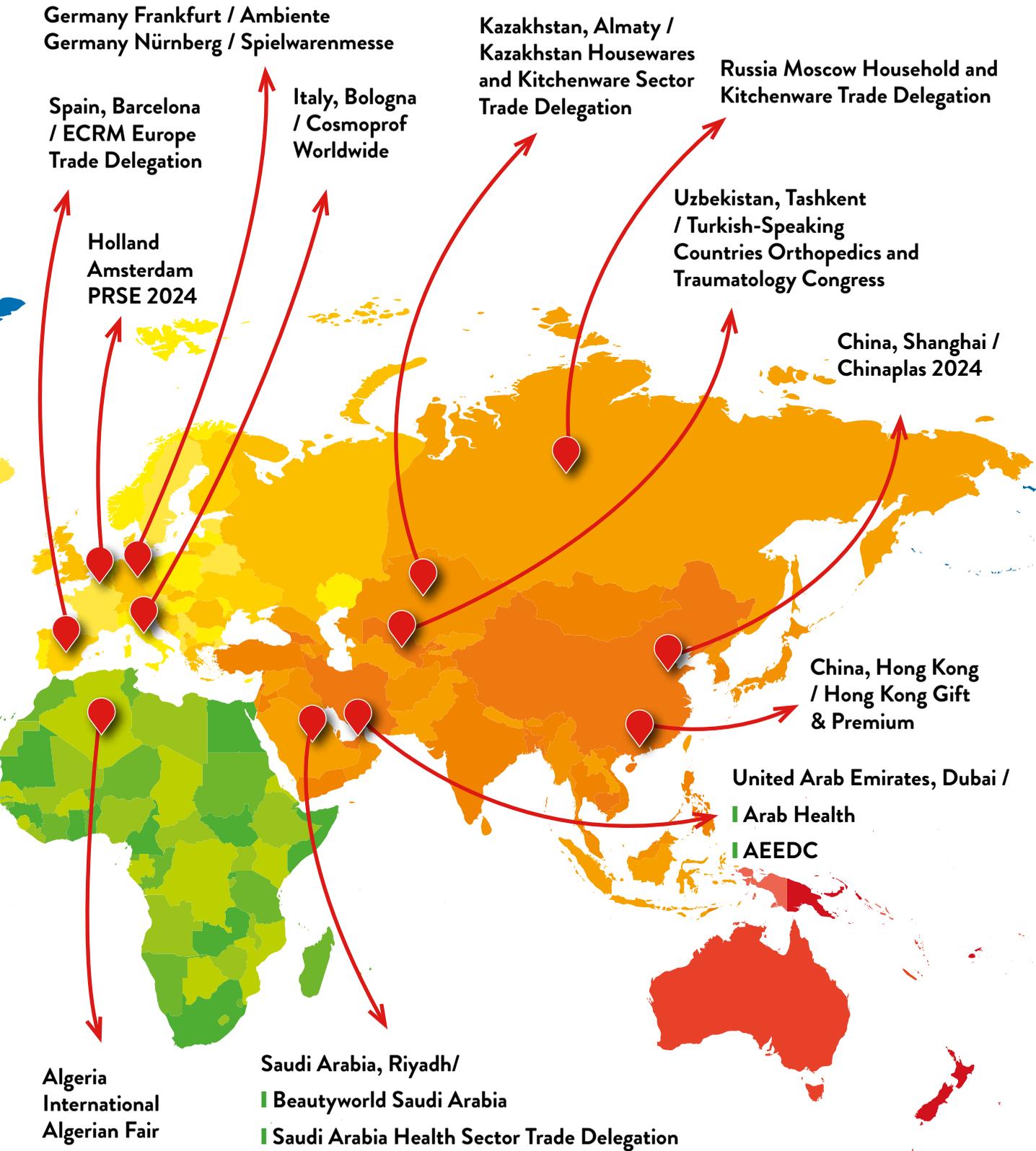
ABD Miami / Cosmoprof North America

The İstanbul Chemicals and Chemical Products Exporters' Association (İKİMİB) aims to boost the country and sector exports by bringing the potential of its exporters to target markets through events organized in the first half of 2024.

Panama / Expocomer

Chile, Santiago / Chile Packaging Sector Trade Delegation







AWARE PROJECT GUIDES TOWARD SUSTAINABILITY

The opening meeting of the “Supporting Resilience and Adaptation to Climate Change by Preventing Water Loss (AWARE)” project, conducted under the coordination of the Istanbul Mineral and Metals Exporters’ Association (IMMIB), was held in Istanbul on May 10, 2024. The AWARE project, signed by the Chairman of the Istanbul Chemicals and Chemical Products Exporters’ Association, Adil Pelister, aims to raise awareness about water management in the production processes of the chemicals and chemical

products sub-sectors and the non-metallic minerals sector, and to strengthen resilience against climate change. Within the scope of the project, the effects of climate change on these sectors will be analyzed, and businesses will be guided on how to prepare for these impacts.

The AWARE project, implemented with the financial support of the European Union and the Republic of Türkiye, is supported under the “Climate Change Adaptation Grant Program” of the Turkish Ministry of Environment, Urbanization,

and Climate Change.

In his opening speech, Halit Süha Taşpolatoğlu, a member of the Board of Directors of İKMİB, emphasized the importance of water, stating, “Protecting and effectively using water resources in the fight against climate change is vital for our sector. This project aims to contribute to making our sector more resilient in the fight against climate change. The participation of our sector representatives in these activities will be effective in achieving a sustainable future for our sector.”



TURKISH PLASTIC COMPANIES SHOW THEIR STRENGTH AT NPE 2024 EXHIBITION

The Istanbul Chemicals and Chemical Products Exporters’ Association (İKMİB) organized a national participation at the NPE 2024 The Plastics Show, which was held in Orlando, United States, from May 6-10.

The national participation event, successfully organized by İKMİB for the third

time, was held with a large attendance. A total of 34 Turkish companies once again showcased the country’s strength and innovation capacity in the plastics sector by exhibiting products related to plastic raw materials and plastic machinery equipment on the world stage.

EXPORT TO THE USA REACHES 385 MILLION DOLLARS

Adil Pelister, Chairman of the İKMİB Board of Directors, emphasized that this year, for the third time, İKMİB successfully represented Türkiye at the NPE 2024 exhibition. He stated, “A total of 34 Turkish companies participated, 10 under national participation and 24 individually. The fair, being one of the most significant global events in the plastic sector, is an important opportunity for the promotion of Turkish brands and the establishment of new collaborations for our exporters. The U.S. market is one of the target markets for our country and our sector. When we look at the plastic sector’s exports to the U.S., it amounted to 385 million dollars in 2023. In the first four months of this year, exports from the plastic sector to the U.S. reached 145.6 million dollars, an increase of 20.5%

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TURKISH PRIVATE LABEL SECTOR MAKES ITS MARK AT PLMA'S WORLD OF PRIVATE LABEL 2024 FAIR

For the 14th time, the national participation of Türkiye in PLMA's World of Private Label 2024, the world's largest private label products fair, was organized by İKMİB.

H Every year, the PLMA's World of Private Label 2024 brings together companies operating in the private label products sector, and this year, it was held on May 28-29 in Amsterdam. The national participation of Türkiye was organized for the 14th time by the Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB). A total of 148 companies from Türkiye participated in the fair, with 96 companies under national participation and 52 companies individually. Participating companies from the cosmetics, personal care, cleaning, pharmaceuticals, plastics, packaging, and food sectors showcased Turkish products to visitors.

İKMİB Chairman Adil Pelister emphasized the importance of the fair,

stating, "We made a significant presence at the fair, with 96 companies participating under national participation and 52 companies individually. Our exporters successfully promoted

the Turkish brand. Fair participation is crucial for our private label products sector to closely follow global market dynamics and new trends. We believe that PLMA's World of Private Label 2024, one of the most successful fairs with professional participants, will contribute to new collaborations for all our participants."





TURKISH COSMETICS SECTOR MEETS WITH THE U.S. MARKET

16 representatives from 10 companies in the Turkish cosmetics sector participated in the U.S. Cosmetics Sectoral Trade Delegation organized by the Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB).

Aimed at enhancing the international competitiveness and export potential of the Turkish cosmetics sector, İKMİB held the U.S. Cosmetics Sectoral Trade Delegation in Tucson, Arizona, from June 1-7, 2024. This event provided an important platform for Turkish cosmetics companies to showcase their strength in the global market. Participating companies presented their branded or private label products, including color cosmetics, skincare, personal care products, soap, and wet wipes, to buyers.

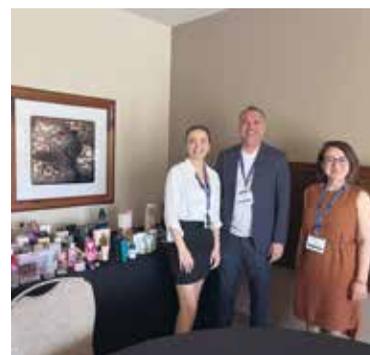
During the event, more than 300 B2B meetings were conducted with over 50 major buyer companies, including industry giants such as Amazon, Bargain Hunt, CVS Health, KeHe, Food Lion, and Walgreens. These meetings offered a significant opportunity for Turkish cosmetics brands to gain international

recognition and establish new business partnerships.

“THE EXPORT GROWTH WILL CONTINUE”

Highlighting the importance of sectoral trade delegations in enhancing the global competitiveness of companies and seizing new business opportunities, İKMİB Chairman Adil Pelister said, “As part of the U.S. Cosmetics Sectoral Trade Delegation, we brought together 10 Turkish companies with over 50 U.S. buyers. In 2023, the U.S. surpassed China by importing approximately \$22 billion worth of cosmetic products. Our trade missions and fair activities have a significant impact on increasing our exports not only in the U.S., which ranked third in our sector’s exports in 2023, but also in neighboring

markets. Additionally, sectoral trade delegations contribute to companies’ sustainable growth. In the January-May 2024 period, our sector’s exports of essential oils, cosmetics, and soap to the U.S. increased by 7.8% compared to the same period last year, reaching \$50 million. We plan to continue activities in this region to increase the visibility and recognition of our sector in these markets. In this context, we foresee that the upward trend in our sector’s exports will continue,” he said.





İKMİB ESTABLISHES A TRADE BRIDGE WITH 185 B2B MEETINGS IN RUSSIA

Significant business partnerships were established between Turkish and Russian companies as part of the “Russia Home and Kitchenware Sectoral Trade Delegation” organized by the Istanbul Chemicals and Chemical Products Exporters’ Association (İKMİB).

i KMİB arranged a trade delegation centered on the home and kitchenware sector to enhance the foothold of Turkish companies in the Russian market. The “Russia Home and Kitchenware Sectoral Trade Delegation” took place in Moscow from June 4-7, 2024, with 21 representatives from 15 companies participating. İKMİB Board Member Ali Küçük also participated in the delegation, and T.C. Moscow Trade Counselor Cansu Şaziye Tanrıverdi provided valuable information about the market to the participants.

As part of the delegation, Turkish companies met with Russian firms. A total of 185 B2B meetings were conducted between Turkish participants and 26 Russian buyer companies. During the retail tour organized within the framework of the delegation, visits were made to Hyperglöbus and Auchan su-

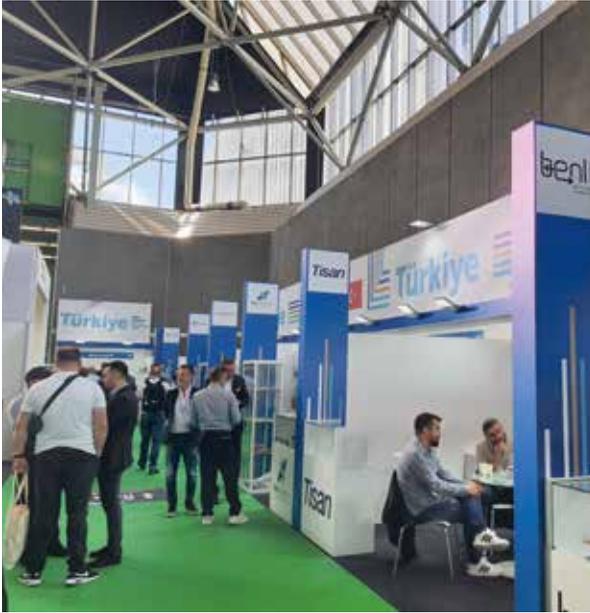
permarkets and Tvoı Dom store, which mainly features home products, in Moscow. Additionally, a meeting was held with the top representatives of Turkish banks based in Russia during the visit to the Russian Turkish Business Association (RTİP). During this meeting, information about money transfer issues and methods in Russia was shared with the delegation participants.

“THE RUSSIAN MARKET OFFERS SIGNIFICANT POTENTIAL FOR THE SECTOR”

Highlighting the importance of the home and kitchenware sector in creating added value for the country through a trade surplus, İKMİB Chairman Adil Pelister said, “As İKMİB, we organized the second sectoral trade delegation of the year

for the home and kitchenware sector, this time focusing on the Russian market. We held the first delegation in Kazakhstan in February this year. Russia ranks 19th among the countries where our sector of plastic-made tableware, kitchenware, and household goods exports the most. In 2023, our sector’s exports to Russia increased by more than 20% compared to the previous year, reaching \$9.8 million. The Russian market offers significant potential for the sector. We believe that the sectoral trade delegations we organize for different markets will contribute to our companies’ exports. As İKMİB, we will continue to support our companies with such activities.”





TÜRKİYE'S PLASTIC RECYCLING POTENTIAL SHOWCASED

The Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB) organized a national participation event for the first time at the PRSE – Plastics Recycling Show 2024, one of the most prestigious events in the recycling sector.

The PRSE – Plastics Recycling Show 2024, held in Amsterdam on June 19-20, 2024, featured a total of 34 Turkish companies, including 8 official and 26 individual participants, under the coordination of İKMİB. The fair, which brought together 483 companies and over 10,000 visitors from around the world, saw Turkish participant companies showcasing product groups related to the recycling sector and presenting them to potential buyers.

“WE SEE THE PRESENCE OF OUR TURKISH COMPANIES AT PRSE 2024 AS A SIGNIFICANT STEP”

Adil Pelister, Chairman of the İKMİB Board, expressed that they

organized national participation for the first time at PRSE – Plastics Recycling Show 2024, recognized as one of the world's most important events in the plastic recycling sector. He stated, “As İKMİB, we have carried out a significant event for the recycling sector, a sub-sector of our plastic industry. We are pleased with the productive and effective participation of our companies in this national participation organization at PRSE 2024. The fair, which mainly targets professionals in the sector, is gaining global recognition and importance each year. We believe that participating in this fair is essential to keep up with developments in recycling and not fall behind the

latest technologies in the sector. We see the presence of our Turkish companies at the fair as a crucial step for our exports, both in becoming an important part of the sector and in terms of sustainability and compliance with the European Green Deal. In 2023, Türkiye's plastic sector exports exceeded 10 billion dollars, with half of these exports directed to Europe. From this perspective, we believe that participating in the PRSE fair will contribute to our participant companies by increasing their share of the 137 billion dollar market in Europe and keeping up with new trends and developments in the recycling sector. In this regard, we plan to organize national participation for the same fair in 2025 through our Union.”

TURKISH ECONOMY CONTINUES TO GROW WITH CHEMICAL INDUSTRY

The chemical industry achieved an 8% increase in exports, reaching \$15.8 billion in the first six months of 2024.



Playing a significant role in Türkiye's export growth, the chemical industry made a remarkable achievement by exporting \$15.8 billion in the first half of the year. According to data from the Turkish Exporters Assembly (TİM), the chemical industry exported \$2.3 billion in June, continuing to grow with an 8% increase and maintaining its position as the second-largest exporting sector in June.

Adil Pelister, Chairman of the Board of the Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB), evaluated the June export figures, stating, "As the chemical industry, we exported \$2.3 billion worth of chemicals and products in June. Due

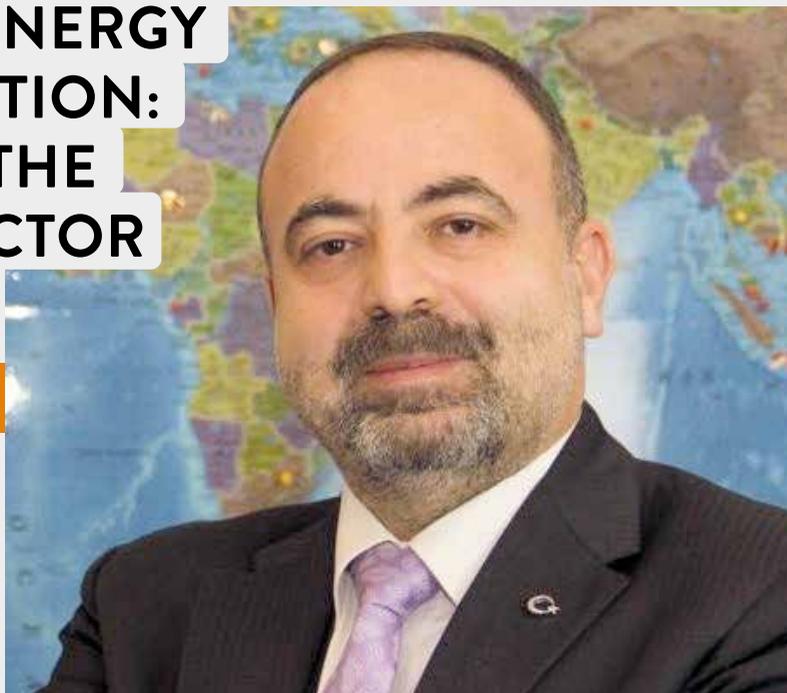
to the loss of working days during the Eid al-Adha holiday, there was a decline in both general and sector exports. On the other hand, factors such as disruptions in global supply chains and rising production and logistics costs have affected our export performance. While our sector's exports decreased by 6.5% in June, we recorded nearly an 8% increase when looking at the first six months. In June, our sector managed to secure a 12% share of the country's exports, maintaining its position as the second-largest exporting sector. Our exports for the January-June period exceeded \$15 billion, reaching \$15.8 billion."

Highlighting the strategic importance of the chemical industry, Pelister

emphasized that İKMİB will continue to support companies for the development and sustainable growth of the sector. He added, "We see the importance of the chemical industry when we look at the top 10 most powerful countries in the world. Our chemical industry, which has strategic importance for the growth of our country and the development of the economy, ranks among the top in both Türkiye's largest 500 industrial enterprises and the top 1000 exporters. As İKMİB, we support the development and stable growth of our sector, carefully consider the suggestions of our companies, and help resolve their issues. We will continue to work with all our strength to help our exporters overcome the challenges they face."

ADVANCING ENERGY TRANSFORMATION: THE ROLE OF THE CHEMICAL SECTOR

DR. S. ARMAĞAN VURDU
Secretary General of İMMİB



Global renewable energy capacity increased by 50% in 2023. With significant contributions from solar energy installations, this capacity rose to approximately 510 gigawatts. While increases in renewable energy capacity have reached record levels in Europe, the US, and Brazil, China's acceleration in this area is particularly noteworthy. However, it is important to acknowledge that this growth has been made possible not only through countries' sustainability policies but also through the efficiency and R&D efforts of various sectors. The chemical sector stands out as one of the key driving forces behind this growth.

Last year, it was estimated that 96% of newly established large-scale solar and wind energy facilities had lower construction costs compared to coal and natural gas plants. In terms of solar energy technologies, which account for one-third of the global increase in renewable energy capacity, module costs fell by nearly 50% compared to the previous year in 2023. Materials such as high-purity silicon and cadmium telluride (CdTe) and copper indium gallium selenide (CIGS), used in the production of solar panels, have been developed with contributions from the chemical industry. These materials not only enable photovoltaic cells to operate with high efficiency but also reduce the cost of solar energy technologies. Additionally, polymer and resin composite materials used in the production of wind turbines are also supplied by the chemical sector. These com-

posite materials make turbine blades lighter, more durable, and longer-lasting, which is significant for reducing both production and maintenance costs. Therefore, these innovations, in which the chemical sector plays a major role, have significantly contributed to the competitiveness of renewable energy alternatives and will continue to do so in the future.

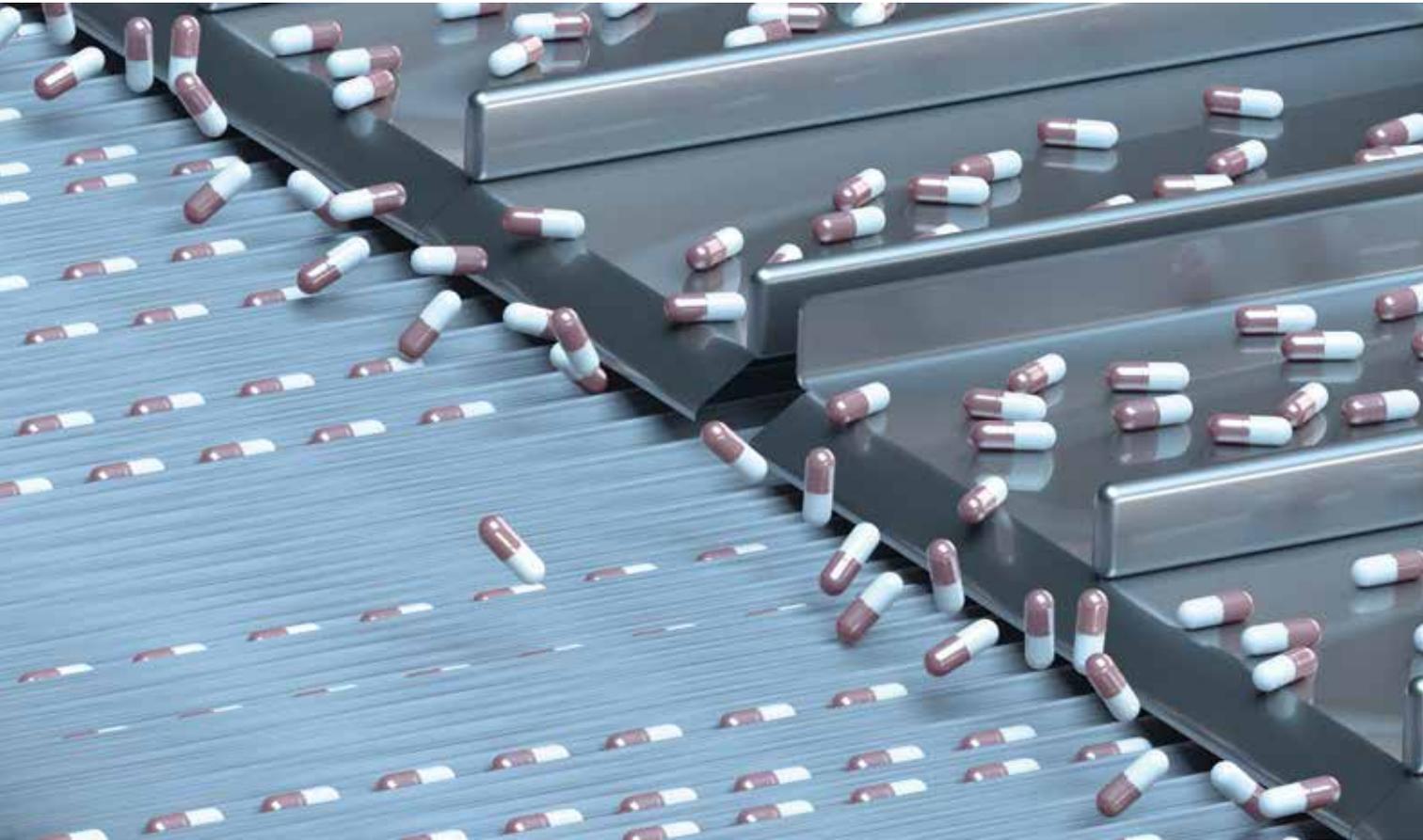
Energy storage solutions play a critical role in the sustainability of energy transformation, and innovations in this area are significantly shaped by the chemical industry's contributions. Advanced lithium-ion batteries rely on various chemical components for high energy density and efficiency. The chemical industry plays a central role in the production of these technologies while also providing recycling and waste management solutions. The rapid increase in renewable energy capacity brings challenges related to the integration of these systems into electricity transmission networks. Planning to overcome these challenges and ensure the stability of energy transformation has become one of the most important aspects of the process.

According to S&P Global's Commodity

Report, a large portion of investments in energy transformation is directed towards renewable energy sources and electrification, while the share allocated to energy efficiency efforts is relatively low. Investments in the chemical sector could lead to significant advancements in energy efficiency. The chemical sector contributes significantly in areas such as combined heat and power generation, other process efficiency technologies, low-emission hydrogen, carbon capture, utilization and storage, and advanced plastic recycling.

Global goals for renewable energy capacities and energy transformation are directly related to countries' policy implementations, energy efficiency efforts, electricity transmission infrastructure projects, and the supportive environment provided by the private sector. Overcoming existing challenges, accelerating relevant policies, and fostering private sector interest in transformation are essential to achieving global renewable energy and carbon emission targets. Ultimately, the chemical sector will continue to play a critical role in these processes by providing innovative solutions and materials necessary to achieve these goals.

The Pharmaceutical Sector: **A DYNAMIC FORCE IN THE ECONOMY**



The Turkish pharmaceutical industry, known for its constantly evolving technology and innovative approaches, is among the key high value-added sectors contributing significantly to the national economy.

From the earliest days of human civilization, the pharmaceutical industry has played a crucial role in healthcare, underlining its importance as a high value-added sector. The recent COVID-19 pandemic has once again highlighted the critical role of the pharmaceutical industry. During this global crisis, Türkiye's pharmaceutical sector faced challenges such as rising costs and difficul-

ties in accessing raw materials. Despite these hurdles, the industry continued to produce medicines without interruption and proved its potential through significant achievements, such as the production of domestic vaccines. As a result, the pharmaceutical sector contributes to the national economy by generating employment and boosting export volumes, in addition to its crucial roles in both industry

and healthcare services.

With its high production capacity, the Turkish pharmaceutical sector continues to attract new investments. It boasts 109 pharmaceutical production facilities and 13 raw material production plants that meet international standards. While 91 out of every 100 drugs used in the country are produced in these facilities, the number of R&D centers, which stood at just one in 2008, has now reached 42.

GLOBAL PHARMACEUTICAL MARKET ON THE RISE

According to the 2023 Türkiye Pharmaceutical Sector Report by IQVIA, the global pharmaceutical market has grown by 6.9% over the past five years, reaching a sales volume of \$1.4 trillion in 2022, a 7.8% increase from the previous year. The United States leads the global pharmaceutical market with \$643.1 billion in sales, followed by China with \$162.6 billion. The report highlights that Vietnam, Argentina, the United Arab Emirates (UAE), and Russia were the fastest-growing markets compared to the previous year. On the other hand, Japan, the third-largest pharmaceutical market, experienced a 13.7% contraction. In Türkiye, the pharmaceutical market is valued at approximately \$7.7 billion, placing it 22nd globally. Despite a 78.1% growth in 2022 based on the local currency, the market contracted by 4.8% in dollar terms compared to the previous year.

14.5% INCREASE IN EXPORTS

The Turkish pharmaceutical industry, which holds a significant position within the chemical sector, ranks 29th globally in terms of export potential with a 0.2% market share. Demonstrating its strong growth and international competitiveness, the Turkish pharmaceutical sector achieved a 14.5% increase in exports compared to the previous year, reaching an annual export value of \$2.2 billion. Türkiye's strategic location, along with



The global pharmaceutical market grew by 7.8% in 2022, reaching a sales volume of \$1.4 trillion.

its robust transportation and logistics capabilities, continues to drive the growth of pharmaceutical exports. Europe remains one of the most important markets for the Turkish pharmaceutical industry, with exports reaching 190 countries, including those in the Commonwealth of Independent States, North Africa, and the Middle East.

FIXED EXCHANGE RATE CHALLENGES

One of the key issues facing the Turkish pharmaceutical industry is the country's fixed exchange rate policy for drug pricing. In Türkiye, drug prices are calculated using a fixed exchange rate. According to regulations, the exchange rate is set at 60% of the previous year's average euro rate rather than the current rate. This pricing mechanism, which is updated annually in February, was adjusted multiple times in 2022 and 2023 due to recent fluctuations in the exchange rate. The gap between the fixed exchange rate and the actual rate has led to supply issues for imported drugs, making it difficult for these

SECTOR FILE

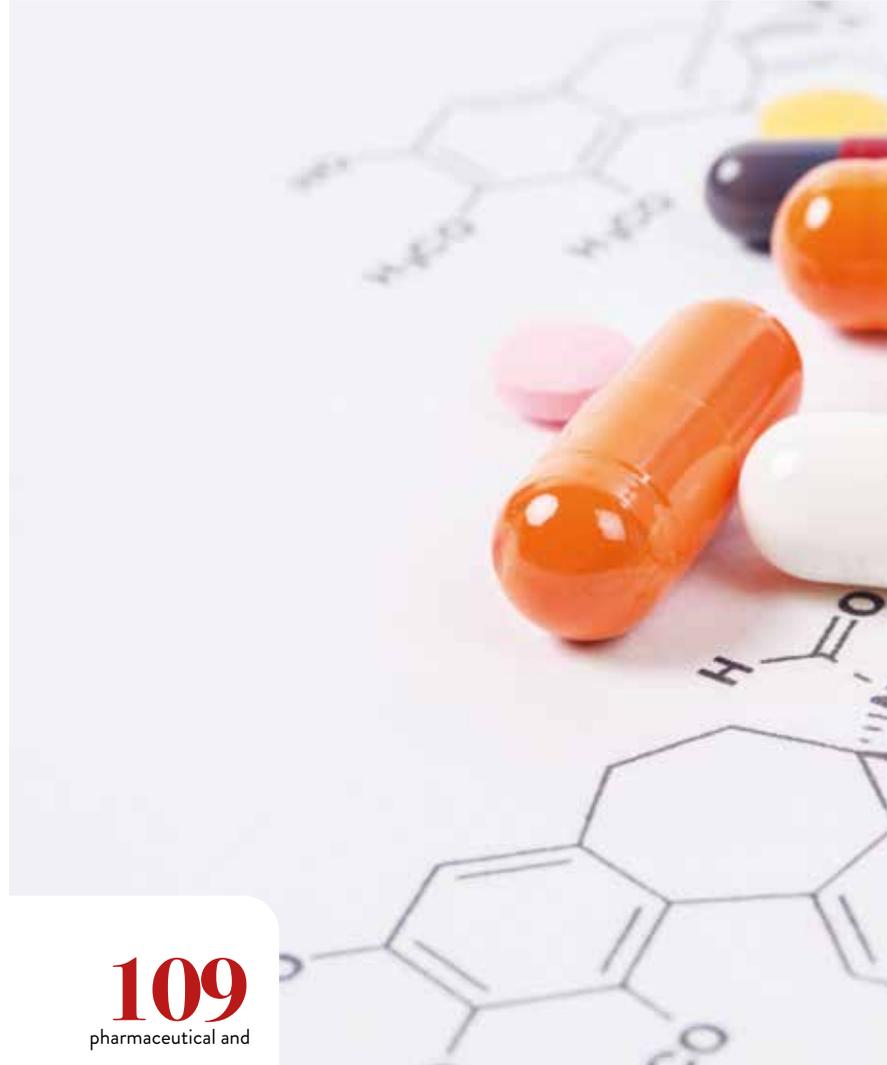
drugs to enter the Turkish market. The widening difference also negatively impacts local drug manufacturers due to rising production costs.

A BIOTECHNOLOGY REVOLUTION

Biotechnological drugs, which are shaping both the present and future, are now a driving force in the global pharmaceutical industry. The production of biotechnological products using live organisms instead of chemical processes holds significant importance for the sector. Biotechnological drugs open new doors for treating diseases that conventional drugs cannot address, leading to new investment opportunities. While the share of biotechnological drugs in the global pharmaceutical market continues to grow, the IQVIA report shows that in the United States alone, reference biotechnological and biosimilar product sales reached \$263 billion in 2022. Germany and France followed with \$16 billion and \$15 billion, respectively. In Türkiye, reference biotechnological products accounted for approximately \$1.1 billion, while biosimilar product sales reached \$64.3 million in 2022. Biotechnological drugs accounted for 16.6% of the Turkish pharmaceutical market in 2022, compared to an average of 35.8% in OECD countries and 29.9% in EU member states.

THE GROWING IMPORTANCE OF TECHNOLOGICAL COLLABORATIONS

As technology continues to drive transformative changes across all sectors, including the pharmaceutical industry, it is reshaping consumer habits. In an increasingly competitive landscape, investing in digital technologies is becoming more crucial for adapting to the changing world and maintaining competitiveness. According to the KPMG “Healthcare and Pharmaceutical Sector Outlook” report, collaborations and



109

pharmaceutical and

13

raw material production facilities in Türkiye meet international standards.

The Turkish pharmaceutical sector achieved a

14.5%

increase in exports, reaching

\$2.2

Billion

Annually.

partnerships between pharmaceutical companies and technology firms are expected to become increasingly important in the coming years. Another area of transformation is the growth of pharmaceutical e-commerce, which has been accelerated by the COVID-19 pandemic. This growth holds the potential to create a more competitive market and reduce drug prices.

THE NEAR FUTURE OF THE PHARMACEUTICAL INDUSTRY: DIGITAL THERAPIES (DTX)

According to KPMG’s Healthcare and Pharmaceutical Sector Outlook report, one of the applications set to shape the future of



the pharmaceutical industry is Digital Therapies (DTx). Enabled by recent medical advancements, wearable devices, technology platforms, data collection, and AI-powered real-time analytics, Digital Therapies are expected to become widespread globally and expand their market share by 2027. As governments increasingly focus on DTx, it will be crucial for the pharmaceutical industry to adapt to this technology.

The 12th Development Plan emphasizes leveraging public procurement to enhance competitiveness in global markets and strengthen supply security in the pharmaceutical sector.

12TH DEVELOPMENT PLAN: AIMING FOR A STRONG EXPORT INFRASTRUCTURE

On November 1, 2023, Türkiye unveiled its 12th Development Plan, outlining the country's roadmap for the next five years from 2024 to 2028. The plan aims to promote economic and social development, elevate Türkiye's international standing, and enhance national welfare. One of the key priorities of the plan is to maximize the utilization of Türkiye's existing resources to increase its growth potential. Within this framework, active industrial policies will be established, with the pharmaceutical and medical device sectors being among the priority areas for structural transformation in the manufacturing industry. The plan sets forth several policies and measures to leverage public procurement as a catalyst to boost competitiveness in global markets, reduce import dependency, and ensure supply security in the pharmaceutical and medical device sectors. The plan also includes measures to support production, R&D, and export infrastructure, particularly in the pharmaceutical sector, and strengthen supply security. Additionally, restrictions on pharmaceutical exports will be lifted within the framework of updating the Customs Union, and mutual recognition agreements with the EU will be implemented. Furthermore, export strategies for target markets will be developed, and institutional structures will be strengthened to increase high value-added local production and exports in the pharmaceutical sector.

“OUR MAIN FOCUS IS TO ESTABLISH A MEDICINE BRIDGE FROM TÜRKİYE TO THE WORLD”

“One of our primary goals is to be among the top 20 pharmaceutical producers in the countries we operate in and to increase our global market share.”

World Medicine, one of Türkiye’s pioneering pharmaceutical companies, was recognized as the company with the highest pharmaceutical exports at the İKMİB 2023 Export Stars Awards, thanks to its consistent growth and innovation-focused approach over the years. We spoke with Ruşen Kalender, Chairman of the Board, about World Medicine’s success strategies, the secrets behind its outstanding performance in exports, and its future goals.

What is your strategy for achieving global success? How many countries does World Medicine export to?

To sustain our success, we follow specific strategies. Among our primary goals is to be among the top 20 pharmaceutical producers in the countries where we operate and to increase our global market share. Our main focus is to establish a medicine bridge from Türkiye to the world and to make Türkiye a pharmaceutical production hub. Currently, we export to over 50 countries across continents such as Asia, Africa, Southeast Asia, and Latin America. Exports account for 75% of our total sales.

Are there specific countries where you want to grow? What is your main target in pharmaceutical exports?

In the pharmaceutical markets where we are

strong, we aim to be among the top five producers. Increasing our global market share is a priority. In this regard, Europe and America are on our radar. Our biggest goal is to be the single brand that comes to mind when “pharmaceutical export” is mentioned in Türkiye. This way, we will achieve our goal of being the pharmaceutical company that contributes the most to the Turkish economy.

How do you see Türkiye’s potential in the pharmaceutical sector? What position do you think Türkiye holds in the global pharmaceutical market?

Looking at our target markets, we want to conduct all our exports through Türkiye. Türkiye has high potential in terms of qualified human resources, production infrastructure, and logistics operations, which is why we are committed to making Türkiye our main production and center hub for pharmaceutical exports.

According to Deloitte, Türkiye has the potential to become a regional pharmaceutical production hub and even a regional R&D center. With qualified human resources and technological investments, I am confident that Türkiye will increase its share in the global pharmaceutical market and make a bigger name for itself in the world. We are committed to making new investments and initiatives focused on Türkiye to support this future.



Ruşen KALENDER
World Medicine Chairman

INTERVIEW



50+
country

5000+
Competent employee

450+
Product

4
Production center

Do you have any current activities or investments in digitalization?

At World Medicine, our Çerkezköy factory has an annual production capacity of 1.3 billion boxes. Behind this production capacity are high-tech production devices. We have equipped our laboratories and production infrastructure with state-of-the-art devices that enhance quality, eliminate errors, and most importantly, accelerate our processes by reducing time.

In the context of European Commission projects, we are continuing our role as a project partner and coordinator in a gene therapy project aimed at treating neurological diseases. We have signed collaboration protocols with academicians and research institutes from six different countries, including Germany and Portugal.

Can you provide information about your R&D and innovation activities? How does your new product development process work?

We continuously increase our investments in R&D. We allocate about 5% of the sales revenue from our R&D products to R&D expenses. For the past two years, we have been the second

company in Türkiye with the most projects across all sectors.

One of our most valuable investments in this regard is the WMINOLAB Innovation Laboratory. Our WMARGE laboratories are equipped with advanced high-tech devices. Our main areas of focus at WMARGE include biosimilars and biobetters, gene therapy for treating neurological disorders, drug repositioning, development and improvement of transdermal patches using nanotechnological methods, increasing absorption and distribution of active ingredients in inhaler products, and initiating international collaborations for Horizon Europe project calls for research and development. We collaborate with universities, research institutes, startups, incentive programs, and marketing teams both domestically and internationally for these projects.

What steps are you taking in terms of sustainability? Do you have any eco-friendly practices?

We continue to make national investments in Solar Energy Plants (GES) to contribute to improving the world and supporting the Turkish economy in every way. We are implementing a solar energy plant project with an annual capacity of 22 MEGAWATTS (MWE). During this period of global energy shortages, I believe our energy investments will be pioneering and encouraging for similar investments, especially in the pharmaceutical sector, in reducing Türkiye's energy dependency and transitioning to green and sustainable energy.

Based on this insight, we have focused on a goal called "Transition to 100% Renewable Energy." With our energy investments, we produce our own energy. Additionally, we already use Green Energy, or clean energy, in our factories.

We also follow this approach in our supplier selection, making collaboration decisions with environmental and sustainability considerations in mind. We conduct projects supporting well-known Civil Society Organizations in terms of environmental and social sustainability. We will continue to increase our efforts in environmental and social sustainability.

"We are determined to make Türkiye our main production and hub for pharmaceutical exports. Our biggest goal is to become the only brand that comes to mind when 'Pharmaceutical Exports' are mentioned in Türkiye."



TGL İLE MÜMKÜN!

TGL, güvenli taşımacılığı
deneyimli bir ekiple mümkün kılıyor.

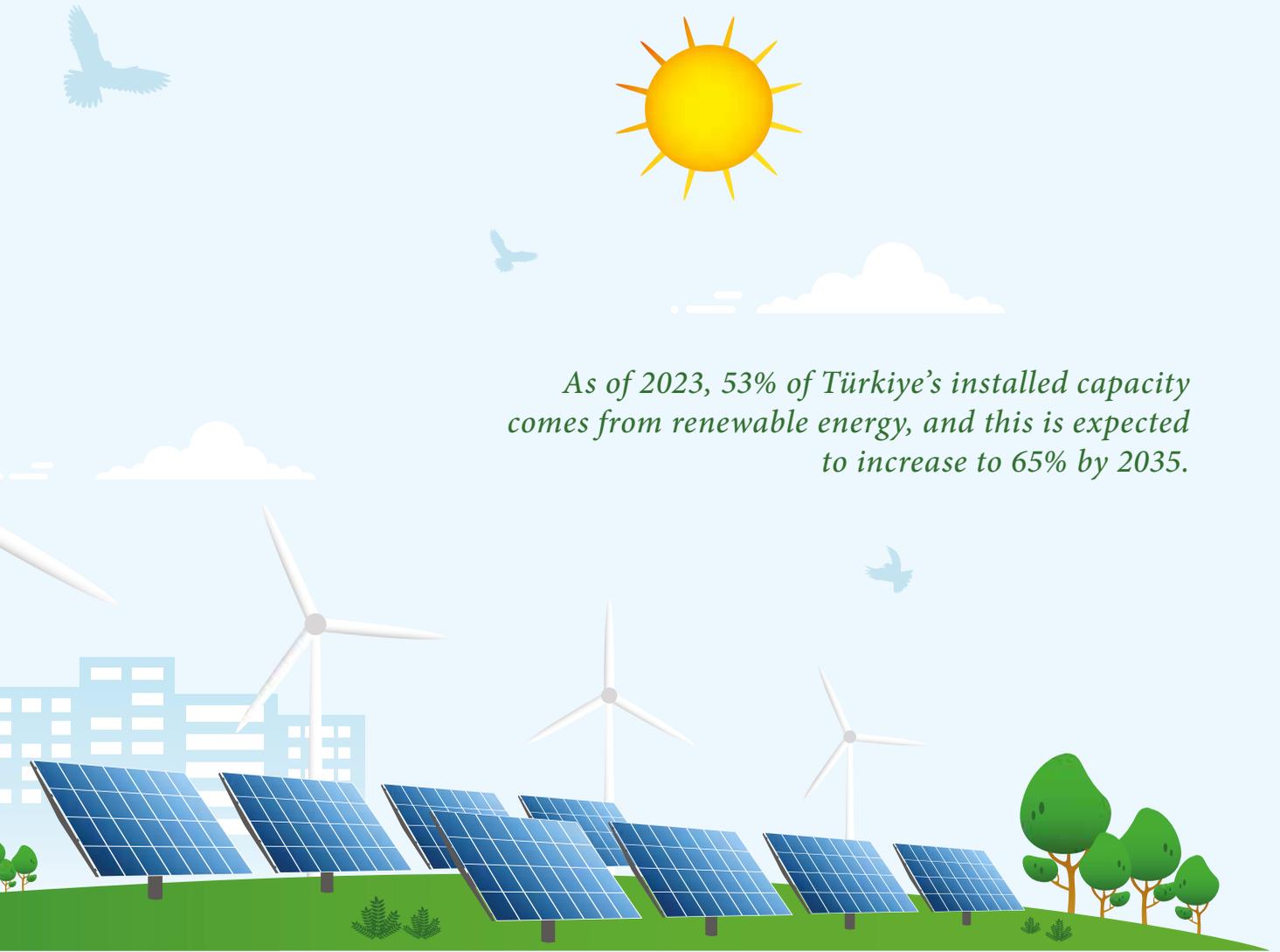
Sıvı Kimyasalların Taşınması | Intermodal Taşımacılık
Tank Konteyner Temizliği | Tank Konteyner Depolama





TÜRKİYE'S RENEWABLE ENERGY INVESTMENTS INCREASED

Türkiye, which has greater potential in renewable energy compared to other countries, exceeds the world average in its alternative energy investments and usage capacity.



As of 2023, 53% of Türkiye's installed capacity comes from renewable energy, and this is expected to increase to 65% by 2035.

Fossil fuels, widely used around the world, are increasingly being replaced by renewable energy sources due to growing environmental awareness. Energy is one of the most significant factors determining a country's dependence on foreign resources. In many countries, including Türkiye, a large portion of the foreign trade deficit is due to energy costs. During the Russia-Ukraine war that began in 2022, we witnessed a global energy crisis when Russia, the world's largest natural gas exporter, halted gas trade. Besides the environmental and political impacts of fossil fuels, one of their greatest disadvantages is that they are depleting. Therefore, interest in renewable energy sources is growing to ensure energy security and reduce foreign depend-

ence. The National Energy Plan presented by the Ministry of Energy and Natural Resources in May 2022 includes ambitious targets indicating that investments in renewable energy sources will increase. Under the plan, the installed capacity of renewable energy, which reached 53% by June 2023, is expected to rise to 65% by 2035.

12TH LARGEST IN RENEWABLE ENERGY: TÜRKİYE

Türkiye, which imports 91% of its oil, 98% of its natural gas, and 56% of its coal, had an energy bill of \$99.5 billion in 2022, accounting for 73% of the foreign trade deficit. While these figures showed a slight decrease in 2023, it is inevitable for Türkiye to adopt innovative solutions and



sustainable strategies in its energy policy.

Türkiye has greater potential in renewable energy compared to other countries. PwC Türkiye's "2023 Overview of the Turkish Electricity Market" report highlights that the focus on renewable energy over the past 10 years has set Türkiye apart from other countries, noting that Türkiye ranks as the 12th largest country globally in renewable energy capacity. Although Türkiye's efforts for a green transition, like the National Energy Plan, are accelerating, the country has yet to set a clear policy for phasing out coal. At the same time, Türkiye ranks as Europe's 5th largest country in renewable energy installed capacity. According to PwC's report, the total installed capacity in Türkiye has increased, especially since 2014, through the widespread adoption of renewable energy sources. A significant portion of the electricity generated from renewable energy comes from hydropower plants.

CAPACITY INCREASE IN RENEWABLE ENERGY SOURCES

Türkiye's goal of increasing its solar energy

Türkiye, which imports 91% of its oil, 98% of its natural gas, and 56% of its coal, had an energy bill of 99.5 billion dollars in 2022, accounting for 73% of its foreign trade deficit.

capacity plays a critical role in the country's transition to sustainable energy sources. The National Energy Plan prepared by the Ministry of Energy and Natural Resources envisions the largest capacity increase among renewable energy sources to occur in solar energy, in line with the goal of reaching net zero emissions by 2053. Türkiye's solar energy installed capacity, which was 6.7 gigawatts at the end of 2020, is expected to rise to 52.9 gigawatts by 2035. This increase implies that the installed solar energy capacity will grow by approximately 500% by 2035.

Currently, in Türkiye, where fossil fuels dominate primary energy consumption, the share of thermal power plants, which includes coal and natural gas-based production, is projected to drop from 57.6% in 2020 to 34.2% by 2035 in the scenario where these capacity increases materialize. Solar energy's share will rise to 16.5%, wind energy to 17.7%, nuclear energy to 11.1%, and hydropower's share will drop to 17.3%. The remaining portion of production will come



from other sources, including geothermal and biomass.

As part of the net zero emissions goals, it is estimated that the share of fossil fuels in Türkiye's primary energy consumption, which stood at 83.3% in 2020, will decrease to 20.8% by 2053. Overall, coal's share is calculated to be 3.6%, natural gas 11.7%, and oil 5.6%.

TÜRKİYE NEEDS TO ACCELERATE SOLAR ENERGY INSTALLATIONS

As one of the countries with the greatest potential for renewable energy, Türkiye enjoys an annual sunshine duration of 2,741 hours and a total annual solar energy value of 1,527 kWh/(m².year), positioning it as a country with significant potential. According to research conducted by Ember, volatility due to drought poses a serious risk for Türkiye, where hydropower is the main source of renewable electricity. Hydropower production in key provinces such as Şanlıurfa, Elâzığ, and Diyarbakır fell by 10 TWh, or 39%, from 2020 to 2021. To cover the gap in hydropower, Türkiye turned

to expensive imported natural gas, but it is believed that accelerating the installations of wind and solar energy systems could end this risky dependence.

RECORD IN WIND ENERGY

With a diverse range of renewable energy potentials, including wind, solar, geothermal, biomass, hydropower, wave, and hydrogen energy, Türkiye holds an important position in renewable energy sources, especially wind energy, which can be produced entirely using domestic resources. Türkiye, which has 3,983 active wind power installations across nearly 50 provinces, met approximately 11% of its electricity demand from wind farms last year. Wind energy capacity increased by 21.3 MW in 2022, reaching 10,882.8 MW. According to data released by the Ministry of Energy and Natural Resources, wind energy broke a new record on January 7, 2024, reaching 28%. While total electricity produced from all sources was 778.5 GWh, electricity generated from wind reached 218 GWh.



12

Türkiye ranks as the 12th largest country globally in renewable energy capacity.

%11

Türkiye met approximately 11% of its electricity demand from wind farms last year

“WE NEED TO ACCELERATE OUR RENEWABLE ENERGY CAPACITY INSTALLATIONS”



Sena SERHADLIOĞLU
SHURA Energy Transition Center Senior
Energy Analyst Sena

Currently, Türkiye’s total installed electricity capacity has exceeded 106 GW, and approximately 55% of this capacity is comprised of renewable energy plants. Nearly all of the 2.5 GW capacity commissioned last year came from renewable energy sources.

In the Türkiye National Energy Plan, which outlines Türkiye’s medium- to long-term energy sector goals, the installed capacity is expected to reach 190 GW by 2035, with 65% of this capacity coming from renewable energy sources. In this context, investments need to accelerate, and approximately 1.5 GW of wind and 3.5 GW of solar capacity must be commissioned annually until 2035. Therefore, we need to speed up our renewable energy capacity installations to achieve at least 5 GW annually.

Renewable Energy Costs Have Dropped

With technological advancements, renewable energy costs have significantly decreased in recent years. Between 2010 and 2022, the leveled electricity

costs of wind and solar energy fell by 69% and 89%, respectively. As a result of these declining costs, solar and wind energy have become some of the cheapest energy sources in Türkiye, as they are globally. The ability to locally produce renewable energy and its sustainability ensure energy supply security and reduce the need for energy imports derived from fossil fuels. As electricity generated from renewable sources increases, electricity prices decrease, making energy more economically accessible. Considering Türkiye’s commitment to transitioning to a net-zero-emission economy by 2053, accelerating the integration of renewable energy sources into the grid will provide long-term economic benefits by reducing greenhouse gas emissions.

Türkiye Ranks 12th Globally in Renewable Energy Capacity

In the electricity sector, Türkiye has achieved rapid growth in renewable energy capacity, particularly in wind and solar, over the past decade. In addition to technological advancements and decreasing

investment costs, the incentives implemented in Türkiye have played a key role in this growth. Currently, Türkiye ranks 5th in Europe and 12th in the world in terms of installed renewable energy capacity.

However, for a comprehensive energy transition, renewable energy needs to be utilized not only in the electricity sector but also in energy-intensive sectors such as industry, buildings, and transportation, which are still dependent on fossil fuels. Particularly in sectors that play a significant role in Türkiye’s exports, low-carbon production has become one of the most important criteria for international competitiveness. Increasing the share of renewable energy in these sectors requires boosting clean electrification. This will reduce fossil fuel consumption and lower greenhouse gas emissions. Additionally, maximizing energy efficiency practices and adapting to new and emerging technologies, such as green hydrogen for processes where direct electrification is not feasible, will also be important.



“FIRST ENERGY EFFICIENCY, THEN RENEWABLE ENERGY”

Onur ÜNLÜ
ESCON Energy CEO

Energy, which is responsible for 75% of global greenhouse gas emissions, has become a top priority for countries and companies, especially in recent years, due to the effects of climate change as well as supply, security, and cost issues. Türkiye stands out among countries for its efforts in the energy sector in recent years. We are one of the two countries that reduced energy intensity consecutively in 2021 and 2022. However, our energy intensity is approximately 28% higher than that of EU countries. This situation indicates the abundance of our energy-intensive industries and our potential for energy efficiency.

The energy efficiency potential in Turkish industry is 32%. We reached this rate based on the results of the “Energy Efficiency Report of Turkish Industry,” which we prepared as ESCON Energy to measure energy efficiency in the industry and reveal the potential in this area. We shared the second edition of the report with the public last year, following the first publication in 2021. In the second report, we examined 411 factories from 14 sectors across 51 cities, as well as 23 commercial buildings.

Of these businesses, 185 are listed in ISO 500, and 69 are in the Second ISO 500 list for 2021. Therefore, the potential for energy efficiency is high in every sector of our country’s industry, and we have a long way to go in this regard. Through investments in energy efficiency and depending on the type and scope of the implementation, it is possible to reduce energy consumption by 20% to 50%. For this reason, this issue should be the top priority on the agenda of businesses.

Target: 100 Million Tons of Emission Reduction through Energy Efficiency

Energy efficiency helps reduce energy consumption through waste heat recovery, cooling solutions, heat pumps, ORC (Organic Rankine Cycle) systems, and process-specific energy solutions. Our country aims to reduce energy consumption by 16% and cut 100 million tons of emissions under the 2024-2030 National Energy Efficiency Action Plan. Additionally, the “Law Proposal on Amendments to the Mining Law and Some Other Laws,” passed by the Turkish Parliament last May, includes crucial provisions that will promote the

spread of energy efficiency. These include raising the upper limit for energy efficiency projects, supporting investments with high savings potential, and contributing to technology, innovation, and digitalization. It also supports companies that reduce energy intensity, carbon intensity, or energy consumption, and removes sectoral restrictions in VAP (Voluntary Agreements Program).

Energy Efficiency Reduces the Cost of Renewable Energy Investments

Meanwhile, Türkiye ranks 1st in the world and 5th in Europe in terms of renewable energy capacity. Thus, we are in a good position in this area. However, there is some conceptual confusion regarding energy efficiency and renewable energy. When a business invests in renewable energy, the source of the energy consumed changes. For example, while fossil fuels were used previously, the investment now allows energy to be sourced from clean sources such as solar power. However, this does not change the amount of energy used. Therefore, to reduce consumption, energy efficiency measures must first be implemented. Afterward, the reduced energy consumption can be supplied from renewable energy sources, significantly lowering the cost of renewable energy investment. For this reason, our priority should be energy efficiency investments, which are more effective and provide greater returns than renewable energy.

TURKISH CHEMICAL INDUSTRY GAINING MOMENTUM IN THE CANADIAN MARKET

The Turkish chemical industry strengthened its presence and increased its market share in Canada, achieving an export of \$145 million, reflecting an 8.1% increase in 2023.

Thanks to its strategic location, Canada serves as a connection point between the North American market and Asia. Comprising 10 provinces and three territories, Canada is the 9th largest economy in the world with a GDP of \$2.1 trillion. It is one of the countries with a strong and stable economy. With a per capita income level of \$52,722, Canada is among the world's most affluent countries and is a member of both the G-7 and G-20. The country's natural resources are a major revenue source supporting its economy, while its advanced industry and dynamic manufacturing structure underpin its strong and sustainable growth. The

ÜLKE KÜNYESİ

Population
40,7 million

Unemployment rate
6,1%

GDP
2,14 Billion \$

abundance of investment flows and natural resources contributes to Canada being one of the world's leading industrial powers.

INDUSTRIAL GIANT

Canada's industrial strength is a key factor in its position among the world's largest economies. Its economy largely revolves around international trade, with exports and imports of goods and services accounting for about one-third of its GDP. In 2023, Canada's total exports amounted to \$568.3 billion, while imports were \$558.7 billion. Canada's closest commercial relations are with the US,

China, and Japan in terms of exports, and it has significant import relationships with the US, China, and Mexico. With its dominance across all sectors due to its natural resources, Canada adds value with resources like gold, nickel, uranium, diamonds, and lead. It also hosts the world's second-largest oil reserves. Canada is one of the leading countries in natural gas reserves and production, ranking 15th in proven reserves and 5th in natural gas production and export. In addition to oil and natural gas, Canada is one of the largest producers of uranium and zinc. While energy resources play a crucial role in the development of Canada's diverse economy, the services sector, which constitutes 70% of economic activities and 75% of employment, also significantly contributes to this development.

TURKISH CHEMICAL SECTOR ON THE RISE IN CANADA

Between 2022 and 2023, Türkiye's exports to Canada experienced a general decrease of 9.7%. Exports dropped from \$1.88 million in 2022 to \$1.7 million in 2023. Among exports to Canada, the steel sector leads, followed by the grains, legumes, oilseeds products sector, and the chemical substances and products sector. The chemical sector, which is one of the top three sectors in Türkiye's exports to Canada, continues to gain significant momentum. According to data published by the Turkish Statistical Institute (TÜİK), chemical sector exports increased from \$134 million in 2022 to \$145 million in 2023, reflecting an 8.1% growth. This growth trend in the chemical sector offers new opportunities for Turkish chemical industries and contributes to strengthening trade relations. The Turkish chemical industry, which increased its exports to Canada in 2023, is expected to strengthen its presence and market share in Canada in 2024.

Investment relations between Türkiye and Canada are also quite strong. Between 2002 and 2020, Türkiye invested \$114 million in Canada. According to the latest report from

Canada, with its natural resources, holds a dominant power across various sectors, adding value through its resources like gold, nickel, uranium, diamonds, and lead.

568

Billion \$

Canada's total trade volume (2023)

559

Billion \$

Total import (2023)

A GLOBAL POWER IN POTASSIUM

Canada ranks among the world's most important countries due to its rich mineral and resource deposits. It is a global leader in the production of coal, nickel, titanium concentrate, aluminum, iron ore, zinc, copper, gold, lead, molybdenum, and diamonds. According to the Electronic Industries Alliance (EIA), Canada had 170 billion barrels of proven crude oil reserves in 2021, placing it fourth globally and accounting for 10% of global reserves. In the same year, with 73 trillion cubic feet of proven natural gas reserves, Canada ranked 15th among 92 countries, holding a 1% share of the global total. While Canada was the world's largest uranium producer until 2009, it fell to second place after Kazakhstan entered the market. However, Canada remains the global leader in potassium production.



The longstanding relations between Türkiye and Canada have significantly increased in recent years, both diplomatically and economically.



145
Billion \$
Türkiye's
chemical sector
exports to
Canada (2023)

the Ministry of Industry and Technology, there are 563 Canadian-invested companies in Türkiye. These investments are primarily concentrated in the energy, mining, information technology, and infrastructure sectors.

TÜRKIYE-CANADA RELATIONS REMAIN STRONG

The longstanding relations between Türkiye and Canada have significantly increased in recent years, both diplomatically and economically. As members of the G20, NATO, the Organisation for Economic Co-operation and Development (OECD), the Organization for Security and Co-operation in Europe (OSCE), the United Nations, and the World Trade Organization (WTO), Türkiye and

Canada share important platforms that shape their bilateral relations. In 1993, efforts to establish a Parliamentary Friendship Group between the two countries began, resulting in the formation of the first Türkiye-Canada Friendship Group in the Canadian Parliament in 1996. Türkiye is Canada's 34th largest trade partner, with 85% of Türkiye's exports to Canada consisting of industrial products and 15% agricultural products. On the other hand, imports from Canada mainly consist of raw materials and semi-finished products. To further enhance trade and economic relations between the two countries, a Memorandum of Understanding (MoU) for the Economic and Trade Joint Committee (JETCO) was signed on June 8, 2019.

The Turkish Paint Industry

AIMS TO BECOME A GLOBAL POWER

As a cornerstone of the industry, the paint sector is steadily advancing towards becoming a global force with its \$1.42 billion export value.



The Turkish paint industry, which has a dynamic structure within the chemical sector, continues to be one of the pillars of the industry by contributing significantly to the economy. The sector, which has a wide range of applications from automotive to construction, textiles to furniture, holds an important position within the manufacturing industry. While the global paint market is expected to grow at an average annual rate of 3.5% between 2010 and 2030, its economic size is expected to reach 134 billion euros by 2030. The fastest-growing region in this expanding market is predicted to be Asia, with a growth rate of 5%. The Turkish paint industry, which has accelerated its growth with the development of the global construction industry, has reached a volume of 1 million tons and holds a 2% share of the global paint market. Over the past decade, the Turkish paint industry has risen significantly, ranking fifth globally in production, following Germany, Spain, France, and Italy. With an increasing production capacity of 600,000 tons, Türkiye

THE TOP 5 COUNTRIES IN TERMS OF EXPORT VOLUME:

- Russian Federation
- Iraq
- Uzbekistan
- Iran
- Georgia

exports to 160 countries. Paints, known for their protective properties, reflect the speed of industrialization as increased production and demand in the sector. Despite importing 70% of its raw materials, Türkiye is progressing towards becoming a regional power with its value-added products, including the production of aircraft and ship paints, as well as the paint for the domestic vehicle TOGG.

EXPORT INCREASE OF 3.51% FROM THE TURKISH PAINT SECTOR

According to data prepared by the Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB), the Turkish paint sector's exports in 2022 amounted to \$1.42 billion, and in 2023,

The Turkish paint industry, which has gained momentum in the past decade, ranks fifth globally in production, following Germany, Spain, France, and Italy.



According to the WPCIA report, the Asia-Pacific region, which accounted for 54.7% of global production in 2023, leads the world as the largest producer of paints and coatings.

this figure increased by 3.51% to \$1.47 billion. The top three product groups with the highest sales in 2023 were plastic-based putties, other synthetic paints, and printing inks. These exports accounted for 15% of total exports. In terms of exports by country for the January-December 2023 period, Russia ranked first with an 18% share, totaling \$264 million. Iraq came in second with \$127 million and a 9% share, followed by Uzbekistan with \$80 million and a 5% share. Significant increases in exports were

observed in countries like Congo, Slovakia, Saudi Arabia, Guinea, and Ecuador compared to the previous year.

THE GLOBAL PAINT INDUSTRY GATHERED IN ISTANBUL

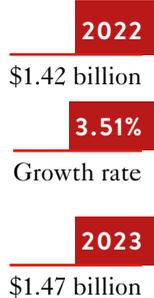
The “Paintistanbul & Turkcoat 2024” fair, which brought together the paint and raw materials sectors under one roof, demonstrated the potential of the Turkish paint industry to international buyers from 29 countries. The fair, which

provided significant added value to the sector's exports through the business volume generated, was held from May 8-10 in collaboration with Artkim Fuarçılık and the Paint Manufacturers Association (BOSAD). "Paintistanbul & Turkcoat 2024" is the world's third-largest fair in the paint and raw materials industry and was opened with the participation of Deputy Minister of Industry and Technology Oruç Baba İnan, President of the World Paint Manufacturers Association Tom Bowtell, BOSAD Chairman of the Board Kenan Baytaş, and İKMİB Chairman of the Board Adil Pelister. Deputy Minister of Industry and Technology Oruç Baba İnan noted that the global paint market continues to grow, stating, "According to analyses, the sector is expected to grow by 30% by 2030. Türkiye continues to be one of the most important pillars of the global paint market, with a 2% share. It is inevitable that our country will become a hub in the paint sector. I believe this fair will also contribute to the growth of the Turkish paint sector abroad."

also highlighted the challenges faced by the sector, saying, "Rising inflation, labor shortages, the fact that 70% of raw materials are imported, insufficient investment in R&D, the sector's financial structure, long payment terms, and the lack of sufficient measures to increase the sector's competitiveness are some of the urgent problems we need to address. Despite all these negative effects, we aim for 15% growth in the Turkish paint sector in 2024. We must be prepared for this growth with our strategic development plans."



Paint Sector Exports



15% GROWTH TARGETED IN 2024

BOSAD Chairman of the Board Kenan Baytaş, stating that the paint and paint raw materials industry is making confident strides toward becoming a regional power,

"OUR GOAL IS TO EXPAND OUR PLACE IN THE WORLD"

İKMİB Chairman of the Board Adil Pelister, stating that the chemical sector closed 2021 with \$25 billion in exports and 2023 with \$30.6 billion, said, "I have no doubt that the Chemical Technology Center we will open this year will be a major investment for the future of the chemical sector; this center will provide great benefits to our country. We are a major producer for Europe, and our goal is to expand our place in the world. The chemical sector, in terms of its impact, supplies resources to 27 other sectors, making it one of the most important factors in the growth of countries. Our aim is to have our strategically important sector supported at the highest level."



“OUR PAINT INDUSTRY PRODUCES TO GLOBAL STANDARDS”

Kenan BAYTAŞ

President of the Paint Manufacturers Association



“Our country’s location, strong R&D investments, and quality workforce have made us a global player. We are working towards our goals with an awareness of our sector’s strengths.”



We spoke with Kenan Baytaş, President of the Paint Manufacturers Association (BOSAD), about the development of the Turkish paint industry, its export potential, and the challenges faced by the sector.

How do you evaluate the development of the Turkish paint industry in recent years? What is the export potential of the Turkish paint industry?

There are nearly 600 companies operating in our paint industry. The Paint Manufacturers

Association (BOSAD) represents 85% of the paint and raw material producers in our country. As the Chairman of the Association, I can say based on our members that our paint industry produces to global standards. Looking at Türkiye’s current position in the global paint industry, we see that our country has a sector that rapidly adapts to technological innovations in paint production and offers high-quality products. From production to logistics, planning to inventory management, our sector operates at global standards. In the international market, we are a regional power as the 5th larg-

There are nearly 600 companies operating in our paint industry.

In the international market, we are a regional power as the 5th largest sectoral producer in Europe.

est sectoral producer in Europe. Our industry, with a volume approaching 1 million tons, holds a 2% share of the global paint market.

What is the export potential of the Turkish paint industry? Which countries are on your export route?

Türkiye’s paint industry has a very high export potential. This applies to both traditional markets and new, growth-potential markets. Our sector’s exports in 2023 are around \$1.47 billion. Increasing construction activities and industrial growth in regions such as the Middle East, Africa, and Asia are also driving demand for Turkish paint products. Exports are made to approximately 200 countries, including Russia, Iraq, Uzbekistan, Iran, and Egypt. The Asia-Pacific and South American markets are among the ones we aim to grow in.

What activities does BOSAD undertake to support the development of the sector in Türkiye?

Through the events we organize, BOSAD represents the sector on national and international platforms. We held our 9th paintistanbul & Turkcoat fair from May 8-10. In 2026, we will bring the sector together at the tenth edition of our fair.

Another of our international activities is our congress. Our recent congress, held under the slogan “Towards a Smart and Sustainable Future,” was well received. Our 2025 event plan includes a congress where leading firms in the paint industry, top executives, and expert academics will gather.

How are climate change and environmental regulations affecting the paint industry? What strategies is the sector adopting to adapt?

Sustainability and innovation are important throughout the entire production process, from raw material supply to getting the product onto the shelves. In recent years, our sector has undergone significant transformation. At BOSAD, we are also conducting activities with an awareness of the critical role and impact our sector plays in sustainability.

We are involved in efforts related to REACH, CLP, VOC, TDG (Transport of Dangerous Goods), GHS (Globally Harmonized System), Biocides, sustainability, and the European Green Deal. We closely monitor significant global developments in the sector.

What is the current level of domestic raw material usage in the sector?

The use of domestic raw materials has always been our priority. However, in our sector, 70% of raw materials are imported. Considering this, I can say that our use of domestic raw materials is around 30%.





*“WE MUST ESTABLISH
A STRONG IMAGE
FOR TÜRKİYE IN THE
COSMETICS INDUSTRY”*



**GOLDEN ROSE
AT A GLANCE**

165

Total number of stores

105

Number of overseas stores

%50

Percentage of female employees

**%25
increase**

Export target for 2025

Golden Rose, one of the leading brands in the Turkish cosmetics industry, stands out with its pioneering position in the sector and its superior performance in exports since its establishment. Uğur Adıyaman, Export Sales Manager at Golden Rose, shared insights on how the brand has become a global player in international markets.

Golden Rose is one of the first brands that comes to mind when thinking of Turkish cosmetics, and its brand recognition extends beyond Türkiye's borders. What is your strategy for achieving global success through brand building in the cosmetics industry?

Golden Rose is a brand established by the Erkul family many years ago, under the leadership of the late Ahmet Erkul, in 1983. Throughout this process, our strategies have continued successfully from the past to the present. This is a team effort, and every individual here has contributed to this success. Therefore, this success is not the result of a single person but rather a collective effort. We are a company that operates mainly through distributors. Our main goal is to produce the highest quality product at the most affordable price under the most advanced technological conditions. The facility we operate in is unique in Türkiye and is among the few in Europe. Our strategy is based on the principles that have been passed down from the past, focusing on finding the right customers, guiding them with the right pricing, right product, and right distributor. Thanks to these principles, we are making rapid progress in our branding journey.

What is your market dominance in terms of exports? How does Golden Rose, a brand of Erkul Cosmetics, position itself in the global market?

Our main line of business is exports, but we also have a strong presence in the domestic market. It would be unthinkable for a company producing in Türkiye not to be in the domestic market. Exports constitute a large portion of our total sales, with domestic sales in Türkiye accounting for only about 20-25% of our total sales. Currently, out of the 60 stores in Türkiye, 24 are owned by us, and we have a total of 165 stores worldwide. We continue to open stores in locations where we see

potential. Golden Rose and Erkul Cosmetics have been the export leader for the past 13 years. The main driving force behind this success is Golden Rose. In the past 5-6 years, private-label products have also become a part of this success. However, the foundation of our superior performance in exports is the Golden Rose brand.

How do you assess the interest in Turkish products from other countries?

We are a brand that has been in this business for many years. Therefore, our products have been well-received in many countries, especially in the European Union, America, the Balkans, North Africa, the Middle East, Turkic Republics, and Russia. This appreciation has continued through generations. As we expanded our product range, our sales also increased. This process has been fortunate for us. However, it is currently very challenging to establish a cosmetics brand globally. Competition is intense, with many strong companies. Competing with these companies and properly promoting Turkish cosmetics is a necessity. I am well aware of how surprised European and other foreign visitors are when they ask, "Is such production possible in Türkiye?" after visiting our facility. We place great importance on technological innovations in our production area. By effectively using technology in the cosmetics industry with robots in our production processes, we offer high-standard products to our customers. Having such a production capacity in Türkiye provides a significant advantage for the Turkish cosmetics industry.

In this competitive environment, which brings innovation and continuous development, how does Golden Rose stand out?

Erkul Cosmetics is a semi-integrated facility and is actually a group of companies. In addition to producing color cosmetics in our factory, we also produce about 90% of the packaging for our products. We are also a plastic manufacturer, and this gives us a significant advantage in competition. It's also a huge advantage in accelerating product diversity. As I mentioned earlier, this is entirely a team effort. To be competitive in the cosmetics industry, good production, high production volumes, and affordable sales are necessary. We possess all



To be competitive in the cosmetics industry, good production, high production volumes, and affordable sales are necessary. We possess all these elements.

these elements.

Today's consumers expect more from brands than just products or services; they also demand sustainability, inclusivity, digitalization, and innovation. What strategies does Golden Rose adopt to meet these changing expectations and carry your brand into the future?

Any cosmetics manufacturer that does not comply with the European Cosmetics Regulation norms cannot sell products to Europe, and if they do not comply with FDA (Food and Drug Administration) norms, they cannot sell to the United States. Therefore, we closely follow the sustainability standards in these regions. These steps, which encompass a wide range of processes from carbon footprint to producing packaging from recycled materials, are of great importance for our future. Because we must protect our world. Sustainability is important not just in name but also in truly being sustainable. We at İKMİB also place great importance on this issue.

What are Golden Rose's goals for the next 5-10 years?

We continue to work hard on production and investment. Our company was founded with 100% Turkish capital. Therefore, I can say that in the next

few years, our sales will increase, and we will be able to make new investments with new products. However, global economic uncertainties and various conflicts can hinder our plans. For this reason, we are focusing on more grounded and reliable projects. By making new investments in countries where we see potential, we are trying to secure the future of both ourselves and our customers. In the past, Türkiye had difficulties selling products to Saudi Arabia. However, as of April, we have opened six stores under the Golden Rose brand. Within the next five years, we aim to reach a total of 35 to 50 stores. By making the right partnerships in the right locations, we will ensure that our brand is carried into the future.

Are there any new markets you are targeting?

Latin American countries, in particular, are an attractive market for us. Thanks to the Cosmeet B2B meetings we have held in Panama through İKMİB over the past two years, we have started selling to companies in this region with potential. We are also exploring regions like the Far East and Australia. It is time to move beyond the four-hour flight route and enter new markets. Profitability is generally higher in these regions. Therefore, I am among those who still believe that turning our gaze a bit more towards the West is important.

“MURNIA PRODUCTS FILL A CRUCIAL GAP IN CANCER TREATMENT”



“Murnia products fill a crucial gap in cancer treatment, which is already difficult for patients to tolerate, by helping them cope with skin and mucosal wounds that develop during treatment, allowing them to complete their treatment without interruption.”

Mouth sores and skin burns caused by radiotherapy and chemotherapy during cancer treatment can cause more pain for patients than cancer itself. We spoke with Hülya Dağöttüren, Biochemistry Specialist and founder of Umayana, who developed two products for the treatment of these wounds.

First of all, we would like to learn more about the Umayana brand. Can you tell us about the founding story of Umayana?

Where does the brand’s name come from? I founded Umayana as an LLC company in California with an American

friend during the year I decided to return to Türkiye from the United States. After working for four years at a private university in Türkiye, I decided to focus entirely on my patents and formulations, so I established Umayana Biotechnology under that name at Teknopark Istanbul in early 2022. I wanted my products to be launched from my own country for the first time. We were excited to name our company “Umayana” because, in Turkish mythology, Umay Ana is associated with fertility. She is the owner of the tree of life, protects children, spreads abundance to the world, and radiates light. From the very beginning, we chose the name Umayana to reflect not only

the scientific value of our products but also our belief in them.

You have developed Murnia Gel and Murnia Cream, which heal mouth sores and skin wounds and burns caused by radiotherapy and chemotherapy in cancer patients. How did this idea come about, and how do these two products help in healing such wounds?

While working at the Pediatric Hematology and Oncology department at Istanbul Medical Faculty, I encountered mouth sores known as “oral mucositis.” During the same period, I completed my thesis on antioxidant activity in tumor tissues of patients with bowel cancer. One of the main sources of wounds caused by cancer treatment is harmful oxygen radicals. Therefore, I focused my work on providing an antioxidant solution for cancer wounds on the skin and mucosa. Another direction I pursued was ensuring that the patented molecules and overall formulation had clean ingredients, avoiding any content that could contain harmful oxygen radicals. Mouth sores occur in 40% of all cancer patients undergoing treatment. These sores are extremely painful and make it difficult for patients to eat or even drink water, leading them to describe the condition as “worse than cancer.” One of the toughest aspects is that treatment often needs to be paused until the patient recovers from these sores. Meanwhile, the cancer may mutate, requiring the treatment to be replanned. These products, after completing R&D, were clinically tested and presented at international congresses, such as the World Congress of the Academy of Oral Oncology in 2019 and the MASCC/ISOO: Multinational Association of Supportive Care in Cancer/ International Society of Oral Oncology Annual Meeting in 2022, as well as at national congresses on Radiation Oncology. In a clinical trial conducted at Medicana Hospital, we proved that our products are preventive and protective. None of the patients using Murnia developed painful open sores, and their treatments were not interrupted.

What are the distinguishing features of these products, and what advantages do they offer compared to other treatments?

“Our most distinguishing feature is our patented core ingredient, the formulas we developed from it, and their highly effective performance.”

Mucositis is the most severe side effect of cancer treatment. Currently, there is no product on the global market that prevents mucositis. Murnia products fill a critical gap in cancer treatment, which is already difficult for patients to tolerate, by helping them cope with skin and mucosal wounds that develop during treatment and allowing them to complete their treatment without interruption. International studies have shown that treatment interruptions can cost the patient and the state an average of \$20,000 in additional expenses. Our most distinguishing feature is our patented core ingredient, the formulas we developed from it, and their highly effective performance. Murnia’s ease of use, the fact that it doesn’t require hospital use, and, most importantly, its clean content set us apart from competitors.

How do you evaluate the interest in your products, which have been commercialized under the names Murnia Gel and Murnia Cream and patented in the USA, EU, and Türkiye?

The market launch of the formulations is being carried out through a Sales License Agreement with Çapa Medikal, one of the largest medical companies in our country. As of early 2024, Çapa Medikal has begun establishing a sales network for the products in Türkiye. The demand for our products is increasing daily due to their success, especially from leading healthcare institutions in our country, such as Medicana Hospital and Koç University Hospital. To meet the growing demand for these products both locally and globally, we continue to work with the European Innovation Council and Oral Health groups in the United States.

What are your future goals and projects?

We continue to work with the European Innovation Council and Oral Health groups in the United States, targeting global markets. Recently, Umayana was selected as the only Turkish company among four American firms from a pool of 70 projects by an Oral Health group. In the short term, we are moving forward with solid steps to reach global markets while adhering to regulatory requirements.



“WE ARE CONDUCTING EXPERIMENTAL AND THEORETICAL RESEARCH ON RECHARGEABLE BATTERY CHEMISTRIES”

“Chemistry is the fundamental component of most things in our lives. Someone educated in the field of chemistry can contribute to many sectors that make a difference in the world, such as energy, biochemistry, petrochemicals, pharmaceuticals, cosmetics, and materials.”

In 2022, Damla Eroğlu Pala, who won the L'Oréal-UNESCO “For Women in Science” Award in Physical Sciences and aims to leave a mark on the scientific world with her work, conducts experimental and theoretical research on rechargeable battery chemistries, such as lithium-sulfur batteries. She states that her project aims to contribute to a sustainable environment and energy, solving a significant problem both at the national and global levels, and that this project will play a critical role in addressing the energy problem of our time.

In a time when we need knowledge and scientists more than ever, you are also making a name for yourself with your work. Can we start by getting to know you a little bit?

I received my undergraduate and graduate degrees from the Department of Chemical Engineering at Middle East Technical University (METU). During my master's, I won the Outstanding Academic Achievement Award and the Prof. Dr. Hasan Orbey Research Award. Following this, I completed my PhD in the

Department of Chemical Engineering at Columbia University in the United States. During my PhD, I gained experience in modeling and characterizing complex electrochemical systems, such as rechargeable batteries and metal/composite electrodeposition. I conducted my postdoctoral research at Argonne National Laboratory in the United States. During my time at Argonne, I worked on the “Joint Center for Energy Storage Research” project, a center supported by the U.S. Department of Energy, involving 14 different organizations, focusing on the techno-economic modeling of rechargeable batteries developed for use in electric cars. Since 2017, I have been working in the Department of Chemical Engineering at Boğaziçi University. In 2022, I received the L'Oréal-UNESCO “For Women in Science” Award in Physical Sciences and the METU Prof. Dr. Mustafa N.

The development of rechargeable batteries with high energy density and low cost will play a critical role in solving the energy problem of our time.

Parlar Foundation Research Incentive Award. In my “Electrochemical Engineering Research Laboratory” at Boğaziçi University, I conduct research on lithium-sulfur batteries.

What is the main focus of your research? What topics are you investigating?

I am a chemical engineer specializing in electrochemical engineering. In my research laboratory, called the “Electrochemical Engineering Research Laboratory,” we conduct experimental and theoretical research on rechargeable battery chemistries, such as lithium-sulfur batteries.

You won the L'Oréal-UNESCO “For Women in Science” Award in Physical Sciences. What are the innovations and features that stand out in your project?



ACADEMIC VIEW

Chemistry is very important in my research, as I deal with complex electrochemical systems.

The development of rechargeable batteries with high energy density and low cost will play a critical role in solving the energy problems of our time. Lithium-sulfur batteries have gained significant importance in recent years due to their high theoretical specific energy. However, to commercialize lithium-sulfur batteries, it is necessary to increase their energy density and cycle life. Due to the complex mechanisms occurring in lithium-sulfur batteries, battery performance is highly dependent on battery design, especially the composite material design in the cathode. The aim of this project is to produce 3D nickel-sulfur composites through electrodeposition and to develop lithium-sulfur batteries with high energy density and cycle life using the obtained composite cathodes. In this research, we aim to correlate ma-

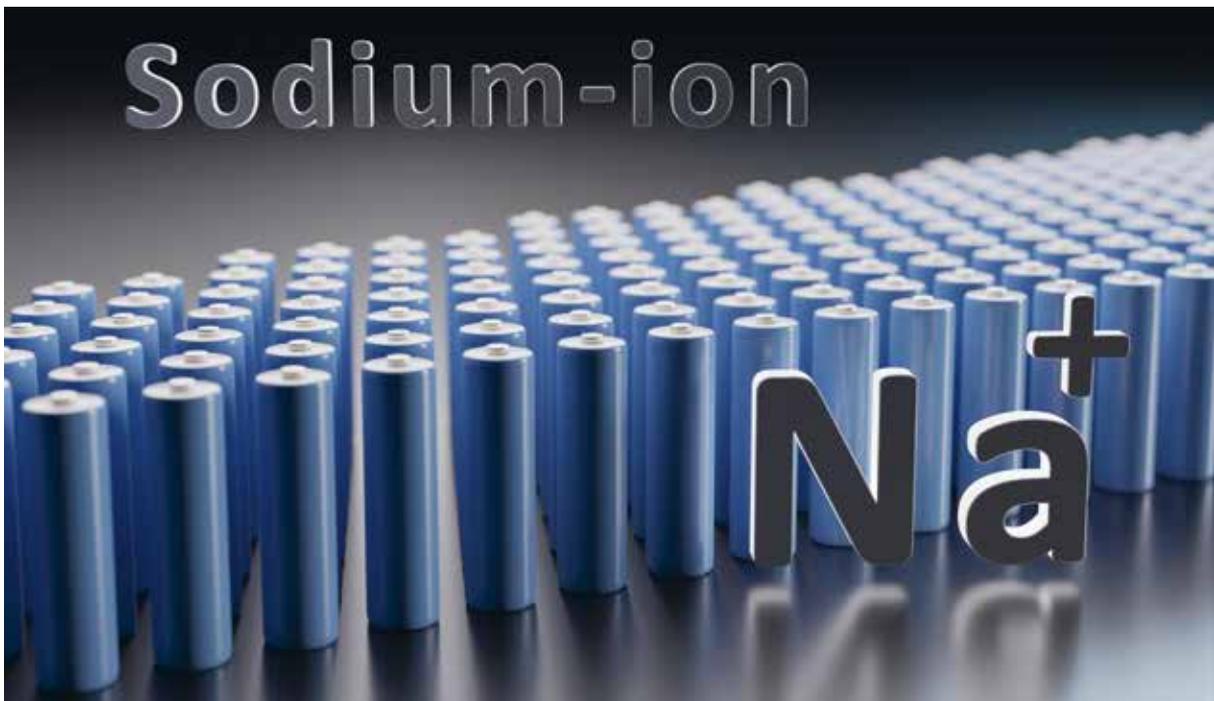
terial design with battery performance by using both experimental and theoretical methods.

What are your goals with the high-energy and longer-lasting lithium-sulfur batteries you are working on? How do they differ from traditional batteries?

Lithium-sulfur batteries have gained significant importance in the development of rechargeable batteries with high energy density and low cost for use in electric vehicles and smart grids, due to sulfur's high specific capacity, affordability, abundance in nature, and non-toxic properties. Lithium-sulfur batteries have approximately five times the theoretical specific energy of the widely used lithium-ion batteries today. However, the energy density and

cycle life of lithium-sulfur batteries are limited. Achieving the desired performance in lithium-sulfur batteries is only possible by correlating critical factors at the material, cell, and system levels. This project aims to contribute to the commercialization of lithium-sulfur batteries in the future by designing a high-performance lithium-sulfur cell and contributing to sustainable environment and energy, solving a significant problem both on a national and global scale. As is well known, lithium-ion is currently the most widely used rechargeable battery chemistry. However, the majority of lithium-ion cathode raw materials are controlled by a few countries, which creates energy dependency. In lithium-sulfur batteries, sulfur is used as the active material in the cathode. Sulfur is an abundant and low-cost material found in Türkiye. In this way, at least the dependency on external sources for cathode active material can be prevented.

We've been seeing an increase in the production and use of electric



vehicles recently. How will this project contribute to electric vehicle technology?

The widespread use of electric vehicles will reduce carbon emissions and lessen our dependence on gasoline. However, to increase the use of electric vehicles, it is necessary to develop batteries with higher energy density and lower cost than current battery chemistries. This project aims to design a high-performance lithium-sulfur battery to contribute to the commercialization of lithium-sulfur batteries in the future.

If lithium-sulfur batteries are commercially launched, which sectors would they impact?

They will impact every area where high-capacity energy storage is needed. This could be transformative for sectors like electric vehicles, the storage of sustainable energy sources such as solar and wind, unmanned aerial vehicles, and many more.

How do you utilize the science of chemistry in your work? Do you have any new studies in this regard?

Since I deal with complex electrochemical systems in my research, chemistry is very important to us. In our research, we experimentally examine the performance of lithium-sulfur batteries using various electrochemical characterization methods. In addition, we develop detailed electrochemical models to model the chemical reactions and transport phenomena occurring in the battery and their effects on battery performance. Similarly, we develop system-level performance models to analyze from material to system, designing battery systems and predicting system-level energy density. Finally, we use machine learning methods to examine factors that can improve battery performance.

You also teach at Boğaziçi University. What advice would you give



To increase the use of electric cars, batteries with higher energy density and lower cost than current battery chemistries need to be developed.

to students and young researchers pursuing a career in chemistry?

Training young engineers and scientists is one of the most rewarding parts of this job. It is a great honor for me to be a role model for my students, encouraging them to conduct research ethically and get excited about science. As I always tell my students, chemistry is

the fundamental component of most things in our lives. Someone educated in the field of chemistry can contribute to many sectors that make a difference in the world, such as energy, biochemistry, petrochemicals, pharmaceuticals, cosmetics, and materials. I think a career in chemistry is very advantageous due to this diversity.



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