



# Chemist

Free of charge İKMİB's magazine. November/December 2022 Issue: 70

## SECTOR

Inorganic chemicals industry increased by 57 percent in exports

.....

## TRAVELLER

Kahramanmaraş the city of heroes

.....

## CHEMISTRY OF THE JOB

Elchin İbadov seeks success first by dreaming the goal he wishes to achieve

.....

## THE INVENTORS OF CHEMISTRY

Prof. Dr. Oğuz Okay  
I define myself as a chemist and polymer scientist

.....

## EXPORT

Adhesives, glues and enzymes industry grow by increasing its export rates



# The message of the president

## TRANSFORMING THE WORLD...

Who would think that we would witness a completely different world transformation with the 'Corona' virus pandemic, which started abroad in the last months of 2019 and with the first cases seen in our country in March 2020?

... maybe conspiracy theorists!

It should not be forgotten that the word 'conspiracy' expresses a fiction that can exist in terms of its etymology.

Our world is going through a tremendous change.

On the one hand, systems transform by triggering each other, on the other hand, transformations change the world socio-economy with chain reactions.

A new crisis that started with the Russian operations in the Ukraine at the beginning of 2022, as one of the rings of this chain transformation reaction, carried the change to another dimension 'Energy Crisis!'

The energy crisis, on the other hand, caused the disruption of the 'Green Transformation' based on 'Sustainability' and the associated ecopolitical transformation.

Although there is no natural gas import and use, especially in Europe due to Russian sanctions, the production and use of nuclear and coal-based energy, especially LNG, has started to increase again.

If Europe can survive the winter of 2023, perhaps a new sociological transformation will be mentioned in Russia this time.

In the meantime, as another and effective link in this whole transformation, the new popular movement in Iran should be taken into account.

The decline in export-led growth in China and the recession signals in the EU started to reveal other risks.

Meanwhile, Germany is changing its 'Supply Chain' practices as of January 2023.

Educational models are changing. The global high inflation and economic contraction will be the trigger of a new innovation.

This trigger can develop based on 5G technology.

The world is on the threshold of a new era.

It almost 'resets' itself...

What awaits us in the New Year, and we will talk about this in our new issue, I wish you all will have a good and successful day.

Stay safe and healthy.



**Adil PELISTER**  
Head Of ikmib

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Where will the changing balances in the world take Türkiye?



## 30 SECTOR

Inorganic chemicals industry increased by 57 percent in exports



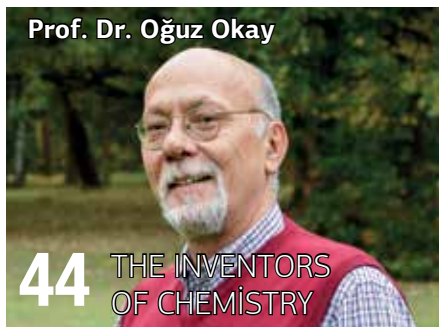
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# Chemist

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## The chemical industry is racing to be the leader in the export step by step

While İKMİB members exports of 30.7 billion dollars in the 11-month period of the year, it expects to reach 33 billion dollars a record at the end of the 2022.. Speaking about the success achieved, İKMİB President Adil Pelister says, "We will continue to work with all our strength to contribute to exports."

According to the data of the Turkish Exporters Assembly (TİM), Türkiye's total exports in November reached 21.9 billion dollars with an increase of 1.9 percent compared to the same period of the previous year, and the chemical industry was the main actor of this success. The chemical industry, which achieved 2.6 billion dollars of foreign sales with an increase of 8.3 percent in the same period, maintained its leadership among all industries in this field with its exports of 30.7 billion dollars in the 11 months of the year. The most striking detail was the increase in exports by 34 percent in the January-November period compared to the same period of the previous year, as the chemical industry progressed to the export leader step by step.

While the Netherlands was the country to which the most exports were made in November, this country was followed by Russia, Romania, Spain, USA, Lebanon, Iraq, Italy, Germany and England, respectively. Chemical exports to the Netherlands in November amounted to 213 million 521 thousand dollars, while the most exported product groups were 'mineral fuels, mineral oils and products', 'inorganic chemicals', 'plastics and their products', 'essential oils, cosmetics and soap' with 'various chemicals'. On the other hand, the countries with the highest chemical exports in the January-November period of 2022 were the Netherlands, USA, Italy, Romania, Lebanon,

Russia, Germany, South Africa, Spain and Iraq.

On the basis of product groups, plastics and its products stood out in November with 797 million 207 thousand dollars, mineral fuels and products with 618 million 368 thousand dollars, inorganic chemicals with 302 million 342 thousand dollars in exports. Other sectors were listed as follows; 'essential oils, cosmetics and soap', 'rubber, rubber articles', 'pharmaceutical products', 'paints, varnishes, inks and their preparations', 'miscellaneous chemicals', 'washing preparations' and 'organic chemicals'.

### 2022 TARGET: 33 BILLION DOLLARS WORTH OF EXPORTS

Evaluating the November export data of the chemical industry, İstanbul Chemicals and Products Exporters' Association (İKMİB) President Adil Pelister noted that "We carried out two important sectoral trade delegations to Uzbekistan and Kenya. We held our national participation organizations in Beautyworld ME, Medica and Cosmoprof Asia fairs and the purchasing committees of international fairs such as Plast Eurasia İstanbul, Turkchem Eurasia 2022 organized in our country. As the chemical industry, we will continue to work with all our strength to contribute more to production and exports. We aim to complete this year with a new record of over 33 billion dollars."

## Turkish Companies Showed Up at Medica 2022 Fair

While a total of 230 companies participated in Medica 2022 Fair held in Germany on behalf of Türkiye, many products were introduced, from medical devices to surgical equipment, orthopedic products to hospital furniture.

Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB), which organized the 13th national participation organization this year, and 57 companies on behalf of Türkiye participated in Medica 2022 fair, which was held in Düsseldorf, Germany, between 14-17 November 2022. In addition, a total of 230 companies represented Türkiye at the fair, in which 173 companies participated individually. While there were 4,300 global participating companies in Medica 2022, products such as medical devices, consumables, hospital furniture, surgical equipment, orthopedic products, drugs and software were introduced at the fair.

Ayşegül Gökçen Karaarslan, The Turkish Republic Consul General of Düsseldorf, The Turkish Republic Düsseldorf Commercial Attaché İrem Ekmekçi Konuk and İKMİB President Adil Pelister, İKMİB Board Members and TİM Delegates visited the fair participants and wished them success. Commenting on the fair, Pelister reported that "The share of our country in Germany's imports of pharmaceutical products in 2021 was 0.08 percent. So we see great potential here. We need to increase our market share above 1%. In this respect, we believe that the fair will make a significant contribution to new collaborations."



### S. BERNA YILDIZ (İKMİB, EXPERT)

Pharmaceutical products (article 30) among the group that Germany exports the most, ranked fourth with 118 billion dollars in 2021. Pharmaceutical product group generally ranks first in the chemical industry exports of the country. The country's most exported product groups are dosed drugs used in treatment/protection, and products such as vaccines, blood, serum and toxins. Despite being so prominent in exports, the pharmaceutical product group ranked fifth in the country's imports in 2021 with 79 billion dollars.



Our exports of pharmaceutical products, including pharmaceuticals, medical devices and dental products to Germany were 134.8 million dollars in 2019 and 179.4 million dollars in 2020, reaching approximately 201 million dollars in 2021. Our most important export items are dialysis and fistula sets, other reagents and standard materials used in the laboratory or diagnosis, dosed drugs used in treatment/protection, prosthetic teeth, medical, surgical, anesthesia instruments and devices, X-ray tubes, surgical gloves, dosed or polyvinyl chloride gloves suitable for retail sales with optimized immune products. In order to further develop our sectoral trade with Germany in the upcoming period, it is important to follow up on issues such as the European Green Agreement and future obligations, the digitalization of the German health economy, and the Supply Chain Law, which is planned to come into effect as of January 1, 2023.





## Packaging industry has focused on new markets with the organization of İKMİB

*Aiming at new markets for the packaging industry, İKMİB has provided the participation of 16 company representatives from 7 countries in the procurement committee, which it organized simultaneously with the 27th International Eurasia Packaging İstanbul Fair, and laid the groundwork for new cooperation opportunities.*

While the 27th International Eurasia Packaging İstanbul 2022 Fair was held between 12-15 October, a total of 814 domestic and foreign companies participated in the organization, 130 of which are members of the İstanbul Chemicals and Products Exporters' Association (İKMİB). 16 company representatives from Nakhchivan, Morocco, Senegal, Bulgaria, Serbia, Portugal and Kosovo came together with Turkish exporters within the scope of the 'Packaging Industry Buying Delegation' organized simultaneously with the fair with the coordination of the Ministry of Trade and the organization of İKMİB. New cooperation opportunities were evaluated in the organization where bilateral business meetings were held under the leadership of İKMİB.

Taking part in the Eurasia Packaging 2022 Fair, İKMİB President Adil Pelister, İKMİB Vice President of the

Board of Directors Tayfun Demir and İKMİB Substitute Member of the Board of Directors Hakan Dirgeme visited the participating companies and wished them success.

İKMİB President Pelister, who made an evaluation on the packaging industry in the organization, stated that "As of 2021, the volume of the industry, which has reached the level of 1 trillion dollars globally, continues to grow by 3 percent every year. The entire packaging industry has a foreign trade volume of 726.5 billion dollars. With 398.5 billion dollars, 55 percent of the sector's foreign trade is the plastic packaging industry. While our country's packaging exports were at the level of 6.5 billion dollars last year, 53% of this was plastic packaging with 3.46 billion dollars. The packaging industry, which exports more than it imports every year, contributed positively to our country's current account deficit by giving a foreign trade surplus of 2.7 billion dollars in 2021. The foreign trade surplus provided by the plastic packaging industry alone was 1.8 billion dollars. Our plastic packaging exports, which were 2.51 billion dollars in the first 9 months of 2021, reached 2.97 billion dollars with an increase of 18.5 percent in the same period of this year. We expect our plastic packaging industry to complete the year with approximately 4 billion dollars."





## The cosmetics and cleaning industries will grow in the Latin American market

*Organizing the “Cosmeet Latam Sectoral Trade Delegation” in Colombia, İKMİB has brought 20 Turkish companies from the cosmetics and cleaning products sector together with 50 buyer company representatives from 13 countries.*

“Cosmeet Latam Sectoral Trade Delegation” was organized by the Istanbul Chemicals and Chemical Products Exporters’ Association (İKMİB) in order to increase the exports of the cosmetics and cleaning products sectors. 20 Turkish companies took part in the event attended by 50 buyer company representatives from 13 different countries and a total of 471 bilateral business meetings were held.

Murat Ertekin, the Head of the Department of Export General Directorate of the Turkish Republic Ministry of Trade, Uğur Adıyaman, the member of the Board of Directors of İKMİB, and the representatives of companies operating in the cosmetics and cleaning products sectors participated in the board of trade in Bogota, Colombia, between September 18-22, which created new cooperation opportunities. Buyers and suppliers from Colombia, Mexico, Peru, Costa Rica, Bolivia, Guatemala, Panama, Chile, Uruguay, Ecuador, Venezuela, Paraguay and the Dominican Republic, as well as representatives of Turkish companies focused on new markets within the scope of bilateral business meetings.



At the event, while Turkish Republic Bogota Ambassador Beste Pehlivan Sun and Turkish Bogota Commercial Counselor Muhammet Hartavi also came together with the participating companies and offered their support, İKMİB President Adil Pelister, who made evaluations about the trade delegation shared the information that “Latin American countries are among the target countries both in general chemistry and in our cosmetics and cleaning products sector. Our general chemical exports to the Latin American region, which includes 19 countries, have increased by 55 percent in the first eight months of this year compared to the same period last year, reaching 596.6 million dollars. The exports of our essential oils, cosmetics and soap sub-sector have increased by more than 50 percent in the first eight months of this year, reaching \$29.7 million. We believe that the market share of the sector will increase thanks to the new connections established by our companies, which hold bilateral meetings with the buyers on the occasion of our delegation organization.

Uğur Adıyaman, Member of the Board of İKMİB, noted that “We came together with buyers and suppliers from Colombia and other Latin American countries in an intensive program in our trade delegation in Bogota, the capital of Colombia. Thanks to this intensive program, we had the opportunity to examine the current market conditions and had frequent bilateral business meetings.”

## Chemical industry aims to increase its export to Uzbekistan



*Seeing that Uzbekistan has accelerated its production activities in many areas recently, İKMİB has brought together Turkish chemical industrialists and Uzbek business people in the organization of the “Chemistry Industry Uzbekistan Sectoral Trade Delegation” organized for this country, and provided 140 bilateral business meetings.*

Looking for new markets to increase its success in export, İstanbul Chemicals and Chemical Products Exporters’ Association (İKMİB) held a “Chemical Industry Uzbekistan Sectoral Trade Delegation”. 33 representatives from 22 Turkish companies participated in the trade delegation held in Tashkent, the capital of Uzbekistan, between 7-10 November. While Halit Süha Taşpolatoğlu, the member of the Board of Directors of İKMİB, led the trade delegation, the representatives of the pharmaceutical-food supplements, cosmetics-cleaning, plastic household and kitchenware and chemical raw materials sectors organized 140 bilateral business meetings were held with Uzbek business people.

In addition to bilateral business meetings, market visits were also made at the event, while information about sales channels and price levels was shared, promotions were made about the Turkish chemical industry on Uzbek television channels. Within the scope of the three-day program, Tashkent Ambassador Olgan Bekar was

visited and the commercial relations between the two countries and the practices of doing business in the country were shared with the participants. On the last day of the delegation, the President of the Uzbek-Turkish Businessmen’s Association Davut Azmi Erbaş and the management of the association came together.

İKMİB President Adil Pelister posted the following information about the organization; “We know that production activities have accelerated in every field and sector in Uzbekistan, new facilities have started to be opened, and the need for products and equipment required for production has increased in this context. With the tax policies that the country has reconsidered, it is ensured that the customs tax rates of the products that are not produced in the country or are less, are reduced. However, the interest in Turkish TV series and the close relations between the governments of the two countries increase the demand for Turkish products. Taking these into account, we organized a sectoral trade delegation for our exporters to increase their market share with a stronger performance in Uzbekistan. Uzbekistan ranks 26th place in the country’s export ranking of our industry with 298 million dollars in the ten-month period this year. The top three product groups we export to Uzbekistan the most are plastics and their products with 99.8 million dollars, paint, varnish, ink and preparations with 59.4 million dollars and various chemicals with 41.2 million dollars. Looking at the last 5 years, we see that there is an increase in chemical exports to Uzbekistan every year. In the ten-month period this year, our exports increased by 18.64 percent.





## The Turkish plastics and rubber industry has stood out at the ‘K 2022 Fair’

*Organized in Germany and being one of the most important organizations in its field, the ‘K 2022 Fair’ brought together the global players of the plastic and rubber industry. Evaluating the fair attended by 181 companies from Türkiye, İKMİB President Adil Pelister propounded that “We will strengthen the ‘Made in Türkiye’ perception with our activities.”*

The ‘K 2022 Fair’, considered the most important plastic and rubber industry fair in the world and taking place every three years, was held in Düsseldorf, Germany, between 19-26 October 2022. The Turkish national participation organization at the fair was held for the 5th time this year by the Istanbul Chemicals and Products Exporters’ Association (İKMİB) in cooperation with the Plastics Industrialists’ Association (PAGDER). A total of 181 Turkish companies exhibited their products in the fair, where 27 companies representing the Turkish plastics and rubber industry and 154 companies participated individually in the national participation organization. While Türkiye was the 4th country with the highest number of participating companies in the fair, after Germany, Italy and Austria, 3 thousand 37 participants from 60 countries took part in the organization.

At the fair, which Türkiye participated in two halls, companies exhibited plastic and rubber raw materials and auxiliary materials, semi-finished products, technical parts and reinforced plastic products, machinery and equipment for the plastic and rubber industry. The Türkiye Republic Düsseldorf Consul General Ayşegül Gökçen Karaarslan, Trade Attaché İrem Ekmekci Konuk and İKMİB Chairman of the Board Adil Pelister, İKMİB Management and Supervisory Board Members and İKMİB TİM Delegates

visited the fair participants and wished them success.

Emphasizing that K Fair is considered the most important fair in the world for the plastics and rubber industry Adil Pelister, Chairman of the Board of İKMİB, stated that, “K fair is an efficient and effective fair in terms of exhibitors and visitors to the fair. We believe that our participation in the K Fair will contribute significantly to the development of the sector and the opportunity for Turkish exporters to have the opportunity to cooperate with the world’s leading buyers, as well as to transform our export potential into actual exports.”

Pelister also stated that the plastics industry has achieved a successful momentum in exports and concluded his words as follows: “Our plastics and products industry takes a 30 percent share from the total exports of the chemical industry. The sector’s exports increased from \$5.31 billion in 2017 to \$9 billion in 2021. We are expecting the exports of our Turkish plastics industry to reach approximately 12 billion dollars in 2022. As İKMİB, we are carrying out many activities that will increase the exports of our sectors. We aim to increase the share of Turkish products in world trade with these activities we have done and will do in the future. We will continue to strengthen the perception of Made in Türkiye in world trade.”

## Turkish cosmetics and cleaning products have debuted in the Middle East market



*Turkish cosmetics and cleaning products sectors exhibited their products by participating in the 'Beautyworld Middle East Fair', one of the most important organizations in its field, held in Dubai with 122 companies.*

One of the most important fairs in the world for the cosmetics, care and cleaning products industry, the 26th of the 'Beautyworld Middle East Fair' was held in Dubai between October 31st and November 2nd, 2022. The Turkish national participation organization was organized for the 17th time this year by the Istanbul Chemicals and Products Exporters' Association (İKMİB), and within this scope, 68 Turkish companies took part in the fair. Apart from the national participation, 54 Turkish companies participated in the fair individually, while a total of 122 companies from Türkiye represented Türkiye at the 'Beautyworld Middle East Fair'. In addition, a wide range of products such as cosmetics, skin care, perfume and fragrance, hair care, nail care, raw materials and cleaning were exhibited at the fair, where 1,400 companies from 66 countries participated. T.R. Dubai Consul General İlker Kılıç, Dubai Commercial Attachés Ersoy Erbay and Hacı Hasan Kaygısız, İKMİB Vice Chairman of the Board M. İmer Özer, İKMİB Board Member Uğur Adıyaman, İKMİB TİM Delegate S. Özgür Öztürk also visited the Turkish companies participating in the fair and wished them success.

Making evaluations about the event, İKMİB President Adil Pelister noted that "The top five exporting countries in the cosmetics sector in the world in 2021 were France, USA, Germany, Singapore and South Korea, respectively. When we look at the last five years, although there was a decrease in global exports in 2020 due to the pandemic, in 2021, the pre-pandemic period was exceeded with

the base effect. In 2021, our country ranked the 23rd. Our country's share in world exports is 0.89 percent. Our country has been a net exporter for the last two years. According to the export data of our country's cosmetics industry, exports have amounted to 1.35 billion dollars with an increase of 19.25 percent in the ten-month period this year. During this period, the top ten countries with the highest exports have been Iraq, the USA, Russia, Iran, the UAE, Germany, the Netherlands, England, France and Israel."

Stating that the top five exporting countries in the world in the washing-cleaning products sector are Germany, the USA, China, Belgium and France, respectively, Pelister propounded that "When we look at the last five years in the related sector, there has been an increase in global exports, except for 2019. In fact, while there was a decrease in many sectors in 2020, an increase was recorded in the sector due to the pandemic. In 2021, Türkiye ranked 19th. Our country's share in world exports is 1.30 percent. However, our country still maintains its position as a net importer. The sector's exports reached 578.4 million dollars in 2022 with an increase of 27.2 percent in the ten-month period. During this period, the most exported markets were Iraq, Russia, Azerbaijan-Nakhchivan, Israel, Iran, Georgia, Romania, Serbia, Egypt and Uzbekistan."

Remarking that when both sectors are considered together, the share of our country in world exports has been 0.96 percent in 2021, Pelister noted that "The most exported product items in our country are surface active cleaners, wet wipes, make-up and beauty care products, perfumes, room fragrances, shampoos, essences, hair preparations and deodorants. If we look at the share it receives from all over the world, we see that the share of wet wipes and room fragrances is quite high."



## ‘Chemical Sectoral Trade Delegation’ from İKMİB to Kenya

*İKMiB, which organized a sectoral trade delegation to Kenya, one of the important markets of East Africa, provided 360 bilateral business meetings with the business people of the country. In addition to business meetings, company visits were also made during the event, and market information was also obtained.*



The ‘Chemistry Industry Kenya Sectoral Trade Delegation’ was held by the İstanbul Chemicals and Products Exporters’ Association (İKMiB). 33 representatives from 21 Turkish companies attended the event organized in Nairobi, the capital city of Kenya. Within the scope of the event held between 20-24 November, 360 bilateral business meetings were held with 167 Kenyan business people. In the organization led by the delegation of İKMİB Board Member Ersin Kayalar; pharmaceutical-food supplements, cosmetics-cleaning, plastic household and kitchenware, paint and chemical raw materials sectors took place.

During the event, where market visits were also made, information about sales channels and price levels was provided, while the Turkish Republic Nairobi Ambassador Subutay Yüksel was also visited, and trade relations and business practices between the two countries were discussed. In addition to bilateral business meetings, market visits were made and information was obtained about sales channels and price levels. While the representatives of the chemicals and paint industry visited Uchumi Chemicals and Basco paints companies, which are the largest companies in the country, the representatives of the cosmetics-cleaning-plastics industry visited the market.

Reminding that they made the second of the chemical sectoral trade delegations to Kenya after Uzbekistan, İKMİB President Adil Pelister remarked that “Kenya is the largest economy in East Africa with a population of more than 50 million. The country, which is the economic, commercial, financial and logistic center of East Africa, is an important trade focus and has been chosen as a regional center by international companies. According to the information we received from our Commercial Attaché, Türkiye-originated products are increasingly appearing in the country. Great developments have been made in the fields of plastics, cosmetics, cleaning, and medical, and in addition to that, Türkiye has become Kenya’s largest supplier of fertilizers. As a matter of fact, we see this in our export figures. When we look at the data for ten months this year, fertilizer comes first with 9.4 million dollars in chemical exports to Kenya. Plastics and its products come second with \$8.4 million, followed by inorganic chemicals with \$5.4 million. In this period, we see that the highest increase was in organic chemicals with 403.61%. Our total chemical exports to Kenya are 36.9 million dollars in the ten-month period. Therefore, we can say that there is still a long way to go here.”



## Turkish cosmetics industry was introduced at Cosmoprof Asia Fair

Cosmoprof Asia Fair, organized for the 25th time this year for the cosmetics and cleaning products industry, was held in Singapore between 16-18 November 2022. Due to the ongoing restrictions in Hong Kong, the fair, which was held in Singapore for the first time this year, hosted a total of 15 companies, 13 companies from Türkiye and 2 individually. With the national participation organization organized by İKMİB for the tenth time, Turkish companies presented their newest products and technologies to the visitors in the 288 square meter Turkish pavilion.

While 1,202 exhibitors and brands from 46 countries and regions took part in the fair this year, Singapore Ambassador of Türkiye Mehmet Burçin Gonenli, Turkish Republic Commercial Counselor Mihriban Esin Arslan, İKMİB



Board Member Uğur Adıyaman and İKMİB TİM Delegate Süleyman Özgür Öztürk visited Turkish companies and exchanged views. The fair is planned to be held again in Hong Kong between 15-17 November in 2023.



## İKMİB brought the domestic and foreign plastics industry together in the procurement committee

Plast Eurasia Istanbul, the most important fair of the plastics industry in the region, brought together international plastic industrialists between 23-26 November 2022. Simultaneously with the fair, local and foreign companies operating in the plastics industry were brought together in the organization of the procurement committee organized by the Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB) with the coordination of the Turkish Republic Ministry of Trade. Bilateral business meetings were held with the participation of 6 purchasing companies operating in the plastics industry from Algeria, Czechia, Iraq and Macedonia. Attending Plast Eurasia Istanbul Fair, İKMİB President Adil Pelister, İKMİB Deputy Chairman of the

Board of Directors Tayfun Demir, İKMİB Board Member Selçuk Gülsün and İKMİB Supervisory Board Member H. Gökhan Can visited the participating companies and wished them success.

Addressing the importance of the fair, Pelister stated that "Plast Eurasia İstanbul Fair is a very important event that has been organized for our plastics industry for 31 years and is among the largest fairs in the world. We visited our participating companies together with İKMİB Board of Directors, Supervisory Board Members and Plastic Industrialists' Federation President Ömer Karadeniz, and listened to their expectations and suggestions for the sector."



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# WHERE WILL THE CHANGING BALANCES IN THE WORLD TAKE TÜRKİYE?



***Three important problems in the world at the same time; a pandemic, a war that could reach a global scale, and an economic crisis probably have not been seen in the last 70 years. The overlapping of problems raises concerns in many areas from energy to security, from agriculture to supply chains, while making humanity uneasy. While the developments point out that the new world order will be established, it is of great importance which side Türkiye will be on in order to achieve its goals after this point.***



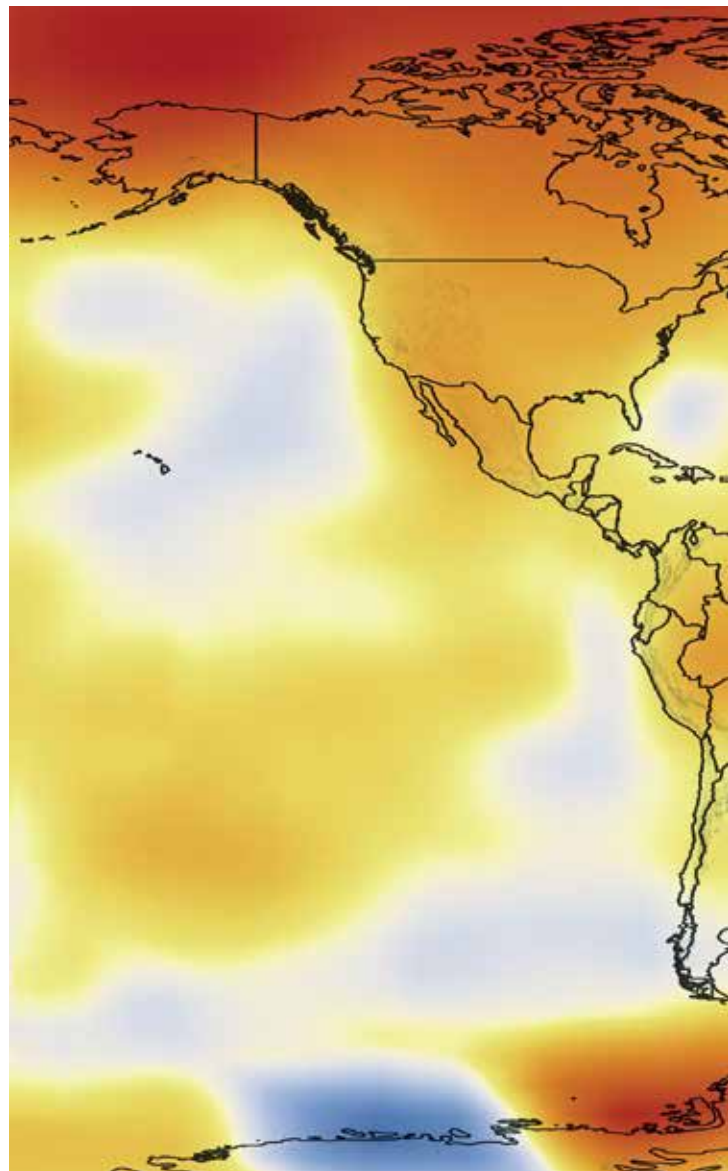
There have been many wars and many economic crises in the world from time to time. Many of them remain in memory. For example, in the 2008 global crisis, many financial institutions, especially in the USA, closed their doors. Wars took place in different parts of the world. For example, the civil war in Syria still concerns many countries. Health problems were also on the agenda of the world from time to time. However, there is such a process going on globally at the moment that the expectation of an economic crisis never goes out of the agenda with the pressure of pandemic, war, inflation. On the other hand, the planet is going through almost extraordinary processes, from agricultural production to supply, from energy to climatic problems. So the world, in the last three years, it is experiencing important problems that it has never encountered before, even unimaginable, at the same time.

As it will be remembered, just as the pandemic problem came to an end after a two-year struggle, there were expectations that global production would revive, the logistics problem would come to an end, and the circulation of goods would accelerate. However, the war that Russia started against Ukraine in February destroyed the hopes of all parties. In addition to these, due to the war environment, the balance of power in the world again revealed bipolarity. While Russia used its biggest weapon, its energy power, against the USA and Western countries, EU countries, especially Germany, were in trouble in terms of production and meeting their vital needs.

While the war between Russia and Ukraine and the threat of the pandemic are moving on, the recession problem is intensifying in countries under pressure of inflation, and the issues such as agricultural production, energy and climate problems triggered by these are at the top of the agenda, it should not be difficult to predict that nothing will be the same as before... Expectations that all these problems will disappear in the short term and that humanity will reach the level of prosperity as in the old days are being shelved. Even if the pandemic ends or the war atmosphere ends, the wounds caused by the mutual trust between countries will not heal for years. Now, it is an issue of concern which country will take place on which side and how in the balance of power that will become bi-polar or tri-polar together with the USA-Russia, perhaps with China. When choosing the pole

to take place, will elements such as democracy and liberal economy be preferred, or will it be taken into account who owns the energy and natural resources?

Considering all these processes; the chemical industry, which directs many sectors, needs to reconsider its future vision and roadmap according to these factors. For example, which areas will companies in the chemical industry need to prioritize while developing their competencies in the medium and long term within the scope of these developments? Perhaps it will be important for them to increase their global cooperation or review their production processes in a very different way. On the other hand, while determining environmentally friendly and sustainable new ecosystems, should the Turkish chemical industry be included in this model, or should it guide new trends? How to stand out in supply chains, new



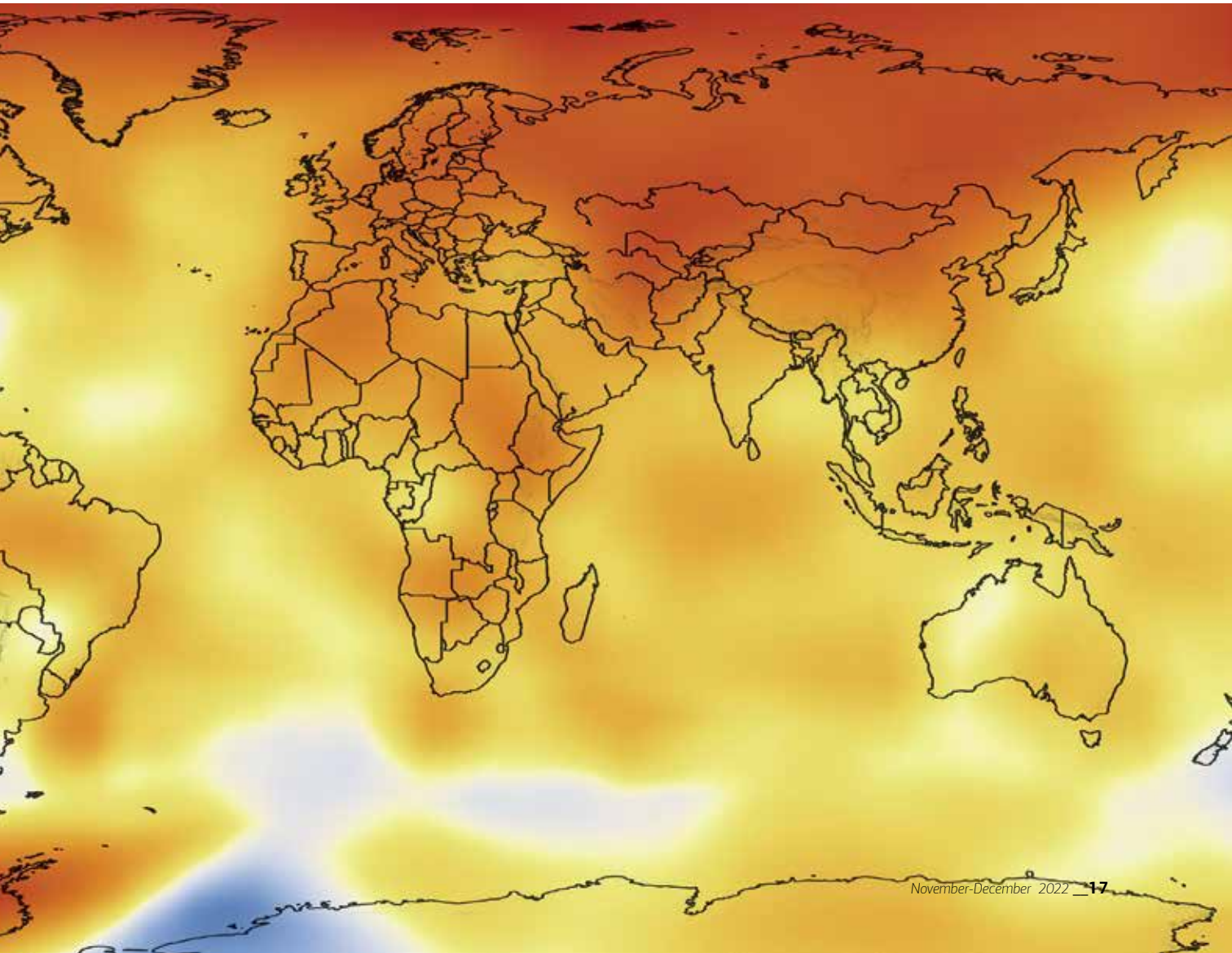
business models, transforming technologies, talent hunting, mergers and acquisitions?

**WESTERN INDUSTRIALISTS CAN SHIFT INVESTMENTS TO DIFFERENT COUNTRIES**

Considering the developments; possibilities of changing the balances in global production come to the fore. Because especially western manufacturers are looking for advantages in production costs, especially in energy and labor, and a trouble-free environment in supply. Especially, Russia’s restrictions on energy shipments, especially gas, to the West threatens the production power of these countries. Automotive and chemical industries, in particular, are concerned about losing their cost advantage in their production due to energy constraints. Moreover, it is not yet predictable how long the uncertainties will last, as the developments inflicted deep wounds between

Russia and the West. At this point, the position of Türkiye draws attention. Türkiye, being close to both European, Middle East and South African markets within a 3-4 hour flight distance, does not have problems in energy supply like Western countries and draws attention with its cost advantage.

According to a news analysis in the Financial Times newspaper in October; The European Industrialists’ Round Table sent a letter to European Commission President Ursula von der Leyen and European Council President Charles Michel, expressing their concerns about the developments. In the letter in question, the statement “Rising energy prices are causing an alarming decline in the competitiveness of industrial energy consumers in Europe”, while warning that “irreparable losses” may arise if a maximum price is not introduced for energy-intensive companies.





Executives from the chemistry, fertilizer and ceramics industries, on the other hand, state that they face the risk of losing their market share permanently, and that they can move their production to other countries.

Considering that gas is the most important energy source for the industrialists in Europe, the shortage of supply from Russia in this area causes some facilities to turn to fossil fuels again. Fossil fuels, on the other hand, seem to undermine the EU's green energy transition plans. According to the information in the news; The German pharmaceutical and biotech company Bayer writes that it has announced its plan to switch to fully renewable energy in 2019, but is now considering reintroducing coal. Another indication of the problems is that the UK-based paper and packaging company DS Smith ordered to reduce consumption in its factories by 15 percent in line with the voluntary reduction accepted by EU members in July.

On the other hand, in the same news, there is information that French automotive supplier Valeo and Belgian chemical company Solvay have also reduced their energy consumption by 20 and 30 percent, respectively. His statement that he will continue to use coal power plants for the next two winters in Wolfsburg, where Volkswagen's largest facility is located, draws attention. The news also reveals the magnitude of the danger, according to the estimates of Goldman Sachs, that if energy prices are not brought under control, 40 percent of the European chemical industry may face the risk of 'permanent rationalization'.

### **FOREIGN INVESTMENT OPPORTUNITIES MAY APPEAR IN TÜRKİYE**

Haberin detaylarında yer alan ve dikkat çeken Within the scope of the remarkable information in the details of the news, there is also information shared by the International Energy Agency (IEA). According to the IEA, it is reminded that in the 10-year period until 2020, gas prices in Europe are 2-3 times higher on average than in the USA. However, it is stated that this difference increased up to 10 times after Russia started to reduce the gas in the war environment. Expert shared their opinions in the news analysis, in which the information is shared that some companies trying not to lose their production and market shares are turning their face to low-cost countries outside Europe. They warn that if the period during which

*The European Industrialists' Roundtable expressed its concerns about the energy problem in a letter to the European Commission. "Rising energy prices are causing an alarming decline in the competitiveness of industrial energy consumers in Europe," the letter noted.*

companies will have to move their production from Europe to another place is prolonged, a certain part of the production may be lost to competitors and never return.

Bayer executive Matthias Berninger stated that: "Once the investment decision is made, it's hard to ask companies to take it back. The decision to invest in a new facility has consequences that will last for 10 years. Our main concern is not being able to find the substances we use in drug production, rather than energy prices."

The future of the Ludwigshafen factory of BASF, one of the most important producers of the gas-dependent chemical industry in Europe, seriously worries some industrialists. Providing information about the developments, Marco Mensink, Director General of the European Chemical Industry Council, emphasizes the importance of the situation by saying that "If the German chemical industry collapses, every supply chain in Europe will have problems within three weeks." Could the opportunity for foreign investment



come to the fore in the Turkish chemical industry or other industries due to the crisis experienced within the scope of these statements? For this, it is useful to discuss what needs to be done both in the chemical industry and in the government, before it is too late.

### A RE-BALANCED WORLD!

S&P Economics and Country Risk Director Lindsay Newman, on the other hand, touched upon the current problems in the analysis shared in November and stated that the accumulated shocks such as the pandemic and the Russia-Ukraine conflict in 2023 would reorganize relations with their global structures and this would have permanent consequences.

In his analysis Newman pointed out that they had five regulatory themes that will drive the economy and risk environment in 2023 addressing them under the headings of 'global security unstable', 'energy exchanges', 'precarious supply chains', 'changing labor markets' and 'economic dissonance'.

**Global security is unstable:** Unresolved conflicts and rivalries will be persistent sources of risk reflected in the global economic outlook in 2023. The invasion of Ukraine has changed the short-term security picture of this region on many fronts, through land conflict, across energy markets, and through the European elections in 2023. The underlying causes of the conflict are unlikely to be resolved next year. Issues such as the occupation of Ukraine, the proliferation of nuclear weapons, cyber operations, infrastructure resilience and the future of security alliances have

accelerated the confrontation with global security risks. The economic and security spheres will become increasingly interdependent in 2023 and beyond as countries apply fiscal leverage, including tariffs, export restrictions and sanctions, to advance their national security priorities.

**Energy swaps:** While the energy security is becoming a current issue after Russia's invasion of Ukraine, countries will be balancing their 2023 fiscal priorities against a new momentum to accelerate energy transitions. In the medium and long term, geopolitical landscape and climate goals are expected to align. In the coming year, as countries balance their fiscal demands and the existential climate threat, not all will be able to invest at the same time. Instead, we expect a widening gap between those that could accelerate energy transitions in the coming years and those less well positioned in sourcing questions, including critical minerals.

**Precarious supply chains:** An expected reduction in supply chain disruptions in the first half of 2023 remains vulnerable to labor and resource shortages, including critical technologies and critical minerals. In the late 2022, S&P Global's Purchasing Managers Index (PMI) signaled an easing process in supply chain tensions due to improved logistics and falling demand due to the inflationary pressure. Even with these modest indicators, the supply chain outlook will continue to be fraught with downside risks and will be closely linked to the broader regional and global economic climate.



### NEW BALANCE!

The Investor Relations Association (TÜYİD) enabled the senior managers of many national and international companies to share their views on the future at the summit it held under the title of 'New Balance' a while ago. Speaking at the summit, TÜYİD President Aslı Selçuk stated that "Pandemic, war and migration, supply chain security, new economic dynamics and inflation, new financial products, climate crisis and depleted resources, regulations, technology and social trends are on our agenda. We are together with the theme of 'New Balance' to talk about whether all these have found their balance. As investor relations professionals, the unchanging priority for us in the remaining period is to create total value for our country, sectors and companies by managing the dynamics that emerge under all circumstances.



*The reports, analyzes and predictions of many institutions, from S&P to TÜYİD, from Axa Group to the European Industrialists' Round Table, are based on the fact that the world order will be reshaped due to pandemic, war and energy problems.*

**Labor market realignment:** Labor markets are in transition as demand exceeds supply and shifts leverage to workers in major markets. We expect any slowdown in wage growth to be limited, with continued tightness in the labor market in major markets but expected to ease somewhat in 2023 where recession prevails. The most significant risk hanging over labor markets in 2023 will be the severity of the anticipated recessions and any global spillovers, and employers' reaction.

**Economic dissonance:** The risk environment will continue to underpin the economic outlook during 2023. As 2023 approaches, the global economy is on the brink of recession. The twin drivers of fiscal policy responses to the shock of the pandemic and the Russia-Ukraine conflict have pushed inflation rates to the highest levels of decades. Central banks sought to slow demand and better align with supply by raising interest rates and reducing assets, putting an end to the quantitative easing that had been in place since the 2008 financial crisis. Recessions are likely in Europe and North America, and Asia Pacific (APAC) and other emerging markets are likely to survive the recession.

### **THE FUTURE MUST BE BUILT WITH A NEW UNDERSTANDING**

'Report on Building the Future with a New Perspective' prepared by TÜSİAD on Türkiye's future was reported during the most important days of the pandemic and shared with the public in October 2021. Although there was no war environment at that time, production and supply problems were at the top of the world's agenda with the pandemic. The recommendations of the business world in the report, which was prepared with an advanced, respectable, fair and environmentally friendly approach; 'human development and competence', 'science, technology and innovation', and 'institutions and rules' were discussed. In the report, which emphasized the importance of these suggestions for the future of the country, it was

underlined that the targeted Türkiye could be built by acting simultaneously in all segments of the society. Accordingly, with the steps to be taken within the scope of the report, it is predicted that the per capita national income will reach the level of 30 thousand dollars in 20 years. In addition, it is emphasized that if these proposals are realized, a developed Türkiye with economic stability, a predictable investment environment, low inflation and strong macroeconomic balances, creating employment, high per capita income with sustainable growth, will take its place in the world.

Within the scope of the recommendations titled 'human development and competence' in the report it is clear that the education curriculum should be reorganized in a way that will raise individuals who can think freely, creatively and critically, and that it should be organized in order to gain the high-level cognitive, social and emotional skills required in the 21st century. Another noteworthy suggestion under the same heading is that vocational education and lifelong learning programs should be designed in cooperation with the public, education and business world in order to gain twenty-first century skills, taking into account the lost and developing jobs in the job market.



Increasing the efficiency of SMEs is underlined among the prominent opinions in the section that includes suggestions on the element of “science, technology and innovation”. For this, it is emphasized that a holistic program should be designed to facilitate access to finance and global trade networks, and this program should be implemented by bringing together many stakeholders such as relevant public institutions, private sector companies and non-governmental organizations.

In the report, which also includes the recommendation of increasing the resources allocated to qualified scientific research and innovation studies, the private sector R&D expenditures, especially in the field of informatics, and the effective use of these resources, the opinion on incentives is as follows: It should be reflected in GE’s productisation, commercialisation, branding, product sophistication.

The report also suggests that the relationship between industrial policy and science and technology policies should be established and that university-industry-public cooperation should be developed in the most effective way, and the development of the infrastructure to accelerate digital transformation is underlined.

In the suggestions under the heading of ‘institutions and rules’ in the last part of the report, the view of improving the investment environment draws attention. For this, it is recommended that the public and private sectors work in cooperation to improve participation and regulatory quality, increase the autonomy of supervisory and regulatory institutions, and create an investment strategy by taking into account new technologies and sustainable development.

On the other hand, on climate change, it is suggested that attention should be paid to studies that are compatible with the European Green Deal, are scientifically based, built on impact analyzes, ensure consistency and integrity between policies, and support sectoral green transformation goals.

Within the scope of the data shown by the reports and analyzes prepared by many national and international institutions; that a new equilibrium model will emerge in the world in the future. In this balance, the preferences and values that will be revealed by both Türkiye and the Turkish chemical industry will play an important role in the production, export and employment of the country’s economy.



### ‘FUTURE RISKS REPORT’ DRAWS ATTENTION TO ENERGY, GEOPOLITICAL AND CLIMATE PROBLEMS

Axa Group, which published the 2022 results of its ‘Future Risks Report’ some time ago, in its related report, emphasizes that climate change, geopolitical instability and energy risks, which have been shown as the most important for the last five years, have recently been intertwined. In the report, drawing attention to the fact that both public authorities and risk experts do not take the necessary precautions against the risks posed by climate change, the following statements are included: “The negative effects of climate change in this risk ranking on biodiversity, health and economy reach undeniable dimensions. In addition, it is predicted that the geopolitical tension caused by the war between Russia and Ukraine will continue to spread.”

Among the economic risks in question, the report, which shared the information that inflation and the decrease in purchasing power, cause anxiety, draws attention to the concerns that the ever-increasing energy and food prices may deepen social inequalities and cause unrest in societies. Experts, within the scope of the report, emphasize that public authorities should be more vigilant than ever to protect social integrity.



# We should read the future of the world well

*While chemical exports are expected to exceed 30 billion dollars in 2022, it is necessary to make new and different readings about the course of the world in order to sustain this success in exports in the future.*

Our world; In the last 20 years, with the development of technology and communication, it has entered a very rapid process of change. The difference of approximately 25-30 years between generations will decrease to maybe 10, maybe even 5 years in the near future. This means; generations should communicate with each other in every aspect, in order to live together with mutual understanding. Accordingly they need to socialize and by following up technology closely, they should use these acquisitions as a key for living and working together with next generations.

What keeps the society together and makes it happy is the 'balance' which is inevitable. These balance elements; are explained by the United Nations Global Compact. The measure of the development of societies; is proportional to stability and sustainability of the balance between these inevitables. While our world is recovering from the effects of the 2008 crisis, we are trying to get out of the environment that has been in full of political turmoil in the last five years in the world and in our country. Health, which is at the top of the list of must-haves in such a period, has been introducing the concept of 'pandemic' to all societies since March 2020.

With the pandemic, business and education life stopped, the work of businesses and universities were interrupted, everyone was closed at home, and a life of anxiety began. In particular, enterprises whose production and demand balance were disturbed began to restrict production and reduce employment. However, there were some sectors that the pandemic



was an opportunity for them.

Of course, health and the related sectors under it were at the forefront of these... The sectors and sub-sectors that are producing pharmaceuticals, vaccine-related antiviral, disinfectant and protective masks were the leading ones. In addition to these, there was a sector that created an unexpected consumption in our country. The people who stayed at home, after a certain period of time, turned to work that would spend their time useful. In our country, where the culture of painting their own house was weak until the pandemic, there was an explosion in this hobby, and everyone started to paint their house. Paint manufacturers continued their production and sales without interruption. If we look at the paint sector outputs, we can see the issue more clearly.

## **PANDEMIC STRENGTHENED REMOTE COMMUNICATION**

Another important detail, which is one of the benefits of the pandemic, is the transfer of communication to the internet environment. Approaches such as virtual meetings and tourism, which shorten distances, save time, minimize travel and accommodation costs, and do not find many fans before the pandemic, have entered our lives with the pandemic and continue to increase. This understanding, in addition to taking a huge step towards globalization, also helps to reduce carbon emissions.

Production in many areas, which was reduced or even stopped during the pandemic, caused the supply-

demand balances to turn upside down and speculative gains due to the rapid rise in prices. Some producers, who were in a very difficult situation, could not make proper budget and they had become idle or produced in slow pace for a long time. Especially the producers that provide the main input to the chemical industry faced technical problems caused by the stoppage and slowdown. The demands of these producers, which were declared as 'force majeure', were not met and difficulties were experienced. While the prices of the products increased due to the decreasing supply, it caused an inflationary environment in the world. According to the strength of the countries, each country received its share positively or negatively. On top of the price increases in raw and semi-products, the reasons for the unexplained freight increases came. In such an environment, companies engaged in container transportation, especially working with Far East countries, maximized their profits.

#### **RUSSIA-UKRAINE WAR ENDED POSITIVE EXPECTATIONS**

While the negative effects of the pandemic are expected to end, the struggle to overcome the high inflation brought by raw material and freight prices, the World has faced with another unexpected problem. In February 2022, Russia attacked Ukraine and took NATO against it. Especially the USA, EU and NATO countries started to impose an embargo against Russia, causing new problems to come to the fore and

a negative environment to be experienced again in the world. Against this embargo result, Russia retaliated and as Russia, the EU's largest gas supplier, greatly slowed gas shipments to EU countries. The energy problem faced by the EU countries struggling with inflation, caused an increase in natural gas prices with the decrease in supply and an additional inflation.

#### **WHAT NEEDS TO BE DONE FOR SUSTAINABLE INCREASE IN EXPORTS?**

As we approach the end of 2022, this inflation has been felt much more in our country, and the increase in prices and the demand for a double increase in wages brought along the concern of leaving the industrialists in a very difficult situation. Because problems such as pandemic, war and high inflation were weighing down the global economy. Despite these, we expect the exports of chemicals to exceed 30 billion dollars in 2022 with great success. In order to sustain this success in exports in the future, it is necessary to make new and different readings about the course of the world.

For example, if we assume that the pandemic is over, the Russia-Ukraine war is over, and the global inflationary pressures have disappeared; in order to foresee which direction the acceleration of the world will shift, we must reveal our predictions and draw a road map accordingly. How will Russia's activity be in the future? How will China feel its weight in the





*“As a result of the Russia-Ukraine war, especially EU countries accelerate their efforts to turn to green energy, and renewable wind and solar energy sources are being used at an increasing rate. Green and blue hydrogen research and studies continue rapidly. These developments should also be watched carefully!”*

global economy in the future? What will happen to the EU and the USA? We should put these things forward and discuss how Türkiye, and in particular the chemical industry, will play a role in these developments and how they will benefit. Will we continue with the current production approach in the new order, or what kind of a model will we create to provide the added value we aim for?

In addition to these developments, the increasing population in our world and the consequent increasing consumption and the unplanned use of resources in return make the increase in carbon emissions unbearable. Accordingly, the circular economy is gaining importance day by day, and it is aimed to reduce and replace the use of fossil-based materials used as the main input. In particular, the process of converting chemical recycling processes into commercial form has accelerated. Studies on organic-based raw materials and intermediates instead of fossil-based naphtha and natural gas are also promising. As a result of the Russia-Ukraine

war, especially EU countries accelerated their efforts to turn to green energy, and renewable wind and solar energy sources are being used at an increasing rate. Green and blue hydrogen research and studies continue rapidly. These developments should be watched carefully on behalf of our industry!

#### **KTM WILL DIRECT THE CHEMICAL INDUSTRY**

In order to meet our expectations, we will launch the Chemical Technology Center (KTM), which I believe will contribute to our roadmap and is under construction. Here, with the certificates to be obtained from accredited laboratories, studies will be carried out that will help paint manufacturers, especially those used in industrial and automotive, to develop their export markets. Competitive opportunities will also be created in the production of plastics and pharmaceuticals industries. I believe that the future of our chemical industry will be shaped by the works that many sectors will carry out here.

The expectations for 2023 in the world are predicted to be stagnation and recession. In our country, elections will be held in June. These developments force our industrialists to make predictable budgets and investments, even in the short term. Therefore, we should set our goals by focusing on the medium and long term, not the short term, and prepare very comprehensive plans and programs in order to increase our effectiveness in global markets.



# Turkish chemical industry and sustainable growth after 2030...

*Especially the EU markets, including the Netherlands, Germany, Italy and Belgium, and the US manufacturers started to prefer Türkiye as their main supplier due to the changing global trade flows and macroeconomic policies. However, exports of chemical products to neighboring countries such as Lebanon, Greece and Iraq also increased.*

The Turkish chemical industry, which makes up 14 percent of our country's total exports and is the largest industry in foreign sales, is one of the main growing industries in Türkiye.. Even though it is affected by many difficulties, from exchange rate fluctuations to increasing input costs, the export and production figures of the Turkish chemical industry reached its highest level since last year 2016.

Our report titled "Turkish Chemical Industry in 2030 and Beyond", prepared as Strategy&Türkiye, the strategy consultancy team of PwC, reveals the main factors in the growth of the Turkish chemical industry and the foreseen future trends for the industry. The report shows us that; In 2021, the chemical industry witnessed important moves in innovation, capacity increase, acquisitions and consolidations and public offerings, and global companies continued to invest in the Turkish chemical market. In this remarkable growth; we can say that the changes in the global supply chains between Asia and major consumption markets such as the EU and the USA, the increasing logistics costs and the price advantage Türkiye has achieved, the geographical proximity of our country to the main consumption markets, innovation and changing legal regulations are effective. The Turkish chemical industry is still dependent on foreign currency imports of raw materials, but these growth factors also make Türkiye a convenient



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supplier country with competitive labor costs and geographical advantage.

Changes in legal regulations also play an important role in accelerating the sector. The Ministry of Commerce has taken important steps towards ensuring the harmonization of Turkish industry with the EU Green Deal initiative by preparing the Türkiye Green Deal Action Plan. In addition, initiatives such as the promotion of 281 chemical products and the Chemical Technology Center under the Technology-Oriented Industry Move Program support the growth of the industry.

With regard to the figures... with the impact of Covid-19, the volume of exports and imports fell to 23.3 billion and 63.9 billion dollars, respectively, in 2020. Production increased from \$49.3 billion in 2019 to \$50.2 billion in 2020. As the production of chemical products surpassed imports, the downward trend in imports and the upward trend in production and exports continued in 2021. Domestic market consumption, on the other hand, fell below the 2016 level and became 77 billion dollars.

Domestic price index of chemical products; increased by 50-150 percent in TL terms due to increasing raw



*In the coming period, Turkish chemical companies need to evaluate their growth strategies around the uniqueness of their market positions and their current and future competencies. Each chemical company should develop and invest in three or four differentiating competencies in line with market trends to maintain its competitiveness and the right to win in the market.*

material, energy and labor costs. If we look at the positive side; The 80 percent depreciation of the TL against the dollar provided the players in the Turkish chemical market with a cost advantage in the EU and USA markets. Especially the EU markets, including the Netherlands, Germany, Italy and Belgium, and the US manufacturers started to prefer Türkiye as their main supplier due to the changing global trade flows and macroeconomic policies. However, exports of chemical products to neighboring countries such as Lebanon, Greece and Iraq also increased.

### **THE HIGHEST GROWTH IN MINERAL FUEL EXPORTS**

Exports of mineral fuels, one of the sub-segments of chemical products, grew by 81 percent on an

annual basis and became the segment that grew the most. So, this increased its share in Türkiye's total chemical product exports from 20 percent in 2020 to approximately 26 percent in 2021. The plastics, rubber and inorganic segments grew 44 percent, 30 percent and 33 percent respectively in 2021. Türkiye's use of imported raw materials and the increase in their prices in dollar terms stand out as the main factors that increase the export value of mineral fuels and plastics. Crude oil prices rose by about 60 percent in 2021, while prices for polyethylene and polypropylene increased by more than 80 percent and 100 percent worldwide.

### **MORE UNIONS AND SALES MAY OCCUR**

There are more than 5 thousand active players in the chemical market in our country. The top 10 players include petrochemicals, mining, consumer chemicals and specialty chemicals. These players account for 30 percent of the total chemical product sales in Türkiye. There were also some changes in the competitive environment in 2021. New chemicals for different application markets such as technology and new technologies for energy efficiency stood out as developments in innovation. New capacity investments were made in existing facilities and new facilities were established for new production lines. The important players of the chemical market continued to realize their growth strategies through





acquisitions and public offerings in a competitive environment. It is likely that more unions and sales will take place in the chemical industry in the coming period, with the difficulty of accessing raw materials and increasing production costs.

### **TURKISH COMPANIES SHOULD ANNOUNCE THEIR SUSTAINABILITY COMMITMENTS**

So, what are the future trends in which chemical companies need to develop competence? According to our report 'Turkish Chemical Industry in 2030 and Beyond'; 'ESG and sustainability', 'changes in the global economy', 'the rise of ecosystems', 'global supply chain reorganization', 'new business models', 'transforming technologies', 'the power of mergers and acquisitions' and 'talent wars'; listed as eight main trends that will shape the future of the chemical industry. Sustainability is becoming a necessity, which requires a change in the chemical industry. Many leading global chemical companies have made ambitious commitments to reduce carbon emissions, energy and water use by 2030 and reach net zero by 2050 to meet the UN Sustainable Development Goals. Turkish chemical companies working with European and US business partners and customers

should also disclose their sustainability commitments and focus on compliance with the legal regulations of these regions.

Despite the recent positive developments, achieving sustainable growth is still a challenge for the Turkish chemical industry. In the coming period, Turkish chemical companies need to evaluate their growth strategies around the uniqueness of their market positions and their current and future competencies. Every chemical company must develop and invest in three or four differentiating competencies in line with market trends to maintain its competitiveness and the right to win in the market. Thus, it will achieve a market positioning specific to the value propositions it offers to its customers.

Therefore, it is useful for Turkish chemical companies to try to evaluate their potential game styles in the market by carefully answering the question "What is the value we create for our customers?" We consider this assessment critical to identifying differentiating sets of competencies, as each play style requires a different set of competencies to deliver the right value proposition.





Dr. Selahattin Armağan VURDU  
**Secretary General of IMMIB**

## Climate Finance

“Zero emission target statements, cooperation and financing were the main agenda items at the Climate Summit. The choice of energy sources and energy efficiency are very significant in reaching the targets; product and manufacturing innovation will be required. All these create the need for serious investment and financing.”

At the UN Climate Summit (COP27), which took place in Egypt in November, world leaders and the business world discussed the future of global action on climate change for two weeks. We are in a period in which it is very important to realize economic growth by keeping the climate agenda in mind. For this reason, the trade world also followed the outcomes of the negotiations at COP27. The importance of cooperation in this transformation process, where both developed and developing countries develop policies to meet the urgent need to reduce carbon emissions while accelerating growth, is emphasized on every platform. As of September, 136 countries that realize 83 per cent of global carbon emissions have a net zero emission target statement. These statements are reflected in the regulations in some countries even if they are not stated all over the world. All over the world, 5,000 companies also have corporate net-zero emissions targets, transforming their entire supply chains to restructuring them. At a time when the world is turning its course towards decarbonisation and greening, it is important for companies operating in our country to be involved in this process in order to increase their competitiveness in the face of the change process in the international economy and trade.

Zero emission target statements, cooperation and financing were also the main agenda items at the Climate Summit. The selection of energy sources and energy efficiency are very important in reaching the targets; product and manufacturing innovation will be required. All of these require serious investment and financing. The term ‘green financing’ is used to finance the use of environmentally friendly, environmentally beneficial or less harmful products, the use of recycled materials, the transition to clean and renewable energy sources, and lower interest rates for products and projects aimed at increasing energy efficiency. Green financing instruments are becoming more widespread and diversified day by day. For example, carbon funds are issued to finance greenhouse gas reduction projects. Investors transfer money to the carbon fund by purchasing “emission reduction certificates” from existing emission reduction projects or investing in new climate-friendly opportunities. Looking at the use of





*Significant climate finance will be needed in the coming years to reduce greenhouse gas emissions from emerging markets and developing economies and to adapt to the current and projected physical effects of climate change.*

green financial products and services in the world, the Netherlands and the UK, which are the leading countries in Europe, as well as Germany, Ireland and Switzerland are the countries where green financial products are seen to a considerable extent. The USA, Canada, some Latin American countries and Australia are among the countries where green financial products are developing after Europe. For example, we realize that especially forest bonds become widespread and develop in Latin American countries.

#### **RENEWABLE ENERGY INVESTMENTS CAN REACH A TRILLION DOLLARS**

In the European Union's Fit for 55 package, the goal of reducing carbon emissions in the EU by 55% by 2030 compared to 1990 levels was announced. By 2050, it is aimed to be carbon neutral. The practices to eliminate carbon leakage will also encourage all countries where

commercial relations are realized, from voluntary practices to regulated practices. Significant climate finance will be needed in the coming years to reduce greenhouse gas emissions from emerging markets and developing economies and to adapt to the current and projected physical effects of climate change. Emerging market and developing economies account for two-thirds of global greenhouse gas emissions, and many are highly vulnerable to climate hazards. According to the IMF, for these economies to be carbon neutral by 2050, the investment need for renewable energy alone will reach \$1 trillion per year by 2030.

In Türkiye, banks have been involved in the green financing race, which highlights renewable energy and energy efficiency, especially since 2012. Many foreign banks and funds, especially the European Investment Bank, the Council of Europe Development Bank, the European Bank for Reconstruction and Development, the French Development Agency's subsidiary Proparco, the Japanese Bank for International Cooperation, the German Industrialization Fund offer long-term and low-interest loans to the entrepreneurs who will produce environmentally friendly energy through Turkish banks. TSKB provides renewable energy, energy efficiency and environmental loans to companies with long-term resources obtained from many international institutions.



# INORGANIC CHEMICALS INDUSTRY INCREASED BY 57 PERCENT IN EXPORTS

*The fact that Türkiye has rich reserves in boron and trona mines provides an advantage in the inorganic chemicals sector. In the 11-month period of 2022, the sector has an export of 2 billion 954 million dollars with an increase of 57 per cent compared to the same period of the previous year.*





Inorganic chemicals, which are among the important sectors of the chemical industry, are among the indispensable products of production with the raw material supply they provide to many industries. Inorganic chemical products, which provide input to biofuels, pharmaceuticals, medical, ceramics, glass, renewable energy investments, electrical and electronic goods, aviation and space industry and construction sectors, draw attention as one of the indispensable players of the chemical industry in exports.

The inorganic chemicals sector has gained a successful momentum in production and export in recent years by concentrating on potential production areas. While the sector realized an export of 1 billion 885 million dollars in the January-November period of 2021, it managed to increase its foreign sales to 2 billion 954 million with an increase of 57 per cent in the same period of 2022. Thus, inorganic chemicals become the third sector in foreign sales after the plastics and their products, mineral fuels, mineral oils and products sectors in chemical industry exports.

Despite being a sector with intense competition in global markets, the inorganic chemicals sector, which has succeeded in exporting to about a hundred countries, finds the opportunity to sell its products almost all over the world. In this success, the preference of the sector's quality products and the strong structure of the supply power come to the fore.

#### **BORON AND TRONA MINE IS AMONG THE MOST IMPORTANT PRODUCT GROUPS OF THE INDUSTRY**

The fact that boron and trona mines, which are among the inorganic chemicals product groups, have rich reserves in Türkiye, provides an advantage to the country's economy in this field. Especially the fact that 48% of the world's boron mine is located in Türkiye and increasing its added value by processing it is among the priority works. Sector representatives attach great importance to R&D and innovation in order to increase efficiency and quality and reduce costs. The sector, which includes technology and digitalization among its priority issues in production and business processes, along with these areas, is developing projects in order to maintain the high-rate growth volume it achieved in 2022 in the coming years.

While sustainability practices come first within the scope of the projects, various environmental approaches, from the evaluation of wastes to the more responsible use of resources, are among the issues that sector representatives pay attention to.





## ETİ MADEN TARGETS A MARKET AS MUCH AS A RESERVE IN BORON

*Eti Maden, the world leader in boron production, increases its market share in this field to 62 percent and carries out its activities with the vision of “Market Until Reserve”. Eti Maden General Manager Serkan Keleşer says that they supply products to many sectors within the scope of their customers’ expectations, emphasizing that they have increased their brand awareness all over the world.*

Türkiye, with a nominal capacity of 2.7 million tons, has a very important share in the global sense, having approximately 48 percent of the world’s boron production. The use of boron, which is among the inorganic products in the chemical industry as a raw material in the glass and ceramic industries, as well as in construction, biofuels, pharmaceuticals and medical, ceramics, renewable energy investments, electrical-electronic goods production, aviation and space industry, offers great opportunities for Türkiye. Eti Maden, which is the biggest player in boron production in Türkiye,



*Eti Maden General Manager Serkan Keleşer*

continues to develop its activities with the principle of “market as reserve”, taking into account the richness of the country.

Eti Maden General Manager Serkan Keleşer draws attention to the fact that the consumption of boron products is not sufficient in Türkiye and he says that they export 96 percent of their production. Reminding that all basic boron products are involved in the production of Eti Maden, Keleşer emphasizes that they process these products and export them by providing

added value. Keleşer said, “Among our 22 basic boron products shaped according to customer needs, borax decahydrate, borax pentahydrate (EtiBOR-48), anhydrous borax (EtiBOR-68), boric acid, boron oxide (anhydrous boric acid), Etidot-67, zinc borate (Eti-ZnBOR), ground colemanite, ground ulexite products, as well as mixtures that are often used in the agricultural sector.”

Reminding that they employ a total of 7,423 people in their operating directorates in Eskişehir, Kütahya and Balıkesir, Keleşer emphasizes that they follow customer expectations globally and work to meet this in production, supply, logistics and service. Keleşer pointed out that they have strengthened the perception of “Made in Türkiye” with the value they have revealed and said, “We continue to carry out studies on the areas we see as potential. In this context, thanks to our attempts to obtain goods and products from boron in recent years, we have also taken important steps towards the defense industry and iron and steel sector, and we have implemented important projects, especially Boron Carbide and Ferrobor. Behind all these achievements, there are qualified human resources, technology, R&D and innovation”.

#### R&D, INNOVATION AND TECHNOLOGY...

Pointing out that there is an intense competition between boron producers and substitute products, Keleşer states that they attach great importance to R&D, innovation and technology in order to gain an advantage in this competition. Explaining his R&D activities in order to continue their activities in global markets, Keleşer continues his words as follows: “In addition to creating new consumption areas for boron, we have been working on special refined boron production with our own know-how and technological infrastructure to date, such as boron oxide, calcined tincal, Etidot-67 (agricultural boron).”, we have

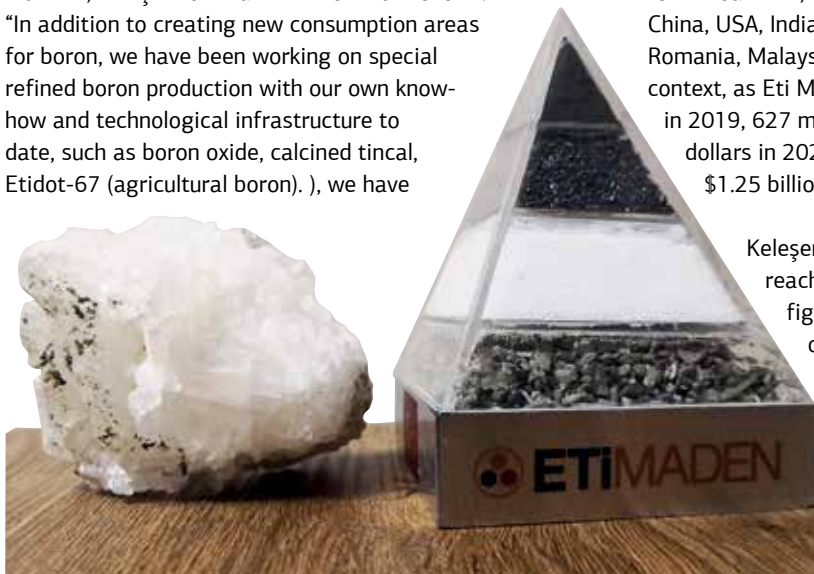
developed zinc borate, anhydrous borax, eticol ceramics, calcined colemanite products. In addition, in 2020, we developed boron cleaning products for machine and hand dishwashing for the cleaning industry, BOREL and BORTAM disinfectant products during the pandemic period, and ABCOL3367, Eti-KDot, Eti-Kbor products for the agricultural sector, as well as granular products, and offered them to the usage of our people and the industry.

In the technological sense, Keleşer stated that they carried out a digital transformation process between 2014 and 2018 and that they transformed production, quality, logistics, human resources, sales, logistics, finance, stock, purchasing and cost processes into an integrated structure with the system created. He says they use technology massively and intensely.

#### ETİ MADEN INCREASES ITS GLOBAL EFFICIENCY

Keleşer, says, “As Eti Maden, we have determined to put the pipe at the service of humanity all over the world as our main duty”, and draws attention to the fact that they are located close to their customers all over the world. Pointing out that they are the leader in the global boron market, Keleşer said, “We carry out our marketing and sales activities through our central organization, as well as our two main companies located in Luxembourg and Finland, and their subsidiaries and distributors. With worldwide operations, we supply more than 350 customers in glass, agriculture, ceramics, detergent and other sectors in the global market, especially in the Far East and Asia. In this context, while we export to 94 countries, we make the most foreign sales to China, USA, India, Netherlands, Spain, Russia, Taiwan, Romania, Malaysia and South Korea, respectively. In this context, as Eti Maden, we exported 780 million dollars in 2019, 627 million dollars in 2020, and 990 million dollars in 2021. We aim to reach approximately \$1.25 billion in foreign sales by 2022.”

Keleşer shares with us that they have reached the highest sales and production figures to date with 2.63 million tons of boron products in 2022 without compromising their understanding of quality, sustainability and innovation, emphasizes that they have increased their market share to 62 percent in the sector and that they have achieved a great success with their ‘Market as Much as Reserves’ vision.







Melike BALADIN  
iKMİB Sectoral Expert

## ASD Market Week Las Vegas Fair...

“While our country had sales of 1.1 billion dollars to the USA in chemical industry exports in 2021, this country ranked 4th among the markets to which we exported the most in the field of chemistry.”

ASD Market Week Fair, held in Las Vegas, Nevada for the final consumer products, took place for the 63rd time between 21-24 August 2022. At the fair, which is held twice a year in March and August, nearly 1800 companies from home textiles to apparel, personal care to cosmetics, cleaning products to glassware, toys to promotional products exhibited their products.

According to official explanations approximately 30 thousand people visited the fair in August, whose audience consisted of e-commerce sellers, retailers and wholesalers from other states of the USA and surrounding countries as well as from within the state. With the effects of the pandemic left behind, the fair is expected to attract more visitors in 2023.

On the other hand, the manufacturer companies, including our country's companies, took part only in the Source Direct section at the fair, where a large part of the participant profile was formed by American wholesalers. Even though it was thought that the manufacturers would disappear in a fair where wholesalers were dominant, the buyers who wanted to buy the products they would supply directly from the manufacturer had the opportunity to easily reach the manufacturers from the said section. On the other hand, the fact that wholesalers are also exhibitors provided ease of access for our companies that want to communicate with them.

### SETTING UP OFFICE IN THE USA WILL PROVIDE ADVANTAGE

US companies and final consumers prefer companies located in the US, which have offices and easy access, as they find them more reliable.

Keeping stocks by opening offices and warehouses in the USA will provide a great advantage to our companies. The feedback received from the aforementioned exhibitor companies for the August fair, where 22 participants from our country took part, also confirmed that companies with warehouses were advantageous. It was observed that companies with warehouses and distributors in the USA left the fair more satisfied.

When we look at the commercial relations of our country with the USA; USA exports increased by 45% in 2021 compared to the previous year and became the second country to which our country exports the most, with 14.7 billion dollars. While our exports in the first 11 months of 2022 amounted to 13 billion dollars, the industries that exported the most to the USA in the same period were chemistry, automotive and steel. Our country; While selling 1.1 billion dollars to the USA in chemical industry exports in 2021, this country ranked 4th among the markets to which we export the most in chemistry. In the January-November 2022 period, the chemical industry, grew 36 percent compared to the same period of the previous year and this country, which exports 1.4 billion dollars, rose to the 2nd place in our foreign sales. As the chemical industry, the sub-sectors that we export the most to the USA were mineral fuels, plastics and products.

When we look at the general economic situation of the USA; as of 2021, it is seen that it has a GDP of 23 trillion dollars and the per capita GDP has reached 69 thousand dollars. According to the world bank data; the annual average consumer inflation, which was 1.2 percent in 2020, rose to 4.7 percent in 2021. The USA is the world's largest importer and it is seen that it has a foreign trade deficit of 1.2 trillion dollars with 2.9 trillion dollars worth of imports and 1.7 trillion dollars of exports in 2021.



Batuhan ÖZDEMİR  
iKMİB Assistant Expert

## Humanitarian Aid Industry!

“The chemical industry, which has its signature in every field that life touches, also has a significant share in humanitarian aid. In particular, sectors such as medical devices, disposable plastic products, and pharmaceuticals provide supplies for international organizations in humanitarian aid. Thus, these sectors can develop their trade portfolios on the one hand and heal the world’s wounds on the other.”

In an environment where unsolved problems such as wars, hunger, and deep poverty continues, humanitarian aid and the institutions, organizations, and individuals that carry out these are becoming increasingly important. In addition to the current crises, the climate crisis at our doorstep, and the emerging disasters related to it, surprise factors such as the covid-19 pandemic that affected life in 2019 make more and more people need help. For these reasons, it is clear that the humanitarian aid industry will become a growing ecosystem.

According to a research by George Ingram and Kristin M. Lord from Brookings Institution, the humanitarian aid sector, which has a structure that is expanding daily and whose players are increasing, is trying to catch up with more points as the number and types of crises rise. This situation reveals that more countries and actors have started to enter the field of humanitarian aid, and the impoverished countries and regions need not only food and clothing aid but also projects that will provide economic development in line with sustainability goals. To exemplify, the support for women’s education, regular health centers, etc. Therefore, humanitarian aid investments and material supply may diversify and become more sustainable according to these issues.

As the research shows, the influence of companies producing goods and services in humanitarian aid, which has become an industry with increasing players and needy people, is growing exponentially. Institutions, NGOs, associations, organizations, and companies are working on establishing effective communication and regular supply networks. In this context, the ‘Humanitarian Aid Industry’; strengthens these communication and supplier networks with large-scale fair/conference events such as AIDEX Brussels, AIDEX Nairobi, and DIHAD – Dubai International Humanitarian Aid Conference and Expo held every year.

### THE HUMANITARIAN AID MARKET EXCEEDS 22 BILLION DOLLARS

Considering the supply figures of the major institutions and countries participating in the DIHAD 2022 Fair; The procurement expenditures of the International Red Cross and Red Crescent Units in 2020 were 82 million Swiss Francs, and the 2019 procurement expenditures of 39 organizations affiliated to the United Nations are 19.9 billion dollars.

According to United Nations data, 39 organizations affiliated with the UN provided goods and services with a total value of 22.3 billion dollars in 2020 through tenders, while it is observed that a total of 507.5 million dollars of purchases were made from companies of Turkish origin.

The chemical industry, which has its signature in every field that life touches, also has a significant share in humanitarian aid. In particular, medical devices, disposable medical consumables, plastic products, disinfectants, hygiene products, chemicals and additives, prefabricated structures, toys, and stationery and pharmaceutical industries provide supplies to international organizations in humanitarian aid. Thus, these sectors have the opportunity to develop their trade portfolios and heal the wounds of the world.

Within these developments, our companies will see this potential by participating in the national participation fair organizations planned to be held in DIHAD and AIDEX fairs in 2023.

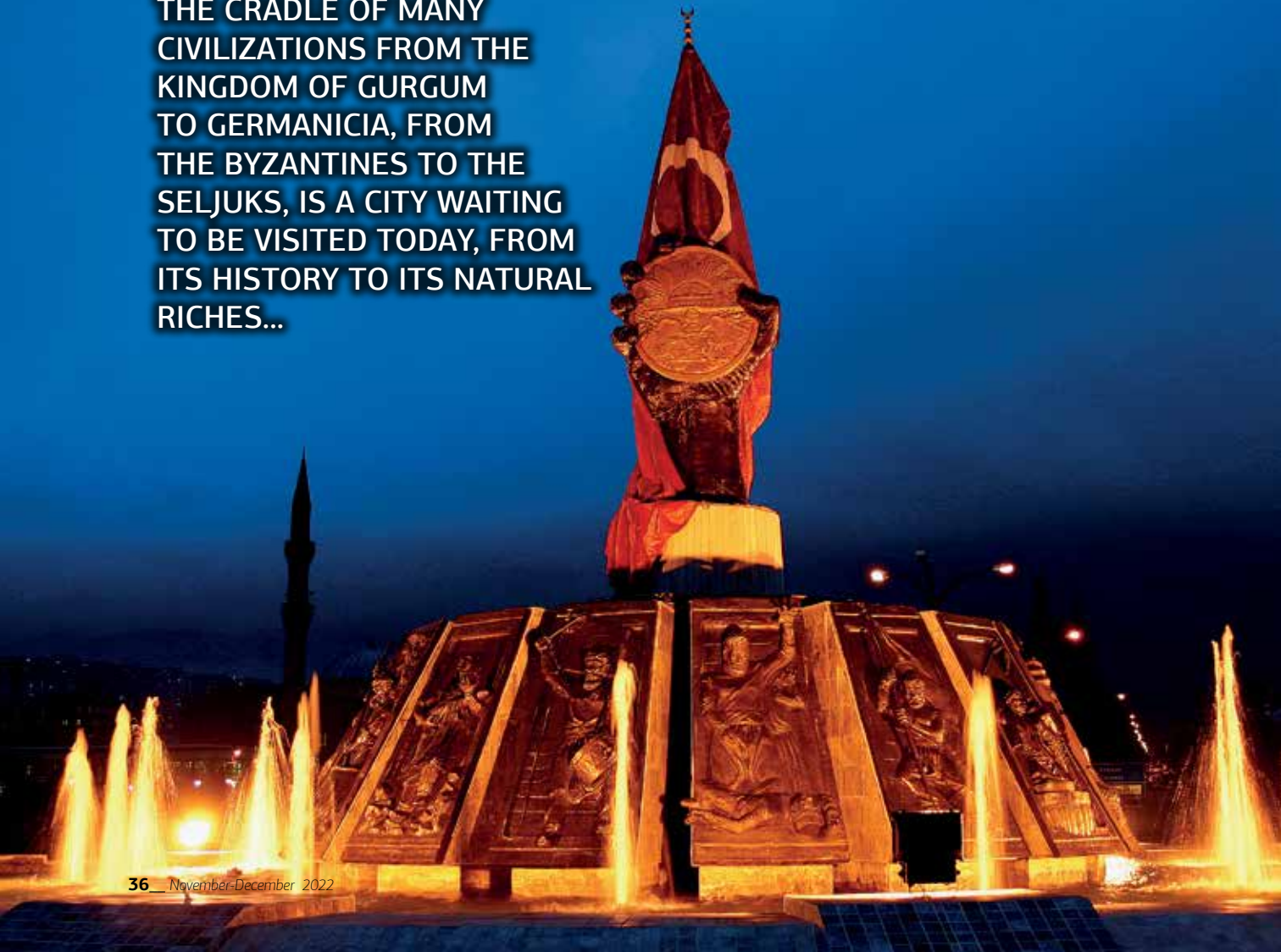




# KAHRAMANMARAŞ

## THE CITY OF HEROES

KAHRAMANMARAŞ, BEING THE CRADLE OF MANY CIVILIZATIONS FROM THE KINGDOM OF GURGUM TO GERMANICIA, FROM THE BYZANTINES TO THE SELJUKS, IS A CITY WAITING TO BE VISITED TODAY, FROM ITS HISTORY TO ITS NATURAL RICHES...





Prepared by  
Serda Büyükkoyuncu,  
Travel Writer



At the end of the Taurus Mountains, on the way to the expeditions throughout history, a city surrounded by mountains, the city of heroes; Kahramanmaraş ...

Kahramanmaraş is a city which you can ski, if you wish, where you will be reborn in the highlands of Holland and England, which has more than a variety of endemic plants, or if you wish, you can find healing in its famous thermal springs...

#### **KAHRAMANMARAŞ THROUGHOUT HISTORY**

The history of these lands goes back to prehistoric times, 14-16 thousand years ago. The first civilization, on the other hand, belonged to the Hittites about 3200 years ago... Its location was so important that there were lots of invaders in the region! Home to Gurgums, Assyrians, Medes and Persians, it was under the rule of the Macedonian Empire during the time of Alexander the Great, and the name of the city goes back to ancient times, just like the city itself. When it was the capital of the Gurgum Kingdom in the 9th B.C., its name was Markas. The names of Germanicia and Marasion are also mentioned in Byzantine resources for the same lands...

During the rule of Rome, its name was Germanicia, because the city was dedicated to the emperor of that period, Germanicus... It had become a city of increasing strategic importance for that period. Germanicia was a place both close to important cities and on the trade route...

The city was ruled as a Christian state for a long time, until the 6th century. At the end of the perpetually Arab raids, Halid Bin Walid conquered Maraş in 637 and Islam came to Maraş. As time passed by the Seljuks conquered the city with a great raid in 1086... But again it didnot belong to this civilization. Namely, those who live in these lands that could not breathe easily. After the Seljuks, Byzantines, Crusaders, Danishmendi, and an earthquake did not leave a stone unturned in 1114... Maraş came under the rule of Ilkhanids and Mamluks after the Seljuks. Then it was conquered by the Dulkadiroğlu Dynasty...

Dulkadiroğlu Principality has been very important for the history of the city. Many monuments and places, such as the Great Mosque, Hatuniye Mosque, Stone Madrasa and

Tomb, Historical Trade Areas, Katip Han, Stone Bridge, that have survived in the city, have remained from the time of the Dulkadiroğlu Principality.

The city joined the Ottoman lands in 1515 during the reign of Yavuz Sultan Selim. But because it was far from the administrative centers of the Ottoman Empire, rebellions broke out from time to time.

The city was invaded first by the British and then by the French during the First World War... But the people of Maraş fought their own War of Independence with the independence struggle they started by saying "Maraş will not be able to smile on the enemy without being a grave for us." Therefore it became the first city to liberate itself by gaining its independence on February 12, 1920.

The city was honored with the 'Red Stripe Medal of Independence' by the Grand National Assembly of Türkiye in 1925 and the title of 'HERO' in 1973, and its name was forever changed to 'HERO'.

#### **HISTORICAL GRAND MOSQUE...**

Grand Mosque; It was built during the reign of Süleyman Bey, the ruler of the Dulkadiroğulları Principality. According to the inscription at the entrance, the mosque underwent a serious restoration in 1496 by Alaüddeve Bey, son of Süleyman Bey of Dulkadir.

Alaüddeve Bey also built an almshouse, Taş Madrasa, Masjid and Büyük Bağdat Han.







### THE MUSEUM OF SEVEN BEAUTIFUL MEN

The most striking museum of the intellectual structure of the city is the Museum of the Seven Beautiful Men... The museum, which was established in a building built by American missionaries as an American girls' college in 1882, was actually three separate buildings when it was first built... Today, only two structures of the school have existed. After the proclamation of the Republic, it was re-opened as a school in 1933 as the first educational institution of Kahramanmaraş. Maraş High School, which raised famous and important people between 1945 and 1965, was in this building.

Afterwards, it went through a series of restorations and repairs and started its new life as both a library and the 'Seven Beautiful Men Museum'. In the museum, there are corners where the mummies, works and life stories of many famous writers, poets and bards raised by the city are told.

### KAHRAMANMARAŞ IN INDUSTRY

Kahramanmaraş, which quickly healed its wounds after its liberation and has come to the present day as one of Türkiye's locomotive cities... The city has protected its history as well as its nature... It has such a plateau that one cannot forget it. Başkonuş Plateau is an indicator of Maraş's care for nature.

### BAŞKONUŞ PLATEAU

Do you like the smell of hyacinth? Who doesn't love? Well, do you like sahlep? Sahlep is an indispensable part of winter



nights... Başkonuş Plateau is exactly in the centre of both hyacinth and sahlep, hundreds of endemic plants and migratory birds guesthouse... There is no different from Switzerland or Norway, but there is.

It was a place that was established as a deer breeding station in 1987, and years later the deer were released to nature. The number of deer breeding in the environment has reached 250-300 today. Since 2011, it has entered the status of a private enterprise and started to be managed by the Erdoğanılmaz family. The entrance part of the plateau is arranged as a recreation area. There are Country Restaurant, bungalow forest houses, tent camping area, caravan camping area, picnic areas, sports fields, children's playgrounds, activity areas such as ATV, horseback riding, sledge, free animal garden and walking paths.

The Erdoğanılmaz family has positioned its accommodation area at an altitude of 1325 meters. In addition, a healthy environment that strengthens the immune system is created by mixing the humid air coming from the Mediterranean with the oxygen created by the diversity of trees. An unforgettable experience is offered to those who come to the plateau with its different beauties in summer and winter and its therapeutic good weather.

### YEŞİLGÖZ LAKE

Another extraordinary beauty in nature is Yeşilgöz Lake... Yeşilgöz's water emerges from a 20-meter deep sinkhole and merges with Tekir Creek. Its water is sometimes green, sometimes turquoise, and sometimes blue. There





are people who say that the reason for these magnificent colors is the game of the sun's rays, and people who say that it is the depth of the water and the reflections of the trees...

### MARAŞ ICE CREAM

When you think of Kahramanmaraş, the first thing that comes to mind is ice cream. Maraş ice cream had a long journey to achieve this fame. The secret is hidden in his mastery, patiently kneaded with the natural riches of Mount Ahir, on which the city leans. Centuries ago, in Kahramanmaraş, a cool dessert was born, consisting of layers of snow accumulated in caves and cavities on the slopes of Ahir Mountain, and the mixture of Kabarcik grape molasses, karakovan honey and fruit extracts produced in the mountain vineyards. This dessert was called Karsambaç in those days. Karsambaç; Later, it was enriched with the milk of goats grown in Ahir Mountain, and finally, this miraculous formula was completed with salep obtained from the roots of wild orchids.

The resulting magnificent mixture was patiently worked by Durgut Usta in the 1960s with his own hard work and skill. The fame of Durgut Usta, who is considered to be the inventor of crushed ice cream, started with a mini ice cream shop, but his fame first enlarge to our country as the famous Kervan Patisseries of Kahramanmaraş. Then it took its place among the favorite flavors of the whole world with the name of Alpedo ice cream. It has been carrying



Maraş Ice Cream to 114.000 points around the world on 4 continents from China to the United States.

Alpedo, which has managed to enter the record books with the world's largest hooked ice cream, offers traditional Maraş ice cream as well as strawberry and pistachio; produces 30 kinds of pure and natural ice cream, from chocolate to orange.

### MARAŞ TARHANA SOUP

Kahramanmaraş has another special food. Maraş tarhana soup, prepared with a different method unique to Kahramanmaraş, has become the indispensable food of the people of Kahramanmaraş. It has become a

cultural feature over time that the neighboring ladies come together in a communal manner during the preparation phase, and get up early in the morning and spread tarhana on a special exhibition called raw. But there are also types that are sold in hygienic packaging in modern facilities.



### MARAŞ BREAD

Just like tarhana, this kind of bread was a war food in those days... Later, it became a culture in Kahramanmaraş, especially during Ramadan holidays. 1-2 months before Ramadan begins, the order is taken from the bakeries, the dough is prepared and given to the bakeries. After the 90's, it has become an industry. Over time, 20 types of donuts such as pistachio, hazelnut, spicy, walnut, cocoa and lemon are offered to the lovers.







**ELCHIN IBADOV**

# Elchin ibadov seeks success first by dreaming the goal he wishes to achieve

**Expressing his success criterion as follows: “I dream of the next small goal I want to reach, I attach importance to positive professional relationships and I try to strengthen my emotional intelligence muscles,” Elchin Ibadov, Vice President of Financial Affairs at SOCAR Rafineri and Petrokimya, says that he achieved his goals with this method.**

Elchin Ibadov, who works as a senior manager at SOCAR Rafineri and Petrokimya, which steers the chemical industry, is a business person who is devoted to education as well as his industrialist identity. Ibadov, who started his business life after completing his master’s degree in the USA, does not give up his passion for education and guides young people as a lecturer in the fields of Economics and Finance at various universities and educational institutions. Stating that he continues to teach from time to time, Ibadov also emphasizes that he has translated or authored a total of 15 textbooks in this field so far due to the lack of modern economics and finance textbooks in the mother tongue in Azerbaijan. Ibadov, who is the Vice President of Financial Affairs of SOCAR Rafineri and Petrokimya, answers Chemist’s questions.

## **Could you please introduce yourself first?**

I was born in 1978 in Ordubad region of Azerbaijan. After a successful education life, I went to the USA in 2001 to do a master’s degree in economics. While continuing my education at the University of Illinois at Chicago, I started my first job as an Economic Research Specialist at the Chicago World Trade Center. It was an important opportunity for me to have my first work experience in such an important global organization. I believe that I acquired the basic philosophies that shape my business life during those years. After completing my master’s degree, I returned to Azerbaijan and worked at PwC professional consultancy company at various levels for 11 years. In 2014, I came to Türkiye, my

second homeland, to take part in SOCAR’s investments in Türkiye, and since then I have been proudly serving our countries by taking various roles in financial management at STAR Rafineri, Petkim and other SOCAR subsidiaries in the Aliağa peninsula.

## **You played an important role in the growth of a strong brand like SOCAR. Could you tell us about SOCAR Türkiye’s investments in Türkiye?**

Azerbaijan State Oil Company SOCAR, one of the world’s most established oil producers, started its operations in Türkiye in 2008 by purchasing 51 percent of Petkim’s shares from the Privatization Administration. As SOCAR Türkiye, we have invested 17.7 billion dollars including SOCAR Terminal, Petkim, STAR Rafineri and TANAP since 2008, making us the largest direct foreign investor in Türkiye.

We make our investments in Türkiye in areas that contribute to the reduction of the current account deficit by taking petrochemistry into consideration. By increasing Türkiye’s value-added production power, we aim to reduce foreign dependency, especially in petrochemicals and petroleum products. With Petkim, we meet approximately 16 percent of Türkiye’s petrochemical raw material needs. STAR Rafineri, on the other hand, meets approximately 25 percent of Türkiye’s processed oil needs. We are in the 8th place on the “2021 Export Champions” list announced by the Turkish Exporters Assembly (TIM). We know that there is still a long way to go in this field.



**Your contribution to corporate success is indisputable. So what are your criteria for success?**

Hard work, perseverance and developing the ability to look at things from different perspectives are definitely important factors behind being successful. If I am successful, I believe that more than one criterion is dominantly important. I can list these criteria as follows:

**1) I imagine the next small goal I want to achieve:**

I think that being an idealist obviously has a very important effect on human motivation. But at the same time, it should not be forgotten that the road to the ideal consists of realistic small steps. Concentrating mentally on the next small goal and imagining it locks you strongly into that goal after a point, and that goal has no choice but to be realized.

**2) I attach importance to positive professional relationships:**

Establishing and, more importantly, maintaining positive relationships based on trust in the universe where there are people who can affect your organization both within your own organization and from outside, play a catalyst role on the way to success.

**3) I strengthen my emotional intelligence muscles:**

In today's business life, technical knowledge, skills and experiences can take us so far. If we think of success as an organism, we can perceive them as the bones of the organism. But if we do not surround these bones with emotional intelligence muscles, we cannot talk about a healthy organism. I think that being able to make decisions in difficult times, showing perseverance, displaying mental toughness, being able to manage and direct people, and many other important issues that make up emotional intelligence should not be ignored in business life.

**How do you evaluate your sector and institution based on your experience?**

The petrochemical industry is one of the fastest growing sectors in the world and in Türkiye. Petrochemical products are used in almost every aspect of our daily life. We can say that Türkiye needs more derivative products than its refinery needs. Petkim follows a trade strategy that is compatible with world markets. For this reason, it is less affected by these negativities with the advantage of being the only domestic manufacturer



by taking proactive measures sensitive to the developments in the world.

**How do you add value to the chemical industry?**

While Petkim provides significant import substitution as a domestic producer, it also provides domestic producers with a competitive advantage. As a domestic manufacturer, we primarily provide raw materials to our industrial customers, and we also meet the technical needs of our customers with our half-century of experienced power and technical equipment from production. With our wide operation network, we provide the opportunity of supply security with our flexibility to meet the needs of industrialists in all points of Türkiye within the same day. With this opportunity, we enable our customers to keep less stock and reduce their stocking costs.

**How do you evaluate the future of your industry in a world where environmental and climate problems are experienced? What is your company's actions on sustainability?**

We attach special importance to combating climate change, which is the common result of the effects of

energy consumption and greenhouse gas emissions, water consumption, waste water and waste management, and air quality as part of our business processes. We built our sustainability strategy, which we developed by following the global trends in the sector, on three basic and one supporting mechanism. ‘Decarbonization’, ‘Circular Economy’, ‘Green Finance’ and the ‘Opportunistic Operation Model’ that supports them... While achieving our emission reduction targets on this basis, we also make strategic investments that will create a sustainable impact.

Within the scope of our decarbonization strategy; We implement energy efficiency, electrification and resource management initiatives to reduce carbon emissions by one percent each year. Our goal; We have determined our goal as follows: 40 percent carbon reduction in Scope-1 and Scope-2 emissions by 2035 and net zero emissions by 2050.

**What advice would you give to young people who want to work in your industry?**

First of all this sector comes to the forefront as a sector that will lead young people to success with its research notion. In addition, gaining knowledge and experience about the transition from traditional production methods to digital transformation-oriented production can enable you to be successful in this sector. Finally, I would like to say that you should always remember the importance of bilateral human relations and emotional intelligence muscles will carry you to the champions league.

**Have you had any hobbies that inspire and energize you in your successful business life? Do these hobbies still add colour up your life?**

Today, we actively use our mobile phones, tablets, laptops and provide high efficiency. However, if we do not supply energy to these devices after a while, that is, if we do not plug them in, these devices will have to stop serving us. This is how I look at my hobbies. I can say they are my charge. There is a beautiful tradition in Azerbaijan that has been going on for many years. Parents often encourage their children to learn to play musical instruments from a very young age. The state also has important support in this regard, such as opening educational institutions to the wider public. On this occasion, I took tar lessons, which is the national instrument of Azerbaijan, and I continue this hobby. I strongly agree with the statement ‘music is food for the soul’. Apart from this, he perceives my



**“THE INDUSTRY MAKES ME EXCITED”**

Chemistry touches upon every aspect of life. Almost all of the things we see around us have chemistry content. Although there is a perception that the chemical industry sometimes harms the nature in society, I believe that the chemical industry has important missions to make the world a better place to live. In order to provide sustainability with realistic plans, I think that the chemical industry should serve humanity for many more years. Especially developments in biochemicals excite me as a representative of this sector. The vision and strategy put forward by our group companies in this regard shows that we are on the right track.

teaching duties as a hobby and I take great pleasure in this work, but seeing the young people I teach take important positions in business life gives me a feeling of great pride. Finally, I would like to note my passion for basketball. I was very pleased and happy the day my managers entrusted me with the managerial position of Aliğa Petkim Spor professional basketball club so that I could live this passion more intensely. I invite you all to support our team, which proudly represents our chemical industry in the Basketball Super League.



**Prof. Dr. Oğuz Okay**

**I DEFINE MYSELF AS A CHEMIST AND  
POLYMER SCIENTIST**

Emphasizing that chemistry is a revolutionary branch of science and open to new discoveries, Prof. Dr. Oğuz Okay states that “Accordingly, the research of chemists is behind the inventions. I describe myself as a chemist and polymer scientist.”



Developing innovative products by signing many pioneering initiatives in the field of chemistry, Prof. Dr. Oğuz Okay, so to speak, is a chemist by the core... His grandfather, Dr. Enver İrdem is a scientist who worked at the Adana Malaria Institute, which was established in 1928 at the request of Atatürk, and the one who first detected the presence of Anopheles multicolor, Anopheles sergenti and Anopheles marteri mosquitoes in Türkiye. His father, Prof. Dr. Ahmet Can Okay made the first classification of germs in Palynology, a new discipline of that period, in his doctoral thesis, which he completed in 1933 at the Geologische Landesanstalt in Berlin. His uncle Prof. Dr. Mecit Okay, on the other hand, completed his doctorate in Berlin and then returned to his homeland and conducted successful studies on organic chemistry. Following the path of his grandfather, father and uncle, Prof. Oğuz Okay, his brothers and his wife Prof. Dr. with the support of Oya Okay, the family continues its adventure in this field and sheds light on the chemical industry with its successful works.

Expressing that he was interested in chemistry and archeology from an early age, Prof. Dr. Oğuz Okay explains the first steps of his success journey as follows: "My uncle, who is an organic chemistry professor, had a great influence on my choice of chemistry. After graduating from the university as a chemical engineer, I won the TÜBİTAK-NATO PhD scholarship abroad and went to

Vienna in 1977. After completing my doctoral studies at the Institute of Macromolecule Chemistry at Vienna Technical University, I returned home on the last day of 1981. I define myself as a chemist and polymer scientist after observing that chemistry is a revolutionary science and open to new inventions, whereas chemical engineering is evolutionist in the classical sense and mainly chemists apply their discoveries during my doctoral years."

Prof. Dr. Oğuz Okay reminds that he worked as a researcher and consultant at TÜBİTAK Marmara Research Center (MAM) for 20 years at various intervals after he returned to Türkiye, and he also worked at Eastern Mediterranean and Kocaeli universities for two years each. Stating that he started to work at İTÜ in 1998 and worked until his retirement the previous month, Prof. Dr. Oğuz Okay reminds that he was entitled to receive many awards, especially the TÜBİTAK Science Award, for his successful work in this process.

**2005 YILI BİLİM ÖDÜLÜ SAHİBİ OĞUZ OKAY**

Prof. Dr. Oğuz Okay, who has made significant contributions to the field of chemistry and materials science, is the recipient of the 2005 TÜBİTAK Science Award. The award recognizes his pioneering work in developing self-repairing materials. The text accompanying the award highlights his achievements and the impact of his research on the chemical industry and materials science.

The image shows a microscopic view of a self-repairing material, demonstrating its unique properties and structure. This material is a key product of Prof. Dr. Oğuz Okay's research, which has led to significant advancements in the field of materials science.

### SELF REPAIRING MATERIALS!

Prof. Dr. Oğuz Okay has expressed that the first question that comes before a scientist doing research in the field of chemistry in Türkiye as either Basic science studies? or Technological studies? He has observed that the way to develop new technologies throughout his research life is through basic science studies, he says that he concentrates on this field and continues: "I only entered my two main studies, which revealed important application areas, only



with scientific curiosity. The first one is self-healing materials. Self-healing is a typical feature of most natural materials. For example, when our hands bleed, a crust forms on the skin after a while and the wound heals in a short time. The creation of this repair mechanism observed in nature in polymeric materials has been the hottest topic of recent years. Because in this context, the useful life of the materials will be extended and the amount of waste material will be significantly reduced, in other words, it will be an environmentally friendly approach. On the other hand, the development of such materials will create a great leap forward in technology. For example, any damage that may occur in materials in unmanned space travels can be repaired without any outside intervention. Bringing a self-repair mechanism to biomaterials used in biomedical and biological applications will expand their usage areas and prolong their life.

From this point of view, while examining the effects of adding water-loving (hydrophobic) side alkyl groups to water-loving (hydrophilic) polymers in the early 2000s, the strong attraction forces between hydrophobic groups did not escape my attention. We started

experimental studies in this direction with my students in my laboratory. As a result, we discovered that this type of polymer, which we synthesized by developing a simple method, has the ability to repair itself for the first time in 2010. Therefore, as a result of research that started with scientific curiosity, we developed for the first time in the literature materials with self-healing and shape memory through hydrophobic interactions. With the help of this technique that we have developed over the years, we have obtained various self-healing polymers, rubber types and hydrogels. We are waiting for the demands of the relevant companies for polymer materials that are extremely easy to produce and have shape-memory ability as well as self-healing feature.”



#### THE SOLUTION TO OIL POLLUTION IN THE SEA!

Reminding that another important work was featured in the media as an ‘oil sorbent’, Prof. Dr. Oğuz Okay states that this project, which aims to prevent marine pollution caused by oil and its derivatives due to tanker accidents, which is an important problem today, started with curiosity. His work on the sorbent, that is, the absorbent material in this project, was carried out by Prof. Dr. Oğuz Okay says: “We were investigating the behaviour of butyl rubber, which has a wide application area, in certain solvents and

### Prof. Dr. Oğuz Okay Wins Alexander Von Humboldt Foundation Award



Reminding that he was deemed worthy of the “Georg Forster Award” given by the Alexander von Humboldt Foundation in Germany, one of the most prestigious international awards in the field of chemistry, in 2015, Prof. Dr. Oğuz Okay expressed his views on this success as follows: “The George Forster Award is given to

researchers who have made an important contribution to science at the international level with their inventions and new theories, and who have a high potential to solve the problems of developing countries with their scientific research. This award has been given due to my research that illuminates the relationships between the structures and properties of soft and smart polymer materials and the products I have developed. Following this award, we collaborated with researchers at the Helmholtz Berlin Materials and Energy Research Center (HZB) for a year. We conducted research on the internal dynamics of self-healing, shape memory materials at the Soft and Functional Materials Institute of the HZB Energy Materials Department, which examines a wide spectrum of materials from metallic materials to synthetic and natural polymers. In addition, we also carried out studies on the identification of hydrophobic nanoclusters that add distinction to the materials we developed in Türkiye, especially with the narrow-angle neutron scattering (SANS) method.”



solvent mixtures, in collaboration with Sabancı University, while working at TÜBİTAK MAM in 1998. During these studies, we developed a technique in which butyl rubber can be easily cross-linked (vulcanized) in a solvent environment and at room temperature, and received its international patent. However, although this rubber material absorbs petroleum and its derivatives, the absorption rate was very slow. When we applied the same technique under cryogelation conditions in 2006, we got a rubber material like a sponge. A rubber sponge that instantly absorbs the oil from the water surface, but excludes the water, and returns the oil when you squeeze it...

This new material, with two patents, selectively absorbs petroleum and petroleum derivatives from sea waters and waste waters very quickly, unlike sorbents made of polymeric materials commercially available on the market, and can be used repeatedly by easily releasing these absorbed pollutants under mechanical force. Micrometer-sized voids created in this new rubber-based sorbent material give the material a super absorbent feature. The fact that the raw materials required for the production of rubber sorbent and the production cost are very low, shows that this sorbent can easily be released to the market in a short time. The most prominent feature here is that it can be used repeatedly as an 'oil selective sponge'.



### “I HAVE WORKED IN MANY UNIVERSITIES ABROAD”

Expressing that he has been working in many countries, Prof. Dr. Oğuz Okay pointed out that, “Since science is universal, it is very important to constantly interact, discuss and participate in joint studies with scientists from developed countries. For this reason, I went abroad very often and participated in research for short or long term. Among them, I worked as a visiting professor at Helmholtz Zentrum Berlin, Soft and Functional Materials Institute in Germany for 12 months in 2015. Again, I carried out studies at the Clausthal University Institute of Physical Chemistry for two months in 2006 and 2009 in Germany. In 2004, I worked for 4 months in the Department of Chemical and Biological Engineering at the University of Colorado in the USA. In 1988, I took part as a visiting researcher at Stuttgart University Technical Chemistry Institute for 18 months, again in Germany.

Reminding that he practises a job that he loves and sees as a hobby, and that he also earns money, Prof. Dr. Oğuz Okay gives advice to young people studying not only in the field of chemistry, but also in all fields. First of all, “Choose which field you like, you will definitely be successful” said Prof. Dr. Oğuz Okay continues his advice to young people as follows; “I advise young scientists not to delay their connections abroad. After reaching a certain scientific level, they should follow the schools where they can go as a visitor and do short or long-term research. They should not miss many research centres and universities where they can improve themselves. I believe that the students will be very successful in the departments they enter wistfully, and therefore will not have any problems.”

### Awards are coming in case of consequence

Prof. Dr. Oğuz Okay, while he was deemed worthy of many awards, some of them are as follows:

- ▶ TÜBİTAK Incentive Award (1990)
- ▶ Sedat Simavi Science Award (1994)
- ▶ TÜBİTAK Marmara Research Center Science Award (1995)
- ▶ Kocaeli University Rectorate Science Award (1996)
- ▶ TÜBİTAK Science Award (2005)
- ▶ Honorary Member of Turkish Chemistry Association (2006)
- ▶ İstanbul Technical University Foundation Science Award (2007)
- ▶ Georg Forster Award from Germany (2015).



# ADHESIVES, GLUES AND ENZYMES INDUSTRY GROW BY INCREASING ITS EXPORT RATES



*The adhesives, glues and enzymes sector has been successfully growing both in kilograms and in terms of export revenue, especially in the last three years. While growth triggers investment, it is recorded that 62 new companies have appeared in the sector in 2021.*

Adhesives, glues and enzymes products, which are one of the intermediate products of production in the industry, meet an important need in connecting objects with each other in many sectors from furniture to construction, from packaging to automotive, from shoes to toys. While the products in the adhesives, glues and enzymes sector vary according to their chemical structure, they are classified as hotmelt adhesives, cyanoacrylate adhesives, epoxy adhesives,

water-based adhesives, solvent-based adhesives, polyurethane-based adhesives, silicones and sealants with ingredients such as EVA, polyurethane, PSA, polyolefin, polyamide. As the sector has grown in investment in recent years, this has led to an increasing momentum in exports.

## **THE SECTOR AIMS TO INCREASE ITS SHARE IN GLOBAL TRADE**

While the exports of the adhesives, glues and enzymes sector around the world reach 30 billion dollars, Türkiye also has a market share in this field with a market share exceeding the level of 1 percent when the exports in 2021 are taken into account. Aiming to increase this share, sector representatives foresee to benefit from the support and incentives in the roadmap to be prepared within the scope of the “Technology-Oriented Industry Move” program and to continue its development. With this development,



sector representatives aiming to reduce the import of products necessary for raw material needs, carry out their work with the purpose of a more dynamic growth both in the domestic market and in the international markets.

### EXPORT ACCELERATION REGISTERS THE GROWTH

In the meantime, the export data of the sector for the last three years point to the growth trend according to the sources of İKMİB. Adhesives, adhesives and enzymes sector, which has grown by increasing its momentum both on the basis of quantity and income in the relevant period, achieved an export of 217 million 25 thousand dollars in 2019 in return for the sales of 99 million 942 thousand kilograms of products. In 2020, the sector generates 234 million 604 thousand dollars revenue in return for sales of 111 million 292 thousand kilograms on quantity basis. According to İKMİB data, the sector, which achieved a revenue of 327 million 341 thousand dollars in 2021 after sales of 151 million 689 thousand kilograms on quantity basis, provides a growth of nearly 40 percent in this period. In addition, the sector's successful export performance

According to the data of İstanbul Chemicals and Chemical Products Exporters' Association; it is stated that in the adhesives, glues and enzymes sector, 3.500 companies signed an export of 327 million 341 thousand dollars in 2021.

with an increase index for three consecutive years gives hope for the future.

On the other hand, considering the January-September period of 2022, the fact that its exports increased to 333 million 715 dollars with sales of 123 million 868 thousand kilograms on quantity basis also causes positive comments in the adhesives, glues and enzymes sector. Despite the fact that less sales were made on the basis of quantity in the nine months of the year, the data has shown that obtaining more revenue in terms of exports has caused to increase the added value obtained for these products. In addition, the fact that more foreign sales were made in the nine-month period than in the previous year also has reflected the success in exports to the numerical data.

### THE HIGHEST RATE OF EXPORTS TO RUSSIA

Again, according to the data of İKMİB, when the exports in the adhesives, glues and enzymes sector are analyzed on the basis of countries, it is observed that the highest sales are made to the Russian Federation. This country is followed by Iran, the United States, Switzerland, Iraq, Germany, Spain, the Netherlands, Egypt and Uzbekistan, respectively. Another point that draws attention on the basis of the countries to which the most exports are made, reveals the importance of the quality perception created abroad by the sector, which has a strong place in the markets of developed countries such as the USA, Germany and Switzerland.

SECTOR, INCREASE IN EXPORTS CATCHED THE TREND:	
Year	Export
2019	217.237 million dollars
2020	234.604 million dollars
2021	327.341 million dollars
2022	333.714.885 dollars