



معهد البحوث الصناعية

INDUSTRIAL RESEARCH INSTITUTE  
INSTITUT DE RECHERCHE INDUSTRIELLE

# ANNUAL REPORT 2023



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## A Pillar of Progress Amid Challenges

*Message from*

***Dr. Bassam Frenn, Director General***



As we step into a new year, Lebanon's situation remains uncertain. However, amidst economic challenges, the Industrial Research Institute (IRI) harnesses the power of innovation to breathe new life into the Lebanese industrial sector.

The past two years have presented significant difficulties. Lebanon has been burdened by political instability, economic crises, and the impact of the pandemic. Today, these challenges persist and have intensified due to increased aggression at the southern border, resulting in casualties, displacement, and substantial economic damage.

Despite these adversities, the IRI remains unwavering in its commitment to resilience, believing that the industrial sector should always be the backbone of any recovery plan.

The expansion of our departments, laboratories, and responsibilities has established the Industrial Research Institute as a keystone of the national economy. We interact with ministries, government agencies, and the private sector, acting as an incubator, driver, and influencer in industrial, commercial, construction, and reconstruction activities.

Driven by our desire to support Lebanese businesses, we continue to advance our research and development, offering comprehensive support programs. We provide the necessary tools for them to innovate, modernize, and succeed.

Internationally, the IRI is establishing strong partnerships with leading European organizations. These global collaborations further reinforce our position as a driving force for the Lebanese economy.

The Industrial Research Institute's name has become synonymous with success, progress, and hope for a brighter future to Lebanon. We remain dedicated to fostering a prosperous Lebanon, ensuring that our country (The Cedar Nation) can once again achieve sustainable growth and development, driving innovation and excellence in every sector.

## IRI: ITS PURPOSE & FUNCTION

The Industrial Research Institute is a Lebanese institution for studies, industrial research, and scientific testing and analysis. IRI is a non-profit, non-commercial, public utility organization having an independent legal personality with the right to own, purchase, sell, insure, accept donations, take loans, and engage in litigation and similar activities. IRI was founded in 1953 and was linked to the Ministry of Industry pursuant to Article 3 of Law n° 642 of June 2, 1997. IRI is governed by private law, and its bylaws and internal and financial regulations.

IRI enjoys financial and administrative independence and is subject to post-auditing by the Court of Accounts in what concerns the contributions of the government to IRI.

IRI's headquarters are located in Hadat, and it is entitled to establish branches in all parts of the Lebanese Republic and abroad.

IRI is an independent national research center, and combines:

- Knowledge, expertise, and specialization
- Scientific material and equipment
- Data and technical documents.

IRI offers specialist scientifically reliable services to the national economy as well as existing industry and those which can be established with the aim of industrial development. The services include:

- Consultations
- Studies and research
- Testing, metrology, and analysis.

IRI, through its activities and operations, seeks to achieve the following goals:

- Conducting research and studies to enable the establishment of new industries
- Conducting research and studies on various materials and items to learn their properties and determine their uses and applications
- Offering specialist consultations on technological, administrative, and economic matters related to existing industry with the aim of industrial development and encouraging the creation of new industries
- Offering internationally accredited services in testing, analysis, and metrology related to materials and items, and issuing certificates of quality and conformity certificates
- Collaborating with national and international official bodies, and economic institutions and trade unions with the goal of fostering economic development.

IRI brings together a reliable body of experts, specialists, and engineers in many fields to carry out its activities, supported by another body of administrators, accountants, and clerks who undertake administrative tasks and other internal services.

## OUR ETHICAL STANDARDS

In carrying out its functions, the Institute adheres to ethical and professional standards whereby it safeguards the clients' best interests. Furthermore, IRI regards as the client's property any information, processes, patent or techniques developed during work with the client and safeguards such matters in complete secrecy.



# GENERAL PUBLIC ACTIVITIES



## DR FRENN WELCOMING THE AMBASSADOR OF BELGIUM “COOPERATION WITH EUROPE CONTINUES”

25/01/2023

Dr. Bassam Frenn continued his diplomatic activities, and met with the Belgian Ambassador to Lebanon, Koen Vervaeke, and the Commercial Attache at the Embassy, Nada Abdel Rahim, who toured the Institute’s departments, directorates, laboratories, and research and study centers. The meeting was attended by the President of the Lebanese University, Dr. Bassam Badran, the President of the Lebanese-Belgian Businessmen Association, Pierre Salloum, and the executives of the institute.

Dr. Frenn began the meeting by welcoming the Ambassador, the University President, and the attendees, highlighting that cooperation between the Institute and Belgium is ongoing and sustainable, and is being manifest in European conferences in Brussels, where the Institute participates as a member in the meetings of the European Laboratory Group Eurolab.

Frenn added, “Bilateral cooperation continues through the European Commission. The Institute hosts European-Lebanese specialized centers concerned with the industrial sector in Lebanon. In recent years, the Institute has become a reference in terms of services for various economic, productive and industrial sectors, and plays a pivotal role in controlling the quality of products exported and imported to and from Lebanon. Therefore, we developed laboratories, acquired equipment, and adopted inspection mechanisms to be at the level of international and European standards. We achieved this with diligent work and absolute dedication by colleagues working at the Institute who follow specialized courses abroad and participate in international and European conferences, and are in turn organizing specialized training courses at the Institute in many fields, both for trainees in Lebanon or from neighboring countries.”



He concluded, “At the Industrial Research Institute, we look forward to more success and building up the experience and qualifications of our staff. We also aspire to a greater partnership with similar Belgian institutions, and we are confident that your love for Lebanon, Mr. Ambassador, will be translated into bilateral and reciprocal relations.”

### Vervaeke

Ambassador Vervaeke responded by thanking the Director for his good reception, praising the role of the Institute in developing the industry and in ensuring guaranteed trade exchange between Lebanon and Europe and vice versa. He stressed that his country, which hosts the European Commission, is always determined to help Lebanon in various aspects.

The attendees then toured the institute’s directorates, laboratories, and research and development departments.



## DR FRENN AND MR SHAWI SIGN A COOPERATION AGREEMENT

20/06/2023

The Director General of the Industrial Research Institute, Dr. Bassam Frenn, and the President of the National Institute of Vine and Wine, Mr. Zafer Shawi, signed a memorandum of cooperation between the two institutes, in the presence of the executives of the Research Institute, members of the Board of Directors of the Wine Institute, and a number of members.

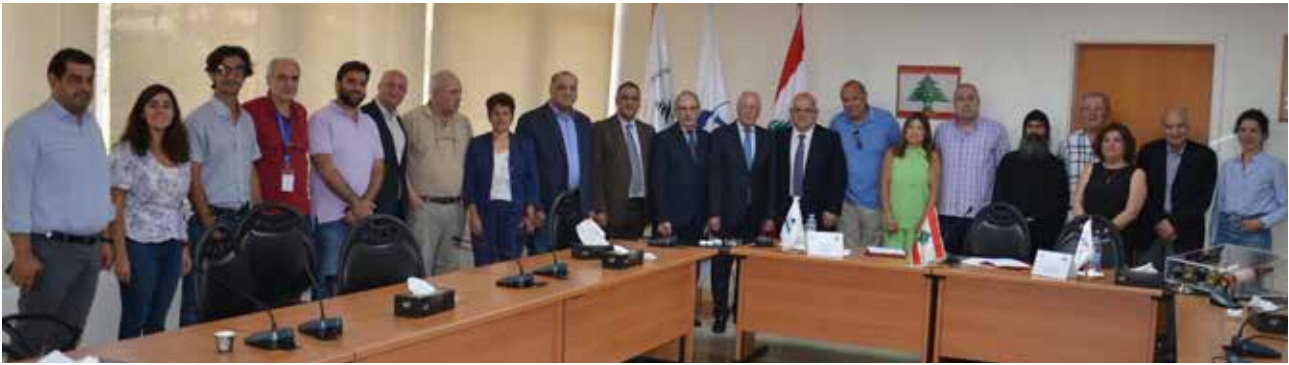
Dr Frenn's speech stressed that the Industrial Research Institute is carrying out its duty and role towards the national industry, which is to advance it, modernize it, promote it, grant it certificates of conformity, and accompany it in its development by assisting it in the necessary research, studies, inspections and laboratory tests in accordance with the mandatory specifications.

He explained that a joint working group will be formed, and the Wine Institute will benefit from the expertise of the Industrial Research Institute employees, who are tasked with providing advice and information that enriches the activity of winemakers and vintners, supporting the spirits industry, especially Lebanese wines, which have seen a surge in demand in global markets, thanks to a great legacy and the determination of those working in this sector, led by my friend Mr. Zafer Shawi, who has a long history in this industry and in the field of business in general. He concluded that the cooperation agreement is a step in the right direction to reach the common goals of serving the wine sector.

Mr. Shawi responded by praising "the efforts of Dr. Frenn and the employees at the Industrial Research Institute who surround my colleagues with all care," indicating that we look forward to more joint work and making the most of the scientific expertise and advanced laboratories available at the Institute, adding them to our experiences and skills that have become advanced in this field.

He said, "We are a sector that has grown thanks to motivated young people who have followed in the footsteps of our fathers and grandfathers, as well as young people who have joined this sector with passion and love. We elaborate our products in





accordance with the best national and international standards, in an integrated production cycle that begins with planting the vine and continues into picking, agglomeration, fermentation, pressing,

aging, bottling, distribution and export. We aspire to globalization, and we have made great strides in this regard.”

## MINISTER BOUCHIKIAN ABOUT THE INDUSTRIAL RESEARCH INSTITUTE: LEBANON THRIVES ON SUCCESSFUL INSTITUTIONS

12/07/2023

The Euro-Lebanese Center for Industrial Modernization (ELCIM) affiliated with the Industrial Research Institute has inaugurated the wastewater treatment plant that was set up at the Institute on the Lebanese University campus in Hadat, with joint funding by the European Union within the framework of the ENI CBC Medprogram part of the MAIA-TAQA project.

The ceremony was attended by the Minister of Industry in the caretaker government, George Bouchkian, the Director General of the Industrial Research Institute, Dr. Bassam Frenn, the President of the Lebanese University, Dr. Bassam Badran, the President of the Industrialists Association,

Salim Al-Zeinni, Director of ELCIM and local project manager of MAIA-TAQA, Naji Abi Zeid, and representatives of institutions specialized in the field of renewable energy and wastewater treatment.





The project, which took about a year to implement at a cost of one hundred and ninety thousand US dollars, aims to operate a sewage treatment plant on solarenergy, recycle waste water and reuse it in irrigation, as well as helping the Industrial Research Institute to compensate for water shortage.

**Bouchikian**

Minister Bouchikian pointed out that “the Industrial Research Institute has embarked on a radical journey with MAIA-TAQA in the areas of new investments with the aim of improving the quality of life and raising its standard. The importance of the project is threefold: scientific research, technological development, and innovation.”

He stressed that “what the institute through ELCIM offer for Lebanese industrialists is considered one of the basic pillars of developing and modernizing the industry in terms of expansion and increasing business volume, facing the challenges of competition, and exporting to the most demanding markets.”

He pointed out that “the percentage of small and medium enterprises in Lebanon exceeds 90%, and this is the same as in the surrounding countries.” He praised “the project creators and their intention to support this type of enterprises, and to introduce their owners to more research

and innovation.”

He said, “Due to the scarcity of natural resources in countries like Lebanon, and their high cost, which is reflected in the cost of industrial production thus reducing the ability of industrialists to compete in foreign markets, the Industrial Research Institute took the initiative years ago to adopt policies to rationalize the use of energy and water. It directed industrialists to adopt these policies. As for the project that we are inaugurating, it is based on operating a sewage treatment plant on solar energy, recycling this waste water, and reusing it for irrigation.”

He praised “the distinguished relationship between Lebanon and the European Union, and between the Institute and the European Union, through its membership in the European Laboratories Federation, and its continued cooperation with relevant European organizations and institutions,”emphasizing that “industry is a basic pillar of the Lebanese economy, especially in light of the existing talent.”He praised the role played by the Industrial Research Institute, as “the starting point in various fields.”

He highlighted “the urgent need to conduct a comprehensive survey of the industrial sector in Lebanon.”

And added that “Lebanon, with the presence of successful institutions, remains a pillar and a basic support for economy, industry, science,



innovation and creativity. These institutions are the ones that maintain and consolidate ties with the countries of the developed West. The first and most important credit goes to human resources that give added value and innovate in their fields of work.”

### **Frenn**

In turn, Dr Frenn stressed that “the concerned authorities are working within one strategy to develop the economy and preserve the environment,” noting that “the Industrial Research Institute focuses on communicating new ideas and projects that can be built upon to support a sustainable economy.” He expressed his belief that “the project falls within this context,” pointing out that “the institute is working today on collecting and reusing rainwater, in an integrated policy with the MAIA-TAQA project.”

He said, “The relationship with the European Union is not new, and without their support, we would not have succeeded in completing this project implemented with joint financing. This relationship will not end with its completion. We began working with them on the issue of energy years ago and have completed many projects whose importance lies in sustainability, especially since we are always committed to our slogan “The project that starts here continues here.”

He concluded, “The main goal of implemented projects lies in conveying the message to interested parties in the industrial and economic fields and decision-makers in Lebanon that we support sustainable projects.”

### **Abi Zeid**

Mr. Abi Zeid explained that “MAIA-TAQA works on three main axes, which have had a significant impact in the field of energy,” pointing out that “the pilot projects it completed in building integrated photovoltaic energy, heat, and wastewater treatment and reuse, which were implemented respectively in Egypt, Jordan, and Lebanon, serve as evidence of its sustainable

practices.”

He cited “the training program in which more than 60 students and professionals participated and had an effective role in transferring knowledge and skills,” announcing “the accreditation of six trainers among the participants, ensuring the dissemination of expertise in the field of energy efficiency, wastewater treatment and reuse.”

He revealed that “Maia-Taqa succeeded in providing sub-grants to nine small and medium-sized companies in Egypt, Jordan and Lebanon,” noting that “this support became possible through the establishment of integrated innovation offices, which facilitate access to resources and financing for these companies.”

He said, “In this ceremony, we crown the efforts made and the impact they have had on the energy sector, as a large number of experts, stakeholders and beneficiaries gathered to exchange knowledge, experiences and success stories.”

He hoped that “this event will serve as a platform for communication, cooperation and exchange of ideas.”

He concluded by saying, “Together, we can continue to drive innovation and sustainable practices in the energy sector.”

### **Salem**

Then, the expert in the field of energy and water, Dr. Talal Salem, spoke about the lessons learned from the MAIA-TAQA project in wastewater treatment and reuse to preserve water resources and sustainably manage resources.

In conclusion, Bouchikian and Frenn inaugurated the station and toured the project.

## DR SALLOUM: THE INDUSTRIAL RESEARCH INSTITUTE'S LABORATORY IS ADVANCED TO ENSURE THE QUALITY OF THE MEDICINE

21/09/2023

During his visit to the Industrial Research Institute, in the presence of former MP Salim Khoury, Head of the Pharmacists Syndicate, Dr. Joe Salloum, was briefed on the advanced, high-standard, internationally accredited laboratories at the Industrial Research Institute. Dr. Salloum met with the Director General of the Institute, Dr. Bassam Frenn.

He called on those concerned to “Adopt the institute’s laboratories to verify the type and quality of medicines, especially in the stages of registering imported or locally manufactured medicines. We have an advanced laboratory to verify the quality of medicines, so please make use of it.”





**LABORATORY SERVICES,  
OBSERVATIONS &  
ACTIVITIES**



# THE INDUSTRIAL RESEARCH INSTITUTE OVERCOMES EXCEPTIONAL CIRCUMSTANCES

*249045 tests 32440 conformity assessment files*

The year 2023 was very similar to the year before, in terms of political, economic and social developments. Therefore, growth did not happen as desired to restart the wheel of economy and relaunch the process of development and reconstruction. Indeed, matters worsened in the year 2023. In addition to the repercussions of Covid-19, there were strikes in the public sector, work interruptions in basic departments that constituted a primary source of revenue collection, some institutions moving abroad, and last but not least, the Israeli aggression against Southern Lebanon and the displacement of more than 100,000 Lebanese from their towns and villages to the Lebanese interior fleeing bombings and attacks. On the other hand, the Industrial Research Institute, with its proactive plans, staff, and laboratory equipment, was ready to face these great challenges, by being fully prepared and physically and permanently present to perform its role and tasks, based on the conviction of the Director General of the Institute, Dr. Bassam Frenn, and his vision that ensuring the continuity of the Institute's work in exceptional circumstances is the way to contribute to the good functioning of the economy, through facilitating imports and exports, accompanying the industrial sector, counseling it and directing

it towards good production.

The tests, examinations and inspections were distributed as follows:

- 249,045 tests and analyses in the field of conformity assessment, conducted by the laboratories of the Industrial Research Institute during 2023, an increase of 29,198 operations compared to 2022, approximating 13.5 percent.

In addition to these tests, there were 291 external inspections, in addition to 580,262 gas cylinders, locally manufactured.

- Standardization and calibration tests amounted to 36,582 tests on 3,768 samples.
- the Industrial Research Institute studied 32,440 files for assessment of conformity to mandatory specifications for goods arriving through Lebanese points of entry.

The Industrial Research Institute consolidates its qualifications as a scientific institution capable of meeting the needs of public administration and the private sector, and ensuring that they are met through scientific and technical tests in many fields, with precision and skill, in addition to preparing scientific research and studies in all economic fields.

## Tests and analyzes

This year, despite the difficult circumstances, the Institute succeeded in increasing the number of tests and analyses it conducted. This is further evidence of the Director General's follow-up and direction to a distinguished staff who work with dedication and sincerity. This resulted in a 13.5 percent increase in the activity of the Institute's

various laboratories, compared to 2022. Activity in the Electrical laboratories increased by 24.2 percent, and their share represented 35 percent of the total number of tests. the activity in the chemical laboratories increased about 28 percent, their share of the total tests amounted to about 33 percent, followed by civil engineering and soil

laboratories, with a share of about 13 percent, and microbiological tests represented 10 percent. These were followed by the Petroleum and Paint Laboratories, with 4 percent, the Central Laboratory for Grains, Flour and Bread Research with 3 percent, and the Textile and Leather

Laboratories with 1.2 percent.

Tests were conducted on 40,737 samples of various types received.

As for the Welding laboratory, it conducted 2,364 tests.

Laboratory activity appeared according to the statistical tables as follows:

**NUMBER OF TESTS BY LABORATORY**

Year	2023	2022	2021	2020	2019	2018
Chemical and physico-chemical	81,600	63,750	69,840	74,270	81,500	80,600
Microbiological analyses	27,100	27,750	27,750	29,250	33,500	39,300
Textile, leather and rubber	3,070	2,250	2,850	3,430	5,900	6,750
Paint, Petroleum and derivatives	9,980	8,300	8,640	9,540	16,500	16,150
Central Laboratory for grains, flour and bread research	7,900	7,604	11,194	13,853	13,879	21,678
Civil Engineering	32,019	40,011	35,345	29,325	60,010	80,821
Electricity	87,376	70,182	56,500	28,092	118,484	122,841
<b>Total</b>	<b>249,045</b>	<b>219,847</b>	<b>212,120</b>	<b>189,653</b>	<b>332,076</b>	<b>372,992</b>
Welding	2,364	670	1,315	1,893	2,303	4,852

**Chemical and Physical Chemistry laboratories**

The number of tests in Wet and Physical Chemistry laboratories reached 81,600 tests, an increase of 17,850 tests, or 28 percent, representing about 33 percent of the total activity of laboratories.

**Microbiology**

The number of tests conducted in the Microbiology Laboratory reached 27,100, constituting about 10 percent of the total number of tests.

**Textile, leather and rubber laboratories**

Testing and analysis operations in these laboratories recorded 3,070 tests, representing about 1.2 percent; Testing has increased by approximately 36 percent. This is due to the major halt in the import of textiles and fabrics.

**Petroleum laboratories**

The activity of the Paint and Petroleum laboratories increased by 1,680 tests, or 20 percent, reaching 9,980 tests, and their share of the total tests became about 4 percent.

**Civil engineering laboratories**

As for Civil Engineering and Soil laboratories, their activity decreased by 20 percent and recorded 32,019 tests, compared to 40,011 tests in the previous year, and their share reached 13 percent of the testing activity.

**Electrical laboratories**

Activity in the Electrical Laboratories skyrocketed, reaching 87,376 tests, an increase of 17,194 tests, and their share became about 35 percent of the total tests.

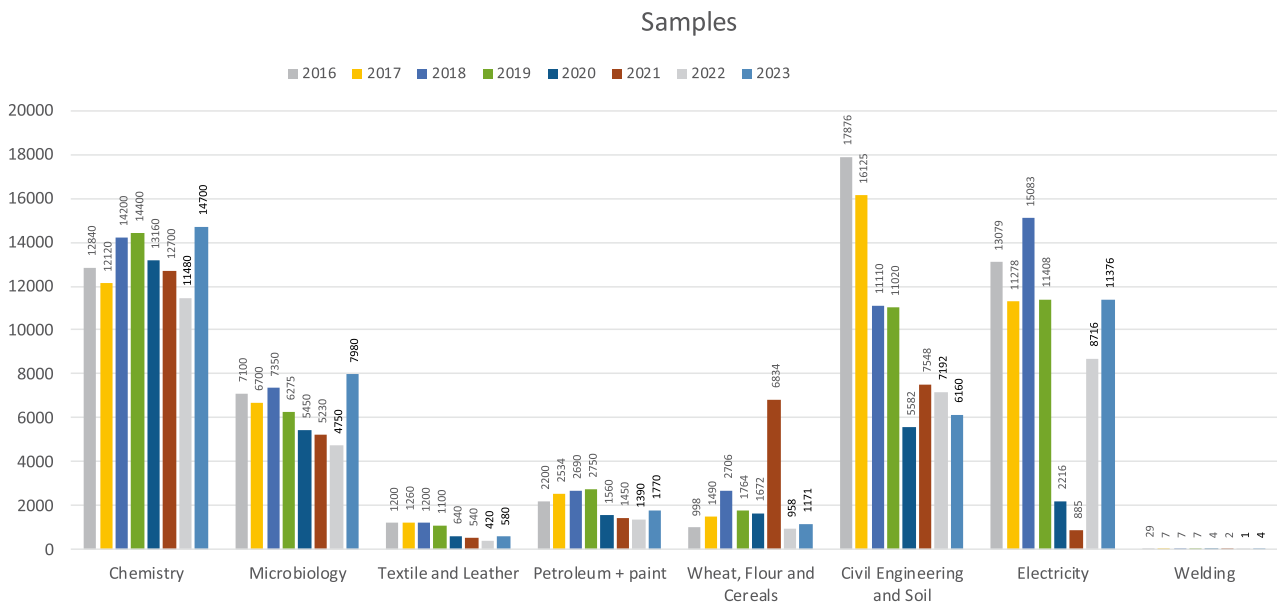
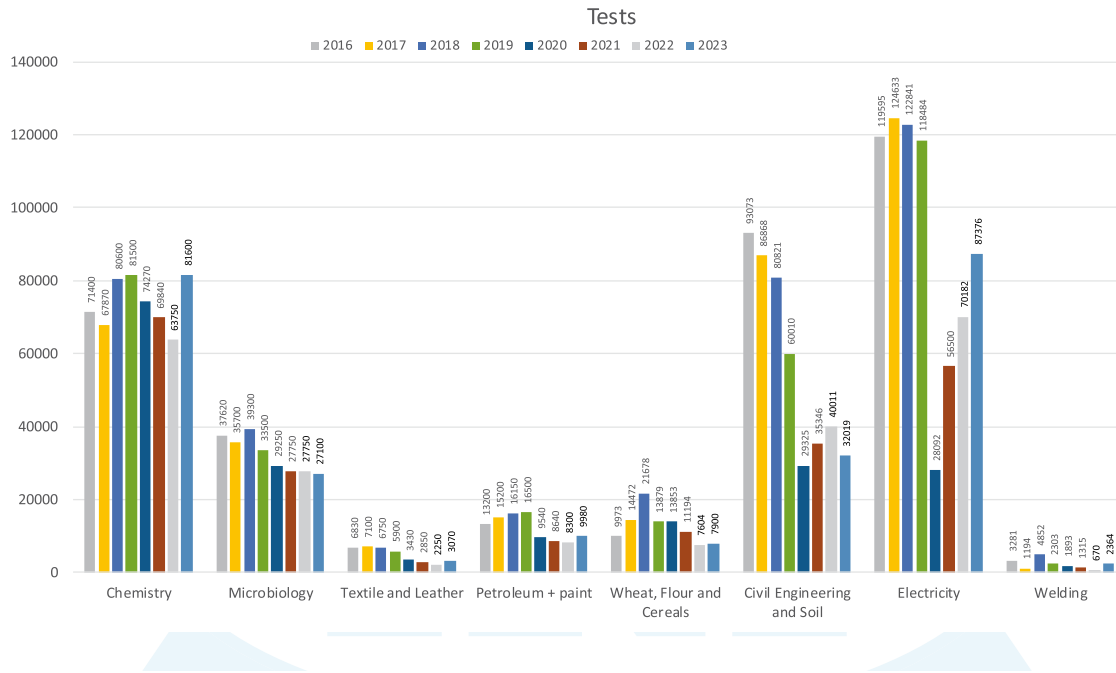
### Central Laboratory for Grains, Flour and Bread Research

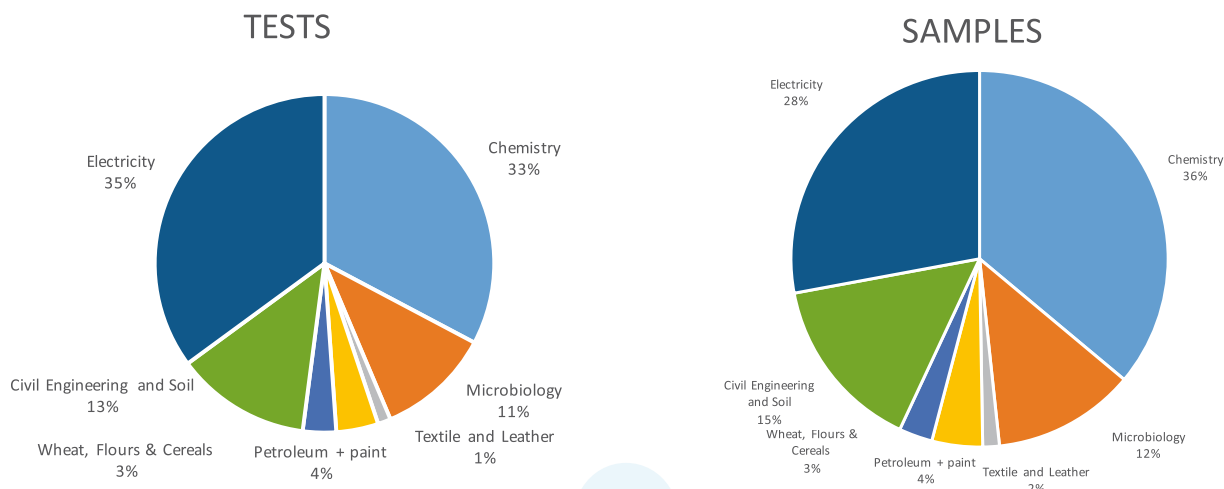
Given the close cooperation between the Ministry of Economy and Trade and the Industrial Research Institute, the laboratory serves the Ministry of Economy and Trade in its responsibility for conducting laboratory tests of imported wheat. It also conducts other tests for the majority of imported and locally

manufactured products. The number of tests at the Central Laboratory for Grains, Flour and Bread Research reached 7,900 tests, an increase of 296 tests, representing about 3 percent of the total tests.

### Lebanese Welding Center

Welding inspections in 2023 amounted to 2,364 operations.





### Metrology and Calibration Laboratories

The various activities of the metrology laboratories increased during 2023 by 46 percent compared to 2022, and reached 36,582 tests, compared to 25,048 tests last year.

These laboratories received 3,768 measuring devices.

These tests were distributed in the fields of temperature, pressure, force, mass, dimensions, and electricity.

The development of the activity of these laboratories is highlighted as follows:

#### Temperature

The temperature laboratories received 927 devices, which underwent 9,270 tests, an increase of 3,120 tests, or 50 percent, at a rate of 10 tests per device, which is the same rate since 2010.

#### Pressure

The number of pressure-measuring devices delivered for testing was 47, and these underwent 376 tests, at a rate of 8 tests per device, which is the same approved rate.

### MEASUREMENT AND CALIBRATION

TOTAL ACTIVITY	2023		2022		2021		2020		2019		2018	
	Units	Tests	Units	Tests	Units	Tests	Units	Tests	Units	Tests	Units	Tests
Temperature	927	9270	617	6,150	437	4,356	440	4,400	533	5,330	551	5,510
Pressure	47	376	64	512	25	200	29	232	18	144	70	560
Force	5	48	5	40	2	16	5	60	9	108	6	72
Mass	2155	21824	1,599	1,5420	1,269	11,883	996	9,288	1,228	11,532	1,170	10,816
Dimensions	370	2960	273	2184	186	1,488	143	1,144	187	1,496	113	904
Electricity	257	2056	79	632	39	380	51	408	38	304	52	416
Other tests	6	48	3	40	17	136	24	192	38	304	36	288
<b>Total</b>	<b>3,768</b>	<b>36,582</b>	<b>2,642</b>	<b>25,048</b>	<b>1,975</b>	<b>18,459</b>	<b>1,688</b>	<b>15,724</b>	<b>2,051</b>	<b>19,218</b>	<b>1,998</b>	<b>18,766</b>



**Force**

The force measurement laboratories received 5 devices to measure their force. 48 tests were conducted on them, an average of 9.6 tests per device.

**Mass**

The number of mass units reached 2,155, which underwent 21,824 tests, with an average of about 10 tests per unit.

**Dimensions**

The number of units increased to 370 units and tests to 2,960, with a rate of 8 tests per unit.

**Electricity**

As for the tests on equipment in the field of electricity, they increased in 2023 to 257 devices and 2,056 tests, at a rate of 8 tests per device.

**Miscellaneous tests**

There were 48 miscellaneous tests, on 6 devices.

**EXTERNAL INSPECTION**

ACTIVITY \ YEAR	2023	2022	2021	2020	2019	2018
Inspection of gas tanks	126	247	120	126	79	109
Inspection and calibration of oil containers	11	19	38	45	39	41
Inspection on steam boilers	188	102	121	137	161	188
<b>Total</b>	<b>291</b>	<b>368</b>	<b>279</b>	<b>308</b>	<b>279</b>	<b>338</b>
Inspection and monitoring of locally-produced gas cylinders	580,262	555,409	85,267	424,168	672,262	677,600
Inspection and monitoring of imported gas cylinders	0	0	0	0	0	14,784
Inspection and monitoring of exported gas cylinders	110,928	115,821	0	0	0	0

**CONFORMITY ASSESSMENT ACTIVITY INCREASED TO 32,440 FILES**

Conformity assessment activity continued to increase in 2023 compared to 2022. This is one more indication of the effectiveness, speed and efficiency of the Institute performance at various border points. This increase was reflected in the increase in the number of customs files subject to conformity by the Industrial Research Institute, reaching 32,440 files, compared to 31,498 files in 2022, an increase of 942 files, or 3 percent.

The conformity assessment activity was distributed according to the types of imported

products as follows:

- Customs files assessed for conformity in the country of export within the procedure of the Institute: 365 files.
- The number of files subject to conformity reached 23,552 files, and the files not subject to the provisions of the mandatory specifications decrees after study amounted to 8,888 files.
- The number of non-compliant files reached 825 files, of which 772 files were corrected and 53 files were rejected.

## CUSTOMS FILES 2023

Types of files	Pre-shipment assessment	Chemistry	Photovoltaic systems	Electricity	Furniture	Medical Devices	Elevators	Mechanic	Power	Pain	Pressure equipment	Civil Engineering	Textiles	Transport vehicles	Welding	Shared Files	Grand Total
Totals	365	4,670	1,599	8,023	743	4,708	188	521	125	1,887	140	2,050	2,044	1,759	10	3,608	<b>32,440</b>
Subject files	365	3,027	1,406	5,218	620	4,148	94	256	104	476	81	1,998	1,523	1,515	7	2,714	<b>23,552</b>
Non-subject files	0	1,643	193	2,805	123	560	94	265	21	1,411	59	52	521	244	3	894	<b>8,888</b>
Percent non-subject files	0.00%	35.18%	12.07%	34.96%	16.55%	11.89%	50.00%	50.86%	16.80%	74.77%	42.14%	2.54%	25.49%	13.87%	30.00%	24.78%	<b>27.40 %</b>
Non-conforming files	0	72	25	557	1	6	0	1	0	16	3	129	14	0	1	0	<b>825</b>
Precent non-conforming files	0.00%	2.15%	1.00%	8.09%	0.00%	0.10%	0.00%	0.00%	0.00%	2.31%	1.23%	4.35%	0.79%	0.00%	0.00%	0.00%	<b>2.62%</b>
Corrected files	0	51	24	543	1	0	0	1	0	8	0	129	14	0	1	0	<b>772</b>
Rejected files	0	21	1	14	0	6	0	0	0	8	3	0	0	0	0	0	<b>53</b>

As for the distribution of files according to the type of imported goods, they were distributed according to their importance as follows:

### Chemicals

4,670 files, compared to 4,057 files in 2022, an increase of 613 files, or 15 percent. These files constitute about 14.3 percent of the total

### Photovoltaic systems

Photovoltaic systems files reached 1,599 files, representing about 5 percent of the total files

### Electrical appliances

Accounting for 24.7 percent of the total customs files, with 8,023 files, an increase of 1,832 files, or 30 percent.

### Medical appliances

Representing about 14.5 percent of the total files, they amounted to 4,708 files, compared to 3,869 files in 2022, that is, an increase of 839 files, or 21.6 percent.

### Construction materials files

Files decreased by 149 from 2,199 in 2022 to 2,050 files in 2023, representing about 9.3 percent. The share of these files in the total is 6.3 percent.

### Textile files

The number of customs files for textile imports reached 2,044 files compared to 1,797 files, an increase of 247 files, or 13.7 percent. The share of these goods is about 6.3 percent of the total

customs files.

**Paint files**

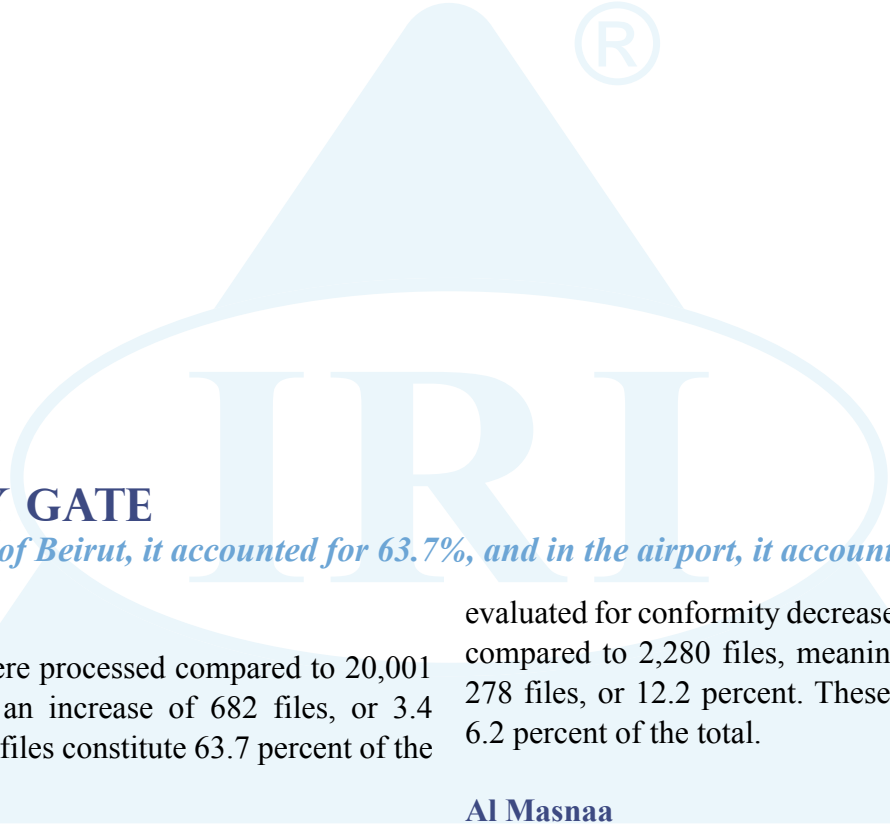
1,887 files, representing 5.8 percent of the total files. There were 1,711 files in 2022, so there was an increase of 176 files, or about 10.3 percent.

**Mixed files**

They were 3,608 files, compared to 3,048 files a

year ago, an increase of 560 files, or about 18.3 percent. The share of these files amounts to about 11.1 percent of the total customs files.

The remaining files are: vehicles, 1,759 files (5.4 percent), mechanical, 521 files (1.6 percent), files approved in the exporting country, 365 (1.1 percent), energy 125, elevators 188, and pressure equipment 140.



**FILES BY GATE**

*In the port of Beirut, it accounted for 63.7%, and in the airport, it accounted for 27.9%*

**Beirut Port**

20,683 files were processed compared to 20,001 files in 2022, an increase of 682 files, or 3.4 percent. These files constitute 63.7 percent of the total.

evaluated for conformity decreased to 2,002 files, compared to 2,280 files, meaning a decrease of 278 files, or 12.2 percent. These files constitute 6.2 percent of the total.

**Al Masnaa**

698 files were evaluated for conformity at Al Masnaa, compared to 1,363 files in 2022, a decrease of 665 files, or 51.2 percent, and the percentage of these files reached 2.1 percent of the total.

**Beirut Airport**

The number of files that were subjected to conformity assessment through Beirut Airport reached 9,051 files, compared to 7,832 files, an increase of 1,219 files, or 15.5 percent. These files constituted about 27.9 percent of the total.

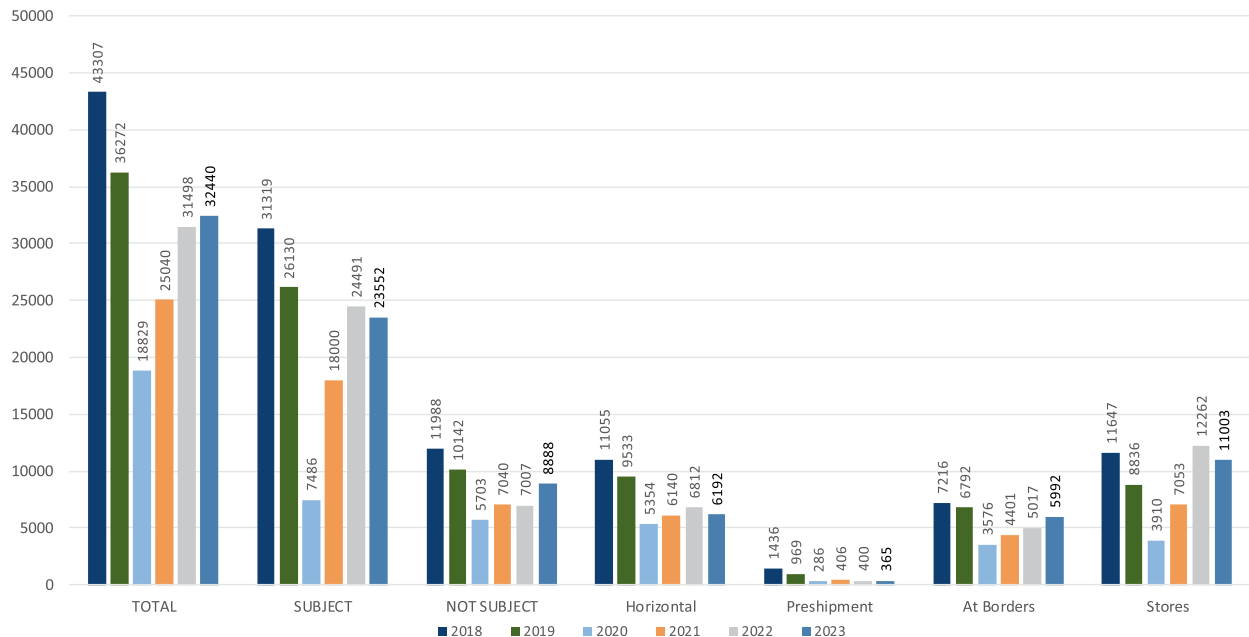
As for the rest of the points of entry, the customs files processed amounted to: 5 files through Al-Abboudieh and one file in the port of Sidon.

**Port of Tripoli**

In the port of Tripoli, the number of customs files

**FILES ACCORDING TO POINTS OF ENTRY**

Types of files	Pre-shipment verification	Chemical	PV systems	Electrical	Furniture	Medical devices	Elevators	Mechanical	Energy	Paint	Pressure Equipment	Civil engineering	Textile	Transport vehicles	Welding	Shared files	Grand totals
Al Masnaa	0	33	137	168	0	3	0	51	2	125	0	2	127	10	0	40	<b>698</b>
Beirut port	365	2,864	1,139	5,071	596	877	144	462	76	1,493	114	1,920	1,619	1,241	8	2,694	<b>20,383</b>
Port of Sidon	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	<b>1</b>
Tripoli Port	0	94	170	466	90	10	1	8	12	140	10	112	151	445	1	292	<b>2,002</b>
Beirut Airport	0	1,679	152	2,318	57	3,818	43	35	0	129	16	16	141	63	1	583	<b>9,051</b>
Abboudieh	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>
<b>Totals</b>	<b>365</b>	<b>4,670</b>	<b>1,598</b>	<b>8,023</b>	<b>743</b>	<b>4,708</b>	<b>188</b>	<b>556</b>	<b>90</b>	<b>1,887</b>	<b>140</b>	<b>2,050</b>	<b>2,044</b>	<b>1,759</b>	<b>10</b>	<b>3,609</b>	<b>32,440</b>
<b>Daily average of customs files</b>	<b>1.534</b>	<b>19.622</b>	<b>6.7143</b>	<b>33.71</b>	<b>3.1218</b>	<b>19.782</b>	<b>0.7899</b>	<b>2.3361</b>	<b>0.3782</b>	<b>7.9286</b>	<b>0.5882</b>	<b>8.613</b>	<b>8.5882</b>	<b>7.3908</b>	<b>0.042</b>	<b>15.164</b>	<b>136.3</b>





## ACCREDITATION CERTIFICATES

The Industrial Research Institute has continued promoting and strengthening Lebanese industry. By the end of 2023, 11 industrial institutions have been granted ISO 9001 certificates in quality management, two institutions have received ISO 14001 certificates in environmental system management, and two institutions have received ISO 13485 certificates for the quality system for medical devices, one HACCP certificate, one ISO 22000 certificates, and one ISO 27001 certificate were granted.

### **Product Certification**

34 products obtained quality certificates from the Industrial Research Institute, distributed among

11 production institutions.

### **Certificates of the Lebanese Welding Center**

Under Law No. 423/2002, under which “The Industrial Research Institute is considered the accrediting body authorized to issue certificates of conformity in the field of all types of welding,” the Institute granted 224 certificates of competency in welding through the Lebanese Welding Center. 15 trainees underwent training courses on welding, and a certificate in the field of inspecting non-destructive testing (NDT) was issued to one inspector who completed a course in inspecting non-destructive testing.



IRI

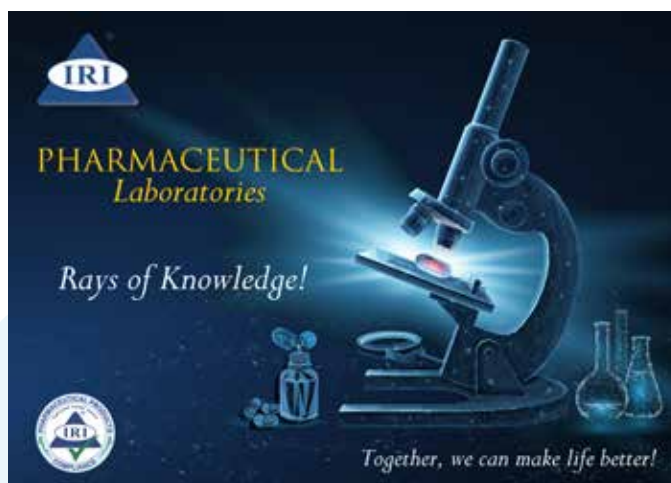
## NEW EQUIPMENT

### Pharmaceutical laboratories

In 2023, the Industrial Research Institute achieved a significant milestone with the establishment and successful implementation of state-of-the-art Pharmaceutical Laboratories.

Equipped with the latest technologies and staffed by a team of dedicated professionals, these new laboratories will cover testing, qualitative and quantitative analysis, assay determination, evaluation of various functional groups, drug characterization, products quality control, packing and packaging materials study,...

These new laboratories implementation reflect IRI commitment to advancing healthcare through innovation, applied research and testing. In



addition, the services provided align with IRI mission to improve global well-being, marking a positive impact on the field of pharmaceuticals and on the broader healthcare landscape.

### Metrology laboratory

#### Mass Comparator

The Mettler Toledo AX206 is a comparator for mass calibration up to 211 g with 1  $\mu$ g readability



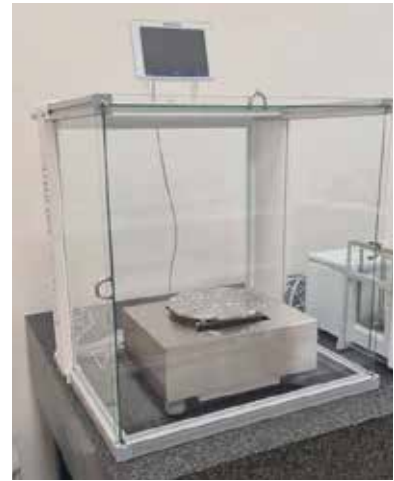
#### Mass Comparator

The Mettler Toledo AX2005 is a comparator for mass calibration from 998 g up to 2,109 g with 0.01 mg readability.



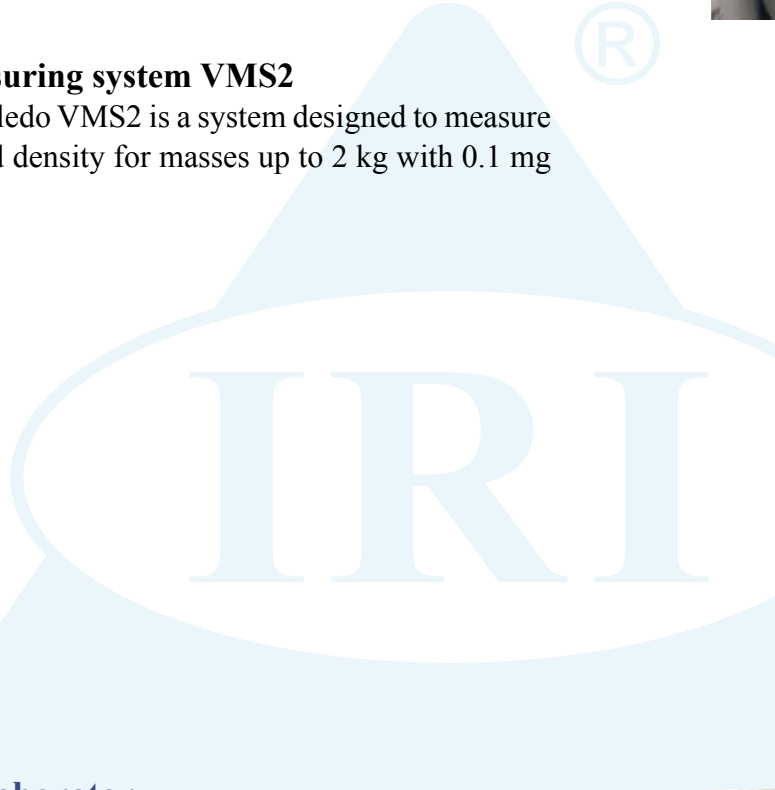
### Mass Comparator

The Mettler Toledo XPR64003LD5C is a comparator for mass calibration up to 64 kg with 5 mg readability



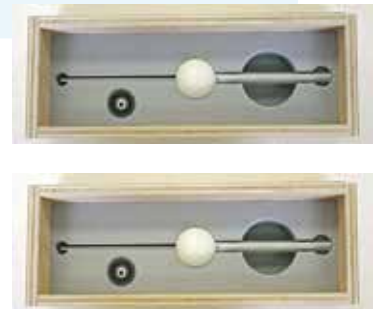
### Volume measuring system VMS2

The Mettler Toledo VMS2 is a system designed to measure the volume and density for masses up to 2 kg with 0.1 mg readability



### Electrical Laboratory

We are striving to improve our Laboratory, adding new tests to our scope of accreditation, and updating regular test methods. That is why we have acquired these two probes from T5-51, T5-52 “TESTING Europe”, for performing the test of **Protection Indicated by the First Characteristic Numeral IP3X & IP4X**, and for obtaining results that are more accurate. They have a diameter of 1mm and 2.5mm respectively.





# IRI'S INVESTMENTS

## IRI'S INVESTMENTS

The investments of the Industrial Research Institute in 2023

At a time when various Lebanese institutions adopted an austerity policy and limited spending due to their difficult situations, the Institute was able to weather this period due to the success of its policies, and did not delay in taking steps to expand investments during 2023.

The most notable investments were:

- Updating the Industrial Research Institute's transportation fleet at a value of \$18,000, paid on account during

the year 2023, out of the full cost of approximately \$213,000.

- Purchasing equipment and supplies for the Metrology Laboratory, approximately \$368,000
- Developing a Backup & Antivirus system, about \$52,000
- Chemistry laboratory modernization for about \$20,000
- Establishing a solar-powered wastewater treatment plant through MAIA-TAQA as part of a project funded in partnership with the European Union at a value of €169,000.







# INTERNATIONAL ACCREDITATION

# IRI IN FIGURES 1000 DOCUMENTS, 30 INDICATORS, 41 AUDITORS AND 437 MAN-DAYS OF AUDIT.

## IRI CONDUCTS 2500 PT TESTS FOR 1300 PARAMETERS WITH A SUCCESSFUL RATIO OF 97%

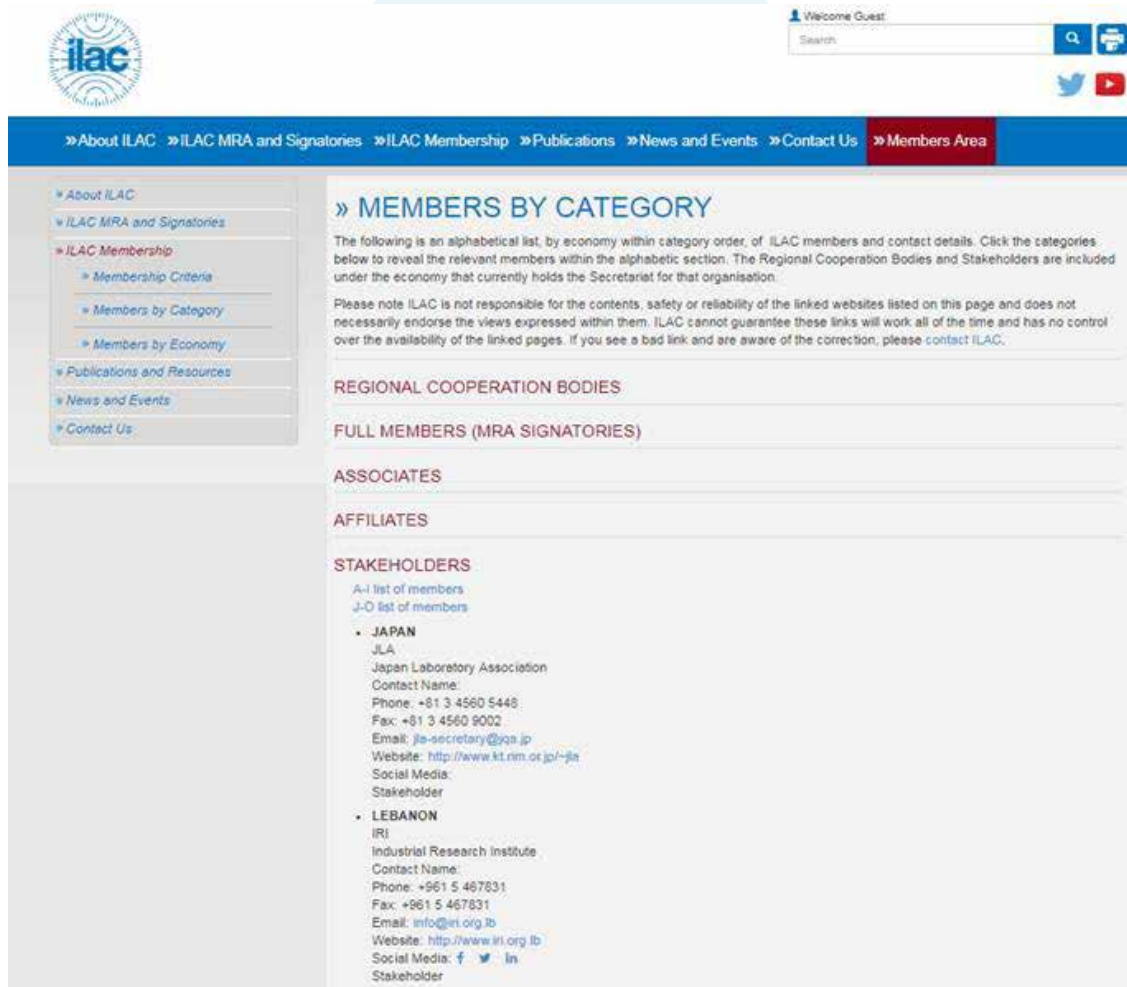
### Quality management overview

The quality management section personnel, assisted by 41 trained auditors, keep and maintain a sound quality management system in accordance with ISO 17025 (testing and calibration) & ISO 17020 (inspection) requirements.

With 1000 controlled documents, 30 Key Performance Indicators continuously monitored

and 437 man-days of audits and assessments performed, the competence of IRI was recognized from the most rigorous accreditation bodies in the world (successively DAKKS and ANAB).

All of the accreditation organizations mentioned above are full members in the international organizations IAF and ILAC and signatories of



mutual recognition. This make the institute’s reports and results trustable and recognized all over the world.

Also, the Industrial Research Institute is a stakeholder member in the international organization ILAC since 2014.

Moreover, IRI regularly participates in international proficiency testing rounds to validate its results. Until date, 2500 tests were done for 1300 parameters with a successful ratio of 97%.

This robust quality management system enabled the Industrial Research Institute to become accredited according to ISO 17025 (since 2004) & ISO 17020 (since 2017) requirements. This helped the Institute to be a key player in the National Quality Infrastructure and earn the

confidence of the most prestigious national and international organizations thus enhancing its network of partnership. Furthermore, the Institute is working towards achieving accreditation according to ISO 17065 (product certification) requirements.

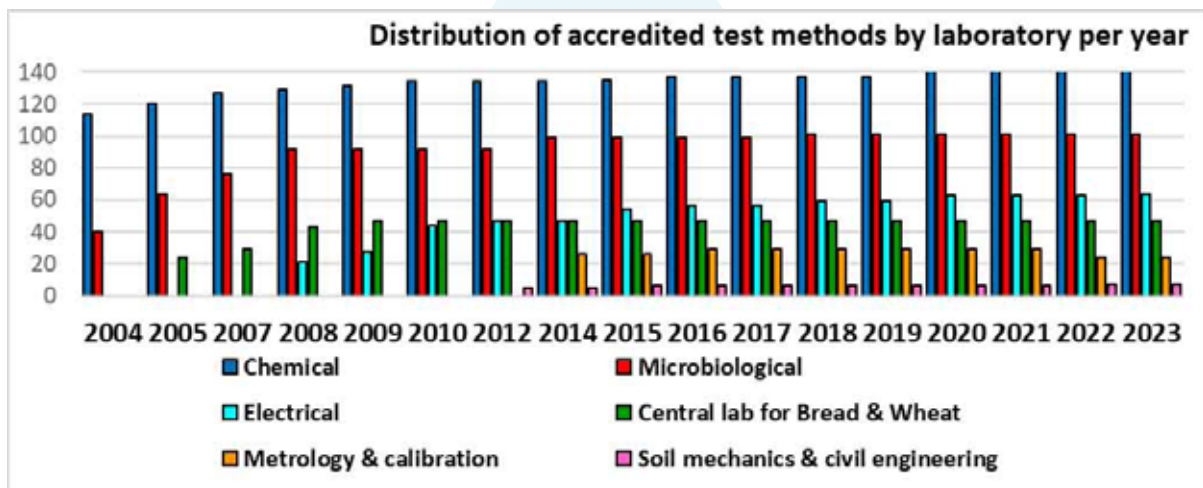
Details of the scopes of accreditations are available on the website: <http://iri.org.lb> in the accreditation section and on the ANAB accreditation body website: <http://anab.ansi.org>

The scope of accreditation according to ISO 17020 requirements covers the inspection of imported goods subject to National decrees, inspection of goods for export as well as inspections according to customers’ specific requirements. It covers the following:

Items, Materials OR Products Inspected	Type and Range of Inspection	Methods and Procedures
Electrical Appliances Food Ceramic Tile Sanitary Wares Oil Cosmetic Glass Diapers Notebook Medical Items Solar Water Heaters Fire Extinguishers Gas Cylinders Boilers Tires Photovoltaic	Qualitative and /or Quantitative  Inspection of New Products	Internal Procedures: PR/CFM/03 IT/CFM/04 IMP/CFM-e/01 to 04 IMP/CFM-h/01 to 39 IMP/CFM-s/02 & 03 IMP/CFM-n/01 to 03 IMP/CFM-r/01 to 07& 09 IMP/CFM-v/01 IMP/CFM-d/01 to 03 Customer-Provided Inspection Requirements

The scope of accreditation according to ISO 17025 requirements covers over 384 test methods in different fields as detailed below:

- Chemical, physico-chemical and microbiological testing of food and animal feeding stuff, vegetable oils, water for human consumption & waste water, cosmetics, wet wipes & baby diapers.
- Electrical testing of household appliances, electrical products, luminaires, lamps, lead acid batteries, circuit breakers & energy meters.
- Physico-chemical and rheological testing of grain, flour, cereals, pulses, feed, milled products & by products in bulk and sacs.
- Mechanical calibration of conventional masses (class E2 & lower), balances (on-site & in permanent laboratories) and temperature.
- Physico-mechanical testing of cement and ceramic tiles.





# CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

**Industrial Research Institute**  
**Lebanese University Campus, IRI Building,**  
**Hadath (Baabda)**  
**Beirut, Lebanon 11-2806**

Fulfills the requirements of

**ISO/IEC 17020:2012**

In the field of

**INSPECTION**

This certificate is valid only when accompanied by a current scope of accreditation document.  
The current scope of accreditation can be verified at [www.anab.org](http://www.anab.org).

Jason Stine, Vice President

Expiry Date: 29 August 2025

Certificate Number: AI-2499



An inspection body's fulfilment of the requirements of ISO/IEC 17020:2012 means the inspection body meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid inspection results (refer to joint ISO-ILAC-IAF Communiqué dated Sept 2013).





## CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

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**Industrial Research Institute**  
Lebanese University Campus, IRI Building,  
Hadath (Baabda) Beirut, Lebanon 11-2806

Fulfills the requirements of

**ISO/IEC 17025:2017**

In the fields of

**TESTING and CALIBRATION**

This certificate is valid only when accompanied by a current scope of accreditation document.  
The current scope of accreditation can be verified at [www.anab.org](http://www.anab.org).



Jason Stine, Vice President  
Expiry Date: 29 August 2026  
Certificate Number: ACT-1898



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory  
quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



**INTERNAL  
& EXTERNAL ACTIVITIES**



*The Industrial Research Institute maintains its successes and a high level of performance in the fields of control, research, development, and testing. It continuously sets basic and alternative plans to ensure that its services are not affected by political, security, and health challenges but keep pace with production, development, and commercial activities, as well as the import and export of goods.*

*The administration of the Institute is implementing a policy of expansion, cooperation and exchange with local and international agencies and institutions, believing in partnership between the public and the private sectors. The Industrial Research Institute performs its duties and role in helping the owners of institutions to persevere, develop, grow and increase the size of their business, thus maintaining their existence and safeguarding the jobs of their employees.*

## THE DEPUTY DIRECTOR GENERAL AND THE ADMINISTRATIVE AND FINANCIAL DIRECTOR MR. SELIM KFOURY REPRESENTS THE INDUSTRIAL RESEARCH INSTITUTE AT THE FIRST MEETING OF THE INDUSTRIAL DEVELOPMENT ADVISORY COMMITTEE

The Deputy Director General of the Industrial Research Institute, Mr. Selim Kfoury, representing the Institute, participated in the first meeting of the Advisory Committee for Industrial Development in Arab Countries via remote communication technology on May 3 and 4, 2023.

### THE FIRST MEETING OF THE INDUSTRIAL DEVELOPMENT ADVISORY COMMITTEE RABAT, MAY 3 AND 4, 2023

#### Report and recommendations

Based on Resolution No. (506) issued by the General Assembly of the Arab Organization for Industrial Development, Standardization and Mining in its twenty seventh meeting (Rabat 18 – 20 October 2022) stating in Paragraph 3 “the approval of the establishment of a committee operating within the scope of the Organization of a technical and advisory nature that includes all areas of industrial development, under the name of the Advisory Committee for Industrial Development, and approval of its bylaws,” and by invitation of the Organization, The first meeting of the Advisory Committee for Industrial Development was held in Rabat on 3 and 4 May 2023 in person and via remote link technology, in the presence of representatives of 12 Arab countries. These are as follows: (attached is a list of participants).

- Ministry of Industry, Trade and Supply – Hashemite Kingdom of Jordan
- Ministry of Industry and Trade – Kingdom of Bahrain
- Ministry of Industry, Mining and Energy – Republic of Tunisia
- Ministry of Trade, Industry and Investment Promotion – Sultanate of Oman
- Ministry of National Economy – State of Palestine
- Ministry of Trade and Industry – State of Qatar
- Public Authority for Industry/Ministry of Trade and Industry – State of Kuwait

- Ministry of Industry – Republic of Lebanon
- Ministry of Industry and Mining – State of Libya
- Public Authority for Industrial Development/ Ministry of Trade and Industry – Arab Republic of Egypt
- Ministry of Industry and Trade – Kingdom of Morocco
- Ministry of Trade, Industry, Traditional Crafts and Tourism – Islamic Republic of Mauritania

In addition to the Arab Organization for Industrial Development, Standardization and Mining (Committee Secretariat)

The meeting was opened with a speech by His Excellency Eng. Adel Saqr Al-Saqr, Director General of the Arab Organization for Industrial Development, Standardization and Mining, delivered on his behalf by Dr. Amir Al-Rifai, Supervisor of the Industrial Development Department, “the meeting rapporteur,” in which he expressed his thanks, appreciation and gratitude to His Majesty King Mohammed VI, may God protect him, for his Majesty’s sincere efforts to advance joint Arab action. He welcomed the participants thanking them for accepting the invitation of the Organization. He also stressed the importance of this meeting, which aims to enhance and strengthen the existing constructive cooperation between Arab countries in the areas of industrial development and provide the opportunity for further dialogue and consultation among them. Then His Excellency presented Briefly the topics up for discussion.

After presenting an introductory video about the Organization, His Excellency Mr. Yousef Ahmed Al-Emadi, Director of the Industrial Development Department at the Ministry of Experimentation and Industry in the State of Qatar, was elected Chairman of the meeting. His Excellency gave a speech in which he expressed his thanks and appreciation for the honor of chairing this important meeting and expressed his appreciation to the Organization for its continuous efforts to consolidate and strengthen the foundations of Arab industrial integration and overcome the development challenges facing Arab countries.

After that, the agenda was approved as follows:

- Item One:** Introducing the objectives, competencies and importance of the Industrial Development Advisory Committee and its work mechanisms.
- Item Two:** Industrial development plans, programs, policies and strategies in Arab countries (Arab experiences).
- Item Three:** A draft Arab industrial development strategy to keep pace with developments in the industrial revolution and achieve comprehensive and sustainable industrial development.
- Item Four:** Promoting industrial investment opportunities in Arab countries.
- Item Five:** Developing the role of small and medium industries in economic and social development.
- Item Six:** The importance of integrating the concepts of green industries, the circular economy, and innovation into the core of industrial policies.
- Item Seven:** The platform for requests and offers for Arab industrial and mining products “APIP online”
- Item Eight:** Work program of the Industrial Development Department.
- Item Nine:** Date and location of the committee’s second meeting.

The drafting committee was also formed by the Republic of Tunisia and the Kingdom of Morocco, in addition to the Arab Organization for Industrial Development, Standardization and Mining as the committee’s rapporteur.

The meeting included the presentation of some Arab experiences of industrial development plans, programs, policies and strategies in the Sultanate of Oman, the Arab Republic of Egypt, the Kingdom of Morocco, and the Islamic Republic of Mauritania, in addition to presenting a number of important topics proposed by the Organization. The participants contributed to enriching the discussion and interacting positively with the topics on the agenda, and the meeting issued the following recommendations:

**Item One:**

Introducing the objectives, competencies and importance of the Industrial Development Advisory Committee and its work mechanisms

- 1- Appreciating the Organization’s efforts in establishing the Advisory Committee for Industrial Development, and emphasizing the importance of the participation of all representatives of Arab countries in its meetings and working to implement the recommendations issued by it.
- 2- Inviting the ministries concerned with industry affairs in Arab countries that are not represented in the committee to nominate a representative and provide the Organization with their contact information (name, job title, mobile phone, email)
- 3- Inviting international and regional organizations related to industrial development issues to participate in the committee’s meetings as “observer members,” in order to enhance cooperation and partnership with the organization in implementing programs and projects of common interest.

**Item Two:**

Plans, programs, policies and strategies for industrial development in Arab countries (Arab experiences)



- 1- Thanking the representatives of Arab countries for the presentations made during the meeting
- 2- Calling on Arab countries to developing policies, programs and plans for industrial development and provide the necessary mechanisms for their implementation
- 3- Calling on Arab countries to provide the organization with their strategies and plans for industrial development so that they can be circulated and benefited from.

**Item Three:**

A draft Arab industrial development strategy to keep pace with developments in the industrial revolution and achieve comprehensive and sustainable industrial development

- 1- Emphasizing the importance of a strategy for Arab industrial integration in order to enhance competitiveness and achieve industrial integration in various sectors. The ministries concerned with industrial affairs in the Arab countries are responsible for providing the Organization with their proposals and visions regarding the draft strategy.
- 2- Approving the formation of a working group for willing Arab countries, tasked with studying the proposals received in this regard from the countries, formulating strategic directions in accordance with the capabilities of the countries, and preparing a draft strategy for Arab industrial integration.

**Item Four:**

Promoting industrial investment opportunities in Arab countries

- 1- Appreciating the Organization's role in preparing a guide for industrial investment for member states, which includes the relevant bodies, modern investment legislation, guarantees, facilities, incentives, and procedures necessary to establish industrial investment projects.
- 2- Calling on Arab countries to cooperate with the Organization in preparing the Industrial Investment Guide, and providing the Organization with data, legislation, available investment opportunities, and areas in which

they have a competitive advantage.

**Item Five:**

Developing the role of small and medium industries in economic and social development

- 1- The need to update the "Program for Developing the Role of Small and Medium Industries in Economic and Social Development in the Arab Countries" (attached), prepared in cooperation between the Organization and the United Nations Industrial Development Organization (UNIDO), with the ministries concerned with industrial affairs in the Arab countries committing to providing the Organization with their proposals and views on the mechanisms of program development and implementation
- 2- The work team charged with preparing the draft Arab industrial integration strategy will study the proposals submitted by the countries regarding the mechanisms for developing and implementing the program and include them in the project.
- 3- Inviting committee members to cooperate with the Organization in organizing and hosting the activities of the Tenth Arab International Forum for Small and Medium Industries, which will be held during 2024.

**Item Six:**

The importance of integrating the concepts of green industries, the circular economy, and innovation into the core of industrial policies

- 1- Calling on Arab countries to work to integrate the concept of green industry, circular economy and environmental innovation into the core of their industrial policies, as one of the basic options available to modify the path of industrial development and enhance its sustainability.
- 2- The importance of taking into account the concepts of green industries, circular economy, environmental innovation, and applications of the industrial revolution when preparing the Arab industrial integration strategy
- 3- Emphasis on coordinating research, development and innovation efforts, activating linking mechanisms between academic institutions and industrial research centers, and

enhancing cooperation between innovation and entrepreneurship systems.

**Item Seven:**

Platform for requests and offers for Arab industrial and mining products “APIP online”

- 1- Inviting members of the Industrial Development Advisory Committee to:
  - Benefit from the contents of APIP online and promoting them to the relevant authorities in their countries
  - Provide the Organization with data on companies and industrial institutions concerned with the industrial and mining sector in their countries to include them on the platform
  - Urge and encourage concerned parties in their countries to register on the platform, enter their requests and offers, and promote their products with the aim of supporting supply and demand opportunities for industrial and mining products in order to enhance Arab environmental trade.
  - Urge industrial institutions and companies in their countries to support and sponsor APIP online
- 2- Considering the possibility of adding data for foreign trade in industrial and mining goods (exports and imports), in addition to the possibility of allocating a special entry in the platform for the price exchange for the most important raw materials and industrial and mining products.

- 3- Considering the possibility of promoting investment opportunities coming from member states
- 4- Thanking the Arab Industrial Development, Standardization and Mining Organization for its distinguished role in creating APIP online and calling on it to continue updating and developing it.

**Item Eight:**

Work program of the Industrial Development Department

- 1- Appreciating the organization’s efforts in preparing activities and events related to current and future developments with the aim of achieving comprehensive and sustainable Arab industrial development.
- 2- Calling on Arab countries to provide the Organization with updated data and statistics that will enable it to prepare studies and reports related to industrial development
- 3- Calling on the ministries concerned with industry affairs in the Arab countries to cooperate with the Organization in supporting and implementing its work programs and hosting its events.

**Item Nine:**

Date and location of the committee’s second meeting

The committee will hold its next meeting at the Organization’s headquarters, with the possibility of hosting it by one of the member states during the first half of 2024.

*Rapporteur*

Dr. Amir Al-Rifai

Supervisor of the Industrial Development Department  
Arab Industrial Development Organization  
Standardization and mining

*President*

Mr. Youssef Ahmed Al-Emadi

Director of the Industrial Development Department  
Ministry of Commerce and Industry  
The State of Qatar

*Approval*

Eng. AdelSaqr Al-Saqr  
General Director

The Arab Organization for Industrial Development,  
Standardization and Mining

**THE FIRST MEETING OF  
THE INDUSTRIAL DEVELOPMENT ADVISORY COMMITTEE  
2023 ,4-3 RABAT, MAY**

#	Methods and Procedures	Type and Range of Inspection	Items, Materials OR Products Inspected	Items, Materials OR Products Inspected
1	Hashemite Kingdom of Jordan	Ministry of Industry, Trade and Supply	Eng. Joumana Al Kilani	Director of Industrial Development
2	Kingdom of Bahrain	Ministry of Industry and Trade	Mr. Khaled Al-Qasemi	Director of Industrial Development Department
			Eng. Ibtissam Al-Shinno	Head of Industrial Operations Department
3	Republic of Tunisia	Ministry of Industry, Mining and Energy	Mr. Salim Farshishi	Director of Mechanical and Electrical Industries and Building Materials Industries
4	Sultanate of Oman	Ministry of Trade, Industry and Investment Promotion	Eng. Jassem Ben Seif Al-Joudaidi	Head of Department of Industrial Strategy Implementation in the General Directorate of Industry
5	The State of Palestine	Ministry of National Economy	Eng. Khodr Daraghmeh	Director General of Industry and Natural Resources
			Eng. Meissa Nidal Muhammad Abu Ajineh	Director of the Department of Trade and Industry
6	Doha – State of Qatar	Ministry of Trade and Industry	Mr. Youssef Ahmad Al-Emady	Director of the Department of Industrial Development
7	State of Kuwait	Public Authority for Industry	Ms. AlyaZayed El-Habshi	International Cooperation Researcher
			Mr. ShimlanHammoud Al-Jouhaily	Deputy Director General for Development and Licensing Sector
			Mr. Abdel Rahman Said Al Sinnawi	Industrial Planning Researcher
8	Republic of Lebanon	Industrial Research Institute	Mr. Salim Kfoury	Deputy Director General
9	State of Libya	Ministry of Industry and Mining	Mr. ImadAshourouqad	Advisory in the Ministry
10	Arab Republic of Egypt	Ministry of Trade and Industry	Eng. Mohammad Abdel Karim Hassan	Head of the Board of Directors of the Public Authority for Industrial Development
11	Kingdom of Morocco	Ministry of Industry and Trad	Mr. Tawfiq Al Rabi'i	Director of Miscellaneous Industrial Activities
			Mr. Mohammad Ziwal	In charge of international cooperation and partnerships projects/Directorate of Communication, International Cooperation and Partnerships
12	Islamic Republic of Mauritania	Ministry of Trade, Industry, Traditional Crafts and Tourism	Mr. Miskeh Mohammad Salim	Chargé d'Affaires at the Ministry

## EU INVESTS 3.7 MILLION EURO TO SUPPORT GREEN AND CIRCULAR ECONOMY IN LEBANON

**June 23, 2023**

Dr. Joseph Matta, Applied Research and Testing Director represented the Director General, Dr. Bassam Frenn in the 2Circular Project Action Event.

On June 22, 2023, UNIDO presented the 2CIRCULAR roadmap to EU representatives, UN agencies, ministries representatives, and various stakeholders from the food and beverage sector.

The project, 2CIRCULAR, builds on the successful experiences of 15 Lebanese companies already supported by UNIDO under the EU-funded MED TEST program thus advancing investment into resource efficiency and cleaner

production techniques as a cost cutting measure. Focusing on the food and beverage industry, 2Circular will go a step further and support the development of 5 innovative circular business models and facilitate access to finance for Small and medium-sized enterprises (SMEs).

Lebanon also faces significant environmental challenges, including air and water pollution, and waste management issues. The project seeks to address these challenges by supporting the adoption of sustainable business practices and encouraging circular models that prioritize cutting costs and environmental footprint resource efficiency and waste reduction.

## ARAB BREAD DAY

**July 10, 2023**

A loaf of bread is an essential product in the Arab region that occupies an important place in the diet of the population and is considered one of the basic foods in daily meals.

Therefore, the Arab Federation for Food Industries and the United Nations Economic and Social Commission for Western Asia (ESCWA) held an Arab Bread Day symposium entitled “Our loaf of bread...health for our generations and sustainability for our planet” at the United Nations House, in which the head of the Central Laboratory for Grains, Flour and Bread Research, Eng. Amin Jbeily participated along with experts and officials from the public and

private sectors, wheat producers and suppliers, and other stakeholders from mills, bakeries, academic bodies, and regional and international organizations. During the symposium, the obstacles facing the sector, the requirements for advancement, and the global and regional repercussions in the production, trade, and consumption of the grain industry were identified. The attendees also discussed the effects of the Corona pandemic, the war in Ukraine, climate change, and the unstable economic and social situation, which is affecting the flow of raw materials.



## TRAINING COURSES ON PHOTOVOLTAIC SOLAR ENERGY WITH LCEC

As part of IRI major role in PV market and in collaboration with LCEC, a series of certified training for Solar Photovoltaic technicians were conducted in four trainings in 2023, as a follow-up to the training courses completed in 2022. These trainings were held in frequent sessions and continuously.



The courses covered the following topics:

- The solar energy market in Lebanon, including legal and administrative requirements
- Welding basics
- Rust protection of frame
- Frame installation
- Solar Energy components
- Solar Energy applications
- Design, sizing and installation considerations
- Safety considerations for solar energy applications
- Acceptance Tests (Earth resistance, verification of conformity, short circuit current, insulation, voltage drop, performance Ratio, etc.)
- Monitoring and control
- Maintenance

IRI Energy Laboratory team continue to put the efforts to serve the Lebanese market.





## BEIRUT ENERGY WEEK

Following to all events regarding Energy Sustainability for the last 10 years, IRI participated in Beirut Energy Week. IRI was represented by Eng. Mohammad Assaad El Hajjar as a moderator of the session “3B-Development Projects Targeting Sustainable Energy: Success Stories to Replicate.” The session was targeting number of successful stories that could be replicated to make a larger impact.



## SOLAR PV TRAINING WITH LSES

In collaboration with “The Lebanese Solar Energy Society (LSES)”, the first phase of the Small Portable Solar Power Pack Project (SPSPP) that was mainly funded by UNOPS and provided low-income families affected by Beirut

Port Blast with 26 solar power packs has come to an end.

Two days training sessions were conducted at IRI’s FASEP for 8 persons working in the field of Solar PV Systems.



## LEBANON WHEAT VALUE CHAIN-SITUATION ANALYSIS & OPPORTUNITIES.

United Nations World Food Program (UN WFP) 3-6 July 2023



Taking into consideration the huge challenges that the grain sector is facing in Lebanon since 2019, the UN-WFP organized a three-day Workshop in Amman-Jordan between Lebanese key players in the wheat food supply chain, like ministries, Research Institutes and the private sector. The aim is to get a closer look at the Jordanian experience in the field of wheat subsidization and wheat flour fortification to alleviate certain vitamin and mineral deficiencies in the Lebanese population.

In addition to COVID and the economic crisis that affected negatively Lebanon's Milling and baking industries, the wheat value chain was further complicated by Beirut's seaport explosion in August 2020 destroying the port grain elevator and silo, a key infrastructure. Moreover, the Ukrainian crisis also laid its weight on this sector.

The workshop focused on the Jordanian experience in managing the wheat supply chain from purchasing to fortification of the Jordanian bread. The purpose was to try to see if the policy followed

by the Jordanian government agencies can be applied to the Lebanese Scenario.

Many highly scientific but heated discussions took place amongst the Lebanese delegation, where Eng. Amine Jbeily Head of the Central Laboratory for Grains, Flour and Bread Researches represented the Industrial Research Institute as the leading reference Laboratory in cereals and baked goods research and development. The general conclusion was that before thinking of flour fortification, a wide national survey and serological study must be conducted to determine any deficiencies in the population, based on which we can base any future strategy for fortification.



## ISO REGIONAL TRAINING ON IMPROVING MARKET ACCESS USING STANDARDS AND CONFORMITY ASSESSMENT, CAIRO, EGYPT

**September 05-07, 2023**

From the 5th till the 7th of September 2023, the Egyptian organization for standards (EOS), hosted an ISO regional training on improving market access using standards and conformity assessment, with the participation of representatives from standards and quality organizations from different Arab countries. Mr. Dany Frenn represented IRI during the workshop.

The training highlighted the importance of having appropriate quality infrastructure to

avoid any trade barriers. In addition, the training focused on the importance of having appropriate communication between standards organization to notify on any new updates, thus facilitating a smooth transition to new requirements without jeopardizing the trust and relationship between trade partners.



IRI



APPLIED RESEARCH  
& STUDIES



## THE INSTITUTE PERFORMED 8 ENVIRONMENTAL AND TECHNOLOGICAL STUDIES AND ANALYZES IN 6 FACTORIES

The Industrial Research Institute keeps pace with the current status of industries and factories, especially the ones that received ISO environmental certification from the Institute, and ensures their continuous compliance with the scientific and technological standards required to maintain a healthy environment for human beings and preserve the nature.

The IRI completed 8 studies and analyzes in 6 factories, among which studies in environmental auditing and in environmental analyzes and technical field studies, as follows:

### **Comprehensive Environmental Analyzes and Technical Field Studies**

- Cimenterie Nationale s.a.l.
- Cover Plus s.a.r.l.
- FOAMEX s.a.l.
- HENKEL Lebanon s.a.l.
- Liban Cables s.a.l.







**SCIENTIFIC  
PUBLICATIONS**

Because scientific research contributes to the progress and preservation of societies by ensuring a better life, the Industrial Research Institute contributed during the year 2023 to research the results which were published in international scientific publications, and which contributed to the advancement of science and knowledge. Professor Joseph MATTA, Director of Applied Research and Laboratories at the Industrial Research Institute has published scientific papers on health, nutritional and environmental issues.

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Contents lists available at [ScienceDirect](#)

## Heliyon

journal homepage: [www.cell.com/heliyon](http://www.cell.com/heliyon)



## Assessment of prerequisite programs implementation at food packaging manufacturing companies and hygiene status of food packaging in a developing country: Cross-sectional study



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### ARTICLE INFO

#### Keywords

On-site inspection  
Packaging contamination  
Acceptance criteria  
Contact surface  
Hand swab

### ABSTRACT

Food packaging has a critical role in all food types and along the food chain from product preservation to transportation, distribution, storage, retailing, and end-use. However, it can become a source of contamination and transfer of microorganisms to the packed food when its hygienic status is not well maintained. The aim of this study was to evaluate the Prerequisite programs (PRPs) implementation in 5 food packaging companies across Mount Lebanon through on-site inspections and to assess the compliance of contact surfaces, employee hands and packaging materials to microbiological specifications. Following on-site inspection, none of the companies achieved a full total score of 100% and scores ranged from 25 to 62%. Regarding the assessment of hygienic status of contact surfaces, non-conforming results (acceptable limit  $\leq 0.6$  log colony forming units (CFU)/cm<sup>2</sup>) were observed in 50% (5/10) of the surfaces for total viable count (TVC). For the employee hands, none of the hand swab samples (10/10) was conforming for TVC that was present in all samples above the acceptable limit. Highest and lowest reported values were 4.4 and 1.7 log CFU/hands respectively. For packaging samples collected during on-site inspections, TVC and yeasts and molds were detected in 20% (2/10) of the samples. However, the samples collected from the retail market, had higher contamination rates of 95% (19/20) and 65% (13/20) for TVC and yeasts and molds, respectively. As for *Enterobacteriaceae*, it was not detected in all tested contact surfaces, employees' hands, and packaging samples. PRPs assessment and related verification activities showed the need for companies to strengthen their hygienic programs and highlighted the importance of food safety management systems (FSMS) implementation not only in food companies but also in food packaging companies. Additionally, the effectiveness of PRPs implementation should be assessed on planned routine basis.

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Environmental Research

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# Serum levels of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans in a sample of Lebanese pregnant women: The role of dietary, anthropometric, and environmental factors

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 Ramzi Finan<sup>h,i,j</sup>  , Georges Abi-Tayeh<sup>i,j,k</sup>  , Mohamad Meslimani<sup>l</sup>  , Ghada Moussa<sup>m</sup>  ,  
 Nada Chahrour<sup>n</sup>  , Camille Osseiran<sup>a</sup>  , Farouk Skaiki<sup>p,q</sup>  , Jean-François Narbonne<sup>r</sup>  

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## Article

# Maternal Serum, Cord and Human Milk Levels of Per- and Polyfluoroalkyl Substances (PFAS), Association with Predictors and Effect on Newborn Anthropometry

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**Abstract:** Background: The understanding of per- and polyfluoroalkyl substances (PFAS) health effects is rapidly advancing among critical populations. Therefore, the objective of this study was to assess PFAS serum levels among Lebanese pregnant women, cord serum and human milk levels, their determinants, and effects on newborn anthropometry. Methods: We measured concentrations of six PFAS (PFHpA, PFOA, PFHxS, PFOS, PFNA and PFDA) using liquid chromatography MS/MS for 419 participants, of which 269 had sociodemographic, anthropometric, environmental and dietary information. Results: The percentage of detection for PFHpA, PFOA, PFHxS and PFOS was 36.3–37.7%. PFOA and PFOS levels (95th percentile) were higher than HBM-I and HBM-II values. While PFAS were not detected in cord serum, five compounds were detected in human milk. Multivariate regression showed that fish/shellfish consumption, vicinity to illegal incineration and higher educational level were associated with an almost twice higher risk of elevated PFHpA, PFOA, PFHxS and PFOS serum levels. Higher PFAS levels in human milk were observed with higher eggs and dairy products consumption, in addition to tap water (preliminary findings). Higher PFHpA was significantly associated with lower newborn weight-for-length Z-score at birth. Conclusions: Findings establish the need for further studies, and urgent action to reduce exposure among subgroups with higher PFAS levels.

**Keywords:** human biomonitoring; persistent organic pollutants; cord; human milk; newborn; perinatal exposure; pregnant women; exposure predictors





ACTIVITIES OF THE  
EUROPEAN-LEBANESE  
CENTER FOR INDUSTRIAL  
MODERNISATION – ELCIM  
AND THE ACTIVITIES OF  
THE CENTER FOR  
INNOVATION & TECHNOLOGY -  
CIT



*ELCIM has pursued its intense activity both locally and with its regional partners. Its focus is on developing the performance of small and medium enterprises, which are considered the most flexible and capable of interacting with the Lebanese economy. In this context, ELCIM has organized training courses for trainers in energy efficiency, technology, food, dairy and cheese industries, etc.*

## MAIA-TAQA PROJECT

### Organizing a Train of Trainers' sessions in Energy Efficiency, Wastewater Treatment and Reuse

Within the MAIA-TAQA project activities, ELCIM team organized train of trainers sessions in Energy Efficiency, Wastewater Treatment and Reuse. The technical team set the training ToR's and drafted its content.

The training included professionals in the Energy and water sectors and was intended to provide the selected participants with the necessary tools to become similar training content.

Additionally, ELCIM formulated a set of guidelines for assessing the Train of Trainer (ToT) candidates, which included an online evaluation of the content as well as a live assessment day where prospective trainers delivered short presentations to the training evaluation committee, followed by a questions and answers session.



### 3 vouchers awarded to support 3 SME's in identifying their innovation needs and reducing technical, business, and commercial barriers between Mediterranean countries.

Another major activity of the MAIA-TAQA project was to support 3 selected and innovative SME's in the field of Renewable Energy, Energy Efficiency and Wastewater Treatment and Reuse. ELCIM identified and selected three SMEs who needed access to technical knowledge, specialized consultancy and networking opportunities. The SME's were supported with vouchers worth €20,000 each under the MAIA-TAQA Innovation One-Stop Shop office



## B2B events to enhance cross border cooperation.

A main achievement of the MAIA-TAQA project was the organization of B2B events where SMEs, consultants and associations dealing with Renewable Energy Services were offered the opportunity to exhibit during the three days of the Lebanon International Solar Week. The event was scheduled from June 1st to June 3rd 2023, at the Hilton Beirut Habtoor Convention Center.

The event also gathered project partners from Greece, Italy and Tunisia interested in the Lebanese Market and seeking Collaboration with Lebanese Counterparts.

In addition to being part of the MAIA-TAQA exhibition stand, the selected RE businesses benefited from a matchmaking session organized to foster cooperation among SMEs and build long-lasting partnerships. This session also offered them visibility to funding and investment prospects from key actors in the Renewable Energy sector.

This unique opportunity also enhanced the business capacity of startups to support them in gaining increased visibility.



## B2B event and Workshops in Athens in collaboration with the Arab Hellenic Chamber of Commerce and Development

ELCIM met all the partners of the Maia-Taqa project in Athens for a remarkable B2B event and workshop. The event was organized by the Center for Renewable Energy Sources (CRES) the lead partner of the project, and the Arab Hellenic Chamber of Commerce in Athens.

The event provided an excellent platform to 3 selected Lebanese companies for networking, knowledge exchange, and exploring potential collaborations in the Renewable Energy sector.

One of the highlights was the participation of SMEs beneficiaries of the MAIA-TAQA Innovation One Stop Shop office vouchers. These innovative companies operating in Lebanon, Greece, and Egypt, specialized in Resource Efficiency solutions. Their valuable presence allowed for meaningful discussions, sharing of expertise, and the identification of cooperation opportunities.



## MAIA-TAQA final conference in Lebanon during Actea event at NDU

The final event of MAIA-TAQA in Lebanon held on July 6th at Notre Dame University in ACTEA 23, was a resounding success! The MAIA-TAQA project has been recognized for its outstanding contribution to the ACTEA Conference with a trophy handed to the The Euro-Lebanese Centre for Industrial Modernisation director and Maia-Taqa Lebanese project manager, Mr. Najj Zeid.

This event provided an excellent platform to discuss the remarkable results achieved by the project in promoting sustainable practices and efficient resource utilization in Wastewater and Energy Efficiency in Lebanon through sustainable cooperation and support for SMEs.



## Launching the MAIA-TAQA wastewater pilot under the patronage of H E Mr. Georges Bouchikian

The launch of the MAIA-TAQA project has been recognized for its outstanding contribut pilot project in Lebanon focused on Wastewater Treatment and Reuse, was a remarkable milestone in the project achievements.

The gathering saw the esteemed presence of His Excellency Mr. George Bouchikian, Dr. Bassam Frenn (Director General of the Industrial Research Institute), Mr. Najj Zeid (ELCIM Director and MAIA-TAQA Project Manager), Mr. Selim Zeenni (President of the Association of Lebanese Industrialists - ALI), Dr. Bassam Badran (President of the Lebanese University), representatives from the EU delegation, a representative from the Ministry of Environment and various stakeholders from Lebanon's Renewable Energy sector.



The event was extensively covered by television networks, newspapers, and prominent websites. Journalists had the opportunity to ask intriguing questions about the project and its potential for replication.

The event was filled with insightful discussions and inspiring speeches. The project was presented under its different milestones and a comprehensive overview of the pilot was provided, including its technical characteristics and future sustainability.





## TRANSDAIRY PROJECT

### Organizing a specialized training (Intermediary training program gathering key stakeholders and researchers in the ICT and Dairy sectors)

Under the EU-funded Transdairy project, ELCIM implemented a Specialized training event on the 16th of March 2023 at Bossa Nova hotel, Beirut. The specialized training gathered Dairy Value Chain researchers and innovators across Lebanon to shed the light on the technology transfer in this field and the integration of innovative solutions to help the sector to move forward. On another level the participants were given the opportunity to learn about the design and development of a successful value proposition for their startups in addition to the existing legal structures in the country and the Intellectual properties registration.



### Organizing a Brokerage event at HORECA fair gathering key stakeholders and researchers in the ICT and Dairy Sectors

The Euro-Lebanese Centre for Industrial Modernisation organized a highly successful cross-border brokerage event from April 25th to 28th 2023 within the HORECA fair which brought together innovators from Lebanon, Italy, Tunisia, and Greece in the Dairy, Bio/Nanotechnology and ICT applied to the Dairy Value Chain sectors.



The primary objective of the Cross-Border Brokerage Event was to create meaningful connections between businesses, investors and entrepreneurs from different countries, thereby providing a unique opportunity to explore potential collaborations and expand their business horizons.

Amidst the buzz, the one-to-one matchmaking sessions stole the spotlight, enabling participants to forge connections with potential partners and economic organizations, paving the way for thrilling business opportunities.

Furthermore, a voucher delivery ceremony was held whereby 3 demonstrators' vouchers, 3 spin offs vouchers and 2 co-patency vouchers were formally delivered to the winning beneficiaries.

## Another brokerage event organized for ICT researchers/Startups/SME's applied to the Dairy Value Chain

The Euro-Lebanese Centre for Industrial Modernisation organized a highly successful ICT brokerage event during the Agri-Food Innovation Days (AFIID) in May 24 and 25 in Lebanon. The ICT brokerage event focused on revolutionizing the Dairy Value Chain through digital transformation as a result of the remarkable convergence of dairy producers, technology providers, researchers, and policymakers who are all motivated by the same desire to increase the sustainability and efficiency of the Lebanon industry. The selected participants were given the opportunity to:

- Meet entrepreneurs, ICT startups, spin-offs, distributors and SMEs
- Discuss, exchange ideas and secure potential collaboration through workshops and panel discussions
- Explore business opportunities and expand their network through B2B meetings and demo sessions for promising technologies



This event provided the project beneficiaries a fantastic opportunity to network with like-minded individuals and showcase the immense potential of digital solutions in ensuring the sustainability of the Dairy Value Chain. The event's opening keynote address was given by Mr. Naji Abi Zeid, director of ELCIM, who delved into the importance of digital transformation and its impact in revolutionizing industries. The primary objective of the ICT Brokerage Event was to create meaningful connections between businesses, investors, and entrepreneurs from different countries, thereby providing a unique opportunity to explore potential collaborations and expand their business horizons.

## Implementing the 4th Open Day event

ELCIM and Berytech Foundation organized the 4th project Open day from a series of planned events on the 16th of March 2022 at Bossa Nova hotel.

This Open day aimed at bringing together experts, entrepreneurs, researchers and industrialists in the field of the Dairy Value Chain to discuss existing and potential partnerships among stakeholders and showcase new business lines in the locally manufactured dairy products as a substitution to imported

ones. Discussions tackled also Technical and legal regulations regarding the Dairy Sector and the creation of new entities as well as the integration of Applied Research in the DVC to foster innovation and further develop its potential.





## Organization of the 7th and 8th Focus Groups Series by ELCIM and Berytech Foundation under the TRANSDAIRY Living Labs activities

These focus groups discussions were closely implemented in synergy with the TRANSDAIRY ENI CBC Med project workshop and brought together participants from various backgrounds, including EU institutions, business organizations, ICT research centers and key stakeholders in the Dairy sector.

This diverse group brought different perspectives and expertise to the discussions which evolved around the identification and understanding of the major issues that SMEs in the Dairy and Technology sectors encounter. Among these, regulatory hurdles, technological limitations, market constraints and other barriers to growth and innovation.

Furthermore, the focus groups discussions provided a platform for participants to explore potential business opportunities. By sharing insights and collaborating, attendees had the opportunity to identify strategies for enhancing their export activities and expanding their market presence.



## EMPHASIS PROJECT

### Participating in the 4th Steering and Technical Committee Project Meeting 1-2/03/2023, Catania, Italy – Sicily

The ELCIM team participated in the EMPHASIS 4th Steering Committee Meeting held in Catania, Italy on March 1st and 2nd. This meeting marked a significant milestone in the project's progress. With a packed agenda brimming with updates and strategic planning for the project's final year of implementation across the Mediterranean region, the team embarked on fruitful discussions and collaborative efforts.

Representatives from Greece, Italy, Spain, Lebanon, Egypt and Jordan convened to delve into various pivotal topics vital to the project's success. Among the focal points were discussions surrounding the design and establishment of the EMPHASIS Open Innovation Network & Services, aimed at fostering collaboration and innovation within the Mediterranean region.

Additionally, the meeting highlighted the support services currently being extended to the selected 24 SMEs, aimed at increasing innovation partnerships and facilitating joint R&D opportunities.



### Supporting 3 local companies (Pulp – Saifan Group – Agrocedrus) in developing their innovation capabilities and finding potential collaboration partners within the EU partners database

With the financial support of the EMPHASIS project, three local businesses, Pulp, Saifan Group and Agrocedrus, were selected by ELCIM and given a significant boost to improve their ability to innovate. This support aimed to help them grow their businesses and open a collaboration with like minded companies in the European Union. By looking beyond Lebanon, these companies had the opportunity to meet their technical goals and form valuable partnerships.



## Organizing a Training and Open Day in synergy with the TRANSDAIRY project

ELCIM organized a successful Training and Open Day on 16th of March 2023 aiming at addressing the core challenges of technology transfer and the development of startups' value propositions.

The Open Day/Training was centered around the 2 axes: A training involving top notch subject matter experts covering some of the essentials for entrepreneur: technology transfer, value proposition development and legal structures

and IP; while the second part was to showcase entrepreneurs on their usage of technology and business development for their companies. The objective was to demonstrate the importance of knowledge gathering and network development for SMEs.

The EMPHASIS project was presented and the option for partnerships with beneficiaries from Italy, Spain and Greece was brought forward.



## Organizing a workshop to support local selected companies in capacity building, IP protection, and Quality Control.

The workshop organised on 22 August 2023 at le Royal Hotel delved into the EMPHASIS approach and cross-border collaborations through the direct experiences of participants.

It was attended in addition to the project beneficiaries by preeminent representatives from the public and private sectors and from the EU delegation.

It started with a detailed explanation of the EMPHASIS project approach and its activities

then followed by a group discussion exploring the individual experiences of the beneficiaries. The discussion highlighted both the positive outcomes and challenges faced in adopting the Open Innovation approach. It also explored how the participants benefited from the program.

The audience gained valuable insights by learning about the beneficiaries' firsthand experiences with the EMPHASIS program and its potential applications.

## Organizing a Capacity Building Training and Open Day at le Royal Hotel on 29 August 2023

The training and open day, hosted by the Euro-Lebanese Centre for Industrial Modernisation, brought together a diverse group for an enriching learning experience. Participants gained practical insights, strategic guidance and business tools vital for thriving in today's market.

Highlights included:

**Registering businesses:** Participants learned to navigate regulatory frameworks and establish a solid foundation.

**Crafting compelling business plans:** Attendees gained skills to articulate their vision, mission, and strategies for success.

**Securing investment:** The event provided insights into funding mechanisms, investment trends and attracting investors.



The Emphasis Project Training and Open day gathered representatives from the EU delegation, business organization, research centers and more. It allowed major stakeholders in the business to discuss the key issues plaguing SME's within the Lebanese context and ways of mitigation through Open Innovation.

IRI



## LEBANON INNOVATE

### Mapping Research Centres in Lebanon within Lebanon Innovate project

The Lebanon Innovate initiative aims to capacitate and empower the innovation ecosystem, bringing together key players from various sectors. This ecosystem includes universities, research centers, business support organizations, tech infrastructure, investors, government, entrepreneurs and more.

ELCIM within the framework of the Lebanon Innovate project conducted a thorough mapping of non-academic research centers in Lebanon aiming to assess their capacity and needs and identifying the obstacles preventing their progress. The Program objectives include enhancing competitiveness in the industrial sector (Agri-food, Health, ICT, and creative sectors), empowering stakeholders to generate knowledge and commercialize technologies, fostering partnerships between industry and academia for innovation and knowledge transfer, and establishing linkages with European countries and diaspora networks to access international markets.

The study has a dual purpose. First, it evaluates



their overall status and assess their needs of research centers in these sectors, emphasizing their role in shaping policies, driving innovation, and forming partnerships. Second, it aims to lay the foundation for a practical innovation ecosystem, identifying barriers and proposing strategic actions to revitalize research institutions.

This mapping report provides an overview on the research institutions mapping assessment allowing to gain a comprehensive understanding of the research landscape in Lebanon, to assess the research institutions capabilities, and to explore the needs and challenges while identifying hot research topics and recognizing key researchers and innovators.

### Adhering to the Europe Enterprise Network (EEN)

Within the Lebanon Innovate project, ELCIM lead the Lebanon Innovate team to apply for joining the Europe Enterprise Network (EEN) the world largest Network for Small and Medium Sized enterprises (SME's).

The Enterprise Europe Network (EEN) is a network of support organizations that provide services to support SMEs grow and internationalize. It aims to strengthen their competitiveness by providing them with a wide range of business support services, fostering innovation, and facilitating international collaboration.

It operates in more than 60 countries, including

EU member states, candidate countries, and other partner countries.

The main objectives of the Enterprise Europe Network are to : Facilitate Business Partnerships, Provide Innovation Support, Offer Internationalization Service, Promote Access to EU Funding, Provide Business Advice and Support, Facilitate Technology Transfer and Support for EU Policies.

The Enterprise Europe Network Lebanon will be operated by ELCIM and implemented at the Industrial Research Institute.





ACTIVITIES OF  
THE LEBANESE CLEANER  
PRODUCTION CENTER -  
LCPC

## LEBANESE RESOURCE EFFICIENT AND CLEANER PRODUCTION CENTER

- The Industrial Research Institute includes the National Cleaner Production Center (LCPC) that have become a major source of expertise and advice on Resource Efficiency and Cleaner Production in Lebanon and is a regular member of the Global RECP Network by UNIDO and UNEP. In parallel, more than 100 CPCs have been created through bilateral, governmental; and other forms of assistance. There is now an extensive network of cleaner production-related institutions capable of delivering resource efficiency and cleaner production services at the local and national levels.
- The concept of Resource Efficiency and Cleaner Production is through the prevention of pollution and waste generation at the source itself.

## THE ROLE OF TECHNOLOGICAL CHANGE IN GREEN GROWTH

By reducing the costs of environmental protection, technological change is important for promoting green growth. This entails both the creation of new technologies and more widespread deployment of existing green technologies. This paper reviews the literature on environmentally friendly technological change, with a focus on lessons relevant to developing countries. It

begins with a discussion of the data available for measuring the various steps of technological change. It continues with a discussion of sources of environmental innovation. Given that most innovation is concentrated in a few rich countries, this leads to a discussion of the remaining role for lower-income countries, followed by a discussion of technology transfer.

## LCPC PARTICIPATIONS:

### Workshop with Swedish Embassy January 23, 2023

At the residence of Swedish Ambassador, a workshop discussion took place on clothes waste management, circular solutions, resource Efficiency and higher ethical standards with better social impact and jobs creation.



### “Global GreenChem (GC) Programme Launching”

**August 8, 2023**

The LCPC were included in the programme launch and project scope, that aims to enhance green chemistry adoption and foster for research & innovation and drive business acceleration and

startups.

The project is implemented by Yale University and executed by UNIDO in partnership with Jordan’s National Cleaner Production Center (NCPC)/Environmental Studies Department (ESD) at the Water & Environment Center (WEC/RSS).

## Arab House for Administrative Development Factory Management

August 20-24, 2023

LCPC director participated in the Factory management course, a specialized program that qualifies participants to acquire advanced technical expertise and skills in managing the production, operation, and maintenance and quality process in their industrial facilities. This program was designed to consist of a number of specialized axes, each of which covers an aspect

of work (production - quality - maintenance), including the tools and skills necessary for each of them, with the aim of keeping pace with global development in this field, with the aim of enabling the trainee to lead industrial and service institutions with the best industrial practices Globalism.

## The HoloRuminant Joint Dissemination Network (JDN)

September 5, 2023

LCPC is included at the HoloRuminant Joint Dissemination Network (JDN), which consists of 5 projects representing a complementary effort to reduce the environmental and climate footprint of livestock production - while guaranteeing genetic diversity and efficient production in a

more constrained environment - by focusing on the mitigation of GHG emissions improving the health and welfare of farmed animals and increasing the sustainability of animal production systems. The project group joins forces to provide an environment to optimize and share efforts.

## BIIS 2023

October 5-7, 2023

LCPC coordinated with Beirut International Innovation Show BIIS 5-7 October 2023.

A hybrid exhibition dedicated to showcasing the innovation of youth, universities, companies and organizations in various sectors of society locally and internationally, and its aim is to

promote technology transfer and investment in the presented innovation.

BIIS 2022 has gathered 20 inventions from 5 countries with a huge success regardless all the difficulties Lebanon and the world are facing.

## The GRA with the Asia-Pacific Economic Cooperation (APEC) establish the project series titled “Indigenous Research Network: The Power of Inclusivity”

November 1, 2023

LCPC is invited to join a project on gathering young emerging leaders to display on a global stage and to:

1. Advocate the importance of inclusion of all people specifically young indigenous people as our future leaders in this space.
2. Promote the positive role of Indigenous led

methods to reduce the impacts of climate change in communities.

3. Connect Indigenous communities together though the exchange of traditional knowledge and practices related to food safety and security.

## UN Climate Change Conference COP28 in Dubai

**December 4-8, 2023**

LCPC had the privilege to take part within the COP28 in Dubai, which is the biggest UNFCCC event ever, contributed effectively in different relevant sessions, and moderated a session on unsustainable patterns of consumption and the need of resource efficiency in built environment.



## Major Economies Business Forum (BizMEF) – COP28 Business Dialogue

**December 7, 2023**

LCPC attended the Major Economies Business Forum (BizMEF) that hosted a business dialogue titled, “The Role of Business in the Global Stocktake: Innovation, Ambition, and Resilience.”



## UNIDO Evaluation Team

**June 13, 2023**

For Identification of technical and administrative capacities of technical organizations with potential of service capacity development in the field of Resource Efficiency, the United Nations Industrial Development Organization (UNIDO) Country Office of Lebanon visited the industrial research institute and the Lebanese cleaner production center in the framework of the project “Private sector transition to a green and circular economy in Lebanon” financed by the European Commission (UNIDO Project No 210028). The aim of this project is exploring existing technical and administrative capacities of national organizations/institutions to implement resource efficiency related services in the Lebanese industry.

The UNIDO team, represented by Mr. Nicola Drago and Mrs. Nada Sabra, met with the Deputy

Director General and administrative and Financial Director of the Industrial Research Institute, Mr. Selim Kfoury, Dr. Joseph Matta the applied research and testing Director at the Institute, and the Director of the Lebanese Cleaner Production Center, Dr. Ali Yaacoub, in presence with the project implementing team.





**IRI COOPERATION  
WITH  
THE PUBLIC SECTOR**



## RELATION WITH THE PUBLIC SECTOR

The Institute acts on behalf of the Lebanese government and is authorized by it, to approve negotiations, sign agreements for mutual recognition of certificates of conformity in the trade exchange between Lebanon and other countries.

The Institute was tasked with the issuing of certificates of conformity in the importation of industrial goods, pursuant to the Lebanese decrees of mandatory specifications, and also in exportation operations in accordance with the specifications of the destination countries.

It should be mentioned here that since 2004, IRI has been the only internationally accredited body in Lebanon, as per the international accreditation certificate DIN EN ISO/IEC 17025. Consequently, the Institute is the only window available for the flow of Lebanese goods, which need laboratory tests and certificates of conformity, to the European and international markets.



### Parliament

IRI regularly accepts the invitations of parliamentary committees in the Lebanese parliament, and attends meetings held by them. IRI offers its technical and scientific expertise related to the Institute's scope of work to these committees during the drafting and discussion of bills.

IRI actively participated in the drafting and discussion of the bill on technical regulations and pertinent procedures for conformity assessment, in all stages of the process, with the subcommittee of the joint parliamentary committees, until the bill was approved by this committee at the end of September, 2011. IRI participated in the drafting of the bill regulating drinking water processing,

treatment and packaging, with the Committee on Public Health, Labor and Social Affairs.

The bill aims to limit the unregulated and exploding number of drinking water distribution companies in Lebanon, as a result of the growing need of the citizens for water that is otherwise unavailable through public drinking water grids. The bill seeks to subject most unlicensed bottling companies to the laws and regulations in force, in order to ensure the safety of water, that it is uncontaminated, and that it complies with the required specifications to preserve public health. IRI also participated in the activities of the Public Works and Energy Committee in several areas, including:

- Following up the process of replacing domestic gas bottles, especially the control of the production and exportation of gas bottles before they are used in local markets.
- Providing the necessary expertise and technical analysis related to fuels allowed in private cars.
- Offering opinion and technical analysis related to bills concerning public safety in the use of fuel tanks, with a view to prevent explosion.
- Expressing an opinion about the draft food safety law.
- Expressing an opinion about the draft law on electronic transactions and data of a personal nature



### Ministry of Industry

IRI is considered to be the quintessential technical arm of the Lebanese Ministry of Industry, especially as IRI is a subsidiary body of the ministry, and that its Board of Directors is headed by his Excellency the Minister of Industry. IRI is

continuously conducting the necessary industrial inspections and studies, as well as feasibility studies aimed at developing existing industries or establishing new ones. This is in addition to conducting studies on the added value of national industrial products and the need for certificates of origin for export clearance. Also, the Institute worked in parallel with the ministry in granting industrial licenses, pursuant to decree No. 8018 dated 20/6/2002, which assigned the required role for IRI in this regard, and is still working in parallel with the ministry whenever it is required to do so.



### Ministry of Economy and Trade

Since its inception, IRI has been cooperating with the Ministry of Economy and Trade, especially the Consumer Protection Directorate and the General Directorate of Cereals and Sugar beets.

- A- Consumer Protection Directorate This directorate is tasked with taking samples from local markets on a regular and ongoing basis, and handing them over to IRI for laboratory testing and issuance of the necessary reports, across various sectors. IRI comprises 14 accredited laboratories covering different sectors, in addition to a control and inspection unit, the meteorological calibration unit and the Lebanese Welding Centre.
- B- General directorate of Cereals and Sugar beets The Industrial Research Institute manages and operates the work of the central laboratory for grains, flour and bread research on behalf of the Ministry of Economy and Trade. The laboratory is equipped in accordance with highly specialized international cereal laboratories. The laboratory meets all the

needs of this directorate by controlling the quality of the imported and the locally produced wheat and wheat products (briefly, monitoring the ingredients that make up the Lebanese bread loaf).



### Ministry of Agriculture

The Ministry of Agriculture requests IRI to analyze samples from agricultural products or material on a frequent basis. These are usually sent to IRI by the ministry for testing, whether upon importing them, exporting them or their usage. IRI is also tasked with the analysis of fertilizers and pesticide residues in vegetables, fruits and other crops.

الجمهورية اللبنانية  
وزارة الصحة العامة



### Ministry of Public Health

IRI laboratories are used by the Ministry of Public Health in conducting special tests on bottled water, as a fundamental step in the process of obtaining a license for the water bottling companies, in addition to other tests conducted by the instituted which include, for example, baby formula, cosmetics, medicine and other items as needed.

The ongoing regulatory campaign launched by the Ministry of Public Health during 2014, required a continuous coordination with the Ministry which was and still sending a large number of samples daily so that the IRI conduct necessary tests and provide technical advice.

In its laboratories, the Institute conducted analysis and tests for thousands of samples brought by the Ministry of Health monitors, and results were given within the required time period, sometimes

immediately. The Institute was not surprised by the unprecedented quantity and quality of samples brought by the Ministry of Health monitors.



### Ministry of National Defense

The cooperation with the Lebanese army, including its various interests and divisions, has been firmly established since IRI's inception. IRI meets the requests of the committee tasked with the receipt of the analyzed materials and the central reserve committee for foodstuff analyses, the stewardship for uniforms and equipment, in addition to the requests of the corps of engineers, the logistical corps and the military police and other corps as needed. IRI also holds training courses on welding works, solar energy and other scientific topics which IRI proudly provides to this institution.



### Ministry of Interior and Municipalities

The Textile, Leather and Rubber Laboratory at IRI is continuously cooperating with the security in analyzing the uniforms of the Internal Security Forces, as well as shoes and equipment, in accordance with their requirements and in order to certify the conformity of these specimens with the specifications established by them, prior to purchasing uniforms and gear. IRI meets the various requests by the Internal Security Forces in different unmentioned sectors, including for example chemical analyses to identify contraband and other security-related analyses.



### Ministry of Energy and Water

IRI works with the Ministry of Energy and Water in different areas, most importantly overseeing the manufacturing of gas bottles and certifying that they conform to the mandatory Lebanese standards. IRI also inspects gasoline tanks in petrol stations, whether for licensing purposes or for maintenance when requested.

In addition, IRI inspects the nominal load of fuel tankers, in addition to other inspections that are conducted at the behest of the ministry.

IRI also conducts studies and offers technical consultation in national issues when requested, issues that fall under the scope of both the ministry's work and IRI's fields of expertise.



### Ministry of Environment

IRI continually cooperates with the requests of the Ministry of Environment, whether by analyzing samples to assess their negative environmental impact, or whether by providing the Ministry of Environment with its services in the field of the inspection and auditing of factories, before suggesting the optimal approach in the production process in order to mitigate the latter's negative environmental impact.

IRI also hosts the Lebanese Cleaner Production Centre (LCPC), which was established as a result of the cooperation among the Ministry of Industry, the Ministry of Environment, UNIDO and Austria.

This centre's main objectives include ensuring compliance with environmental standards during the different stages of production, something that is beneficial in terms of reducing costs by keeping

waste in check on the one hand, and improving the environment by recycling wherever possible during the production process on the other hand.



### Ministry of Justice

The judicial authorities continuously refer legal issues to IRI for technical advice, as IRI is the reference point for these authorities in what pertains to scientific issues.



### Ministry of Foreign Affairs and Emigrants

Within the framework of cooperation and coordination among organizations involved in supporting Lebanon's exports abroad, the Financial and Administrative Director, Mr. Selim Kfoury, and the Applied Research and Testing Director, Dr. Joseph Matta represented the Industrial Research Institute in the meetings held virtually, organized by the Ministry of Foreign Affairs and Emigrants with concerned ministries and agencies and economic attachés in certain countries, and representatives of these countries including, Jordan, the United Arab Emirates, Canada, the European Union and others in an effort to overcome barriers and increase the volume of our exports to these countries.



### Customs

Collaboration with the Lebanese customs is mainly done in the fields of enforcing and verification of conformity with the mandatory

specifications required for goods imported to Lebanon, and which are subject to customs restrictions. This is done according to a specific and known mechanism. The Customs authorities, according to the customary procedure, can send samples to IRI for analysis and for identification of their components, prior to clearing them for entry into the local markets.



### Lebanese Standards Institution (LIBNOR)

IRI worked diligently to establish the Lebanese Standards Institution (LIBNOR), which is tasked with issuing the Lebanese standards. In the beginning, this institution was established in the campus of IRI, which incubated its operations until it was reactivated in 1998. Since then, IRI published approximately one thousand national standards for the institution, as per annual contracts that were in force from 1998 until 2004. IRI is currently represented in the institution's Board of Directors, while IRI is permanently represented in the technical committees tasked with issuing and updating the national standards.

### The Lebanese Council for Accreditation (Colibac)

Some time ago, IRI realized that the infrastructure of a world-class quality process must include the following items:

- Bodies for conformity assessment that implement these specifications. This role is primarily assumed by IRI in Lebanon, not only in the application of national standards, but also in the application of international standards in export operations as IRI is internationally accredited according to ISO Certificates No. 17020 and 17025.
- A national institution for the issuance of national standards, which in Lebanon

is the Lebanese Standards Institution (LIBNOR), a body that is ever striving to improve its role.

Oversight of the local market. This function is tasked to the Consumer Protection Directorate at the Ministry of Economy and Commerce .

A national council for accreditation, whose tasks include accrediting laboratories, monitoring commissions, conformity assessment for products and processes in the country. This national institution was not yet established in Lebanon, and IRI sought hard to establish it in order to complete the quality infrastructure at

the level of national institutions, until the decree of its establishment was issued in 2004, while the decree to establish its Board of Directors was issued in 2006. IRI is represented in the Board of Directors of the Lebanese Council for Accreditation (Colibac).

This council is still in the process of drafting its bylaws, which are nearing completion. Work is also underway to speed up the passing of the necessary legislations that will enable the council to start its operations and serve the purpose it was created for.







# IRI RELATIONS WITH THE PRIVATE SECTOR

## IRI'S RELATIONS WITH THE PRIVATE SECTOR

### Industrialists

IRI allots great importance to industrialists and industry in Lebanon. Thirteen years ago, IRI concluded an agreement with the Association of Lebanese Industrialists whereby it granted industrialists a fifty percent discount on the costs of all laboratory analyses, in accordance with the list adopted by IRI. The services provided by IRI to the industrialists are as follows:

#### **A- Analysis requests with the aim of improving**

The quality of production or finding solutions to production problems. Any industrialist can head to IRI to request an analysis of a product produced in his factory with the aim of improving its quality, or as a result of a particular problem he is facing during production. At that point, cooperation and follow-up begin with the industrialist.

In most instances, his request becomes a process of applied research with which these analyses either end up in improving the quality of the product or determining the underlying cause of the production problem and subsequently, working on solving this problem.

#### **B – Pre-export Analysis**

There are many products that cannot be exported to foreign markets without first being analyzed. As IRI is internationally accredited pursuant to ISO certificates No. 17020 and 17025, its accreditation is recognized by more than 120 countries, rendering it virtually the sole window through which Lebanese goods that comply with technical specifications can flow into the European and global markets, owing to the certificate of conformity issued by IRI.

Therefore, industrialists head to IRI to conduct the analyses required by the destination

countries, in order to obtain certificates of conformity for their products which would give them access to international markets.

#### **C – Product Certification**

This is an optional program that any factory that meets the conditions can request, for implementation in its facilities according to a contract with IRI and a specific mechanism at the latter; this would enable the factory to obtain IRI's conformity mark for its products, in an ongoing and continuous manner. IRI would oversee production through periodical analyses and inspections, before granting the factory certificates of conformity whether for export purposes or for ensuring the conformity of its products to national standards. This takes place in a routine manner, and also on demand, and its cost is factored in into that of the program.

### Merchants

There are goods that are subject to mandatory national standards. For this reason, importing such goods is subject to customs restrictions that stipulate their conformity to the mandatory national standards. This is verified by IRI prior to allowing these goods into domestic consumer markets.

Hence, the relation between the importers and merchants on one hand, and IRI on the other hand is constantly evolving. Efforts are underway, on a continuous basis, to facilitate trade exchange on one hand, and to verify the conformity of imported goods following a scientific method on the other hand.

Many merchants voluntarily head to IRI to request tests and analyses of their merchandise and products, in order to determine their conformity

with international standards in the case of export, or national standards in case of import, prior to shipping it from the country of origin.

### **Farmers**

IRI's laboratories continuously cooperate with farmers. In truth, many farms voluntarily head to IRI and request their products to be analyzed.

IRI provides analysis for farmers for the following products:

- Olive oil
- Honey
- Vegetables and fruits (pesticide residue)
- Irrigation water
- Meat and fish
- Other agro-food products.

### **Researchers and scientists**

Many researchers and scientists head to IRI to conduct tests and analyses necessary for their scientific research. Most of the time, their requests become applied research projects, as they are aware of IRI's capabilities in this area. This is not to mention the fact that IRI houses 14 laboratories spanning many complementary disciplines, in addition to the meteorology laboratory, the Lebanese Welding Centre, the Euro-Lebanese Centre for Industrial Modernization, the Lebanese Cleaner Production Centre, and the Centre for Innovation & Technology.

### **Consumers**

The relationship between consumers and IRI is either direct or indirect, through the civil organizations and associations concerned with consumer protection, the environment and other fields.

#### **Direct relationship**

Any citizen can go in person to IRI in order to test any product, substance or other items, which is what is often done by citizens to ascertain the safety of what they consume, be it drink, food, supplies, household electric appliances, building materials, petroleum products and other daily items.

#### **Indirect relationship**

Consumer protection associations and other civil organizations often head to IRI and request analyses and tests of an environmental or health safety nature. Cooperation with these organizations is done on a continuous basis by IRI, which meets all the former's requests in return for special fees that take into account their conditions in most cases. If these requests were not complimentary, then they would be symbolic, in a bid by IRI to support and encourage these groups to work for the public good.



# DEVELOPMENT OF HUMAN RESOURCES

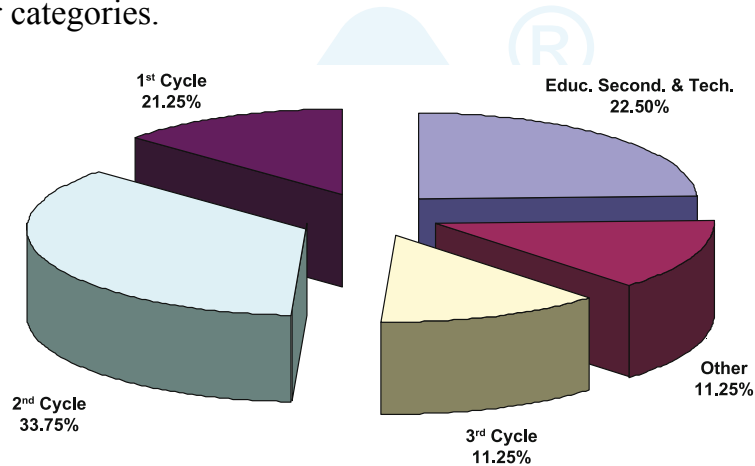
## DEVELOPMENT OF HUMAN RESOURCES

The number of IRI staff members amounted to 160 at the end of 2023; 66% are males, while 34% are females.

The average age is around 39 years.

They can be categorized according to the level of their education:

- 18 hold a 3rd Cycle
- 54 hold a 2nd Cycle
- 34 hold a 1st Cycle
- 36 are in their secondary and technical studies
- 18 are in other categories.



Elementary Levels	No.	%
3 <sup>rd</sup> Cycle	18	11.25
2 <sup>nd</sup> Cycle	54	33.75
1 <sup>st</sup> Cycle	34	21.25
Secondary Education & Tech	36	22.50
Other *	18	11.25

Average Age	Gender	
39 Years	66% Male	34% Female

(\* ) other excluded

Average Age	Gender	
39 Years	65% Male	35% Female





**ON-GOING  
EMPLOYEE TRAINING**

## International Training, Seminars & Workshops

#	Participant	Organizer	Object/Title	Date	Location
1	Amine Jbeily	World Food Programme (WFP)	Flour Fortification Study Tour to Jordan	03-06/07/2023	Amman, Jordan
2	Dany Frenn	Egyptian Organization for Standardization & Quality (EOS)	ISO regional training on improving market access using standards and conformity assessment	05-07/09/2023	Cairo, Egypt

## MISSIONS (Trainers, Experts & Speakers)

#	Participant	Organizer	Object/Title	Date	Location
1	Mohamad Assaad Hajjar	LCEC	Beirut Energy Week 2023	20/09/2023	Le Royal Hotel - Dbayeh
2	Mohamad Assaad Hajjar	IRI with LSES	Solar Photovoltaic PV System	03-04/10/2023	IRI
3	Bilal Hussein				

## Local Training, Seminars & Workshops

#	Participant	Organizer	Object/Title	Date	Location
1	Richard Skaff	ESIAM-USJ, INVV-Liban, Project Oenomed - UE et Ministère de l'agriculture	Oenologie durable ecoconception de la cave	02/02/2023	Campus de l'ESIAM, Taanayel
	Dany Frenn				
2	Eliane Sawma Awad	The Ministry of Industry, The Embassy of Canada in Lebanon & the United Nations Industrial Development Organization (UNIDO)	Presentation of the Pre-feasibility studies covering six value chains	28/02/2023	Lancaster Tamar Hotel, Beirut
	Lama Abou Rjeily				
3	Amine Jbeily	The Ministry of Agriculture & the Food and Agricultural Organization of the United Nations in Lebanon (FAO)	The launching event of the Farmer's Registry	02/03/2023	UNESCO Palace, Beirut

#	Participant	Organizer	Object/Title	Date	Location
4	Selim Kfoury	The Ministry of Industry & Fair Trade Lebanon	The launch of the National Export Center (NEC)	08/03/2023	Ministry of Industry, Beirut
5	Sahar Estephane Halim El Bayeh	The Ministry of Economy and Trade (MOET) and the World Health Organization (WHO)	Launch of the National Legislation for Trans Fatty Acid Elimination in Foods	15/03/2023	Gefinor Rotana, Beirut
6	Ahmad Hassan Mohamad Assaad Hajjar	Energy Department in the Climate change and Sustainability of Natural Resources Group and the United Nations Development Programme (UNDP)	The role of renewable energy in accelerating the recovery in vulnerable and crisis-hit countries	15/03/2023	Online
7	Joseph Matta	International Factory for Food and Beverages (IFFB)	Opening Ceremony of IFFB	28/03/2023	Hsoun, Jbeil
8	Ahmad Hassan	Climate Change Projects - Ministry of Environment & Climate Technology Centre and Network (CTCN)	Policy Working Group for the GCF Readiness Project on Energy Efficient TVs, Washing Machines, Electrical Motors and Distribution Transformers in Lebanon	25/04/2023	Ministry of Environment, Beirut
9	Imad Hage Chehadeh Bilal Hussein	Ministry of Industry - Ministry of Energy and Water & Liban Cables	Inauguration of the Solar Rooftop Power Systems	03/05/2023	Liban Cables, Jbeil
10	Imad Hage Chehadeh	Sibline Cement Company	Launch event for new concrete blocks products in Sibline factory	04/05/2023	Sibline - Chouf
11	Joseph Matta	Al Majmoua Danish Refugee Council Mercy Corps OXFAM	Launching of the Lebanese Cosmetics Association	14/06/2023	Le Royal Hotel - Dbayeh
12	Ahmad Hassan	Liban Cables sal	Solar Farms Development Best Practices	20/06/2023	Hilton Beirut - Metropolitan Palace
13	Amine Jbeily	Food and Agriculture Organization of the United Nations (FAO) and the Ministry of Agriculture	Multistakeholder Consultation Workshop Country Programming Framework (CPF) For Lebanon 2023-2026	21/06/2023	Gefinor Rotana Hotel, Beirut
14	Ramzi Bhamdouni	Berytech	National Launch Event Euromed Clusters Forward (ECF)	22/06/2023	Ritage Garden, Beirut
15	Joseph Matta	UNIDO	Circular Action 2 Event	22/06/2023	Movenpick Hotel, Beirut
16	Amine Jbeily	ESCWA	The Occasion of Arab Bread day	10/07/2023	Online

#	Participant	Organizer	Object/Title	Date	Location
17	Amine Jbeily Petra Youssef	The Lebanese Agricultural Research Institute (LARI) & The International Center for Agricultural Research In Dry Areas (ICARDA)	Workshop for major stakeholders in the wheat sector in Lebanon	24/07/2023	Radisson Blu Verdun, Beirut
18	Mahmoud Amhaz	ESCWA	National workshop on block-chain for trade facilitation for Lebanon	01/08/2023	UN House, Beirut
19	Dany Frenn	IRI & ELCIM	EMPHASIS Project - Workshop	22/08/2023	Le Royal Hotel - Dbayeh
20	Hanady El Khally	International Organization for standardization - ISO	Information Session - CD ISO/ IEC TS 17012	13/09/2023	Online
21	Mohamad Assaad Hajjar Ahmad Hassan	LCEC	Beirut Energy Week 2023	20-22/09/2023	Le Royal Hotel - Dbayeh
22	Ahmad Hassan	LCEC	Cool Up Thermic Groups	21/09/2023	Le Royal Hotel - Dbayeh
23	Maya Majdalany Jihad Hajj Shehadeh	AB Certification	Séminaire des Auditeurs AB	22/09/2023	Online
24	Ahmad Hassan Dany Frenn Mohamad Assaad Hajjar	Embassy of the Czech Republic in Beirut	Online Workshop Czech Ideas	26/09/2023	Online
25	Joseph Matta	Pharmaline	EU GMP ACCREDITATION	04/10/2023	Malia Tower - Amaret Chalhoub
26	Raymonde Khazzaka	IWMI MENA Events	Online Workshop Lebanese water reuse standards consultation	26/10/2023	Online
27	Mohamad Assaad Hajjar	LSES & The Order of Engineers and Architects - Beirut	Closing Ceremony of the LSES Humanitarian and Technical Project	29/11/2023	The Order of Engineers and Architects - Beirut
28	Mohamad Hajjar	LIBNOR	Standards on Facilities management	19/12/2023	Online
29	Mohamad Assaad Hajjar	LSES	The Annual Christmas Dinner	20/12/2023	

## LIBNOR

#	Participant	TC Number	Standard Title	Date
1	Dany Frenn	Furniture TC 2207	TC 2207 - ISO EN 17191: 2021	07/03/2023
2	Dany Frenn	NL TC 2207	NL EN 16890: 2017	14/11/2023
3	Dany Frenn	NL TC 2207 Furniture	EN 1130: 2019 / AC: 2020 CEN/TS 16209: 2022	07/12/2023

## IRI Seminars / Conferences

#	Participant	Organizer	Object/Title	Date
1	Osmat Sarhan Abed Nehme André Abou Zeid Paul Semaan	IRI - CFM Directorate (Inspection Unit)	Inspecting Food and Cosmetics	03/01/2023
2	Ricardo Shaaya	IRI - Electrical Lab	IP & Circuit Breaker test	08/02/2023
3	Ahmad Hassan Ahmad Wehbe Ricardo Shaaya	IRI - Electrical Lab	Electric Meter Test	22/02/2023
4	Mohamad Hajjar Ahmad Habli Maher El Hajj Mohamad Assaad Hajjar	Watermaster	Training on Maintenance and Operation of MAIA TAQA pilot project	22/03/2023
5	Thomas Homsy	IRI - Electrical Lab	Mechanical shock & provision for earthing test	12/04/2023
6	Elie Dawaliby	IRI - Electrical Lab	LED Performance Test and Starter Batteries Test	28/04/2023
7	Mehyidine Habli	IRI - Electrical Lab	Perform the power input and current for household	12/06/2023
8	Thomas Homsy	IRI - Electrical Lab	Perform Resistance to heat test	17/07/2023
9	Rakan Btadine Karim El Hajjar Ricardo Shaaya	IRI - Solar Energy Lab& LCEC	Certified Training for Solar PV Technicians	13-14/08/2023
10	Ricardo Shaaya	IRI - Electrical Lab	Batteries Performance test	21/09/2023
11	Tony Hayek	IRI - Metrology Lab	Calibration of non-automatic weighing instrument	13-27/12/2023
12	Achraf Arabi	IRI - Civil Lab	Testing Cement Compressive Strength	03-17/10/2023



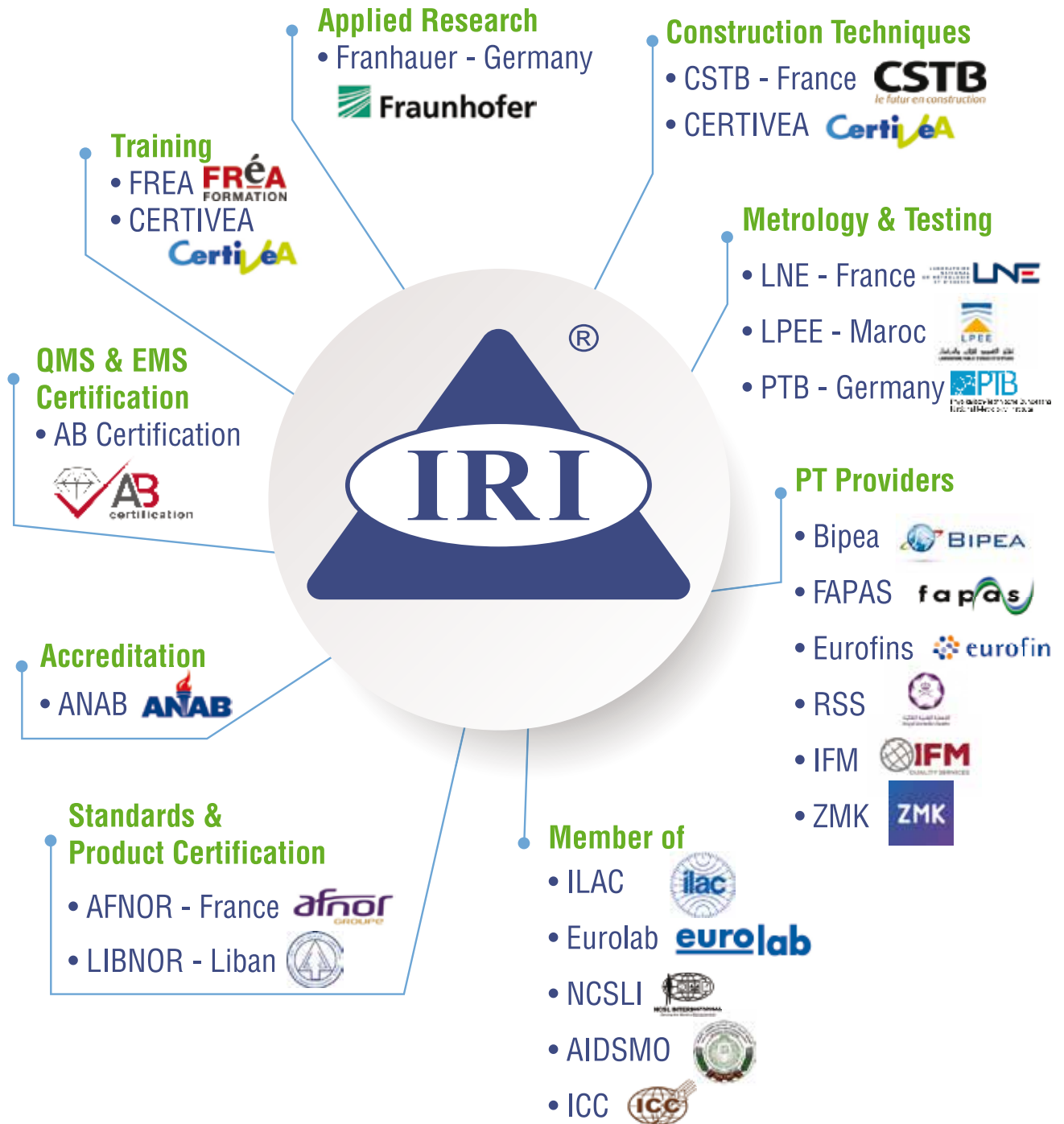


**INTERNATIONAL  
AND LOCAL  
PARTNERSHIPS**

# LOCAL PARTNERS



# INTERNATIONAL PARTNERS





# DECREES, LAWS AND DECISIONS

## LAWS

Law		Official Gazette		Subject	Body
No.	Date	Issue	Date		
318	22/12/2023	53	28/12/2023	Distributed renewable energy production law	Parliament
319	22/12/2023	53	28/12/2023	Amending some provisions of the Social Security Law and establishing the retirement and social protection system	Parliament
323	22/12/2023	53	28/12/2023	Amending some articles of the Lebanese Social Security Law (the law implemented pursuant to Decree No. 13955 issued on 26/9/1963) and its amendments, relating to women and their children.	Parliament

## DECREES

Decree		Official Gazette		Subject	Body
No.	Date	Issue	Date		
11376	29/5/2023	24	8/6/2023	The mechanism for granting contributions and aid to non-public sectors in the Ministry of Industry	Presidency of the Council of Ministers
11492	29/5/2023	24	8/6/2023	Granting the Lebanese Norms and Standardization Organization a treasury advance	Presidency of the Council of Ministers
11493	29/5/2023	24	8/6/2023	Giving legal mandatory status to the National Standard related to respiratory protection devices	Presidency of the Council of Ministers
11494	29/5/2023	24	8/6/2023	Granting legal mandatory status to a national standard related to plastics intended for contact with food	Presidency of the Council of Ministers
11495	29/5/2023	24	8/6/2023	Granting legal mandatory status to national standards related to child care materials and tools	Presidency of the Council of Ministers
11496	29/5/2023	24	8/6/2023	Granting legal mandatory status to national standards related to building materials	Presidency of the Council of Ministers
11497	29/5/2023	24	8/6/2023	Granting legal mandatory status to national standards related to cosmetics	Presidency of the Council of Ministers
11498	29/5/2023	24	8/6/2023	Granting legal mandatory status to national standards related to food	Presidency of the Council of Ministers



Decree		Official Gazette		Subject	Body
No.	Date	Issue	Date		
11499	29/5/2023	24	8/6/2023	Granting legal mandatory status to a national standards related to furniture	Presidency of the Council of Ministers
11500	29/5/2023	24	8/6/2023	Granting legal mandatory status to national standards related to welding	Presidency of the Council of Ministers
11501	29/5/2023	24	8/6/2023	Granting legal mandatory status to national standards related to paints and varnishes	Presidency of the Council of Ministers
11502	29/5/2023	24	8/6/2023	Granting legal mandatory status to national standards related to building safety	Presidency of the Council of Ministers
11503	29/5/2023	24	8/6/2023	Granting legal mandatory status to national standards related to inactive medical devices and personal protective equipment	Presidency of the Council of Ministers
11504	29/5/2023	24	8/6/2023	Granting legal mandatory status to national standards related to detergents	Presidency of the Council of Ministers
11505	29/5/2023	24	8/6/2023	Granting legal mandatory status to national standards related to heating, ventilation and air conditioning	Presidency of the Council of Ministers
11666	22/6/2023	27	29/6/2023	Granting legal mandatory status to national standards related to pipes and pipe accessories	Presidency of the Council of Ministers
12302	20/10/2023	44	26/10/2023	Granting legal mandatory status to national standards related to plastics and packaging materials	Presidency of the Council of Ministers

## DECISIONS

Decision		Official Gazette		Subject	Body
No.	Date	Issue	Date		
6/1	06/02/2023	7	16/02/2023	Criteria to be met by LED lamps	Ministry of Industry
35/1	31/01/2023	7	16/02/2023	Subjecting imported and exported pickles to agricultural quarantine visa	Ministry of Agriculture
55/1	23/02/2023	12	23/03/2023	Banning the import and export of some types of pickled vegetables containing banned coloring agents	Ministry of Agriculture
94/1	13/03/2023	12	23/03/2023	Determining the validity of laboratory analyses of plant food products and agricultural inputs while they are in the customs area	Ministry of Agriculture
7/1	14/03/2023	13	30/03/2023	Chemical evaluation	Ministry of Industry
12/1	03/04/2023	16	20/04/2023	Amendment of decisions related to employing a chemist or licensed chemist and mechanism for chemical assessment of factories issued under decisions numbered 43/1 dated 21/10/2021 and 23/1 dated 22/3/2022 and 35/1 dated 5/5/2022 and 7/1 dated 14/3/2023 and their associated tables	Ministry of Industry
14/1	13/04/2023	18	27/04/2023	Procedures for examining metal gas cylinders before, during and after filling in liquefied petroleum gas filling and storage centers	Ministry of Industry
144/1	05/04/2023	19	04/05/2023	Regulation of repackaging dried milk and/or dried milk components	Ministry of Agriculture
16/1	02/05/2023	21	18/05/2023	Banning the use of titanium dioxide E171 in artificial powdered drinks	Ministry of Industry
165/1	02/05/2023	21	18/05/2023	Subjecting imported wheat intended for human consumption to laboratory tests	Ministry of Agriculture
23/1	17/05/2023	22	25/05/2023	Banning the import of egg box cardboard	Ministry of Industry
42/1	09/06/2023	26	22/06/2023	Assignment to the duties of Director General of Industry	Ministry of Industry
44/1	13/06/2023	26	22/06/2023	Assigning an employee to the duties of Chief of Cabinet in the General Directorate of Industry	Ministry of Industry
14	21/06/2023			Imparting legal mandatory status to a national standard related to pipes and their accessories	Council of Ministers

Decision		Official Gazette		Subject	Body
No.	Date	Issue	Date		
16	21/06/2023			Mechanism for procuring wheat (durum and common) and barley	Council of Ministers
23	21/06/2023			Imposing additional fees on the import of natural stone and marble tiles	Council of Ministers
54/1	03/07/2023	29	13/07/2023	Authorizing the Director General of Industry to sign a license to export foodstuffs manufactured in Lebanon	Ministry of Industry
55/1	03/07/2023	29	13/07/2023	Appointing an employee to the duties of Head of Industry Department in Akkar	Ministry of Industry
70/1	16/07/2023	35	24/08/2023	Amendment of Decision no 16/1 dated 2/5/2023 banning the use of titanium dioxide E171 in artificial drinks powders	Ministry of Industry
63/1	24/07/2023	36	31/08/2023	Authorization to sign industrial certificates	Ministry of Industry
71/1	16/08/2023	36	31/08/2023	Related to plastics permitted for use in containers for filling water	Ministry of Industry
80/1	06/09/2023	41	05/10/2023	Appointing the government representative in the Lebanese Accreditation Council (COLIBAC)	Ministry of Industry
1348/1	19/10/2023	47	16/11/2023	Guideline for Good Clinical Practice (GCP), Bioanalytical Method Validation and Study Sample Analysis	Ministry of Public Health
1349/1	19/10/2023	47	16/11/2023	Principles of good pharmaceutical manufacturing	Ministry of Public Health
52/1	21/07/2023	48	23/11/2023	Banning the import of Burghul except through a license issued by the Ministry of Industry	Ministry of Industry

## CIRCULARS

Number	Date of signature	Subject	Body
3/1	23/01/2023	Related to banning the use of Rhodamine B dye in the manufacture of turnip pickles	Ministry of Industry
14	26/05/2023	To all public administrations, public institutions and municipalities regarding sending to the Presidency of the Council of Ministers a copy of all correspondence conducted with countries, organizations and international bodies abroad, as well as prior coordination with the Ministry of Foreign Affairs and Emigrants regarding the nomination of Lebanese figures for positions in international organizations.	Presidency of the Council of Ministers
15	05/06/2023	To all ministries and public administration regarding subjecting the import and export of merchandize by relevant ministries to the system of advance authorization	Presidency of the Council of Ministers
75/1	30/08/2023	Related to plastic materials permitted for use in containers intended for water filling	Ministry of Industry



IRI



COMMUNICATION  
& MEDIA



## MEDIAS

### Tour of the ambassador of Belgium in the Industrial Research Institute 25 – 01 – 2023

# الذبيار

## جولة ل سفير بلجيكا في معهد البحوث الصناعية وتأكيد على استمرار التعاون

26 كانون الثاني 2023



استقبل المدير العام لمعهد البحوث الصناعية بشام الشرفي سفير بلجيكا في لبنان كون فرمات Koen Verweeke والملفقة التجارية في السفارة لدى عبد الرحيم في جولة اكلوعية على اقسام المعهد ومختبراته ومراكزه البحثية والدراسة. حضر الاجتماع رئيس الجامعة اللبنانية الدكتور بشام بدران، رئيس تجعج رجال الأعمال اللبناني - البلجيكي نيار سلوم وكواتر المعهد.

بدأ الشرفي - مؤيداً أن التعاون بين المعهد وبلجيكا قائم ومستدام، ويتجدد في المؤتمرات الأوروبية في بروكسل حيث يشارك المعهد كعضو في اجتماعات مجموعة المختبرات الأوروبية Eurolab

وقال: كما أن التعاون اللبناني مستمر وغير المؤقتة الأوروبية، ويخدم المعهد مراكز تخصصية أوروبية - لبنانية تعنى بالقطاع الصناعي في لبنان التي أخذت من المعهد شاعرة ارتكاز وعمل. ولقد أصبح المعهد في السنوات الأخيرة مرعوبة على معيد الخدمات لمختلف القطاعات الاقتصادية والإنتاجية والصناعية، ودوره محوري في الرقابة على جودة الهلجات المعصرة والمسؤودة من وإلى لبنان لذلك طوّرتنا المختبرات والتجهيزات والآليات الفحص لتكون على مستوى دولي وأوروبي. وهذا الأمر حثفناه بعسل دؤوب والدفاع كأي من قبل الزلاء العاملين في المعهد الذين يتابعون دورات تخصصية في الخارج ويشاركون في المؤتمرات الدولية والأوروبية، وهم بالتوا ينكمون دورات تدريبية متخصصة في المعهد في مجالات عديدة سواء للمهنيين في لبنان أو من دول الخوار.

وحنم: نتطخ في معهد البحوث الصناعية إلى المزيد من التناج ومصافة خبراتنا ومؤفلات كوادنا كما نحبو إلى شراكة أكبر مع المؤسسات البلجيكية المماتنة، وكلنا ثقة بأن محبتكم للبنان سعادة السفير. ستدجوتنا في العلاقات اللبنانية والتبادلية.

فرمات

ورد السفير - مشياً على دور المعهد في تطوير الصناعة وفي تأمين تبادل تجاري مضمون بين لبنان وأوروبا وبالعكس. وشهد على أن بلاده التي تحتضن المفوضية الأوروبية، عازمة ومصقمة دوماً على مساعدة لبنان في مختلف التوايدي.

تم جال الحضور في مديريات المعهد ومختبراته وأقسامه البحثية والنظرية.

## Signing of a cooperation agreement between the Industrial Research Institute and the National Institute for Vine and Wine 20-06-2023

# الشرق

الخميس 22 حزيران 2023 / العدد 3590

### مذكرة تعاون بين «البحوث الصناعية» وشاوي رئيس المعهد الوطني للكرمة



وقع المدير العام لمعهد البحوث الصناعية الدكتور بشام القرن ورئيس المعهد الوطني للكرمة والشيخ ظافر شاوي مذكرة تعاون بين المعهدين، في حضور كوادز معهد البحوث وأعضاء مجلس إدارة معهد النبيذ وعدد من الأعضاء.

وأكد القرن في كلمته أن معهد البحوث الصناعية يقوم بواجبه بدوره تجاه الصناعة الوطنية، وهو الارتقاء بها وتحديثها وتعريفها ومنحها شهادات المطابقة، ومواكبتها في عملية التطوير من حيث مساعدتها في الأبحاث والدراسات والتشوهات والخصوص المخبرية الضرورية وفق المواصفات الإلزامية.

وأوضح أنه سيمار إلى تأليف فريق عمل مشترك يستفيد معهد النبيذ من خبرات موظفي معهد البحوث الصناعية المكلفين بإعطاء الاستشارات والمعلومات التي تخص عمل الكرامين ونشاطهم في دعم صناعة المشروبات الروحية ولا سيما النبيذ اللبناني.

القرن وشاوي يوقعان مذكرة التعاون العلمي والمختبرات المتطورة الموجودة في المعهد، وإضافتها إلى خبراتنا وممارتنا التي نعدت متقدمة في هذا المجال. وفي مقدمهم الصديق ظافر شاوي الذي يملك بأعما طويلاً في هذه الصناعة وفي حقل الأعمال بشكل عام، مشيراً إلى أن اتفاقية التعاون هي خطوة صحيحة للوصول إلى الأهداف المشتركة لخدمة القطاع. وردّ شاوي بكلمة حيا فيها «جهود الدكتور القرن والعالمين بزراع الكرمة وصولاً إلى اللطف والتجميع والتخمير والعصر والتعبئة والتعليق والتصدير، إننا نسبو إلى المزيد من العمل المشترك والاستفادة القصوى من الخبرات على هذا الصعيد».

# الجمهورية

العدد 3590 | الخميس 22 حزيران 2023

### تعاون بين معهدي «البحوث» و«الكرمة»

وقع المدير العام لمعهد البحوث الصناعية بشام القرن ورئيس المعهد الوطني للكرمة والشيخ ظافر شاوي مذكرة تعاون بين المعهدين، في حضور كوادز معهد البحوث وأعضاء مجلس إدارة معهد النبيذ وعدد من الأعضاء.

وأكد القرن في كلمته أن «معهد البحوث الصناعية يقوم بواجبه بدوره تجاه الصناعة الوطنية، وهو الارتقاء بها وتحديثها وتعريفها ومنحها شهادات المطابقة، ومواكبتها في عملية التطوير، من حيث مساعدتها في الأبحاث والدراسات والتشوهات والخصوص المخبرية الضرورية وفق المواصفات الإلزامية». وأوضح أنه «سيصار إلى تأليف فريق عمل مشترك يستفيد معهد النبيذ من خبرات موظفي معهد البحوث الصناعية المكلفين بإعطاء الاستشارات والمعلومات التي تخص عمل الكرامين ونشاطهم في دعم صناعة المشروبات الروحية، ولا سيما النبيذ اللبناني الذي أصبح مطلوباً في الأسواق العالمية، بفضل إرث كبير يحمله وتصميم العالمين في هذا القطاع وفي مقدمهم الصديق ظافر شاوي الذي يملك بأعما طويلاً في هذه الصناعة وفي حقل الأعمال بشكل عام، مشيراً إلى أن «اتفاقية التعاون هي خطوة صحيحة للوصول إلى الأهداف المشتركة لخدمة قطاع النبيذ».

وردّ شاوي بكلمة حيا فيها «جهود القرن والعالمين في معهد البحوث الصناعية، مشيراً إلى أننا «نتطلع إلى المزيد من العمل المشترك والاستفادة القصوى من الخبرات العلمية والمختبرات المتطورة الموجودة في المعهد، وإضافتها إلى خبراتنا وممارتنا التي نعدت متقدمة في هذا المجال».

وأكد «إننا نسير جميعاً بمنتجاتنا وفق أفضل المعايير الوطنية والدولية، في حلقة إنتاجية متكاملة تبدأ بزراع الكرمة وصولاً إلى التقطع والتجميع والتخمير والعصر والتعليق والتعبئة والتخليط والتوزيع والتصدير، إننا نصبو إلى العالمية، وحققتنا إنجازات على هذا الصعيد».

# Inauguration of the wastewater treatment plant at the Industrial Research Institute 12-07-2023

## النضار

### محطة تكرير في الجامعة اللبنانية... نموذج مستدام يلحظ تهديدات الجفاف

08:31 | 12-07-2023



يستلزم العالم طقوسه البشرية والمؤسسية صلباً مشكلة النضار التي لطالما العاثت في المسائل الغربية والشرق الأوسط في أزمته السياسية والاقتصادية وما يربطها بها. يبدو أن فيه من سائر إمكانياته كإحدى المدن في قائمة الدول التي تتكون فيها المؤسسات غير الحكومية والدولة بآلية الترخيص الذاتي.

في ظل هذه الظروف، فإن نموذج البحث الجامعي والتجديد في الصرف الصحي بدعم من الدولة يبرز كأحد الحلول المستدامة.

ديوان التحرير العام لمركز  
والتحرير الصحفي لمشروع

ملفها لصاحب التكنولوجيا  
تأليف التي لهذا لبنان مع

ليتمتع متولة للإبلاغ بل

في على مدى سنتين على  
مخسمة وطاقم الدعم الذي  
رثت الصناعات مع MAIA

في تم التطوير التكنولوجي

التسعين بالمئة وهي حال  
توسعات وتعريف أخطائها

في مستويات عالية تزيد من  
مخاطر التلوث، بل إن هذا  
تأثيرات التي لتتعد هذه

في الطاقة الشمسية وإزالة  
مخاطر الأوبئة من جهة والتي

والمخاطر البشرية

ومن التزام الصناعيين وما إن كان ممكنة اعتماد المشروع في المجتمع التي بالنسبة بعضاً بتلوث محلي

المصالح غير المتوقعة، مؤكداً في الوقت عينه التزام المصنعة المصنعة بالقانون كدليل للمواطنين إلى مساعدة

أن رئيس جمعية الصناعيين سليم الزيني رأى في المسؤولية تقع على عاتق الدولة لا على الصناعيين وذلك

وذكر الزيني بمشروع البوليبيرو لدعم الاقتصاد الأخضر والتدوير في لبنان الذي يموهبه لم تعامير عالمي فالتدوير

بموجب مشروع محطة التكرير تحدياً وهو استدامته وصيانتها على الدوام. هذا التحدي يشاركه الصناعيون على

المشروع في السنتين الأولى، وبعدها يتعاون معكم في الأعمال المطلوبة في مشاريع ذات أهداف مشتركة.

## الأصواء

الطبعة 12 | العدد 12 | 2023

### تدشين محطة تكرير مياه الصرف الصحي في معهد البحوث الصناعية

في مجال الطاقة المتجددة ومعالجة مياه الصرف الصحي. هذا المشروع الذي استغرق تنفيذه قرابة السنة، يكلفه مائة وتسعين ألف دولار أميركي. يهدف إلى تشغيل محطة معالجة مياه الصرف الصحي على الطاقة الشمسية، وتكرير المياه المثلثة وإعادة استخدامها في مجال الريّ كما يمكن أن يستفيد معهد البحوث الصناعية منها لتعويض النقص في المياه. وألقى بوشكيان كلمة رأى فيها أن معهد البحوث الصناعية يطور تجربة نوعية مع MAIA-TAQA في مجالات الاستثمارات الجديدة بهدف تحسين نوعية الحياة ورفع مستواها، وما يهتم من المشروع ثلاث نقاط أساسية هي: البحث العلمي، والتطوير

العام المركز اللبناني الأوروبي للتدشين الصناعي حفل تدشين محطة تكرير مياه الصرف الصحي التي تم إنشاؤها في المعهد في حرم الجامعة اللبنانية في الحدث، يتمويل مشترك مع الاتحاد الأوروبي في إطار برنامج ENI CBC Med ضمن مشروع MAIA-TAQA في حضور وزير الصناعة في حكومة تصريف الأعمال النائب جورج بوشكيان، المدير العام لمعهد البحوث الصناعية الدكتور بسام الزين، رئيس الجامعة اللبنانية الدكتور بسام سدران، رئيس جمعية الصناعيين سليم الزيني، مدير ELCIM، والمدير الحالي لمشروع MAIA-TAQA، ناجي أبي زيد، وممثلين عن المؤسسات المتخصصة في

التكنولوجي، والابتكار. وأكد أن ما يقدمه المعهد و ELCIM للصناعات اللبنانية يعدّ من الدعائم الأساسية لتطوير الصناعة وتحديثها لجهة التوسع وتكبير حجم الأعمال وخوض تحديات المنافسة والتصدير إلى الأسواق الأخرى نظراً. وأن الأثر الذي ان تسمية المؤسسات الصغيرة والمتوسطة في لبنان تجاوز الـ ٩٠٪، وهي حال الدول المحيطة بنا. يؤه بوشكيان بوضوح المشروع ويوجههم لدعم هذا النوع من المؤسسات، وتعريف أصحابها أكثر على البحث والابتكار. بدوره أكد الدكتور الزين أن الجهات المعنية تعمل ضمن استراتيجية واحدة لتنمية الاقتصاد والمحافظة على البيئة.

مشيراً إلى أن معهد البحوث الصناعية يركز على إيصال الأبحاث والمشاريع الجديدة للمجتمع العلمي ودعم الاقتصاد المستدام. لافتاً إلى أن المعهد يعمل اليوم على جمع مياه الأمطار وإعادة استعمالها، في سياسة متكاملة مع مشروع MAIA-TAQA. وشرح أبي زيد أن Maia Taqa تعمل على ثلاثة محاور رئيسية والتي كان لها تأثير كبير في مجال الطاقة، معتبراً أن المشاريع الجريبية التي إنجزتها في بناء الطاقة الكهروضوئية المتكاملة، والحرارة ومعالجة مياه الصرف الصحي وإعادة استخدامها، والتي تم تنفيذها على التوالي في مسر والأرين ولبنان تعدّ بمثابة دليل بارز على ممارساتها المستدامة.

**Visit of the head of the Syndicate of Pharmacists Dr. Joe Salloum to the Industrial Research Institute**  
**21-09-2023**

## المركزية



### نقيب الصيدلة: لاعتماد مختبرات معهد البحوث الصناعيّة

المركزية - زار نقيب الصيدلة جو سلوم معهد البحوث الصناعيّة بحضور النائب السابق سليم خوري، واطلع على مختبرات المعهد المتطورة والعالية المعايير المعتمدة عالمياً.

إثر الزيارة، دعا سلوم العاملين التي "اعتماد مختبرات المعهد للتأكد من نوعية الدواء، وجودته، خصوصاً في مراحل تسجيل الدواء، المستورد أو المصنوع محلياً، فإدنا مختبر مطوّر للتأكد من نوعية الدواء، فتمضوا اعتمادوه".

وذكر: ليس لدينا من ميزر أو نشاء مختبر مركزي ونحفل للتاليه او التأخير في الشروع بإنشاء الوحدة الوطنية للدواء، تحت حجة أن لا مختبر مركزياً لدينا.



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