

**IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT IN
LEBANESE MANUFACTURING SMES PLASTIC SECTOR**

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Abstract: *In Lebanon, the majority of enterprises work as Small and Medium Enterprises (SMEs). SMEs play an important part within the money related advancement of various nations. It utilizes current perspectives to analyze the factors impacting wander, effectiveness and improvement of SMEs in Lebanon. It investigates primary variables influencing venture and efficiency as takes after: flexibility, customers and employee's relations, inspiration of the proprietors, instruction of the labor constrain, get to to framework, get to fund, measure of firms and other business climate factors. Other commerce climate factors are insecurity, bribe or debasement, the sum of time that businesses spend managing with government control, poor power accessibility, etc. The foremost concerning issue for little and medium measured enterprises (SMEs) isn't the thought or the item given and neither its clients, but their needs. Tall costs of operations and office space are essentials to the survival of a private venture. An incubator points to have a positive impact on the financial wellbeing of an area, of a community indeed on a country.*

Keywords: *Lebanese Small and Medium-sized Enterprises, Information Technology, Financial State, National Economy, Environmental Problem, sustainable development, Manufacturing plastic Sector.*

1-Introduction:

Since the 1960s to date, small and medium sized enterprises (SMEs) had been given due recognition's in specific within the developed nations for taking vital parts within the course of cultivating accelerated monetary improvement, development and stability interior a number of economies (Yitzhaki, 2006). Over the final few various a long time, the commitments of the SMEs segment, the progress of the most prominent economies on the earth have transmitted the searchlight on the uniqueness of the SMEs; and this have succeeded in overruling as of now held views that SMEs have been slightest complex miniature sorts of more prominent undertakings (Al-Shaikh 1998; Gaskill et al. 1993).

The survival of the SMEs during the latest financial emergency pushed Collins, in 2010, to discover out why some enterprises declined whereas others persisted. (Aliouat and Nekka, 2011) also conducted investigate to find out the reasons that “make a few SMEs work legitimately, against all chances, in these environments”. Little and Medium Enterprises (SMEs) plays a huge part within the monetary enhancement and destitution reducing of various nations. SMEs are found in a wide show of trade works out.

These extents from the single expert creating cultivating actualizes for the town showcase, the coffeehouse at the corner, the internet bistro in a private area to a small complex building or programming firm advertising in overseas markets and a medium-sized car parts maker pitching to multinational automakers within the family and farther markets (OECD, 2014). The development in consideration in SMEs has turned out to be more crucial since the financial impact of the 2007/2008 cash related crisis on economies all around (Igwe, 2016; Igwe, Onjewu and Nwibo, 2018). With globalization, making countries are winding up progressively dependent for widespread exchange of items and enterprises, work, advancement and development. This wonder demands that all economies conclusion up

proactive, recognize openings that offer close points of interest and make creative moves to monetary improvement, work creation and prospering.

For example, up to date studies conducted with the help of United Nation Industrial development organization (UNIDO) agree that SMEs are: labour-intensive, delivering more conceivable outcomes for low-expert staff, related with control profit conveyance imbalance, quintessential for agriculture-elegant countries transitioning to an industrial and repair-oriented monetary systems, quality sites for advancement and maintainable activities due to their characteristic adaptability and risk-taking potential (Patricoff& Sunderland, 2005). Little and medium agencies play predominant parts inside the economies of most of the created and setting up countries, mainly in Lebanon, and impact hugely on business generation, profit dissemination, and dispersion of industries.

The importance of the SME sector and the informal division is expressed globally, characterizing SMEs as challenging mission, after which each country has its claim definition. There's not any single, consistently acknowledged definition of a little company (Story, 1994). Organizations vary of their levels of capitalization, deals and business. Subsequently, definitions which utilize measures of measurement (e.g. Number of specialists, turnover, benefit and net valued at) when connected to a segment might lead to all firms being categorized as little, whereas the rise to measurement definition when connected to another segment would result in however another result.

The Lebanese economy faces a complexity of issues, which are established in socio-monetary structure and history of violence and bad form. Subsequently the low rural efficiency, starvation and set up droughts; excessive population advance, low human asset advancement, over the top transport costs and natural corruption make a commitment definitely to the auxiliary issues which brought about in huge macroeconomic challenges. Other than, social issues, the human valuable asset base

and the common profitable device and programs, had been too littered with the struggle.

For that reason the annihilation of the social fabric, the lack of men and women's certainty and believe in each distinctive extend additional the destitution and vulnerability of the Lebanese individuals curiously in rural areas. On this setting, the Lebanese government's sublime reason is to form a modern social, political and financial system that need to handle the issues of the country. The government of Lebanon have to be create a scope that promote the creation of elective ways of accomplishing high incomes, business, a scope which empowers entrepreneurs to create commitments more positively to monetary development within the country. Entrepreneurs are encouraged in implementing little and medium offices which play a fundamental role on monetary improvement. Many countries are facing low efficiency development, powerless exchange and speculation, and rising or diligently tall imbalance.

In addition, major trends, including the unused mechanical revolution, the changing nature of work and statistic changes, call for innovative policy solutions. The population of SMEs is exceptionally differing in terms of age, size, trade demonstrate and the profile and goals of business people. They change in their characteristics and performance, counting across segments, regions and countries. These differences have suggestions for how approaches are outlined and targeted.

2. Definition of SMEs

Small and medium-sized companies (SMEs) are an exceptionally heterogeneous workforce. SMEs are found in a tremendous cluster of exchange schedule, extending from the only artisan creating rural actualizes for the village advertise, the coffee store at the corner, the internet café in a little town to a little unobtrusive building or application enterprise offering in overseas markets and a

medium-sized car components brand advancing to multinational automakers inside the domestic and abroad markets. The house owners may just or might not be poor; the firms work in exceptionally select markets (urban, rural, neighborhood, national, regional and worldwide; embody interesting levels of ability, capital, sophistication and development introduction, and is also inside the formal or the casual economy. The abbreviation "SME" is utilized within the European Union and by worldwide organizations such since the World Bank, the united international locations and the World alternate institution.

Little and medium enterprises (SMEs), play a major role in advancing financial and social development in addition to their part as catalysts of work creation (Magableh, 2015). Within the setting of creating nations, SMEs include over 95% of add up to businesses, contribute up to 33% of GDP and utilize 45% of the workforce (IFC, 2016). Comprising over 97% of add up to private undertakings and utilizing over 51% of total workforce; SMEs are considered one of the most columns of the Lebanese economy (IFC, 2014). In any case, the sector's development has been prevented by a few boundaries both on arrangement and procedure levels. Be subsequently supporting the SME segment can play a part in reducing a few of the burdens that as of now confront the nation on both financial and social levels.

3. SMEs in Lebanon

SMEs play a particularly critical part in creating countries. They are a major source of work, income and trade profit (OECD, 2004). Within the MENA locale, SMEs constitute 99% of companies and give 2/3 of workstations (Koldertsova, 2006). In Lebanon, there's no official definition for SMEs, or their commitment to the Net Household Item. Gauges from the World Bank appear that 90.2% of SMEs have less than 5 employees. (Koldertsova, 2006).

Furthermore, monetary and financial policies of the postwar highlight an enormous debt. The Central Bank continue on an effective banking framework that carries impressive national investment funds, a major resource to huge trade execution. But as the Lebanese beneficial sector comprises of little and medium endeavors, the recession gets to be more critical. This segment is debilitating by the day. Debt policy that has been taken after since 1990 by the governments of previous Prime Minister Hariri made the intrigued rates generally tall on debt.

This projected rapid increase in plastic waste generation in LIMICs, particularly for short-use items and objects, will necessitate a coordinated effort by municipalities to provide systems for collecting, disposing, and potentially reclaiming, recycling, and recovering significant additional material. However, currently, approximately 40% wt. of municipal waste plastics are mismanaged, and this proportion is expected to rise to 55% by 2040 unless significant and concerted action is taken to either inject more resources into an already struggling waste management system or dramatically reduce the mass that enters it. Controlling and eliminating this massive amount of uncontrolled plastic garbage is quickly becoming one of the most important environmental issues of the twenty-first century.

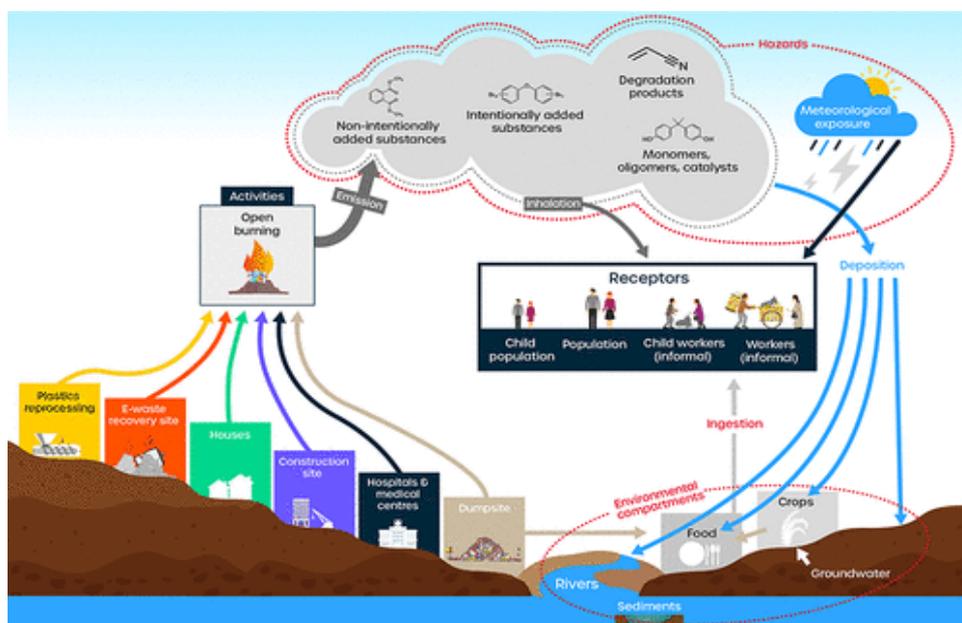


Figure 1: <https://pubs.acs.org/doi/abs/10.1021/acs.est.0c08536>

4- Municipal Solid Waste Management

Due to severe environmental and social difficulties regarding growing urbanization, MSWM infrastructure, and the development of the informal waste sector, the Municipal Solid Waste Management (MSWM) sector represents a major challenge for low- and middle-income countries. Recognizing its importance, a number of countries have introduced various formalization steps aimed at addressing the social issues associated with this industry.

Regardless of these efforts, not all attempts at formalization have been effective due to the existence of barriers that limit their long-term application. Additionally, there is a common lack of knowledge or understanding about these barriers and the types of procedures that can be taken to facilitate formalization, resulting in a win-win situation for all parties concerned. In this environment, policymakers and decision-makers in the public and commercial sectors are

regularly faced with the challenge of devising practical formalization approaches that are tailored to their specific MSWM situations. (Aparcana, 2016).

Plastic pollution, on the other hand, is a particular problem in Lebanon due to the country's high reliance on imported goods, the nature of its distributed economy, the country's large plastic manufacturing industry, and a variety of macro and microeconomic factors that make the recycling of plastics impractical. In fact, after the United States, Lebanon is believed to have the second-highest percentage of tap water contaminated with plastic fibers in the world, at 93.8%. About 11% of the garbage is composted, while about 8% is recycled in terms of recycling. Recycling networks are produced by a system of waste pickers and material merchants who labor to recover materials before they are collected from points of generation or storage, and after they have been disposed of in a waste disposal facility. (zoe Gareiou, 2022).

a. Plastic Waste

More than 8 billion tons manufactured of plastic since the 1950s, more than quadrupling worldwide production, yet recycled less than 10% of it. 1,2 Plastic garbage continues to accumulate at an alarming rate, with some plastics taking more than 400 years to decompose. This is especially true in low and middle-income countries (LMICs), where waste infrastructure has often been unable to keep up with the consumption of plastic and foreign imports. And, despite plastic restrictions in 34 of Africa's 54 countries, as well as the fear of penalties and even jail time, regulation hasn't always worked.

Micro- and nano plastics (plastic bits shorter than 5 mm and 100 nm, respectively) are created when bigger plastic pieces break down and can be released directly into the air and rivers through industrial operations. Micro plastics have been identified in more than 80% of tap water samples around the world, according to some research. According to some estimates, Micro plastics have been discovered

in the human placenta for the first time, providing new and disturbing insights into how these particles can transit through the body and harm health. These tiny fragments of plastic can enter the body and damage human health in a variety of ways, whether breathed, absorbed topically, or swallowed through a wide range of water and food products—ranging from seafood to salt to veggies to anything packed in plastic—in a variety of ways.

Plastic garbage poses an indirect health danger; when a large amount of trash accumulates, the most frequent method of disposal is to burn it on-site at residential and community dump sites. One-quarter of all plastic garbage is anticipated to be burnt globally. More than 75% of all waste, including plastics, is burned in Sub-Saharan Africa, for example. This leads to pollution and releases chemicals into the air, such as dioxins, furans, mercury, and polychlorinated biphenyl, which are harmful to respiratory health and have been related to asthma and other illnesses, such as cancer.

Plastics contributed significantly to climate change throughout their entire life cycle, which in turn creates a slew of health issues and poses an existential threat to humanity and the world as we know it. (Erika M. Veidis, 2022). Scientists were trying to get a handle on the massive amount of plastic that ends up in the seas and the devastation it does to birds, marine mammals, and fish two years ago. The projection that by the middle of the century, the oceans will contain more plastic debris than fish, ton for ton, has become one of the most widely referenced statistics and a rallying cry for action. (Parker, 2018).



Figure 2: A Chinese laborer sorts through plastic bottles at a recycling operation in Dong Xiao Kou village, on the outskirts of Beijing.

Source: <https://www.mdpi.com/2071-1050/14/3/1912/htm>

b. Plastic Waste and recycling

Plastic garbage has become a big issue on land and at sea during the last decade. Plastic has gone from being praised as a scientific marvel to being vilified as an environmental disaster. Over the previous year, the media has focused on ocean and river plastics, with a particular focus on the major issues in Asia and the massive amount of floating plastic found in the middle of the oceans.

Only around 9% of all plastic ever produced has been recycled, with the other 12 per cent being burned and the rest ending up in soils, oceans, and landfills. The plastic business is a rapidly expanding industry, with nearly half of all plastic produced since 2000. The global average for recycling is currently less than 20%, with the United States recycling only 9% of its plastic production. We've used the term "recycle" to refer to a variety of practical approaches to dealing with plastic. It should only be used to plastic garbage that is reused or reprocessed into comparable or different products. Some of the solutions to the plastic waste problem

do, in fact, include the destruction of polymeric materials. True recycling is rare, and even the plastic bottles that we separate for collection every week in the United Kingdom may not end up as plastic bottles but instead be hydrolyzed and turned into monomers before being depolymerized into polyethylene terephthalate (PET) for use in a variety of products, including carpet material. PET is the plastic that is most easily recycled. (Letcher1, 2020).

c. Biodegradation of traditional plastic waste

Different bonds in the backbone chains of plastic materials are also important in the mechanisms of plastic biodegradation because these specific bonds are critical to enzyme assault. Polymers with carbon backbones, such as polyethylene (PE), polystyrene (PS), polypropylene (PP), and polyvinyl chloride (PVC), biodegrade differently than polymers with ester-bond backbones and sidechains, such as poly (ethylene terephthalate) (PET), and polymers with hetero/carbonate (urethane) bonds, such as polyurethane (PU) (Zi-Hao Qin, 2021)

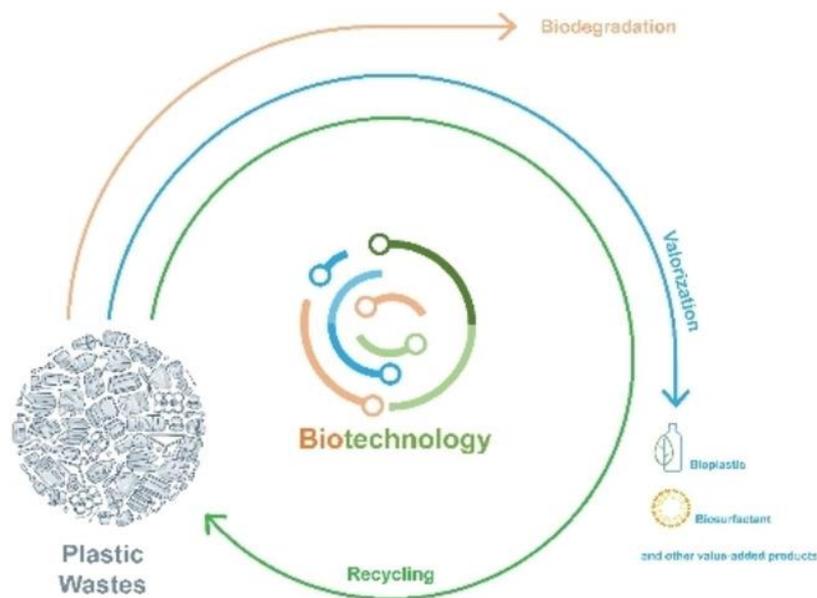


Figure 3: Plastic biodegradation: Severe plastic wastes pollution requires immediate remediation. As one green alternative, plastic wastes recycling and

valorization based on the principle of biodegradation attract attention from all relevant fields. With the assistance of biotechnology, it could provide feasible solutions for tackling the plastic waste dilemma.

Source: <https://chemistry-europe.onlinelibrary.wiley.com/doi/abs/10.1002/cssc.202100752>

5 -ICT & Sustainable Development

When ICT and SDG scores are compared, there is a substantial association between the two, implying that ICT allows countries to accelerate their progress on the SDGs. The majority of the countries at the top of the standard are predominantly European countries, which is not surprising given that European countries are at the forefront of both ICT advancement and sustainable development. The benchmark demonstrates a substantial discrepancy between the lowest scoring country (Pakistan) and the highest scoring country (Singapore) (South Korea). Almost all of the world's leading countries score equally on six of the Sustainable Development Goals (good health and wellbeing, quality education, gender equality, affordable and clean energy, industry innovation and infrastructure, and sustainable cities and communities), all of which can be influenced significantly by ICT.

6-Lebanese SMEs and the difficulty to achieve the sustainable development goals

Some SMEs in Lebanon exhibit concern about social and environmental issues and indicate plans to engage in pro-environmental initiatives, others continue to reject establishing a culture of social responsibility.

A focus on CSR in Lebanon can provide scholars and practitioners with a new model, as well as teach executives about the characteristics of the approach to sustainable development, which is especially important for a country dealing with a variety of environmental and social concerns. In other words, we're interested in

Lebanon's private sector CSR practices and the role of SMEs as new powerful change agents in the current economic scenario.

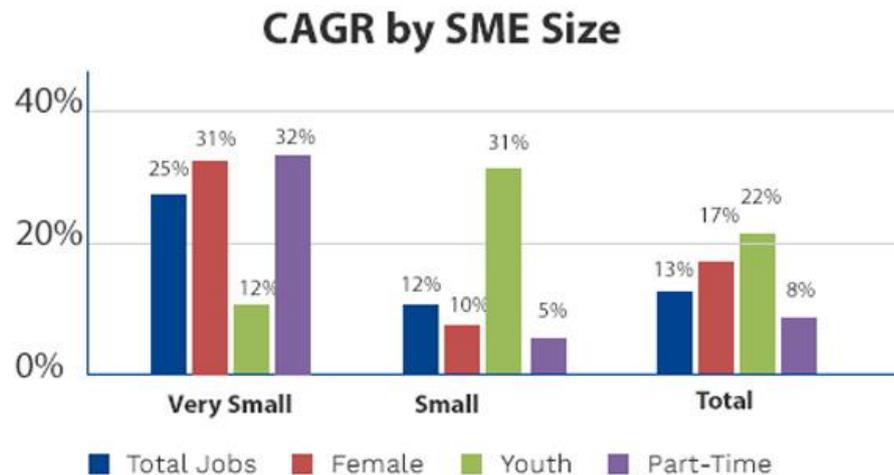


Figure 4: CAGR by SME Size

Source

https://www.google.com/search?q=SMEs+in+lebanon&tbn=isch&hl=en&chips=q:smes+in+lebanon,online_chips:financing:RPyFYiLeswg%3D&rlz=1C1BNSD_enLB963LB964&sa=X&ved=2ahUKEwiGy4Tuhs73AhUNohoKHYqODawO4IYoAnoECAEOIA&biw=1499&bih=730#imgrc=3zYIvpOwMbBOCM

In Lebanon, there is no proper legislative framework for implementing CSR. For example, the EU Council's 2014 directives place an obligation on the roughly 6,000 companies existing in Europe that employed more than 500 employees to report their performance on a variety of sustainability issues. The Lebanese legislation does not provide any specific fiscal incitation or regulations for CSR. (Samer Elhajjar, 2020)

The term "innovative financing for development" was first used in 2002 at the International Conference on Financing for Development, and these innovative financing mechanisms arose from the need to achieve development goals that were

agreed upon by 192 UN member states and 23 international organizations. These measures are designed to reduce poverty, reduce unemployment, and, as a result, increase investment. In addition to assisting the health sector in reducing mortality and combating various infections. By 0.7%, the majority of donor countries failed to meet their commitments. Most developing countries, on the other hand, had a budget set aside for the social sector, particularly the health sector, but it was insufficient. Lebanon's banking and financial situation. The economic, financial, and social situation of Lebanon is fraught with difficulties and political issues, in addition to mounting debts. (Karaki, 2021)

Citizens in countries where government corruption is rampant are in desperate need of financial aid. However, their governments typically leave donor countries and international financial institutions with three bad options: relying on leaky government channels to spend and risk money not reaching the needy, maintaining exclusive control over financing decisions and advocating a criticism of foreign influence, or refusing help altogether and abandoning people in need. In each situation, the audience suffers a setback.

The significance and potential commitment of the SME division are backed through both theoretical and experimental contentions and confirmation. We turn to begin with to the previous. A part of the commitment of the SME segment both to the overall entire component productivity (effectiveness, as commonly outlined) of an economic framework and to work generation and distributional correspondence comes by advantage of its design of innovation choice. SME technology tends to be intermediate between the inconceivably labor seriously advances of small scale producer, which subsequently accomplish simplest low normal work productiveness, and the especially capital seriously advances of colossal businesses which subsequently procure over the top work efficiency, but

utilize additional capital per laborer than is to be had for the financial framework as a whole.

Given this relationship between estimation and capital intensity, it turns into an inevitable conclusion that an economic system that applies an intemperate share of its capital to a little workforce need to necessarily have, as the other part of the coin, a gigantic casual or micro enterprise division that produces utilize of exceptionally small capital (the bit not utilized by the large-scale segment) with the colossal amount of work not employed by way of the gigantic enterprises. Its intermediate technology property is what offers the SME division a specific function (at the side of small-scale agriculture) in the modern release of satisfactory or respectable business. When most occupations are inside the miniaturized scale manufacturer segment, as well lots of them are destined to be low efficiency and for this reason low sales in character.

SME organizations can also be significantly additional beneficial, so in terms of the skill to produce «decent» occupations this sector competes with enormous individual businesses and the federal government, in any case it has the abilities of being competent to create numerous additional such employments for a modest enter of capital. The key instrument in creating to begin with rate work in most setting up worldwide areas involves the development of this division rapid sufficient to require in people previously unemployed (fair many) or locked in in low productiveness casual division occupations.

7- Conclusion

We don't have a recycling problem in Lebanon we have enough numbers of recycling plants but we face mismanagement for these factories and a poor control my message To promote the institutionalization and execution of CSR, the government should offer a legal framework and well-structured policies.

Furthermore, the Lebanese government should assist firms in achieving CSR by enforcing the law, disseminating information, providing training or awareness campaigns, and providing subsidies.

References

1. Aparcana, S. (2016). Waste Management. *ELSEVIER*.
2. Costas A. Velis – School of Civil Engineering, U. o. (2021). Mismanagement of Plastic Waste through Open Burning with emphasis on the Global south. *Environmental Science and Technology*.
3. Erika M.Veidis, A. D. (2022). Tackling the Ubiquity of Plastic Waste for Human and Planetary Health. *National Library of Medicine*.
4. Karaki, H. A. (2021). INNOVATIVE FINANCING. *UDC 336.63*.
5. Letcher1, T. M. (2020). *Introduction to plastic waste and*.
6. Parker, L. (2018). A whopping 91% of plastic isn't recycled. *planet possible*.
7. Samer Elhajjar, F. O. (2020). Identifying the drivers of resistance to corporate social responsibility: the case of lebanese SMEs. *Lebanese SMEs resistance to CSR culture*.
8. Zi-Hao Qin, J.-H. M. (2021). Biotechnology of Plastic Waste Degradation, Recycling, and valorization:current advances and future perspectives. *ChemSusChem Chemistry–Sustainability–Energy–Materials*.
9. zoe Gareiou, c. C. (2022). Awareness of Citizens for the Single-Use Plastics: Comparison between a High-Income and an Upper-Middle-Income Economy of the Easter Mediterranean Region, Greece and Lebanon. *Sustainability*.