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VULNERABLE CONSUMERS

Consumers Working Group (CUS WG)

Co-funded by the European Union

Empowering Mediterranean regulators for a common energy future

ABOUT MEDREG

MEDREG is the Association of Mediterranean Energy Regulators, uniting 28 regulators from 23 countries across the European Union (EU), the Balkans, and the MENA region. Established in 2007 and co-funded by the European Union, MEDREG serves as a platform for cooperation, knowledge sharing, and capacity building in energy regulation. It promotes coherent regulatory approaches and practices at the regional level, aiming for progressive market integration within the Euro-Mediterranean basin. To support its members, MEDREG organises training sessions, workshops, and tailored hands-on initiatives that enhance the capacity of energy regulators.

MEDREG's ultimate goal is to establish an integrated Euro-Mediterranean energy market that strengthens energy security and drives a clean energy transition. This includes integrating renewable energy sources, reinforcing cross-border infrastructure, promoting innovation, enhancing energy efficiency, and advancing renewable gases such as hydrogen. Additionally, MEDREG advocates for transparent and non-discriminatory regulation to attract infrastructure investments, modernise electricity and gas markets, and improve consumer protection.

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DISCLAIMER

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Executive Summary

The Mediterranean region faces persistent challenges in ensuring energy security and affordability, particularly for vulnerable consumers—those experiencing socioeconomic hardships and who are highly susceptible to energy price fluctuations and supply disruptions, as demonstrated during the 2022 energy price surge. This report examines the complexities of vulnerability within the energy sector, highlighting the necessity of timely identification, targeted support, and effective policies to protect at-risk consumers.

Our findings reveal variability in how Mediterranean countries define and identify vulnerable consumers, resulting in diverse approaches and practices. While definitions differ, all countries assist consumers identified as vulnerable, albeit using varying criteria, such as income levels, household composition, and health conditions. A holistic approach to vulnerability indicators is encouraged to enhance the inclusivity and effectiveness of support programmes across the region.

Additionally, the report addresses the concept of energy poverty, a term closely related yet distinct from vulnerable consumers. Unlike general energy vulnerability—which includes individuals at risk of future hardship—energy poverty is characterised by an immediate inability to access sufficient energy services due to socioeconomic and environmental factors. Addressing both categories is critical, as energy security and affordability remain pressing issues across the Mediterranean.

For policymakers, monitoring developments in energy poverty and vulnerability is paramount. Enhancing data collection and analysis enables more precise targeting of support measures, fosters the development of evidence-based policies, and allows for the effective tracking of intervention outcomes. By improving data sharing and quality, Mediterranean nations can more accurately address the needs of their vulnerable consumers.

Support schemes in the region vary widely, ranging from direct financial aid to energy efficiency initiatives and social tariffs. Effective support requires streamlined administrative processes, adequate funding, and collaboration among stakeholders. Regular evaluation and adaptation of these schemes ensure that they remain responsive to the evolving needs of vulnerable consumers, contributing to long-term energy resilience.

Collaborative efforts through MEDREG are crucial for fostering knowledge sharing, harmonising approaches, and addressing shared challenges among Mediterranean countries. Initiatives such as regional workshops and capacity-building programmes enable countries to exchange expertise, benchmark against one another, and develop coordinated strategies to protect vulnerable consumers.

Empowering vulnerable consumers through education and awareness is essential. By providing clear information and guidance on managing energy use and accessing available support, governments and

energy providers can foster a sense of agency among consumers, enabling them to make informed decisions and reduce their energy-related burdens.

The recommendations in this report underscore the need for a unified and adaptable approach to supporting vulnerable consumers. By working collaboratively, Mediterranean countries can create a more equitable and sustainable energy system that protects all consumers, paving the way for a just and inclusive energy transition.

1 Introduction

1.1 Purpose and Structure of the Report

This report aims to present a comprehensive and up-to-date analysis of the status and support mechanisms for vulnerable consumers within the energy sector in Mediterranean countries. Building on insights from the 2020 edition, it incorporates new perspectives and addresses the evolving challenges faced by vulnerable consumers in the region.

It seeks to elucidate the extent to which these consumers are defined and recognised within existing legislation, with a particular focus on their intersection with energy poverty. The study showcases the economic and non-economic support mechanisms implemented to assist vulnerable consumers in the region and identifies who bears the responsibility for monitoring and observing the status of the vulnerable, ensuring that support schemes are genuinely provided to those in need.

The report will also examine the effectiveness of the measures implemented to address the challenges faced by vulnerable consumers, even when posed by non-deterministic events, such as the COVID-19 pandemic and the energy price surge. Furthermore, this study seeks to provide valuable insights into the protection and support needs of vulnerable consumers in the region, contributing to the development of more effective policies and interventions.

Ultimately, this report strives to inform policymakers, national regulatory authorities, energy providers, and other stakeholders about the needs and vulnerabilities of vulnerable consumers, enabling the development of more targeted and effective policies and interventions. These, in turn, will empower a larger segment of the population towards a more secure and well-functioning energy market.

Addressing the needs of vulnerable consumers is critical to ensuring equitable access to energy and mitigating energy poverty. Vulnerable consumers, often characterised by low-income, high-energy expenditure, or specific health needs, require targeted interventions to maintain their energy security and well-being. This report aims to highlight the measures implemented by different countries and assess their effectiveness in supporting these consumers.

1.2 Methodology

To address the report's objectives, a questionnaire was collectively drafted by the MEDREG CUS WG chairs in coordination with the WG members and subsequently circulated among them for responses. The replies later served as building blocks for the report's various chapters and sub-chapters. The questionnaire template, which was circulated among the WG members, covered three parts, as outlined below:

- Overview
- Support Schemes
- Best Practices Applied during Unique Scenarios

Moreover, the report incorporates case studies from countries that have effectively addressed similar challenges in the past, facilitating knowledge sharing among members.

The MEDREG Secretariat gathered data and information from its members and collaboratively drafted the report with the CUS WG chairs. Replies from Albania, Algeria, Bosnia and Herzegovina, Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Lebanon, Montenegro, Morocco, North Macedonia, Portugal, Spain, and Türkiye have been considered in this study.

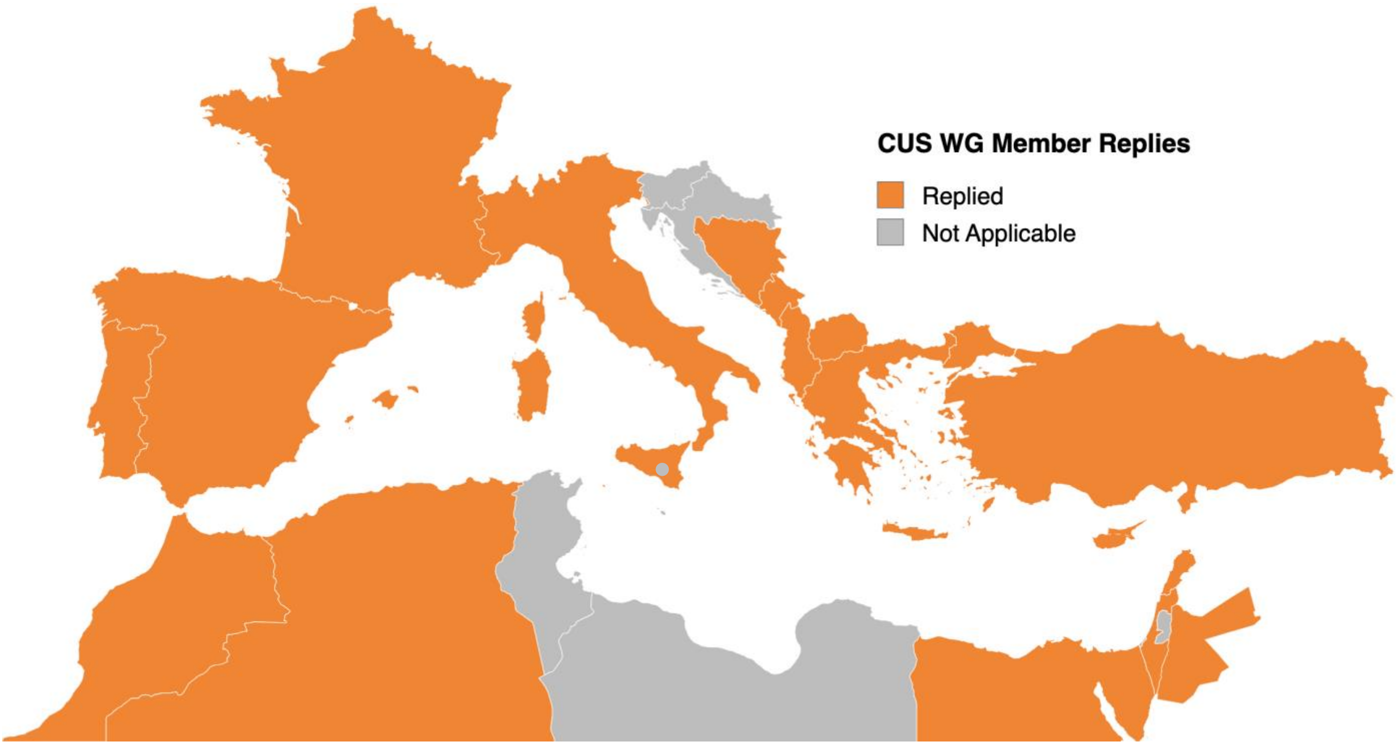

Figure 1 - *Countries Assessed in the Report. (Map was made using mapchart.net.)*

1.3 Disclaimer

Despite the comprehensive approach of this study, several limitations must be acknowledged. The report relies on data provided by member countries through a questionnaire, and the quality and completeness of this information may vary, potentially affecting the accuracy of the findings. Additionally, the diverse economic and social contexts of Mediterranean countries result in differences in the observed patterns.

The timeliness of the data is another limitation, as rapidly changing energy markets and the ongoing impacts of events such as the COVID-19 pandemic and the recent price surge may not be fully captured. While case studies provide valuable insights, they may not be entirely applicable across different national contexts due to variations in regulatory frameworks and social factors.

The definition of 'vulnerable consumers' also varies across countries, leading to inconsistencies in how these consumers are identified and supported. Finally, the cross-sectional nature of the study provides a snapshot of time without capturing long-term trends or the full impact of interventions.

2 Overview

2.1 Definition and Criteria of Vulnerable Consumers

In many Mediterranean countries, legislation defines what constitutes a vulnerable consumer, with variations often occurring between sectors, such as electricity and gas. Definitions typically consider factors such as income level, energy consumption, and specific health-related needs. This section explores these definitions, their legal bases, and the criteria for obtaining vulnerable consumer status.

2.1.1 General Legislation Definition

Ensuring fair treatment for all consumers in the energy market is of utmost importance. While some countries have yet to establish a legal definition for vulnerable consumers, the positive trend of 10 out of 18 surveyed countries having one in place indicates growing recognition. This statistic is illustrated in Figure 2 below.

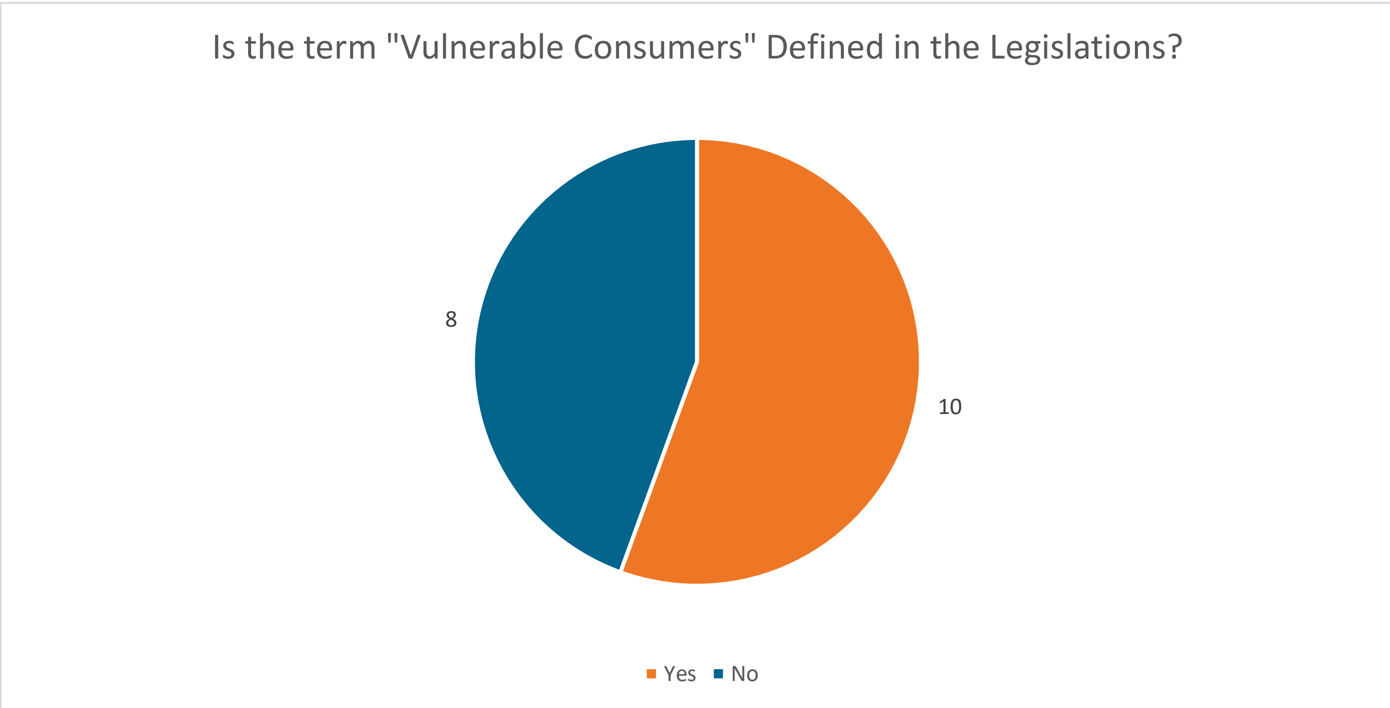

Figure 2 - *Definition of Vulnerable Consumers in the Legislations*

Legal frameworks can protect consumers without an explicit and fixed definition. For instance, **France's** general legislation prohibits taking advantage of vulnerabilities, allowing judges to consider any power dynamics that may enable a consumer to be exploited. This open definition enables French judges to assess power imbalances and further protect consumers who have been exploited. However, a clear definition in legislation facilitates the targeted identification of these consumers—often low-income households, the elderly, or those with disabilities. This identification can be crucial in implementing effective support mechanisms. Precise legal definitions can serve as a foundation for developing specific policies, such as subsidised rates, payment plans, or energy efficiency upgrades for homes, ensuring these consumers have access to reliable energy. Clear definitions can empower vulnerable consumers and foster awareness of their rights and the available support programmes. Ultimately, a well-defined category of vulnerable consumers within legislation provides a foundation for a more equitable and sustainable energy market across the region. As demonstrated by **Portugal's** recent expansion of the definition to encompass both economic and social needs, the future of consumer protection in the region lies in continuously refining these definitions to ensure that they meet the population's needs. While a clear legal definition of vulnerable consumers should improve their situation, the absence of an explicit definition does not preclude the existence of protective frameworks. Several Mediterranean countries demonstrate commendable efforts to address the needs of their most vulnerable citizens, even without an explicit definition of vulnerable consumers. For instance, Algeria, despite lacking a specific definition, has implemented social aid programmes and energy subsidies to support disadvantaged groups. **Morocco's** Unified Social Register represents a proactive approach to identifying the potential beneficiaries of social support programmes. Even without a formal definition, countries such as **France** recognise the concept of vulnerability within a broader legal framework, focusing on protecting consumers from exploitation. These examples underscore a growing awareness of the challenges faced by vulnerable populations. While legislative gaps persist, the implementation of targeted support programmes and the ongoing development of social registries signify positive strides towards a more inclusive and equitable energy landscape in the Mediterranean region.

2.1.2 Vulnerable Consumer Definition for the Energy Sector

Another layer is the specific protection granted in the context of the energy sector. Here, we explore whether the definition of the vulnerable consumer is general or specific to the electricity market and whether there is a separate definition for the gas market, if applicable. Figure 3 below shows the distribution of countries that have set a specific definition for the sectors versus those that have a generic definition.

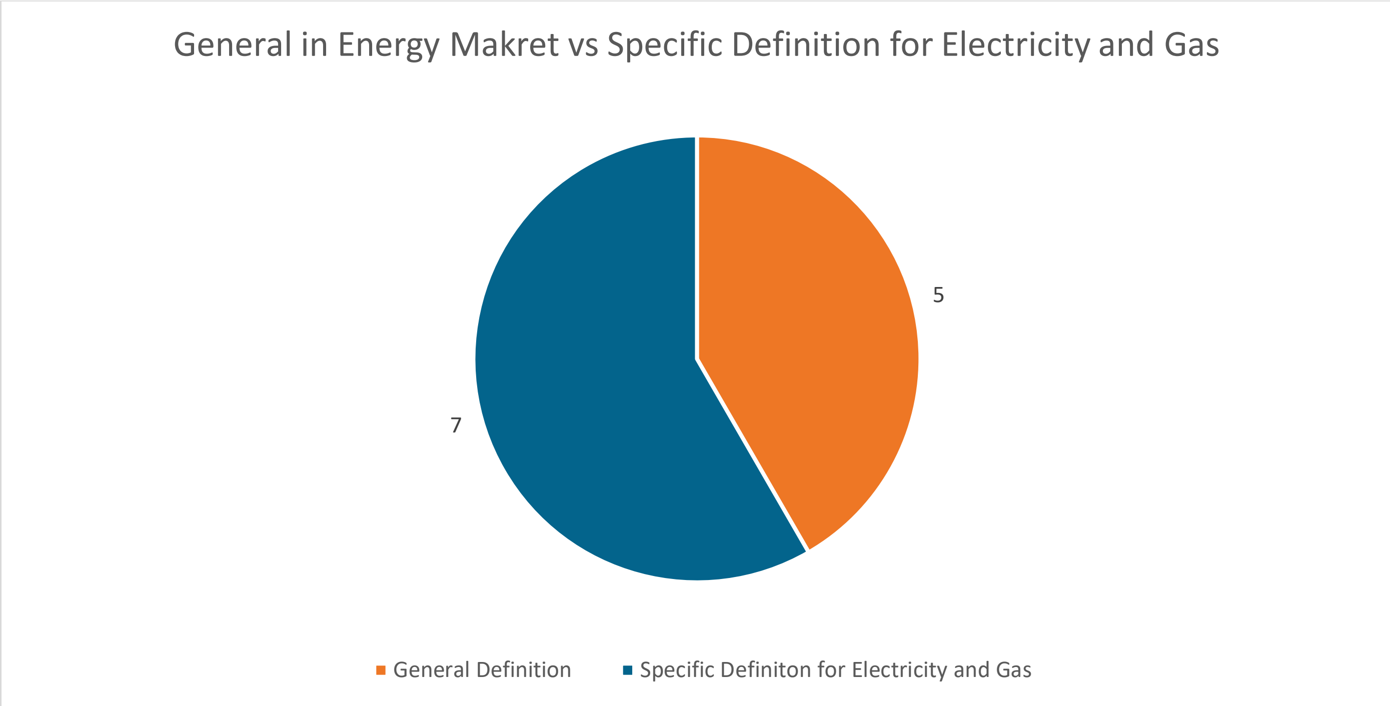

Figure 3 - *Definition of Vulnerable Consumers in the Energy Market*

Most Mediterranean countries have stated that they possess a specific definition for vulnerable consumers in electricity and, where applicable, gas. For instance, in **Albania,** the energy sector definition of a 'vulnerable consumer' refers to a household customer who, for social reasons, is entitled to certain special rights regarding electricity supply, as specified in the definitions of this law. Meanwhile, in the gas sector, the definition differs, stating that the Vulnerable Consumer is a household customer who, due to their social position, retains special rights concerning natural gas supply—rights guaranteed in exceptional cases following this law. Similarly, in **Bosnia and Herzegovina**, in the Republika Srpska, there is a separate definition of a vulnerable consumer for electricity (energy-protected customer) and for gas (socially vulnerable customer).

Some countries, while having a specific definition for electricity and gas, apply the same definition in both cases. For instance, in **Italy**, similar definitions for electricity and natural gas have been introduced in two different primary law provisions. The only difference is that the definition applied for the natural gas sector does not include cases that assume the use of electricity. Likewise, in **Portugal**, although the legislation separates the definitions, the criteria for the main energy discount (social tariff) are very similar for both electricity and natural gas supplies.

In **Montenegro**, vulnerable consumers of electricity and gas are addressed together in the same provision. According to Article 198 of the Montenegrin Energy Law, paragraph 5 states: 'It is prohibited to suspend the supply of electricity and gas to customers referred to in paragraph 1 of this Article, and to customers referred to in paragraph 2 of this Article, from the beginning of October to the end of April, regardless of any outstanding obligations based on consumed electricity or gas'.

Therefore, the Energy Law specifies electricity and gas as energy resources for this category of consumers.

In **Greece**, **France,** and **North Macedonia**, there appears to be a general definition. However, in the **French** case, even though vulnerable consumers are not specifically defined in the context of energy consumption, low-income households are deemed more vulnerable and thus receive additional economic protection, while high-risk medical patients (PHRVs) benefit from a special information scheme provided by electrical DSOs.

As expressed, there appear to be some regional similarities. For instance, in EU countries, countries often share similar approaches to defining vulnerable consumers, reflecting cultural, economic, and social similarities within the region. Countries in the Balkan region, such as Albania, Bosnia and Herzegovina, and Montenegro, may have definitions that align more closely with regional economic and social conditions, such as the legacy of socialist economies and ongoing economic transitions. Meanwhile, countries on the southern shore of the Mediterranean orient their definitions to reflect specific cultural norms, financial challenges, and climate conditions.

Spanish Case

In **Spain**, the specific definition of vulnerable consumers is limited to the electricity sector.

The definition of vulnerable consumers is outlined in Article 3 of the Royal Decree 897/2017, of 6 October, which regulates the figure of the vulnerable consumer, the social bonus, and other protection measures for domestic electricity consumers:

'1. For the purposes of this royal decree and other applicable regulations, a vulnerable consumer shall be considered the individual who is the holder of an electricity supply point in their main residence, who is a natural person, is under the regulated tariff for small consumers (PVPC), and meets the other requirements of this article.

2. (…)'

Note:

PVPC: (Voluntary Prices for Small Consumers) is established under Royal Decree 216/2014 of 28 March, which sets out the methodology for calculating voluntary prices for small electricity consumers and their legal contracting regime. The regulated PVPC tariff is a system implemented by the government and offered by the Suppliers of Last Resort (SOLR) to determine electricity prices. It is a time-of-use tariff with variable pricing. Customers connected to low-voltage electrical networks with a contracted power equal to 10 kW or less may opt for the PVPC tariff. From 1 January 2024, only individuals or microenterprises will be eligible for the PVPC tariff.

2.1.3 Criteria for Defining a Consumer as Vulnerable

To gain a deeper understanding of what makes a consumer vulnerable, Mediterranean countries tend to share similarities, although each country highlights its own differences. The concept of vulnerability is complex. While a universal definition remains generic, several key dimensions emerge as common factors influencing consumer vulnerability. When analysing the Mediterranean region, some trends in the criteria set to identify vulnerable consumers become evident. Most countries consider income level to be a decisive factor in defining a vulnerable consumer. Figure 4 below shows the number of countries that use income level, consumption level, health reasons, and age as defining criteria for vulnerable consumers:

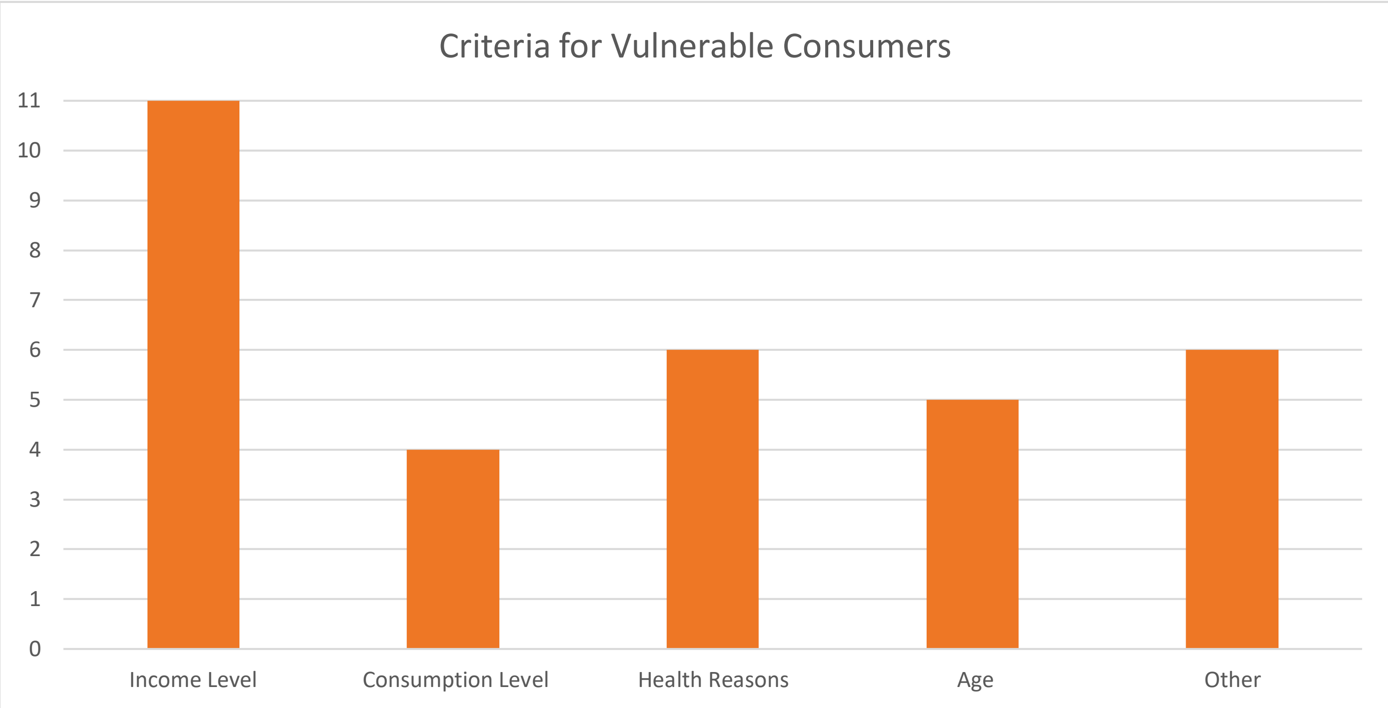

Figure 4 - *Criteria for Vulnerable Consumers*

2.1.3.1 Income Level and Socioeconomic Status

A dominant factor in determining consumer vulnerability is the socioeconomic status of consumers. This includes income levels, wealth, education, and occupation. Individuals with lower incomes are naturally more likely to face challenges in affording the necessary goods and services, making them more susceptible to market dynamics. For instance, **Portugal's** definition of economically vulnerable consumers is primarily based on income thresholds and social benefits. In **Portugal**, consumers with an annual income below €6,272.64 are considered economically vulnerable. Similarly, **North Macedonia's** programme for protecting vulnerable consumers targets households with low incomes and those receiving social assistance. In **France**, energy consumers are deemed vulnerable based on their income or if they have previously received public emergency funds to pay housing-related bills.

2.1.3.2 Consumption Level

Consumption levels are a key factor in determining vulnerable customers in several Mediterranean countries. In **Albania**, for instance, energy consumption limits are explicitly defined for both electricity and gas, with considerations for factors such as household size and seasonality. **Portugal**, while using broader income-based criteria for its social tariff, indirectly ties consumption levels to vulnerability by capping natural gas consumption at 500 m^3 annually for eligible households. This suggests the recognition that lower consumption often correlates with economic hardship, enabling targeted intervention to support those with the lowest energy usage.

2.1.3.3 Health

In addition to the above, health conditions also emerge as a significant issue in characterising vulnerable consumers, as they can greatly impact a consumer's ability to protect their rights and interests. Individuals with health conditions often rely on a constant energy supply to ensure that essential medical equipment remains functional, such as oxygen concentrators, dialysis machines, or insulin pumps. Moreover, maintaining a stable indoor environment - crucial for managing respiratory or other health issues - depends heavily on reliable energy. These consumers are particularly vulnerable to energy market fluctuations, price hikes, or disruptions, as they may face severe consequences for their health and well-being if their energy supply is compromised. **Bosnia and Herzegovina**, **Italy,** and **Montenegro** explicitly recognise health as a vulnerability factor. In Bosnia and Herzegovina, for example, protected customers are defined as those whose lives or health could be endangered by a power outage, including individuals reliant on life-saving medical equipment. Similarly, **Cyprus** recognises consumers who receive severe motor disability allowances, as well as those who are paraplegic or quadriplegic, as vulnerable consumers.

2.1.3.4 Age

Another aspect considered is the age of the consumer, which is a crucial factor contributing to potential vulnerability. The elderly, often characterised by declining physical and cognitive abilities, may be more easily subjected to relatively tougher conditions. This group may have a diminished capacity to understand complex contracts offered by suppliers, make informed decisions, or seek their rights effectively if they require support. **Greece**, for instance, automatically categorises individuals aged 70 and above as vulnerable consumers. **Italy** also includes customers over the age of 75 in its definition of vulnerable consumers for both electricity and natural gas.

2.1.3.5 Other Factors

Beyond these primary dimensions, other factors can contribute to consumer vulnerability. Consumers with disabilities represent a particularly vulnerable segment of the population in the marketplace. Physical, sensory, intellectual, or learning disabilities often create significant barriers to accessing goods and services. In recognition of the specific vulnerabilities faced by this group, countries such as **Italy** and **Montenegro** explicitly include disability as a criterion for identifying consumers at risk.

Geographic location can also influence consumer vulnerability. Individuals residing in rural or remote areas may have limited access to essential goods and services, reduced competition, and, consequently, higher prices. Furthermore, transportation challenges can hinder their ability to exercise consumer rights. **Italy** and **North Macedonia** acknowledge the vulnerability of consumers in remote areas. In

Italy's case, for example, individuals located on smaller, non-interconnected islands are included as a category of vulnerable consumers.

More diverse factors may include language barriers, low literacy levels, lack of financial literacy, and membership in marginalised groups. These factors can intersect and amplify existing vulnerabilities, creating complex and overlapping challenges for affected consumers. In Spain, for instance, consumers who are territorially, sectorally, or temporarily in a special situation of subordination, defencelessness or lack of protection that prevents them from exercising their rights as consumers on equal terms will be considered vulnerable consumers.

Turkish Case

In **Türkiye,** although there is no clear definition for vulnerable consumers, regulations exist regarding the treatment of elderly people, disabled individuals, and the families of martyrs and veterans. Based on these criteria, the 'vulnerable' receive social aid from the state. Different types of social aid are funded by the Ministry of Family and Social Affairs. The income limit is set for households with a per capita income of less than one-third of the net minimum wage (for 2022, this is 1,833.45 TRY, approximately €92.50).

Additionally, there are different aids, depending on age, disability, and the number of children.

- 1-2 persons = 75 kWh, 3 persons = 100 kWh, 4 persons = 125 kWh, 5+ persons = 150 kWh

Protection against disconnection for non-payment of bills is provided by EMRA.

- For elderly individuals, disabled persons, and families of martyrs and veterans.
- Normally, one unpaid bill is sufficient for disconnection in electricity in Türkiye, but it takes three unpaid bills for this group.

It is essential to recognise that the term 'vulnerability' is often a dynamic condition. Individuals may move in and out of vulnerable situations due to slight changes in their circumstances, as well as shifts in the market affecting the consumer.

The analysis reveals that while there are shared characteristics among vulnerable consumers in Mediterranean countries, the specific criteria used to identify them vary significantly. This highlights the nuanced nature of vulnerability, influenced by cultural, economic, and social factors unique to each region. Understanding these diverse perspectives is crucial for developing effective policies and interventions to protect vulnerable consumers and promote fair market practices in the Mediterranean.

2.2 Entities Responsible for Identifying Vulnerable Energy Consumers

Identifying vulnerable consumers involves various entities, such as energy providers, local authorities, and regulatory bodies. The roles and responsibilities of these entities are crucial to ensuring that support reaches those in need. This section will detail the mechanisms and processes for identifying and verifying vulnerable consumers.

The Mediterranean region exhibits diversity regarding the entities responsible for identifying who the vulnerable consumers are. In this regard, most countries in the region have stated that the issue is dealt with at the ministerial level. In **Albania,** for instance, the Ministry responsible for social affairs, in cooperation with the Ministry responsible for energy, the Ministry of Finance, and in consultation with ERE, drafts the criteria and procedures for obtaining vulnerable customer status and managing these consumers. Meanwhile, in **Greece**, the criteria, requirements and procedures for classifying customers as vulnerable are stipulated by the decision of the Minister for Energy. This includes measures relating to supply tariffs and discounts, as well as measures to protect individual classes of vulnerable consumers, both before the supply contract is signed, during the contractual period, and when the contract with the supplier is terminated. In this case, RAAEY monitors compliance with obligations towards vulnerable customers and may impose penalties if they fail to discharge these obligations. Similarly, in **Cyprus**, the regulatory authority plays a role in identifying vulnerable consumers, with support from the Ministry of Energy, Commerce and Industry.

In Montenegro, the issue is handled by the Ministry of Labour and Social Welfare. In **North Macedonia**, it is managed by the Ministry of Economy and the Ministry of Labour and Social Policy, while in **Türkiye**, although no solid definition is present, it is overseen by the Ministry of Family and Social Affairs. Similarly, in **Egypt**, the relevant ministries are responsible for identifying vulnerable consumers and, in that regard, taking measures to assist them, which are applicable in the energy sector as well as in all other sectors.

In **Israel,** the matter of vulnerable consumers is handled by both energy providers and local authorities. Similarly, in **Bosnia and Herzegovina,** local authorities intervene in such cases, as institutions dealing with social welfare issues are generally in charge of identifying vulnerable customers.

Another difference is that in **France**, energy consumers receiving energy vouchers ('chèque énergie') are considered vulnerable energy consumers. The fiscal administration identifies households qualifying for energy vouchers based on their income. Once consumers receive their voucher, they can use it by communicating its number to their energy suppliers.

Meanwhile, in **Italy**, the qualification as a 'vulnerable consumer' includes five different categories of consumers who can benefit from protection against exposure to free market choices. They can choose the vulnerable supply service (with main contractual conditions defined by the NRA and a price reflecting the wholesale energy market price) as an alternative to supply in the free market. Only one of these categories, namely consumers in economic hardship, benefits from direct economic support (social bonus support scheme), which involves a 30% reduction in the average expenditure for energy supply.

In **Portugal**, the identification of energy-vulnerable consumers is, for the energy sector, the responsibility of the government (Energy and Geology General Directorate – DGEG) and is coordinated with the Tax Regulator (Autoridade Tributária e Aduaneira), the Social Security System (Segurança Social), and the DSO.

In **Spain,** meanwhile, although the government verifies compliance with the requirements for receiving a social bonus as a vulnerable consumer, the consumers themselves must provide the necessary documentation to the supplier of last resort, who then submits the documents to the government for verification.

While there are commonalities in recognising the need to protect vulnerable populations, the specific criteria and procedures used to identify them vary significantly across countries. Understanding these differences is crucial for developing effective policies and interventions to ensure equitable access to energy services and mitigate their impacts in the region.

Italian Case: NRA's Role in Identifying Vulnerable Consumers

The qualification as a 'vulnerable consumer' offers protection from exposure to free market choices, as consumers can opt for the vulnerable supply service (with main contractual conditions defined by the NRA and a price reflecting the wholesale energy market price) as an alternative to supply on the free market. Only one of these categories, namely consumers in economic hardship, benefits from direct economic support (social bonus support scheme), which involves a 30% reduction in the average expenditure for energy supply.

Depending on the case, vulnerable consumers are identified as follows:

- Age over 75: the date of birth is derived from the tax code—a 16-digit alphanumeric code issued by the tax administration for each natural person, which is necessary to stipulate the supply contract. This code contains a 5-digit YYMDD sequence referring to the date of birth.
- The condition of economic hardship is determined based on the level of an indicator (ISEE), which is calculated using an algorithm that considers various factors, such as income, asset size and family unit composition. The ISEE level is generally required to access welfare benefits at both the national and local levels. It is calculated and certified with a validity of one year by INPS, the public body responsible for providing welfare and social security benefits nationwide. The applicant must submit all required documentation, including bank certificates, tax returns, and land and real estate registry certificates. In the context of energy supply, if the ISEE level falls below a threshold value—periodically updated by the NRA—the family unit qualifies as a vulnerable consumer and is admitted to the social bonus support scheme.
- The use of life-saving equipment powered by electricity and personal disability conditions are certified by the local health administration. In the case of life-saving equipment, the customer is recognised as a vulnerable consumer and granted access to the health bonus support scheme.
- Supply locations on smaller, non-interconnected islands, as well as the supply for emergency housing facilities following calamitous events, are both identified by DSOs.

2.3 Energy Poverty

Energy poverty is a distinct, yet related issue defined by the inability to afford adequate energy services. Criteria for energy poverty often include income levels, energy expenditure, and housing energy efficiency.

Energy poverty can be generally defined as a situation in which individuals or households are unable to afford adequate access to energy services, such as electricity, heating and cooking fuel. This lack of access affects their ability to maintain a basic standard of living and often leads to severe social and economic hardships. Energy poverty is most prevalent among low-income households, particularly in developing countries where reliable energy infrastructure may be lacking, or in developed countries where energy prices are excessively high relative to income levels. The inability to afford sufficient energy can lead to inadequate living conditions in relation to seasonal climates, poor lighting and limited access to essential appliances, such as refrigerators or stoves. This situation highlights true inequality, as those experiencing energy poverty are often forced to make difficult choices between paying for energy and other essential needs, such as food, healthcare or education.

At the European level, within the framework of energy efficiency policies, 'energy poverty' refers to a household's lack of access to essential energy services that ensure basic living standards and health. These services include adequate heating, hot water, cooling, lighting, and energy to power appliances, in line with the relevant national context, existing social policies, and other applicable national policies. Energy poverty arises from a combination of factors, including, at a minimum, non-affordability, insufficient disposable income, high energy expenditure, and poor energy efficiency of homes.[1]

Although energy poverty and vulnerable consumers might initially seem to have the same meaning and significance, the key difference between them lies in their scope and focus. Energy poverty specifically refers to the inability to afford adequate energy services, usually in a sustained and systemic manner. It is a condition that affects the quality of life over an extended period and often results from deep-rooted economic or infrastructural challenges. In contrast, the concept of vulnerable consumers is broader and more dynamic, encompassing individuals who may be at risk of falling into energy poverty due to specific vulnerabilities, such as age, health status or economic instability. While all energy-poor individuals can be considered vulnerable consumers, not all vulnerable consumers are energy-poor; some may have access to energy but are at risk of losing it under adverse conditions. Addressing energy poverty often requires systemic changes, such as improving energy infrastructure and reducing energy costs, whereas supporting vulnerable consumers may involve targeted interventions, such as social assistance programmes or price protection measures.

[1] Directive (EU) 2023/1791, Article 2(5), of the European Parliament and of the Council of 13 September 2023, on energy efficiency and amending Regulation (EU) 2023/955 (recast) (europa.eu).

This section of the report examines how energy poverty is defined in the legislation of Mediterranean countries and explores the measures that have been implemented, as well as those currently being undertaken, to address this issue. The aim is to illustrate how the concept of energy poverty differs from that of 'vulnerable consumers'.

2.3.1 Definition

As previously mentioned, energy poverty represents a distinct and specific condition. Although the issue is widely recognised in the Mediterranean region, only five out of the 18 countries that responded to the questionnaire indicated that the term 'energy poverty' was defined in their national legislation. Figure 5 below illustrates the distribution of countries that have defined 'energy poverty'.

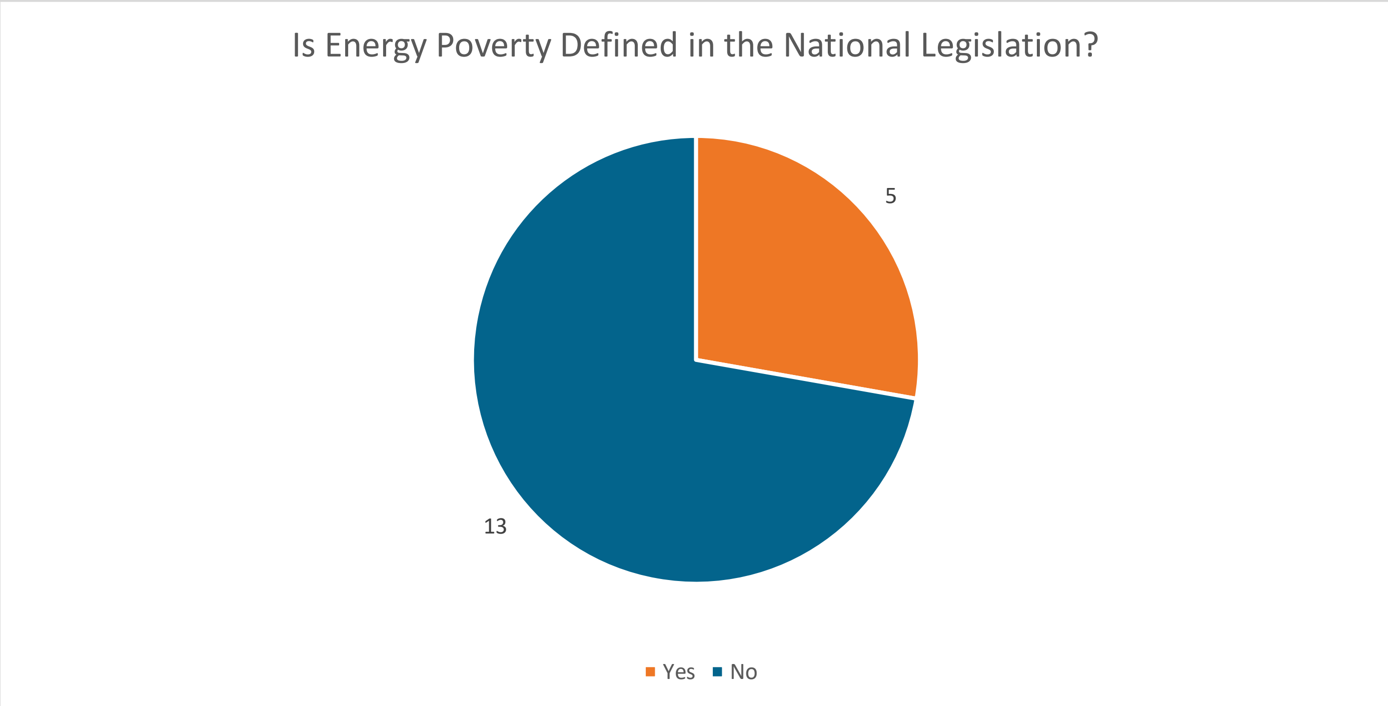

Figure 5 - *Energy Poverty Definition in the Legislations*

The five countries that define energy poverty (**Cyprus**, **France**, **Greece**, **Portugal,** and **Spain**) have provided definitions that are similar to each other and to the generic definition mentioned above.

In **Cyprus,** for instance, the concept of energy poverty includes recipients of public assistance provided by the Social Welfare Services of the Ministry of Labour, Welfare and Social Insurance, as well as beneficiaries of guaranteed minimum income provided by the Welfare Benefits Administration Service of the same ministry. These recipients must be Cypriot citizens, citizens of any EU member state or the European Economic Area, or those who have the same rights as the aforementioned citizens and who are permanently residing in the areas controlled by the Republic of Cyprus[2].

In **France,** a person who experiences difficulties in securing the energy supply necessary to satisfy their basic needs due to inadequate resources or poor housing conditions[3] is considered to be in energy poverty.

In **Greece**, energy poverty is defined as 'the situation of consumers who find it difficult, due to their low income, as declared on their tax returns, in conjunction with their job status, family status, and state of health, to meet the cost of reasonable electricity or natural gas requirements, as the cost accounts for a considerable proportion of their disposable income[4]".

In **Spain**, Royal Decree-Law 15/2018, of 5 October, on urgent measures for energy transition and consumer protection, established in Article 1 of the National Strategy against Energy Poverty. This Strategy is designed as an instrument to address the issue of energy poverty. Through this Strategy, a diagnosis and characterization of the problem will be conducted, official measurement indicators will be developed, objectives for reducing energy poverty in the medium and long term will be set, and specific measures will be proposed to achieve these objectives, along with their financing mechanisms. The Strategy will give particular consideration to income thresholds and the vulnerability of affected groups. The Council of Ministers approved the Strategy on 5 April 2019.

Portuguese Case

Portugal has established a Long-Term Strategy to Combat Energy Poverty 2023-2050, which provides guidance on understanding the concept:

'Energy poverty is a complex and multidimensional problem resulting from a combination of factors, particularly low income, difficulty in accessing efficient and quality energy services, and the low energy performance of homes. This issue is exacerbated by low levels of energy literacy. Energy poverty, therefore, impacts social well-being, quality of life, health and the labour productivity of families and is not exclusive to economically disadvantaged families. In fact, the concept of energy poverty also encompasses families who, to avoid energy costs, adopt practices that restrict their energy use, thereby harming their comfort and well-being, as well as families lacking disposable income to access more efficient energy services or implement measures to improve the comfort temperature of their homes'.

…

'This Long-Term Strategy to Combat Energy Poverty 2030-2050 (ELPPE) adopts the definition of energy poverty contained in Directive (EU) 2023/1791, of the European Parliament, Council, and Council of 13 September on Energy Efficiency, which defines it as the lack of access of a household to essential energy services provide basic and

[2]Ministry of Energy, Commerce and Industry Order No. 289/2015 (https://www.cera.org.cy/Templates/00001/data/nomothesia/ethniki/hlektrismos/Diatagmata/kdp2015_289.pdf)

[3] (Article 1-1 of the Right to Housing Law (n° 90-449) as amended in 2010 by the "Grenelle 2" Law (n°2010-788))

[4] Law 4001/2011 Article 2 (1) (i)

decent standards of living and health, namely heating, hot water, adequate cooling, lighting, and the necessary energy for household appliances. This definition takes into account the national context, social policy, and other relevant national policies, caused by a combination of factors, including at least the lack of price accessibility, insufficient disposable income, high energy costs, and low energy efficiency in homes'.

The Long-Term National Strategy also outlines general indicators that link households to energy poverty:

- Population living in housing unable to maintain adequate heating or comfortable cooling during the summer.
- Population residing in homes with issues of infiltration, humidity, or rotting elements.
- Households whose energy expenditure exceeds 10% of total income.
- The proportion of residential buildings with an energy class of C or lower.

In **Italy**, although currently not in effect, a forthcoming legislative definition is pending. Energy poverty is considered in the National Energy and Climate Plan, which the government is set to update in July 2024. However, the condition of 'economic hardship', which defines a consumer as vulnerable, ensures automatic access to the social bonus support scheme, consisting of discounts on electricity and natural gas bills (see Chapter 3.1 below). Similarly, **Montenegro**, while currently lacking a definition in its Energy Law, is set to introduce energy poverty in an upcoming revision.

In other countries in the region, although there is no legal definition of the term "energy poverty" in their legislations, the issue is still addressed. **Algeria**, for instance, lacks a formal legal definition for energy poverty but employs the concept of disadvantaged social categories within its regulatory framework. **Egypt**, likewise, does not explicitly define energy poverty in its national legislation. **North Macedonia** has not established a precise definition; however, it implements an annual protection programme for vulnerable consumers, determined in cooperation with relevant ministries and based on NRA recommendations. **Türkiye**, like Algeria, operates without a legal definition of energy poverty but provides targeted support and measures to address the issue.

2.3.2 Criteria for Energy Poverty

All countries that have defined energy poverty have stated that the primary criterion is income level, specifically the share of energy expenditure in disposable income, as seen in **Cyprus**.

In **France**, another decisive criterion is the Energy Effort Rate, which is the proportion of a consumer's total income represented by the home's annual energy bill. If this rate exceeds 8% and the household belongs to the 30% poorest households (the first three deciles of total income per consumption unit), it is considered to be in energy poverty.

In **Greece**, health and family status are also used as criteria for energy poverty.

Meanwhile, in **Spain**, in addition to excessive energy expenditure (2M), defined as the percentage of households whose energy spending as a share of income is more than double the national median, additional criteria include Hidden Energy Poverty (HEP), which is defined as the percentage of households whose energy spending is less than half of the national median. Furthermore, it includes the inability to maintain an adequate temperature in the home, as well as the delayed payment of utility bills.

While income level remains a central factor, other criteria, such as energy expenditure as a percentage of income, energy effort rate, health status, family status and the ability to maintain an adequate home temperature, are also considered.

The concept of 'energy poverty' introduces a new perspective, highlighting the potential for households to underreport energy consumption due to financial constraints or social stigma. This underscores the complexity of energy poverty and the need for a novel approach to address it. By recognising the diverse factors that contribute to energy poverty, policymakers and organisations can develop more effective strategies to ensure equitable access to energy and improve the quality of life for vulnerable populations.

2.3.3 Measures to Address Energy Poverty

Although some countries have not defined energy poverty, they still acknowledge its presence and understand its implications. Addressing energy poverty requires a multifaceted approach involving a combination of financial support, policy interventions, and energy efficiency improvements. Various strategies are being implemented across the region to alleviate the burden of high energy costs on vulnerable households.

Specific measures that the Mediterranean region considers when tackling the issue of energy poverty include financial interventions and Energy Efficiency Measures. The full distribution of the number of countries that follow each measure to combat energy poverty can be seen in Figure 6 below:

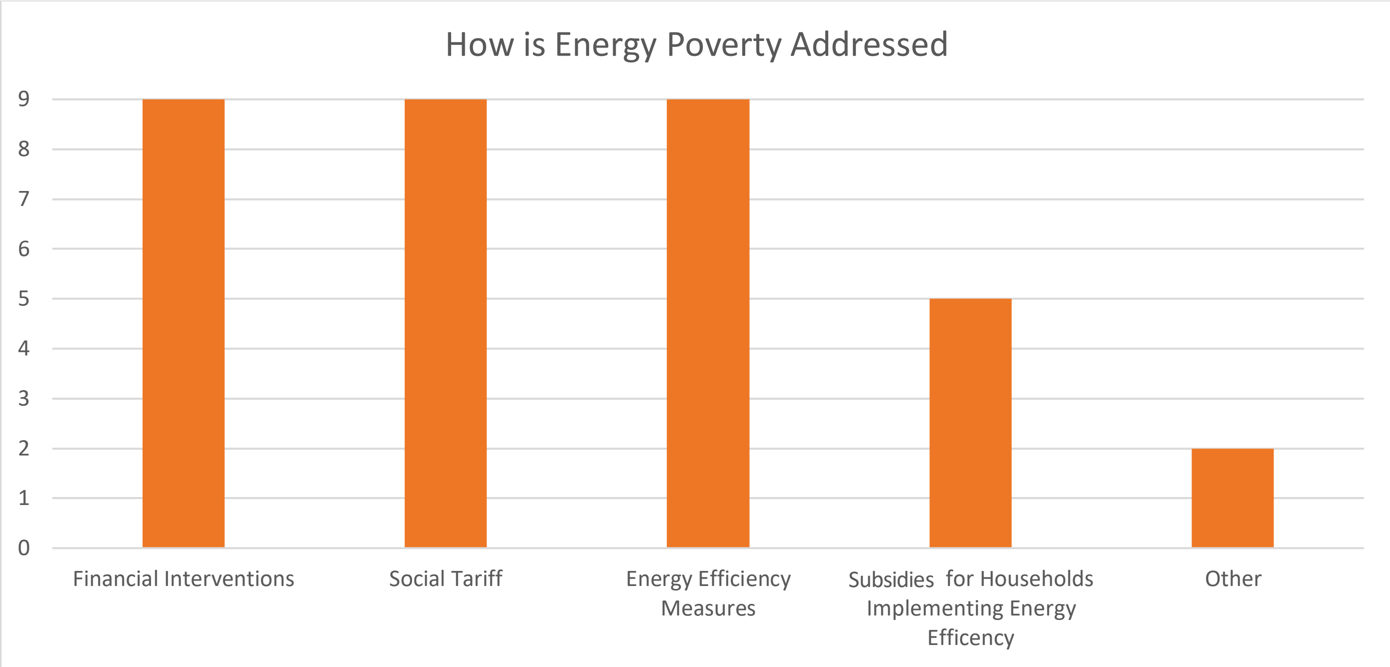

Figure 6 - *Addressing Energy Poverty*

As seen above, key interventions include financial support mechanisms, such as social tariffs, investments in energy efficiency improvements, which are often subsidised for vulnerable households, and broader financial interventions. Additionally, community-based initiatives and wider policy changes aimed at improving energy market accessibility and promoting renewable energy can significantly contribute to alleviating the burden of energy poverty.

2.3.3.1 Financial Interventions

Financial interventions represent a direct approach to mitigating the economic burden of energy costs for vulnerable households. These measures typically involve providing monetary assistance, such as grants, rebates, or vouchers, to help offset energy bills. This type of support can be particularly effective in crisis situations or for households facing temporary financial difficulties.

2.3.3.2 Social Tariff

A social tariff is a discounted energy rate offered to low-income households as a means of alleviating the financial strain of energy costs. This targeted approach ensures that those most in need receive direct support. Social tariffs can be implemented by energy providers or through government-backed programmes.

2.3.3.3 Energy Efficiency Measures

Energy efficiency measures focus on reducing energy consumption within households. By improving the energy performance of homes, these initiatives can lower energy bills and enhance overall comfort. Such measures may include insulation upgrades, boiler replacements, or the installation of energy-efficient appliances. Long-term benefits extend beyond cost savings to include reduced carbon emissions and improved living conditions.

2.3.3.4 Subsidies for Households Implementing Energy Efficiency

To incentivise energy efficiency improvements, many governments offer subsidies or financial incentives to households undertaking such projects. These subsidies help offset the initial costs of energy-saving upgrades, making them more accessible to low-income households. By reducing upfront expenses, these programmes encourage investment in energy efficiency and contribute to long-term energy savings.

In **Lebanon**, the National Energy Efficiency and Renewable Energy Action (NEEREA) is a national financing mechanism that allows private sector entities to obtain subsidised loans for energy efficiency and renewable energy projects. NEEREA was administered through Lebanese commercial banks under the leadership of Banque du Liban (BDL). The loans were available for private, existing, and newly built facilities, with a ceiling of 10 million USD, offered at a low interest rate for a maximum of 14 years, including a grace period of up to 6 months to 4 years due to COVID-19. Lebanese commercial banks also provided green loans to the private sector. However, following the economic collapse of 2019, the mechanism ended.

In **France**, over the last few years, one-third of the Energy Savings Certificates scheme has targeted improvements for households in energy poverty.

2.3.3.5 Others

The ‘other’ category encompasses a diverse range of strategies employed to address energy poverty. These may include community-based initiatives, such as energy advice services or warm banks, which provide practical support and information to vulnerable households. Additionally, policies aimed at improving access to energy markets or promoting renewable energy generation can indirectly benefit those experiencing energy poverty by increasing affordability and sustainability.

For instance, in **Morocco**, ONEE has carried out a large-scale operation to distribute low-energy light bulbs to consumers and has established a system to provide end consumers with high-quality, low-energy light bulbs at a very affordable price. This scheme enables end consumers (with low consumption) to reduce their consumption and, ultimately, their energy bills, in line with measures taken to promote energy efficiency. In November 2022, the Ministry of Energy and ONEE launched a new electricity savings initiative, enabling end consumers to reduce their bills.

In **Egypt**, significant investments are being made to expand the natural gas network to reach remote and underserved areas. To tackle energy poverty in the natural gas sector, Egypt has also initiated a Low-income Household Gas Connection Project, where the government, in collaboration with international entities, has connected 2.25 million households.

Bosnia and Herzegovina Case

All three public power utilities in **Bosnia and Herzegovina** (Public Utility Elektroprivreda BiH d.d. Sarajevo, Mixed Holding "Elektroprivreda Republike Srpske" – Parent Company, a.d. Trebinje, and Public Utility Elektroprivreda HZHB d.d. Mostar) have energy efficiency advisory sections on their respective websites.

Furthermore, there are ongoing loan and grant programmes for building energy-efficient buildings and houses, as well as retrofit measures. One of these involves the disbursement of European Union funds under the Energy Support Package to mitigate the immediate effects of the energy crisis and accelerate the energy transition.

Within this programme, at the end of 2023, the relevant institutions—namely, the Environmental Protection Fund of FBIH, the Environmental Protection and Energy Efficiency Fund of RS and the Brčko District Department of Communal Affairs—announced open calls for applications to distribute grants for implementing energy efficiency measures in housing units and micro, small and medium enterprises. Eligible applicants will receive a grant of up to 2,500 EUR for implementing energy efficiency measures in housing units to cover 50% of total expenditure, while the remaining 50% must be covered by the applicants themselves. A similar co-financing scheme is envisaged for micro, small, and medium enterprises with the following grant amounts:

- A micro enterprise with a woman as a majority owner may receive 50% of total investment in grants, while other micro enterprises may receive 45%. The grant amount may not be lower than 2,500 EUR or higher than 15,000 EUR. The remaining 50% (or 55% for other enterprises) of the investment must be covered by the eligible applicant.
- A small or medium enterprise with a woman as the majority owner may receive 50% of the total investment in grants, while other small and medium enterprises may receive 45%. The grant amount may not be lower than 5,000 EUR or higher than 25,000 EUR. The remaining 50% (or 55% for other enterprises) of the investment must be covered by the eligible applicant.

3 Support Schemes and Monitoring

3.1 Existing Support Schemes

Support schemes for vulnerable consumers can be classified as economic (e.g., financial subsidies, regulated prices) or non-economic (e.g., protection against disconnection, energy efficiency measures). This section will provide an overview of these schemes, outlining their scope, and examining their implementation across various countries.

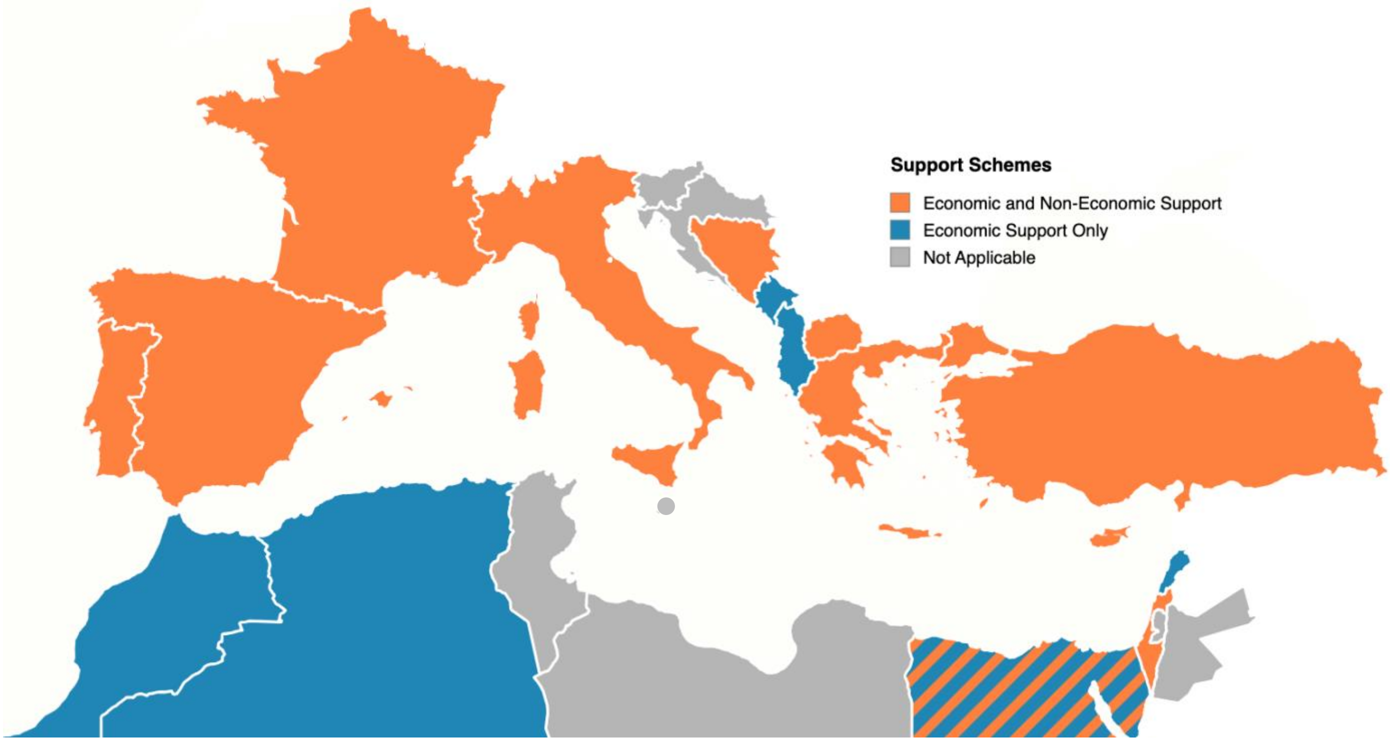

Figure 7 - *Existing Support Schemes for Vulnerable Consumers (Map made using mapchart.net)*

Figure 7 above illustrates the support schemes implemented in the countries of the Mediterranean Region. It is important to note that the electricity and gas sectors, where applicable, are generally treated similarly across these countries. However, **Türkiye** stands out with a slight difference: in the electricity market, both economic and non-economic support schemes are applied to assist vulnerable consumers, while no support schemes are in place for the gas market. In Egypt, on the other hand, economic support schemes are applied in the electricity sector, while both economic and non-economic schemes are implemented in the gas sector.

3.1.1 Economic Support Systems

Economic support for vulnerable consumers encompasses various mechanisms, such as regulated and non-regulated pricing schemes, targeted tariffs and direct financial assistance. This section will provide a detailed overview of these support systems, including their funding sources and the specific consumer categories they aim to assist.

The economic support mechanisms in the energy sector vary across countries to address the needs of different categories of vulnerable consumers, ensuring that those in need have access to affordable energy. These categories include low-income families, individuals facing economic hardship, pensioners, households in remote areas, and those with medical conditions that require electricity for essential health needs.

Specific regulated prices and special tariffs are often the first considered when implementing economic support schemes for vulnerable consumers. Regulated prices involve setting fixed energy prices for specific consumer groups, with the government capping these prices to shield vulnerable consumers. Special tariffs, on the other hand, are tailored to different consumer segments and can include tiered pricing based on income levels, consumption habits or specific vulnerabilities. For example, lower tariffs may be applied to energy consumption during off-peak hours or for essential appliances.

However, as shown in the study below (Figure 8), the countries in the Mediterranean region have also considered other methods to provide economic assistance to vulnerable consumers.

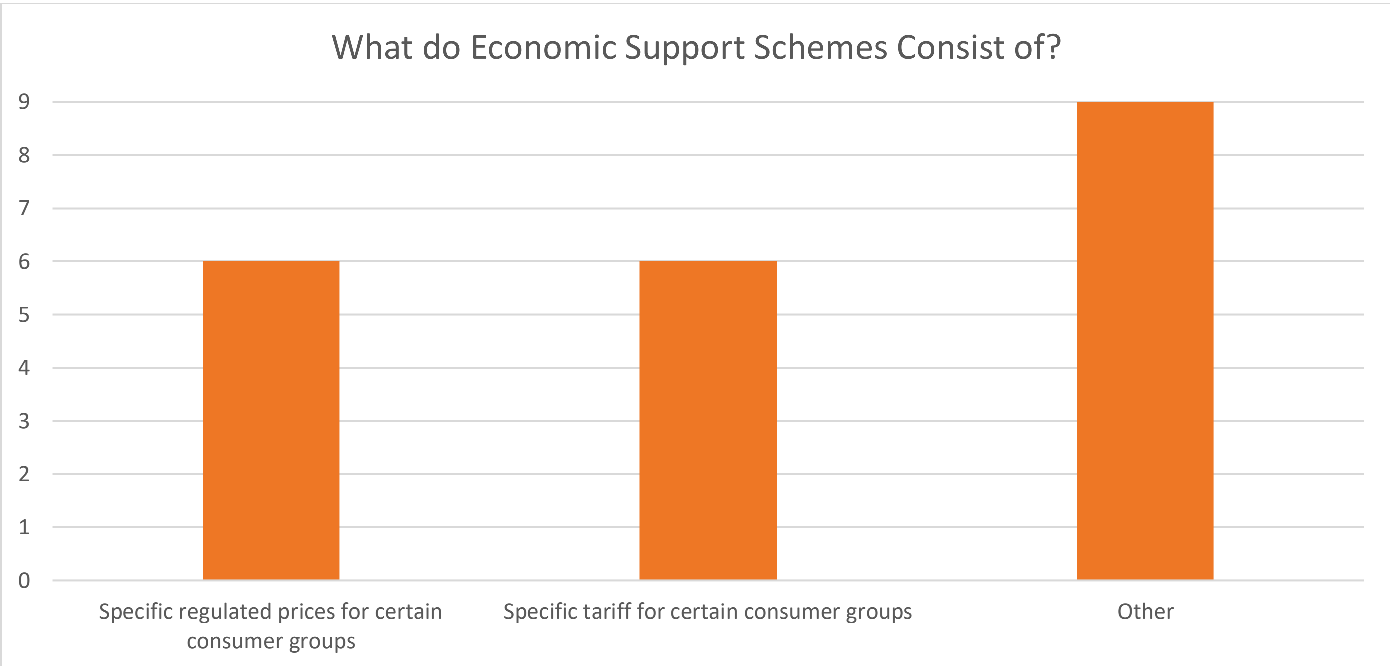

Figure 8 - *Economic Support Schemes*

It is noteworthy that while the first two strategies garnered significant support (6 votes each), a more diverse range of approaches, grouped under the category 'Other', secured the majority of votes. This suggests that policymakers in the Mediterranean region are considering a wider array of solutions to address this issue. In fact, it highlights the need for innovative and tailored strategies that take into account the specific circumstances of each country and its population.

In **Albania**, economic support is primarily targeted at low-income families, ensuring that their basic electricity needs are met despite financial constraints. Additionally, household consumers receive support from the Council of Ministers to help cover the cost of gas supply services, with the funds being strictly allocated for this purpose.

In **Algeria**, support is extended to three key groups: household consumers, residents of isolated areas, and those living in the southern regions of the country. This targeted assistance ensures that even those in remote or economically disadvantaged areas can access affordable electricity.

In **Bosnia and Herzegovina**, economic support is more specifically targeted. In the Federation of Bosnia and Herzegovina (FBIH), the primary beneficiaries include pensioners receiving guaranteed minimum pensions and social welfare recipients. In the Brčko District (BD BIH), support extends to low-income pensioners, war and civil invalids with low disability allowances, families with children who have special needs, foster families, and unemployed individuals registered with the Employment Office, including women over 55 and men over 60 years old.

In **Cyprus**, financial incentives are available for residents who install residential photovoltaic systems, participate in energy upgrade programmes, or implement energy-saving measures.

Egypt offers economic support to household and agricultural customers consuming less than 650 kWh monthly, ensuring that those with lower electricity usage benefit from reduced costs. In the gas sector, low-income citizens receive government support through reduced gas prices, which are adjusted based on consumption.

In **France**, low-income households across the country receive economic support through an annual voucher to help pay their energy supply bills ('chèque énergie'), with the average amount being €150. An additional measure is in place for overseas regions: tariff equalisation ensures that consumers in these regions pay the same prices as those in mainland France, protecting them from higher local production costs.

Greece provides support to low-voltage household consumers, with eligibility based on family income, household composition, and the presence of disabilities. This approach tailors support to those with the greatest need within the household sector.

In **Israel**, economic support is available for individuals who need electricity for economic reasons or due to medical conditions, ensuring that essential power needs are met despite financial or health challenges.

Italy has a dual support scheme: a social bonus for customers experiencing economic hardship and a health bonus for households using electricity-powered medical-therapeutic equipment. These targeted schemes ensure that both financial and health-related vulnerabilities are addressed. This applies to both electricity and natural gas.

Jordan extends support to the industrial sector, specifically targeting medium and small industrial enterprises that are crucial to the country's economic fabric.

In **Lebanon**, after years of subsidised electricity tariffs, a tiered pricing structure was introduced. Vulnerable consumers benefit from a lower rate of $0.10 per kWh for the first 100 kWh consumed monthly, while consumption beyond this threshold is charged at $0.27 per kWh. This system ensures that those with limited energy consumption continue to pay lower bills.

Montenegro provides economic support to households with vulnerable customers, ensuring that those most in need can afford their electricity consumption.

Morocco offers government subsidies to consumers in the regulated market, with a social tariff specifically for households consuming 150 kWh or less per month. Additionally, there are time-based tariffs that benefit consumers connected to medium, high, and very high voltage networks, particularly during off-peak periods.

North Macedonia identifies two categories of vulnerable consumers. The first group includes individuals receiving guaranteed minimum assistance who are eligible for cash allowances to help cover part of their energy costs. The second group consists of households with low total net incomes, with specific income thresholds based on household size: MKD 19,000 for a single person and up to MKD 43,000 for households with five or more members. For vulnerable natural gas consumers, a monetary allowance is provided to households receiving guaranteed minimum assistance, specifically to cover energy costs during the colder months, from October to March. This allowance, amounting to 1,000 denars per month, is adjusted annually based on the cost of living, helping households manage their gas and electricity expenses during the winter.

In **Portugal**, economic support in the electricity sector is provided to those benefiting from social programmes such as solidarity supplements for the elderly, social inclusion income, unemployment benefits and disability pensions. Economically vulnerable individuals are defined as those with an annual income below €6,272.64, with adjustments based on household size. For natural gas, a social tariff is applied automatically to eligible consumers, offering a substantial discount on gas bills. In 2024, the average discount on gas bills through this tariff was 31.2%, excluding taxes and providing significant relief to vulnerable households.

Spain classifies consumers into three categories: vulnerable, severely vulnerable, and those at risk of social exclusion. Vulnerable consumers have a joint household income ≤1.5 times the IPREM of 14 payments, with higher thresholds for larger households. Severely vulnerable consumers must have an income ≤50% of these thresholds, while those at risk of social exclusion are supported by public administration social services, covering at least 50% of their electricity bill at regulated prices. For gas, the Last Resort Tariff (TUR) is available for consumers with an annual gas consumption of 50,000 kWh or less, with different tariff levels depending on consumption. For example, TUR.1 applies to consumers using up to 5,000 kWh per year, primarily for hot water, while TUR.2 and TUR.3 cater to higher consumption levels. Vulnerable consumers can opt for the TUR, which is regulated by the government and updated quarterly, or choose from competitive market offers. Additionally, direct grants are available to further support vulnerable consumers, ensuring that they have access to affordable gas.

Finally, **Türkiye** offers a social tariff for the families of martyrs and veterans as well as for low-income households, ensuring that these specific groups receive the necessary financial relief for their electricity costs.

The Mediterranean region has implemented a diverse range of economic support schemes to assist vulnerable consumers in accessing affordable energy. These schemes vary across countries, reflecting their unique economic and social circumstances. Countries with higher levels of economic development are able to allocate more resources to energy support schemes. While traditional approaches, such as regulated prices and special tariffs, have been implemented, the region has also explored innovative solutions to meet the specific needs of vulnerable populations. Tailored and comprehensive approaches are essential to ensuring that energy remains affordable for those who need it the most.

Algerian Case

Electricity and gas prices for end consumers in Algeria are subsidised by the state and set by CREG, with a focus on preserving the purchasing power of low-income households. These subsidised prices apply to the entire population without differentiation between social categories.

In line with its policy of supporting populations in the south and highland regions, the state has introduced a partial subsidy for electricity bills in these areas, which face particularly harsh climatic conditions, especially during the summer months. This subsidy, which represents a significant portion of the government's budget, is structured as follows:

Southern Area:

- Low-voltage household customers and farmers receive a 65% reduction in electricity bills, applicable to consumption of 12,000 kW per year.

- Low-voltage and medium-voltage business customers benefit from a 25% reduction in their electricity bills, applicable to consumption up to 200,000 kW per year.

Highlands Area:

- Low-voltage household customers are charged at the 1st bracket tariff for consumption up to 375 kWh per quarter.

- Low-voltage non-household and medium-voltage customers receive a 10% reduction in their consumption charges, either per quarter or per month.

It is also important to note that, as part of its broader support policy—especially concerning the development of industrial and agricultural investments—the state plays an active role through direct financial investment in the transport and distribution of electricity. Additionally, significant efforts are directed towards rural electrification, with a particular focus on providing electricity to isolated areas.

3.1.2 Non-Economic Support Systems

Non-economic support systems are essential in complementing financial aid for vulnerable consumers by offering policies and programmes designed to address energy-related challenges. These schemes focus on preventing energy service disconnection and improving energy efficiency, thereby helping to reduce energy consumption and overall costs. This can include extended payment deadlines, hardship programmes or exemptions for specific vulnerable groups. On the other hand, energy efficiency mechanisms aim to reduce energy consumption and lower costs for vulnerable consumers. These initiatives may involve providing energy-efficient appliances, offering home energy audits, or implementing financial incentives for energy-saving upgrades.

An analysis examined what different countries in the Mediterranean region have implemented as non-economic support schemes to address the challenges faced by vulnerable consumers within the energy sector. As seen in Figure 9 below, the findings reveal a strong emphasis on consumer protection, with 14 countries stating that protection from disconnection is a valid method, including measures such as extended payment deadlines, disconnection protections, and targeted support for specific vulnerable groups. In **Cyprus**, for vulnerable populations, an uninterrupted electricity supply is not a convenience but a necessity. This case advocates the implementation of measures to prevent the disconnection or reconnection of electricity during critical periods for vulnerable consumers, where such disruptions pose significant risks to their health and well-being. Disconnection can sometimes have severe consequences for vulnerable individuals, particularly those with chronic health conditions, disabilities, or limited mobility.

In contrast, only three countries highlighted energy efficiency mechanisms as a means of assisting vulnerable consumers. The accompanying figure provides a visual representation of these key findings.

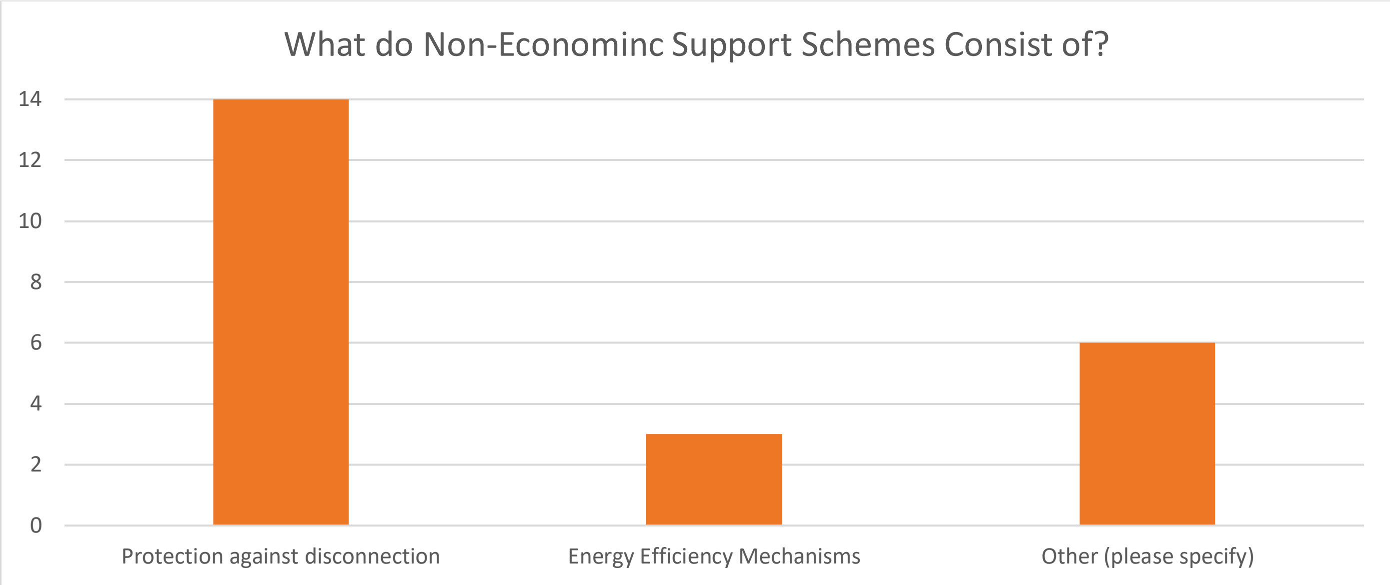

Figure 9 - Non-economic Support Schemes

It is noteworthy that the two countries, Bosnia and Herzegovina and Morocco, which apply Energy Efficiency Mechanisms, also protect against energy disconnection.

Regarding the three countries that have stated that motivating energy efficiency is among their support schemes, **Bosnia and Herzegovina** aim to empower consumers to make informed decisions about reducing energy consumption by providing energy efficiency advice, which would assist the vulnerable in the long run. Additionally, some energy efficiency mechanisms are in place, offering all consumers financial incentives through appliance grants and funding for building energy efficiency improvements. These measures not only contribute to environmental sustainability but also help alleviate the financial burden on vulnerable households.

Morocco, similarly, has set a response to the challenges faced by vulnerable consumers, including both short-term relief and long-term sustainability measures. Protection against disconnections during the COVID-19 pandemic provided crucial support to households during a time of economic uncertainty. However, the adoption of prepaid meters in rural areas promotes energy efficiency, empowering consumers to manage their consumption and potentially reduce costs, tailoring electricity supply to real needs.

It is also noteworthy that all the countries that have opted for 'Other' have also stated that protection against disconnections is among their support schemes.

Among the particularities in the region (the countries that have chosen 'Other'), **Greece** has established a comprehensive framework to protect vulnerable consumers from energy-related hardships. In addition to protection from disconnections, extensions of payment deadlines and favourable debt settlement terms have been implemented to provide much-needed financial relief in an indirect way.

Italy's approach to supporting vulnerable consumers emphasises access to energy services. The guarantee of vulnerable service supply ensures that vulnerable customers can avoid, if they wish, exposure to free market choices. By linking the pricing of this service to the wholesale energy market, the government aims to balance the needs of vulnerable consumers with market realities. Additionally, the explicit protection of users of medical-therapeutic equipment underscores the critical importance of an uninterrupted energy supply for health and well-being.

Montenegro has adopted a straightforward yet effective strategy to protect vulnerable consumers during the harshest months of the year. By imposing a blanket ban on electricity and gas supply suspensions from October to April, the country ensures that vulnerable households are shielded from the risk of disconnection during the heating season. This measure directly addresses the immediate needs of these consumers by preventing energy-related hardship.

North Macedonia offers a multi-faceted approach to supporting vulnerable consumers. The prohibition of disconnections during the winter months and the requirement for extended notice periods provide essential safeguards against energy-related hardship. Flexible payment options and priority services for specific groups demonstrate a commitment to meeting the diverse needs of vulnerable populations. By informing consumers about their rights and offering free services, such as non-regular equipment verification, the government aims to empower individuals and build trust.

Portugal's support for vulnerable consumers focuses on providing additional safeguards and transparency. By granting economically vulnerable consumers longer disconnection notice periods, the country allows more time to address financial challenges. The right to be supplied by a specific service provider offers consumers greater choice and control. Additionally, the requirement for bills to be sent well in advance of the payment deadline enhances financial planning and reduces the risk of unexpected disconnections.

Spain has implemented a comprehensive framework to protect vulnerable consumers from energy poverty. The extended protection against disconnections, coupled with safeguards for specific groups, such as families with children and individuals with disabilities, demonstrates a strong commitment to social welfare. The minimum vital supply scheme provides a safety net for those facing severe financial hardship, ensuring access to essential energy services while facilitating debt repayment.

Türkiye's approach to supporting vulnerable consumers combines protection against disconnections with targeted measures for specific groups. Extended protection for elderly people, disabled individuals, and families of martyrs and veterans provides essential security. While the focus on energy efficiency in public buildings is commendable, expanding these efforts to the residential sector could further benefit vulnerable consumers. The flexible payment options for natural gas offer additional relief and help prevent disconnections.

In **France,** vulnerable consumers also benefit from additional protection against disconnections.

The analysis of non-economic support schemes implemented across the Mediterranean region reveals a strong emphasis on consumer protection, particularly through measures to prevent disconnection. While energy efficiency mechanisms are less prevalent, countries such as **Bosnia and Herzegovina** and **Morocco** have demonstrated the positive impact of combining both strategies.

In countries like **Cyprus**, where an uninterrupted electricity supply is considered a necessity rather than a convenience for vulnerable populations, measures to prevent disconnection are crucial. This underscores the need for tailored approaches that address the specific needs and vulnerabilities of different groups within society.

The findings suggest that a comprehensive approach to supporting vulnerable consumers requires a combination of measures. Protection from disconnection provides immediate relief, while energy efficiency initiatives contribute to long-term sustainability.

3.1.3 Seasonal Support Schemes

The design of support schemes for vulnerable consumers is influenced by various factors, including regional climate patterns and seasonal changes. While some countries have implemented support measures that align with seasonal energy consumption fluctuations, others have adopted more consistent approaches throughout the year. A comparative analysis revealed notable differences in the application of seasonal support mechanisms across various regions. The majority of the countries in the Mediterranean region have indicated that no seasonal support schemes are in place. For countries that do have such support schemes, further details can be seen in Figure 10 below.

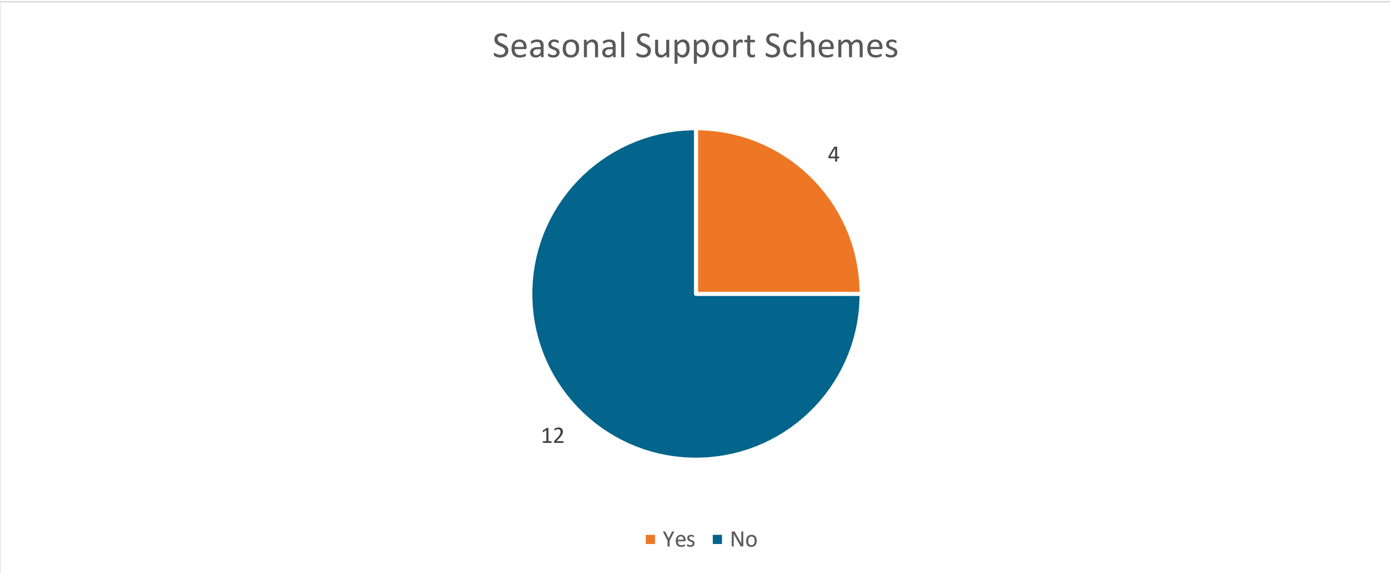

Figure 10 - *Seasonal Support Schemes*

Among the five countries that have stated they have support schemes, **Bosnia and Herzegovina** primarily focuses its support for vulnerable consumers in the colder months. Specifically, the Sarajevo Canton provides subsidies for heating costs between November and March. This support is income-based, with additional provisions for households that include severely disabled members. The subsidy amount fluctuates annually depending on available funds.

France provides year-round non-economic protection for vulnerable consumers, with varying levels of support depending on the season. From November to March, a strict prohibition on disconnections and power capping was enforced for this group. During the rest of the year, although less stringent, vulnerable consumers still benefit from extended payment deadlines and gradual disconnection procedures compared to standard consumers.

Greece offers a combination of year-round and seasonal support measures for vulnerable consumers. Social tariffs are available throughout the year, providing discounted energy rates. However, additional protections, such as disconnection safeguards, are typically implemented during colder months to shield vulnerable households from energy deprivation.

Similar to other countries, **North Macedonia** focuses its support on vulnerable consumers during the colder months. Economic assistance in the form of monetary allowances is provided from October to March to help cover energy costs. Additionally, a blanket prohibition on disconnections is in place from December to February to ensure a continuous energy supply for vulnerable households during the harshest months.

It is noteworthy that in **Egypt**, there are no seasonal support schemes, as support measures are applied year-round, regardless of seasons or specific conditions. This is also the case for all countries that have reported not having seasonal support schemes.

Based on the analysis of seasonal support schemes across various regions, it is evident that countries adopt a diverse range of approaches to addressing the energy needs of vulnerable consumers throughout the year. While some countries have implemented targeted support measures during colder months, others have adopted more consistent approaches throughout the year. This variability reflects differences in regional climate patterns, energy consumption habits, and the specific needs of vulnerable populations.

Overall, the effectiveness of seasonal support schemes in addressing the energy needs of vulnerable consumers depends on various factors, including the specific design of the schemes, the availability of funding, and the broader social and economic context. Further research is needed to evaluate the impact of these schemes and identify best practices for supporting vulnerable populations during periods of high energy demand. It is important to note that seasonal support schemes do not imply that vulnerable consumers are left without adequate support during other months. Rather, these schemes serve as an addition to existing year-round support measures.

Quick Look

French Case: The 'Winter Truce'.

From 1 November to 31 March, energy suppliers must implement a 'winter truce', during which they cannot disconnect a primary residence from electricity or gas supply due to unpaid bills. If the household qualifies as a vulnerable consumer, the electricity supplier is also prohibited from reducing the meter's power output.

Vulnerable consumers—defined as those who receive the government's energy voucher (based on their tax bracket) or who have previously benefited from social funds for their energy bill—are granted an adapted procedure that provides them with a higher level of year-round protection against disconnections in their primary residence.

The adapted procedure includes the following measures: The first warning letter allows a response period of 30 days instead of standard 15 and must include information about available social aid and the consumer's right to oppose the automatic transmission of their file to the social aid fund. Similarly, the second warning letter also provides a 30-day deadline instead of a 15-day deadline.

Additionally, since April 2023, electricity suppliers can disconnect vulnerable customers equipped with a smart meter only after an additional 60-day period of limited power supply. During this period, the supplier must provide a minimum of 1 kVA and contact the customer twice—at least once in writing and once orally.

Statistics from 2023 indicate that in cases of unpaid energy bills, most suppliers prefer to limit electricity supply (735,596 cases in 2023, an increase of 15% compared to 2022) rather than disconnect electricity or gas entirely (265,312 cases in 2023, a decrease of 18% compared to 2022). Notably, some electricity suppliers exceed their legal obligations by guaranteeing all residential consumers equipped with smart meters a minimum power supply of 1kVA, regardless of the time of year or their payment status.

3.2 Covering Costs

As observed, countries across the Mediterranean region have implemented various support mechanisms—both economic and non-economic—to alleviate the burden on disadvantaged households and consumers. While the specific strategies employed vary from country to country, it is also important to consider how such schemes are funded.

Two primary funding models have emerged: direct government intervention through budget allocations and cost-sharing among consumers via adjusted tariffs. In many cases, a hybrid approach combining both methods is adopted. Notably, the findings of this study indicate that a substantial majority of Mediterranean countries primarily rely on state budgets to finance their support programmes for vulnerable customers. This reliance on public funds highlights the crucial role of state intervention in addressing energy vulnerability across the region. Figure 11 below illustrates the extent to which state budgets dominate compared to other solutions.

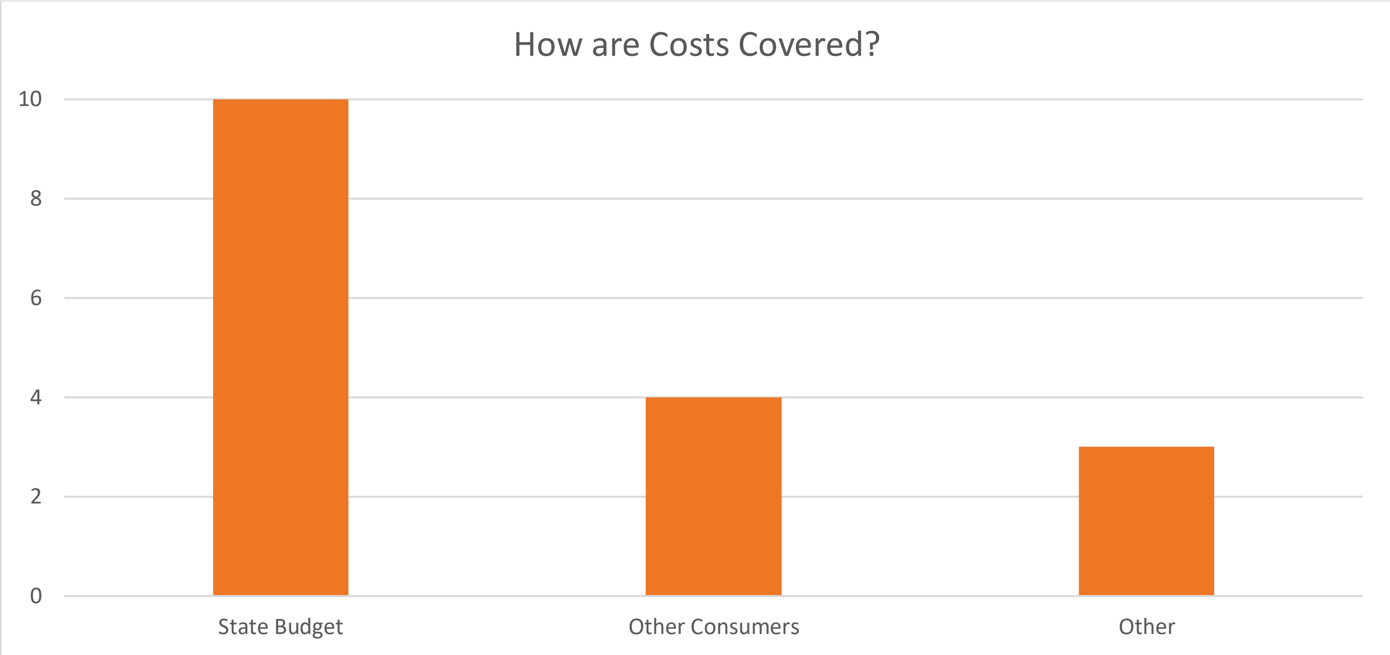

Figure 11 - *Covering Costs of Support Schemes*

As illustrated in the figure above, nine countries have reported that their governments intervene in such cases using a state budget. However, this issue is addressed from multiple directions.

Among these countries, Albania's government takes a leading role. The Ministries of Energy, Finance, and Social Welfare collaborate with the energy regulator, ERE, to identify vulnerable consumers and allocate funds directly from the state budget to provide financial assistance.

France, on the other hand, employs a mixed-funding model. While the state budget compensates suppliers for offering discounted rates to vulnerable consumers, electricity bills for all consumers include a contribution to support these measures.

In **Montenegro**, responsibility for supporting vulnerable consumers is shared. The electricity supplier covers part of the cost, while the remaining portion is funded by the state budget.

In **Morocco**, the government provides subsidies for the regulated market, offering financial assistance to ensure affordable energy for vulnerable consumers.

In **Israel**, the costs of reduced tariffs for disadvantaged groups are integrated directly into the general electricity tariff. This approach ensures the consistent and transparent distribution of financial burdens across all consumers. By incorporating these costs into the base rate, the Israeli model avoids additional administrative complexities.

Italy, on the other hand, has implemented a more specific mechanism. A dedicated component within the overall system charge is allocated to assist customers facing economic hardship. This approach enables targeted support and offers greater flexibility in adjusting the level of assistance based on evolving needs. However, careful management is required to prevent undue financial strain on specific consumer segments.

Some countries, such as **Lebanon**, **Portugal,** and **Spain,** have indicated that they employ unique methods to support vulnerable consumers.

In **Lebanon,** for example, the current tariff structure indirectly supports vulnerable consumers with limited energy consumption. This results in lower electricity bills, making energy more accessible.

In **Portugal**, the social tariff is funded by electricity production centres, electricity traders and other market participants, including consumers and entities that purchase electricity directly from the wholesale market without supplier intermediation. Since mid-May 2024, suppliers have also contributed to financing the social tariff, ensuring that costs are shared across the system.[5]

Finally, in **Spain**, all participants in the electricity market collectively fund the social bonus.

While governments play a pivotal role in funding these programmes, there is a growing trend towards cost-sharing among consumers. This hybrid approach reflects the region's unique economic and social circumstances. The dominant reliance on state budgets for financing energy support schemes is evident; however, implementation strategies vary significantly across countries. Some nations depend on direct subsidies, while others provide indirect support through adjusted tariffs. Ultimately, the choice of funding model is influenced by several factors, including the availability of public resources, the level of economic development, and the desired extent of social protection.

Spanish Case

The specific percentages assigned to each agent are established by the National Commission for Markets and Competition (CNMC).

The percentages set out in Order TED/81/2023, 27 January, are as follows:

a) Production: 46.44%.

b) Transportation: 1.09%.

c) Distribution: 3.93%.

d) Suppliers: 47.56%.

e) Direct consumers in the market: 0.98%.

This information is in accordance with Royal Decree-Law 6/2022, dated 29 March, which adopts urgent measures within the framework of the national plan in response to the economic and social consequences of the war in Ukraine.[6]

[5] Directive n.º13/2024, dated 8 May.

[6] www.boe.es/buscar/act.php?id=BOE-A-2022-4972&p=20231228&tn=1

Order TED/81/2023, dated 27 January, which approves the distribution of the amounts to be financed for the social bonus and the cost of electricity supply to consumers referred to in Articles 52.4.j) and 52.4.k) of Law 24/2013, dated 26 December, on the electricity sector, for the year 2023.[7]

3.3 Monitoring and Evaluation

Accurate and up-to-date identification of vulnerable consumers is a cornerstone of effective energy poverty alleviation policies. To ensure that support reaches those most in need, governments and energy providers must implement robust monitoring systems. This chapter examines the diverse approaches employed by Mediterranean countries to track and manage the status of vulnerable consumers, highlighting the strengths and weaknesses of each system. By understanding these variations, best practices can be identified and implemented to develop more effective strategies to protect vulnerable populations from energy insecurity.

In **Albania,** a relatively straightforward system for identifying and managing vulnerable consumers is in place. A dedicated register maintained by the Ministry of Social Welfare lists individuals eligible for support. This information is shared with energy suppliers and distribution system operators. While the system appears efficient in identifying beneficiaries, its effectiveness in accurately reflecting real-time changes in consumer circumstances remains unclear. The requirement to store data for five years after deregistration is a positive step towards accountability and potential analysis.

The status of vulnerable consumers in **Bosnia and Herzegovina** is determined annually, with vulnerable consumer status reassessed based on available funds and institutional decisions. This approach may lead to inconsistencies and delays in support for those experiencing sudden financial hardship. The requirement for potential beneficiaries to proactively prove eligibility could also be a barrier for some.

In the gas market in **Egypt**, subsidies or aid related to income levels are not directly provided to consumers based on available income and other related data. Instead, these subsidies are reflected in the final price of gas, which varies according to consumption.

In **France,** a centralized system for managing energy vouchers is used, with annual updates to the beneficiary list. The government also monitors voucher usage rates. This approach ensures a degree of control over the programme, but it may not be as responsive to individual circumstances as more frequent assessments.

In **Greece**, existing administrative data, specifically tax records, are used to determine eligibility for social tariffs. This approach can be efficient in terms of data collection but may not capture all relevant

[7] https://www.boe.es/diario_boe/txt.php?id=BOE-A-2023-2606

factors affecting consumer vulnerability. The annual update period could result in delays in support for those facing sudden financial difficulties.

Israel stands out with its exceptionally long disconnection process, offering consumers ample time to address payment issues. While this approach protects consumers from immediate hardship, it may not effectively identify or support those truly in need of long-term assistance.

Italy uses an ISEE-based system to determine eligibility for social benefits, including energy support. The one-year validity period for ISEE calculations allows access to social benefits (including the social bonus scheme for energy bills) at any time of the year with a single procedure, ensuring that resources are correctly allocated to eligible customers.

Montenegro follows a similar annual assessment approach to Bosnia and Herzegovina, determining vulnerable consumers by July 31 for the following year. This method may not be responsive to changes in consumer circumstances throughout the year.

North Macedonia operates on an annual basis, with public announcements for economic support measures. This approach is similar to that of **Bosnia and Herzegovina** and **Montenegro**, with potential limitations in terms of responsiveness.

Portugal stands out with its monthly monitoring system involving multiple government agencies. This approach ensures more up-to-date information on consumer circumstances and allows for timely adjustments to support collaboration between different government bodies is crucial for effective implementation.

Spain has a relatively rigid system with a two-year limit for social bonuses. While this provides some stability, it may not be flexible enough to address changing needs. The system's reliance on consumer consent for data verification could create challenges.

Türkiye relies on the Ministry of Family and Social Affairs to monitor vulnerable consumer status based on existing administrative data. The effectiveness of this approach depends on the quality and comprehensiveness of the available data.

Several countries, including **Bosnia and Herzegovina**, **Montenegro**, and **North Macedonia**, share a similar approach of determining vulnerable consumer status on an annual basis. This may be due to administrative constraints or a focus on long-term planning rather than immediate needs.

The reliance on administrative data, seen in countries such as **Greece** and **Türkiye**, can be attributed to the efficiency of using existing information sources. However, it may overlook factors not captured in these datasets.

Overall, the variety of approaches to monitoring and managing vulnerable consumers reflects different policy priorities and administrative capacities across countries. A balance between providing timely support and ensuring programme sustainability is essential.

It is crucial to note that the effectiveness of these systems can be influenced by various factors, including the accuracy and accessibility of underlying data, the efficiency of administrative processes, and the overall economic situation of the country.

4 Best Practices and Case Studies Applied in Complex Scenarios

4.1 Support Schemes for Crisis Support

The COVID-19 pandemic and recent energy price surges have highlighted the need for robust support strategies for vulnerable consumers. This sub-chapter explores the strategies employed by various countries to address these challenges and support their most vulnerable populations. A majority of the countries analysed indicated that during crises such as the COVID-19 pandemic and the energy price surge, no specific measures were implemented for vulnerable consumers, as shown in Figure 12 below.

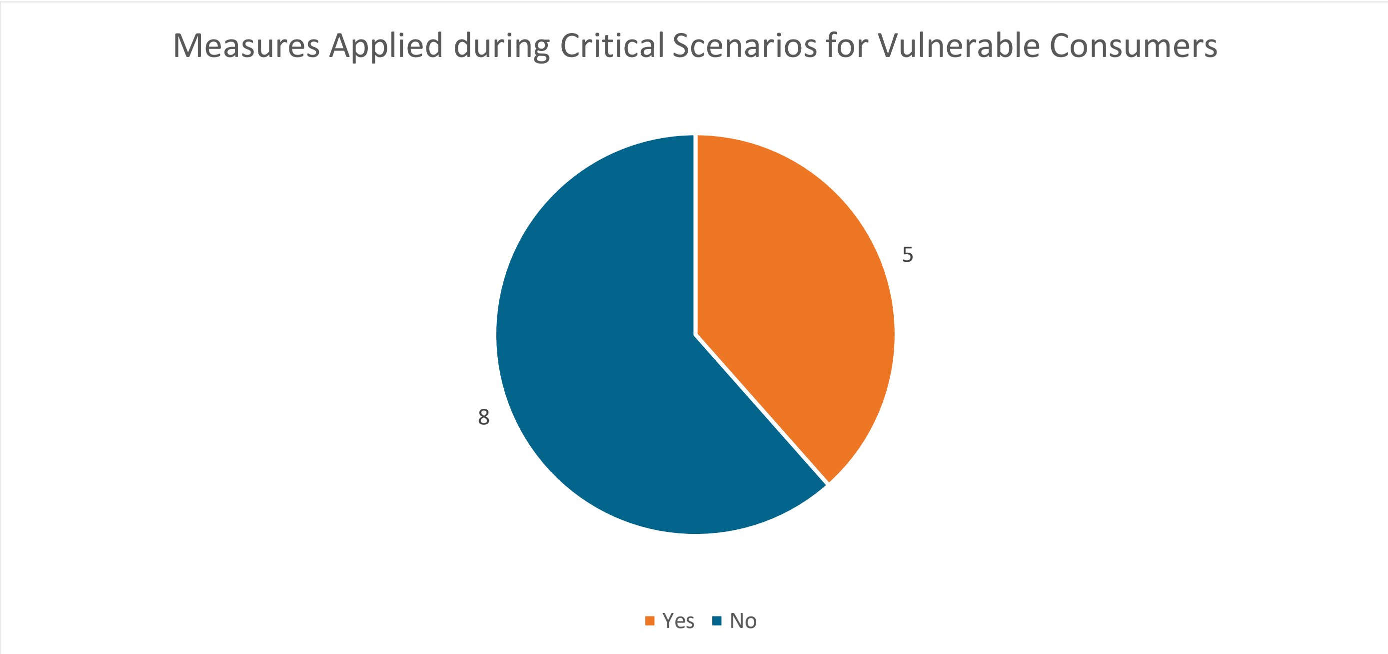

Figure 12 - *Presence of Measures Applied During Complex Scenarios*

France, among the countries that have implemented strategies to address the effects of critical scenarios, extended the protection from the disconnection period during the COVID-19 pandemic. The so-called 'winter truce' was extended by several months in both 2020 and 2021. During the energy crisis, vulnerable consumers received exceptional additional energy vouchers (ranging from €100 to €200 per year) to help cover their higher bills. They were also shielded from the surge in wholesale market prices due to the freeze on the regulated price of gas and electricity, as well as the equivalent mechanism for market-based offers (the so-called 'tariff shield'). The state budget compensated for the revenue losses to electricity and gas suppliers.

The period also saw a capped price for natural gas set by the **Egyptian** government. Additionally, deferred payment plans were offered, along with flexible billing options, allowing consumers to settle their gas bills without penalties.

In **Israel**, measures were implemented to protect vulnerable consumers during challenging circumstances, ensuring that the energy supply was not cut from any households. Vulnerable consumers were permitted to pay their debts through various payment arrangements without incurring interest.

The **Italian** government temporarily raised the income threshold for qualifying for the social bonus scheme from April 2022 to the first quarter of 2024. This expansion allowed more individuals to access the scheme and receive a higher discount on their energy bills. The goal was to help consumers in economic hardship maintain the same level of expenditure on electricity and natural gas as they did before the energy price surge.

Morocco continued its energy subsidies during and after the COVID-19 pandemic, as well as throughout the energy price surge, ensuring that electricity prices remain stable. Additionally, the Ministry of Energy launched a new electricity savings initiative to help end consumers reduce their bills. The Ministry and ONEE offered incentives for consumers who optimised their electricity consumption.

However, it is noteworthy that some countries indicated that the measures applied during crises were not limited to vulnerable consumers alone but were part of broader strategies for all consumers. For instance, in **Portugal**, it was explicitly stated that the measures during COVID-19 were not solely directed at vulnerable consumers. Other countries experienced similar situations.

In **Türkiye**, although no specific strategies were applied during complex scenarios, energy prices have been subsidised by the state for all consumers for a long time, even before the COVID-19 pandemic.

Italian Case: Tackling the Complexities of the Price Surge

In Italy, from April 2022 to the first quarter of 2024, the government implemented temporary measures to address the exceptional surge in energy prices. Specifically, the threshold qualifying for the 'economic hardship condition' was raised, allowing a larger number of consumers to access the social bonus scheme and benefit from a higher discount: a) the ISEE threshold for accessing the scheme was raised from €8,265 to €12,000 in 2022 and from €9,530 to €15,000 in 2023 for family units with a maximum of three dependent children. For families with more than three dependent children, the threshold increased from €20,000 to €30,000 in 2023. b) an additional discount, financed by the state budget and quantified on a quarterly basis, was added to the ordinary discount amount.

These emergency measures allowed beneficiaries to maintain, during the price surge, approximately the same level of expenditure on electricity and natural gas as they had before the crisis.

Egyptian Case: Egypt's Low-Income Gas Connection Project

Aim: The primary objective of this project was to increase access to reliable and affordable natural gas for low-income Egyptian households by connecting them to the natural gas grid.

Key Features:

1. Financial Assistance: The project subsidised low-income households to cover the cost of connecting to the natural gas network, making it financially feasible for those who would otherwise struggle to afford the connection.
2. Geographic Focus: The project primarily targeted underserved areas, particularly Upper Egypt, where access to clean energy sources was limited.
3. Partnership: The initiative was a collaborative effort involving the Egyptian government, the World Bank, the French Development Agency (AFD), and the European Union.

Impact: By the conclusion of the project in 2022, approximately 2.3 million households had been connected to the natural gas grid, with around 400,000 benefiting from connection subsidies.

Benefits:

1. Improved Living Conditions: Access to natural gas enhanced living conditions for participating households, providing benefits such as cleaner cooking, reduced health risks from indoor air pollution, and cost savings.
2. Economic Impact: The project contributed to the growth of the gas sector and created job opportunities during the installation and connection phases.
3. Environmental Benefits: By reducing LPG usage, the project helped lower greenhouse gas emissions and improve air quality.

Overall, the Low-Income Gas Connection Project was a successful initiative that significantly enhanced the lives of many Egyptians by providing access to a clean, affordable, and reliable energy source.

4.2 Longevity of Measures during Complex Scenarios

An examination of the longevity of these policies across different countries reveals a pattern of temporary interventions aimed at addressing acute crises.

France, for instance, adopted a multifaceted approach to mitigate the impact of energy price surges. The government implemented temporary measures, such as gas and electricity tariff shields, to protect consumers from exorbitant price increases. However, as energy prices stabilised, these shields gradually phased out, demonstrating a clear link between the duration of support and prevailing market conditions.

Similarly, **Greece** introduced a temporary mechanism to offset high energy costs, which was discontinued as prices declined, reflecting a comparable strategy.

Italy's exceptional measures were assessed on a quarterly basis to reflect price trends and were fully withdrawn after the first quarter of 2024, indicating a prolonged period of support. In contrast, **North Macedonia** has adopted a more structured approach through an annual programme aimed at protecting vulnerable energy consumers. While this model ensures ongoing support, it lacks the flexibility to respond swiftly to sudden price fluctuations.

While the specific details of these measures vary across countries, several commonalities emerge. First, most support measures were temporary, reflecting a general consensus that such interventions should be time-limited. Second, the decision to extend or terminate these measures was often driven by prevailing energy market conditions. Finally, the emphasis on vulnerable consumers underscores a shared commitment to protecting the most at-risk segments of the population during times of crisis.

4.3 The Impact of Crisis on Policymaking

The COVID-19 pandemic and energy crisis have highlighted the need for agile and responsive policymaking. Governments and national regulatory authorities were compelled to implement emergency measures at an accelerated pace to address the immediate needs of their citizens. However, the long-term sustainability of these measures has been a subject of debate, with previously competitive market players expressing concerns about policymakers' interventions aimed at balancing the market.

Countries such as **France** and **Greece** adopted a relatively short-term approach, emphasising the need to avoid distorting market forces and creating dependency on government support. This strategy reflects a belief in the resilience of market mechanisms to eventually correct imbalances. However, it also underscores vulnerabilities and the significant consequences that misunderstandings can have, prompting regulators to undertake more structural reforms. Since the beginning of 2024, CRE has been implementing a threefold programme based on lessons learned from this period. First, it aims to ensure the coherence of supply offers; second, it introduces prudential oversight; and third, it seeks to improve consumer information through guidelines for voluntary suppliers.

Italy's prolonged support, updated quarterly, aimed to flexibly reflect energy price trends. Similarly, Spain has extended its support to vulnerable consumers. In **Israel**, electricity is never cut off in the event of a sudden emergency need, ensuring continuous supply.

North Macedonia's annual programme represents a hybrid approach, combining elements of both short-term flexibility and long-term planning. While this model provides a degree of predictability for vulnerable consumers, it may also limit the government's ability to respond to rapidly changing circumstances.

In **Portugal**, although the measures implemented during COVID-19 were not exclusively targeted at vulnerable customers, none remained in place. As the pandemic evolved with varying degrees of impact, the measures were adapted to align with each phase of the national situation.

Ultimately, the optimal approach to crisis management requires a delicate balance between providing immediate relief, preventing long-term dependency, and promoting market stability. As the region and the world become increasingly vulnerable to shocks, policymakers must develop innovative strategies to address these challenges while safeguarding the interests of vulnerable populations—strategies that can be referred to as measures to tackle non-deterministic occurrences.

5 Conclusion and Recommendations

The Mediterranean region has faced, and continues to face, significant challenges in ensuring energy security and affordability. Vulnerable energy consumers, particularly those experiencing socioeconomic hardships, are profoundly affected by energy price fluctuations and disruptions, such as those witnessed during the 2022 price surge. The complex interplay of geopolitical factors, economic uncertainties, and climate change presents both challenges and opportunities for adopting comprehensive and sustainable strategies to protect vulnerable consumers.

This report has examined the complexities of vulnerability within the energy sector, emphasising the critical importance of timely identification, targeted support, and effective policy implementation. By analysing the diverse approaches adopted by Mediterranean countries, the report has identified key best practices and lessons that can inform future policy development and implementation.

While there is growing recognition of the need to protect vulnerable consumers, definitions and criteria for their identification vary significantly across Mediterranean countries. Although not all countries have a formal definition in their legislation, consumers classified as 'vulnerable' receive effective assistance in all countries. In general, it is essential to promote the adoption of comprehensive indicators of vulnerability, such as income levels, household composition, and health conditions.

Additionally, the report explored a related topic: energy poverty. Although the terms 'energy poverty' and 'vulnerable consumers' are relevant yet distinct, most countries do not provide a formal definition of 'energy poverty'. However, similar to vulnerable consumers, all countries address indicators similar to energy poverty. It is crucial to distinguish between the broader concept of energy vulnerability and the more specific issue of energy poverty, particularly within the Mediterranean region. Energy vulnerability encompasses a wider range of risks faced by consumers who are susceptible to becoming energy-poor due to factors such as low income, health conditions, or disabilities. However, not all energy-vulnerable consumers are energy-poor; rather, they are at a higher risk of experiencing difficulties related to energy security. Conversely, energy-poor consumers represent a specific subset within the broader category of energy-vulnerable individuals. These consumers face difficulties in accessing adequate levels of energy services due to a combination of socioeconomic and environmental factors, including income, health, and housing conditions. Addressing the challenges faced by both energy-vulnerable and energy-poor consumers remains crucial, particularly in regions where energy security and affordability are increasingly pressing concerns.

Monitoring and responding to developments in both areas—energy poverty and vulnerable consumers—are of utmost importance for policymakers and regulators. Strengthening data collection and analysis capabilities will enable more accurate targeting of support measures, the development of evidence-based policies, and the effective monitoring of intervention outcomes. By continuously improving data quality and utilisation, Mediterranean countries can enhance their ability to identify and address the needs of vulnerable consumers more effectively.

An examination of support schemes reveals that a variety of economic and non-economic measures have been implemented across the region, including direct financial assistance, energy efficiency programmes, and social tariffs. To maximise the impacts of these schemes, it is essential to streamline administrative processes, allocate sufficient funding, and foster collaboration among relevant stakeholders. Moreover, regularly assessing the effectiveness of these schemes and making necessary adjustments are crucial to ensuring that they remain relevant and responsive to the evolving needs of vulnerable consumers.

To strengthen the support provided to vulnerable consumers, targeted and effective schemes should be designed and implemented to address the specific needs of vulnerable groups, such as low-income households, elderly individuals, and people with disabilities. These schemes must be dynamic and adaptable to changing circumstances, ensuring their continued relevance and responsiveness to the evolving needs of vulnerable consumers. Additionally, it is crucial to consider the long-term impacts of these schemes and to develop strategies to promote energy independence and resilience among vulnerable populations.

Collaborative efforts among countries, a key mission of MEDREG, can facilitate knowledge sharing, benchmarking, and the development of harmonised approaches to protect vulnerable consumers. By working together, countries can learn from each other's experiences, identify best practices, and address common challenges, whether persistent, seasonal, or exceptional. To facilitate this, joint initiatives, such as workshops and capacity-building activities, can foster a sense of community and facilitate the exchange of expertise.

Fostering collaboration among MEDREG members can further enhance knowledge sharing, benchmarking, and the development of harmonised approaches to protect vulnerable consumers. By working together, countries can learn from one another's experiences, identify best practices and address shared challenges. Joint initiatives, such as regional workshops, capacity-building programmes and collaborative research projects, can promote a sense of community and facilitate the exchange of ideas and expertise.

Empowering vulnerable consumers through education and awareness campaigns is essential to help them make informed decisions about their energy consumption and access to available support. By providing clear and concise information, energy providers and government agencies can enable consumers to take control of their energy usage, reduce their energy bills, and improve their overall well-being. Additionally, empowering consumers fosters a sense of agency and resilience, enabling them to cope better with energy-related challenges.

By implementing these recommendations, countries in the Mediterranean can significantly improve the status of vulnerable energy consumers, contributing to a more just and sustainable energy future for the region. Through collaboration and the adoption of a comprehensive approach, we can ensure that no one is left behind in the transition to a clean and equitable energy system.

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