

Journal of Agricultural, Earth and Environmental Sciences

ISSN: 3064-9846 **Review Article**

The Formation of the Physiognomy of the city of Heraklion in Crete Island. The opinion of Residents and Visitors

Michelaki Eleftheria

Department of Economy and Sustainable Development, Master's in Environmental Management, Harokopio University

*Corresponding author: Michelaki Eleftheria, Department of Economy and Sustainable Development, Master's in Environmental Management, Harokopio University.

Submitted: 17 March 2025 Accepted: 21 March 2025 Published: 28 March 2025

doi https://doi.org/10.63620/MKJAEES.2025.1080

Citation: Michelaki, E. (2025). The Formation of the Physiognomy of the city of Heraklion in Crete Island. The opinion of Residents and Visitors. J of Agri Earth & Environmental Sciences, 4(2), 01-11.

Abstract

This thesis is a study on the elements that constitute the identity of a region, specifically the city of Heraklion, located in the Island of Crete. It examines the combination of various factors that contribute to the perception of Heraklion's identity. At the same time, it highlights concerns regarding the erosion of Heraklion's identity and identifies the sectors where government structures should focus to strengthen them, thereby shaping the path toward sustainable development. The implementation of state structures and education promoting a new ideology and perception can lead to the preservation of the region's identity. The primary driving force is the well-being of the people who interact daily with the city, as the purpose of all research and "sustainable" plans is the protection of the city's identity in relation to the balance between economic, social, and environmental aspects of human life.

Keywords: Identity, Culture, Sustainable Development, Society, Environment, Heraklion.

Introduction

The identity of cities is one of the most critical factors for understanding their social, economic, and cultural essence. This concept expresses the city's identity by combining its character with the emotional and ideological impressions it leaves on residents and visitors. Interpreting a city's identity requires studying multiple parameters such as the natural environment, customs, traditions, and its history.

During this analysis, it is essential to understand how these factors are reflected in people's daily lives and how they are expressed or utilized in social and cultural activities. The unique aesthetic of each place is a key feature of its identity. However, with globalization, this uniqueness often diminishes, as cities tend to adopt common characteristics, leading to homogenization.

This thesis focuses on the identity of Heraklion, examining the factors influencing it, such as the natural environment, social and cultural characteristics, and historical background. Additionally, it analyses residents' perceptions of their city and explores the possibility of reversing the trend of globalization to preserve local identities. Sustainable development through renewable energy sources, the need for stable social and economic structures, and the protection of both the natural and socio-cultural environment form the central pillars of this approach.

Through research conducted on 214 individuals, the comparison between bibliographic research and real-life perceptions of residents reveals the true image of Heraklion's identity, leading to conclusions regarding the city's prospects in a rapidly changing world and the actions required to maintain its uniqueness within globalization.

Part A

Description of the City – Geographical Definition

The city of Heraklion is the largest and most densely populated city in Crete. It serves as the capital of the Regional Unit of Her-

Page No: 01

www.mkscienceset.com

J of Agri Earth & Environmental Sciences 2025

(Karetsou, 2008)

(Rackham, 2004). (Karetsou, 2008)

aklion and is the fourth-largest city in Greece. Located on the northern coast of Crete, at the edge of the Gulf of Heraklion, the city holds exceptional strategic and geographical significance, evident since the Minoan era when it served as the port of the Knossos palace. Heraklion is deeply connected to the island's history and cultural heritage while also functioning as a central commercial, administrative, and tourist hub for all of Crete.

Regarding its geographical position, Heraklion is situated on a small plain surrounded by hills and mountains. It is located 80 kilometres from Rethymno and 81 kilometres from Lassithi, while the distance from Athens is approximately 300 kilometers. Its geographical location makes it ideal for connectivity with other regions of Greece and abroad, explaining its crucial role in the country's transportation network . Additionally, its direct access to the East and Egypt has historically made it a key point for transit trade, a fact demonstrated throughout its history.

The natural landscape around Heraklion combines coastal and mountainous elements. The city stretches along the coast of the Gulf of Heraklion, overlooking the Aegean Sea, maintaining a strong connection with the sea, which is a major driver of economic activity through its port. The Gulf of Heraklion serves as a natural harbour, supporting not only maritime transport but also boosting the region's rapidly growing tourism sector in recent years.

The port of Heraklion is one of the most significant in Crete and Greece overall, as it is a primary link between the island and the rest of the country, as well as international destinations. It is the largest port in Crete and connects to Athens, Piraeus, Rhodes, Santorini, and other tourist destinations and it is widely known as the "Royal Harbor," while it facilitates both passenger and commercial activities, serving the shipping and tourism industries, which are among the city's primary economic sectors.

Heraklion is surrounded by the "Psiloritis" mountain range and the mountains of Crete, forming a natural barrier that gives the city a distinct local character. The inland area of Heraklion is filled with plains and vineyards, while the climate is typically Mediterranean, characterized by mild winters and hot, dry summers, which favor agriculture and tourism development, and benefits the city from the abundant sunshine and favorable weather conditions, making it ideal for outdoor activities and tourism.

Heraklion's geographical position, natural environment, and infrastructure make it one of the most important hubs in Crete and one of the most dynamic urban destinations in Greece. With its strategic location, the city combines tourism development with agricultural activities (agritourism) while preserving elements of Cretan identity. This identity is shaped by the diverse cultures that have influenced the region over time, leaving their mark on various aspects of life.

Geophysical Culture of the City of Heraklion

The geophysical culture of Heraklion is an intriguing combination of geological, geographical, and cultural factors that shape the city's natural and cultural identity. As mentioned earlier, Heraklion's location in Crete is of great significance, as its geological and geophysical structure has influenced both its development and architectural heritage. The city is situated in an area with high seismic activity, which has played a crucial role in shaping its growth potential. At the same time, its unique geomorphological features have contributed to the formation of its landscape and infrastructure.

From a geological perspective, Heraklion lies on carbonate formations, with seismic activity playing a decisive role in its historical evolution. A notable example is the severe earthquake of 1856, which left only 18 out of 3,620 houses habitable. Similar natural disasters and earthquakes are recorded throughout Heraklion's history, leaving an indelible mark on the city's urban structure.

Additionally, Heraklion's coastal front, particularly its port, is affected by geological processes such as coastal erosion and rising sea levels. According to studies, these processes impact the city's commercial and maritime activities, which have been a significant factor in its economic development from antiquity to the present day (though with diminished influence in modern times). The port of Heraklion, which has been a center of trade and shipping for centuries, remains a vital point for the city despite the natural challenges it faces.

The city's cultural heritage is closely linked to the geophysical characteristics of the region. Knossos, located just 5 kilometers from Heraklion, is one of the most important archaeological sites in Crete and the world. The architecture of the palace takes advantage of the area's natural geomorphology. The Minoans, as noted by Evans (1921), utilized Heraklion's geographical position to construct the famous palace of Knossos, which is directly connected to the landscape and climate of the region. The city's development during the Venetian and Ottoman periods was also influenced by its geological characteristics, with the construction of its walls and port incorporating the topographical particularities of the area.

In modern times, Heraklion's continuous development necessitates the management of geological and geophysical factors to ensure the city's sustainability and safety. Papadopoulos highlights the importance of the geological resilience of buildings and infrastructure, emphasizing the need for strategies to protect against earthquakes and other natural disasters. Advances in modern technology and geological studies now provide tools to upgrade infrastructure, aiming to enhance Heraklion's resilience to natural catastrophes.

The preservation and promotion of Heraklion's cultural heritage extend beyond restoring historical monuments. Sustainable urban development must also consider geophysical conditions and climate change. The interaction between geology and culture is a crucial area for research and practical approaches to the future of Heraklion.

History of the City

The history of Heraklion is rich in cultural, historical, and archaeological elements, reflecting its evolution from antiquity to the modern era. The region has been inhabited since prehistoric

Page No: 02

www.mkscienceset.com

- 5. (Starida, 2014).
- 6. (Papadopoulos, 2011).7. (Doukakis, 2004)

times, with the most well-known settlement being the area surrounding the Palace of Knossos. Knossos was the center of Minoan civilization, extending its influence beyond Crete. It was a highly developed city, as evidenced by artifacts such as Minoan pottery found in Egypt, indicating active trade relations.

During the Roman and Byzantine periods, Heraklion saw the construction of numerous churches based on Byzantine ecclesiastical architecture. However, one of the most significant historical periods for the city was the Venetian era, lasting nearly four centuries, from 1212 to 1669. The Venetians conquered Crete, established their own administration, and exerted a strong cultural influence, transforming Heraklion into one of the most important cities in the Mediterranean. During this time, the city was called "Candia" (later "Rabdh al-Khandaq," meaning "Fortress of the Moat"), and its development was remarkable. The Venetians expanded the port, built the imposing "Koules Fortress", and constructed many buildings and churches, boosting both trade and maritime activities. Their presence left an indelible mark on the city, with Venetian gates, castles, and architectural monuments still standing today. Even the Cretan dialect retains numerous Venetian words that became part of everyday speech over time.

Following the siege of Heraklion and its surrender to the Ottomans in 1669, the city came under Ottoman rule. This period was also significant for Heraklion's development, as the Ottomans constructed mosques and public buildings, often converting existing structures for their own use. The Ottomans maintained the name Candia (Rabdh al-Khandaq) and developed infrastructure that reinforced the city as a political and religious center of Crete.13

During the 19th century, Heraklion became the focal point of Cretan uprisings, culminating in the 1866 Revolution and the island's liberation from the Ottoman Empire in 1898. From that point onward, Heraklion experienced rapid growth, leading to significant urban expansion and the development of modern infrastructure. The city embraced its island identity and officially became part of the Greek state in 1913.

Today, Heraklion's monuments, spanning from the Minoan era to the Venetian and Ottoman periods, remain key attractions for visitors. Museums such as the Heraklion Archaeological Museum and the Natural History Museum of Crete continue to highlight the region's cultural heritage. The city's historic center is filled with archaeological sites and landmarks that showcase its long history and the influence of various civilizations in shaping Heraklion's identity. However, in today's globalized world, the visibility of this rich culture and historical legacy is often overshadowed by modernization.

The Culture of the City of Heraklion

The culture of Heraklion is deeply rooted in the history and traditions of Crete, blending ancient elements with the influences of successive conquerors and cultural movements that have shaped the island over time. From antiquity to the present day, the city maintains a rich cultural heritage, expressed through its institutions, customs, traditions, literature, music, and gastronomy.

Heraklion is home to significant cultural institutions that preserve and promote the island's history and artistic traditions. Notably, the Heraklion Archaeological Museum houses exceptional collections from the Minoan period, while the Natural History Museum of Crete offers unique exhibitions on the island's natural environment. Additionally, the Center for Cretan Literature supports contemporary Cretan literary and artistic expression.

The customs and traditions of Heraklion are deeply connected to Crete's historical and cultural legacy. Religious celebrations, such as festivals dedicated to Saint Titus and Saint Minas, are major events, while traditional practices like "rakokazanemata" (raki distillation gatherings) remain popular. Cretan music, dances, and songs—including the pentozali, syrtos, and kastrinos maleviziotis—continue to be an integral part of social life.

Heraklion has played a crucial role in the development of Cretan literature and poetry. Notable figures include Nikos Kazantzakis and Vincenzo Kornaros, the latter known for his renowned works Erofili and Erotokritos. Kazantzakis, in particular, influenced modern Cretan thought and literature, addressing universal values, human struggles, and spiritual quests in his works. His legacy is honored in Heraklion, where his tomb is located on the Venetian walls. Today, the city continues to inspire contemporary writers and poets who draw from its history and traditions.

The gastronomy of Heraklion is another key cultural expression. Traditional Cretan dishes, such as pork with stamnagathi (wild greens), "boutia" (slow-cooked lamb), rabbit stifado, and snails, reflect the island's rich culinary heritage. Pastries like "bougatsa" and "baklava" remain popular, while the traditional Cretan raki is an essential part of every celebration and social gathering. Many traditional Cretan dishes also incorporate influences from Ottoman and Asia Minor cuisine, such as various pies and dolmades.16

Overall, Heraklion's culture is a unique blend of traditions, artistic influences, and historical heritage that remains interwoven with everyday life. The city continues to be a vibrant cultural hub while preserving and promoting its Cretan identity on both a local and international level.

The Architectural Heritage of the City of Heraklion

The architectural heritage of the city of Heraklion is exceptionally rich and diverse, combining elements from antiquity, the Venetian period, the Ottoman era, and modern times. Ancient architecture in Heraklion is primarily linked to the Minoan and Hellenistic periods. Although archaeological findings from the ancient city of Heraklion are limited, significant remnants exist from ancient Knossos, located near the city. The Minoan Palace of Knossos, with its famous Minoan frescoes and palace buildings, has greatly influenced the architectural perception of the region and the wider area of Crete.

During the Venetian period (1212–1669), the city developed with significant fortifications and public buildings. The most characteristic architectural element of this era is the Venetian Walls, which enclose the city and remain visible in many places. Another notable structure is the Koules Fortress, an imposing

Page No: 03

www.mkscienceset.com

J of Agri Earth & Environmental Sciences 2025

8. (Evans, 1921)

(Kizilaslan, 2011).

10. (Papadopoulos 2011)

11. Archaeological museum of Heraklion, 2024

castle protecting the city's harbor. The Venetian gates, such as Chaniá Gate and Kommeno Benteni, as well as the layout of the squares and narrow streets, reflect the necessities of the time. For instance, Chaniá Gate served as a key connection between the city and its surroundings and played a crucial role in the planning and placement of the Venetian walls around Heraklion.

Following the Venetians, the Ottoman period (1669–1898) introduced architectural elements such as mosques, madrasas (Islamic schools), and fountains, often built on existing Venetian structures. At the same time, the city retained many Ottoman-style houses, characterized by heavy wooden windows and narrow courtyards.

In modern times, the city has developed a range of neoclassical buildings, particularly around the city center, combining traditional Cretan architectural elements with Western influences from contemporary architecture. The architectural heritage of Heraklion is a living testament to the various cultural influences that have shaped the city, with each era's elements intertwining to create the architectural landscape we recognize today. However, one must ask: Is this heritage truly appreciated, and how does the state protect and preserve it? Below is an article from the Cretan newspaper Patris regarding a historical monument, an Ottoman remnant, the Konaki of Bey Sekeria:

Article from Patris newspaper, March 20, 2024

"Finally, the Konaki of Bey Sekeria in Heraklion, located on Apokoronou Street, is being restored and repurposed. As seen in the photos, the new owner is preparing luxury suites and a wellness space."



Figure 1: Photo from an article from Patris newspaper, March 20, 2024 depicting the "Konaki of Bey Sekeria"

This raises the question: How is this heritage being utilized, and who benefits from such renovations that may destroy the existing legacy?

Notable Figures of the City of Heraklion

The notable figures of Heraklion, both historical and contemporary, have played a crucial role in shaping the city's identity, strengthening its cultural, social, and political character. From antiquity to the present day, Heraklion has produced significant

personalities who have contributed to its development in various fields.

One of Heraklion's most famous residents is Nikos Kazantzakis. His works, such as Zorba the Greek, along with his philosophical writings, have left an indelible mark on both the city and the country. Kazantzakis' connection to Heraklion is deeply rooted in local culture. His grave, located on the Venetian Walls, and the museum dedicated to his life and work serve as central landmarks of the city.

Page No: 04

www.mkscienceset.com

- 12. (Tzobanaki, Chrysoula (2012)
- 13. (Karetsou, 2008)
- 14. (Andriotis, Papadakis, 2023)
- 15. (Xanthoudidis, 1981).
- 16. (Karetsou, 2008)



Another prominent artist associated with Heraklion is Doménikos Theotokópoulos, known as El Greco. Born in Heraklion in 1541, during the city's Venetian rule, El Greco became one of the most important figures of the Renaissance. His early training in painting and iconography took place in Heraklion, significantly influencing his artistic development. The city acknowledges El Greco's cultural significance and honors his memory through exhibitions and events showcasing his work and Cretan heritage.

Figure 2: Photo of the famous statue in the center of Heraklion depicting: "Kazantzakis, Kornanos and El Greco"

In politics and society, figures like Eleftherios Venizelos—though born in Chania—had a profound impact on Crete and Heraklion, leading efforts during the unification of Crete with Greece. His political legacy remains influential, and today, his statue stands in front of Eleftheria Square, the city's central square, reflecting his importance to Heraklion.

In contemporary times, artists such as musicians Thanasis Papakonstantinou, Vasilis Papakonstantinou, and Miltos Paschalidis continue to shape Heraklion's cultural life through their music, reinforcing the city's status as a hub of artistic expression.

Thus, Heraklion's identity is shaped through these historical and modern personalities, giving the city a multidimensional character that blends tradition with contemporary creativity.

Concentrators of the City's Physiognomy

Concentrators of the city's physiognomy refer to spaces and areas that, through the concentration of human, social, cultural, and economic activities, reflect the image and identity of the city. These concentrators are vital for the city's function and development, as they concentrate energy and generate social and cultural dynamics that define Heraklion's character.

The most prominent concentrators is the historic center, which includes landmarks such as the Venetian Walls, Liberty Square, and the Koules Fortress, all of which serve as key references for Heraklion's historical and cultural identity. The historic buildings and museums in the center house part of the city's cultural wealth and attract both locals and visitors, highlighting Heraklion's cultural heritage.

Another important concentrator is the Port of Heraklion, a major economic and commercial hub for Crete and Greece. At the same time, the port has a strong tourism function, serving as a gateway for thousands of visitors each year, further emphasizing

the strategic significance of the Koules Fortress and the city's potential for cultural and heritage promotion.

Similarly, the city's historic center and traditional markets, such as the Heraklion Market and Daskalogiannis Square, serve as hubs that connect society and the economy. Markets and commercial areas boost urban activity by providing spaces for trade, social interaction, and daily life. This vibrant commercial life and the diversity of shops attract both residents and visitors, bridging traditional commerce with modern business activity.

Overall, Heraklion's concentrators —historic, cultural, commercial, and public spaces—are integral to understanding the city's identity, making it a living organism with rich social and cultural dimensions.

The Surrounding Environment of the City

Crete, and consequently the city of Heraklion, is characterized by its deep connection with nature and the beauty of its natural environment, which blends harmoniously with urban elements. The region features a variety of landscapes, from coastal areas to mountainous zones, while the northern coast of the island, with the Cretan Sea, offers a unique natural setting for both residents and visitors. At the same time, Crete's rich flora and fauna, along with its natural resources, struggle to integrate with the city's extensive urbanization. Heraklion's geographic location, rapid development, monuments, and archaeological sites coexist with the modern urban fabric. However, one could argue that these natural beauties are somewhat hidden beneath the intense urban appearance of the city.

Significant efforts have been made in recent years to protect the environment and redevelop urban areas. However, Heraklion continues to face challenges from population growth, pollution, and urban sprawl, often without adequate spatial and environmental planning. The expansion of public spaces and the en-

Page No: 05

www.mkscienceset.com

- 17. (Xanthoudidis, 1981).
- 18. (Karetsou, 2008)
- 19. (Andriotis, Papadakis, 2023)
- 20. (N. Panagiotakis 1987)
- 21. (Argyropoulos, 2017)

hancement of green areas are essential for improving the quality of life and preserving the city's natural and cultural environment. Integrating sustainable practices in resource management and urban development is a key goal for the city's future.

Ultimately, the region surrounding Heraklion combines natural wealth with historical heritage but also faces the modern challenge of urbanization. Addressing this requires a strong strategy for sustainable development and the protection of urban resources.

Institutional Framework for the Protection of the City of Heraklion

The institutional framework for the protection of the city of Heraklion includes a series of laws, decrees, and strategies aimed at preserving cultural heritage, protecting the environment, and ensuring the city's sustainable development. Heraklion is a city of particular interest at both national and international levels, as its monuments are part of UNESCO's World Heritage network. Additionally, the city was recognized by UNESCO as a "Creative City of Gastronomy" in October 2023.

The protection of Heraklion's cultural heritage is governed by the country's general institutional framework, including Law 3028/2002 on the Protection of Antiquities and Cultural Heritage. This law establishes the obligation to safeguard archaeological sites and monuments from any form of destruction or alteration. Furthermore, the revised Spatial Framework of the Region of Crete, approved on November 8, 2017, along with its Strategic Environmental Impact Assessment, aims to ensure sustainable development while respecting both the natural and cultural environment. Consequently, the role of archaeological services and the Ministry of Culture is crucial in implementing these policies. At the same time, the local authorities of Heraklion, in collaboration with relevant institutions, must manage the protection and promotion of the city's historic centre.

As stated in Law 3028, Government Gazette A 153/28-6-2002:25 "The cultural heritage of the country, from antiquity to the present day, is subject to protection under the provisions of this law. The purpose of this protection is to preserve historical memory and enhance the cultural environment for present and future generations. The national cultural heritage includes cultural assets located within Greek territory, including territorial waters and other maritime areas under Greek jurisdiction according to international law. Cultural heritage also includes intangible cultural heritage. Within the framework of international law, the Greek state also guarantees the protection of cultural assets that have been removed from Greek territory. Additionally, the Greek state ensures the protection of cultural assets historically linked to Greece, regardless of their location."

At the same time, the institutional framework for protection includes environmental measures, such as Law 1650/1986 on Environmental Protection, which influences urban planning and development activities in the region to safeguard natural resources and ensure residents' quality of life. Gradually, urban landscape redevelopment policies are incorporating environmental criteria to mitigate the effects of urbanization.

Additionally, as the largest urban center in Crete, Heraklion is at the center of significant spatial and urban interventions. Below is a list of Government Gazette (Φ EK) publications related to the city's planning and development, providing a framework for action:

- The General Framework for Spatial Planning and Sustainable Development, which includes urban development and infrastructure, such as port maintenance, tourism enhancement, and natural resource protection.
- The Special Framework for Spatial Planning of Renewable Energy Sources (RES), which addresses the siting of RES projects to reduce dependence on conventional fuels and enhance energy sustainability.
- Law 4759/2020: Reform of Spatial and Urban Planning Legislation, which introduces modernized interventions in spatial management, impacting Heraklion on multiple levels

In conclusion, the institutional framework for the protection of Heraklion integrates cultural heritage preservation with contemporary urban development needs through detailed legislative regulations and strategic plans. However, the successful implementation of these measures depends on the smooth collaboration between local authorities, archaeological and environmental services, and civil society.

The Economy of Heraklion (Primary, Secondary, and Tertiary Sectors)

As the largest and most developed city in Crete, Heraklion's economy is based on a combination of sectors covering all stages of production, including the primary, secondary, and tertiary sectors. These sectors work together to strengthen the local economy and improve the standard of living.

Primary Sector

Heraklion's primary sector consists of agriculture, livestock farming, and fishing. Despite industrialization and the growth of the tertiary sector, it remains significant. Crete, and particularly the Heraklion region, is known for producing high-quality agricultural products such as olive oil, wine, fruits, and vegetables. Olive cultivation is the most important sector, with Crete being one of the world's largest olive oil producers. Additionally, livestock farming and dairy production—including products like feta and graviera cheese, which are PDO-certified—contribute significantly to the local economy due to high demand. Fishing, though on a smaller scale, remains an important economic activity, particularly in Heraklion's coastal areas. A characteristic example can be seen at Heraklion's port, where fishermen are still a visible presence.

Secondary Sector

The secondary sector in Heraklion includes food and beverage manufacturing, the chemical industry, and construction. The food and beverage industry, particularly olive oil processing, is the most developed activity in this sector. Crete, and especially Heraklion, is a center for food production and processing (e.g., rusks, dairy products) with international reach, contributing to job creation and the region's export activities. Additionally,

Page No: 06

www.mkscienceset.com

- 22. (Karetsou, 2008)
- 23. (Municipality of Heraklion, 2023)
- 24. (Gazette, 2002)
- 25. (Gazette, 1986)
- 26. (Gazette, 128/A/2008)

the construction industry is significant, driven by infrastructure projects supporting tourism and urbanization.

The growth is revealed by the statistics given by ELSTAT as follows:

Third Sector

The services sector is the most developed part of Heraklion's economy, mainly due to tourism, which serves as the primary driver of the city's economic activity. Heraklion attracts thousands of visitors each year, drawn by its historical monuments and natural beauty. Tourism supports other service sectors such as catering, transportation, and commerce. Besides tourism, the third sector includes public administration, education, and healthcare, which provide essential jobs and support the city's functioning. However, these services require strong governmental support to maintain expected performance levels.

Overall, while the third sector dominates, the primary and secondary sectors still play a crucial role in Heraklion's economic production and development. However, their significance is overshadowed by the dominance of services. For Heraklion to remain sustainable, greater support for the primary and secondary sectors is necessary. This raises an important question: how can a city sustain itself when its main economic sector—tourism—is not stable?

EU-Funded Projects

As part of sustainable development, the European Union funds major infrastructure and development projects aimed at enhancing sustainability, environmental protection, and citizens' quality of life. Below are some key projects implemented through EU funding:

- Upgrading Heraklion Port: This project involves improving port infrastructure, developing new services, and enhancing maritime and tourism activity. The works include modernizing piers, developing logistics systems, and improving energy efficiency.
- Upgrading Venizeleio Hospital (ESPA Program): This includes modernizing hospital facilities, acquiring new medical equipment, and improving healthcare services, with a focus on strengthening public healthcare and enhancing the quality of medical care.
- Creation and Expansion of a Bicycle Lane Network:
 This project promotes sustainable mobility, reduces traffic congestion, and enhances transport safety by constructing

- new bicycle lanes and upgrading the existing network, connecting key city areas like universities, commercial districts, and the coastal zone.
- Waste Management Strategy: This involves creating and upgrading waste processing and management infrastructure through modern recycling and composting technologies, reducing Heraklion's environmental footprint and promoting a circular economy.
- Cultural Heritage Protection Programs: These support
 the restoration and maintenance of historical monuments
 such as Koules Fortress and other Venetian and Ottoman
 buildings in Heraklion. Additionally, they fund cultural heritage digitization and educational initiatives.
- Development of Digital Infrastructure and Broadband Connectivity: This project improves digital connectivity in the city by expanding high-speed broadband networks and providing citizens with access to digital services, boosting the local economy and e-governance.
- Water Supply and Sewerage Network Improvements:
 This project involves replacing outdated pipelines, reducing water losses, and enhancing drinking water quality, along with upgrading the sewage system to protect the environment and reduce pollution.
- Sustainable Urban Development Plan (SUAP): This
 initiative includes the redevelopment of public spaces, pedestrianization of central areas, development of green infrastructure, and improving accessibility for people with
 disabilities, aiming to enhance residents' quality of life and
 create a more environmentally friendly urban landscape.

In conclusion, EU-funded projects shape the future of Heraklion, supporting sustainable development, cultural heritage preservation, and social cohesion. Their implementation improves residents' quality of life and strengthens the city's competitiveness at national and international levels.

Part B Field Research

As part of this study, field research was conducted among residents and visitors of Heraklion to collect data regarding their perception of the city's identity and all the factors that contribute to it. Specifically, the questionnaire included six closed-ended questions and two open-ended questions and was answered by 214 participants. The responses to the open-ended questions were categorized to provide statistical insights. The questions posed are detailed below, accompanied by the relevant charts:

Questions asked:

To which age group do you belong?

What is the characteristic plant of Heraklion?

What is the most characteristic monument of Heraklion?

What is the most characteristic dish/delicacy of Heraklion?

What is the most characteristic sound of Heraklion?

What is the most characteristic event of Heraklion?

Who is the most iconic personality of Heraklion?

Which of the recent projects in the city, funded by the EU, do you consider the most important?

Page No: 07

www.mkscienceset.com

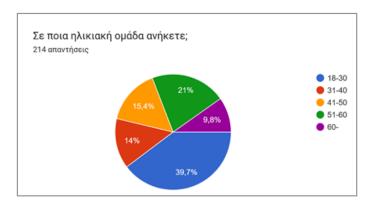
J of Agri Earth & Environmental Sciences 2025

31. (EOT, 2003)

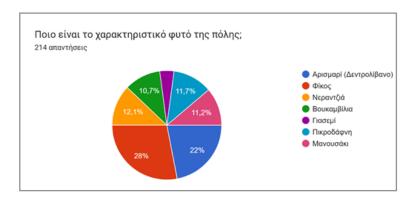
What is its most negative characteristic?

What is its most positive characteristic?

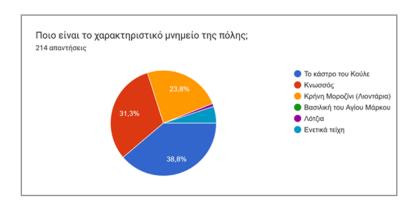
To which age group do you belong?



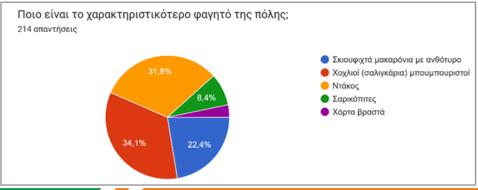
What is the characteristic plant of Heraklion?



What is the most characteristic monument of Heraklion?



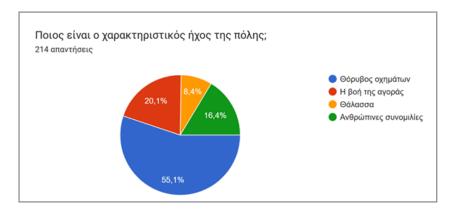
What is the most characteristic Dish/Delicacy of Heraklion?



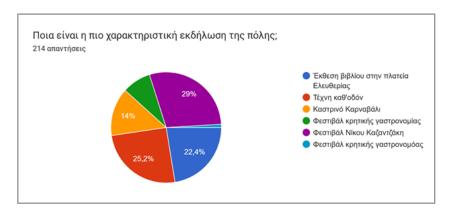
Page No: 08

www.mkscienceset.com

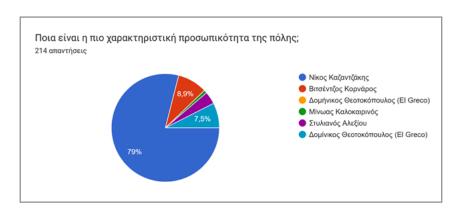
What is the Most characteristic Sound of Heraklion?



What is the Most Characteristic Event of Heraklion?



Who is the Most Iconic Personality of Heraklion?



Which of the recent projects in the city, funded by the EU, do you consider the most important?

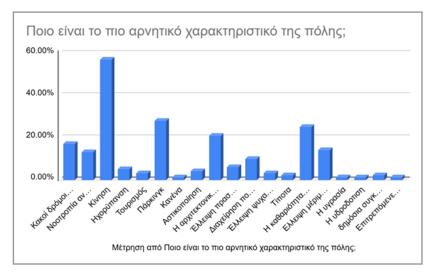


Page No: 09

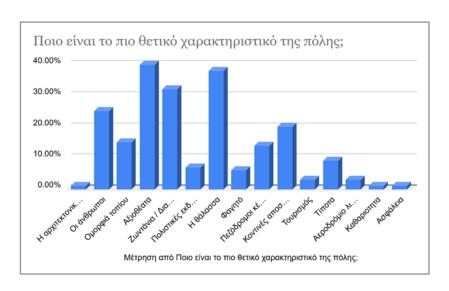
www.mkscienceset.com

- 34. (Region of Crete 2020-2025)
- 35. (Ministry of Culture and Sport 2021-2026)
- 36. (Digital Strategy of Greece 2020-2030)
- 37. (ΔEYA Heraklion)
- 38. (Municipality of Heraklion ΣΒΑΑ)

What is its Most Negative Characteristic?



What is its Most Positive Characteristic?



Conclusions

The research, based on the recorded responses, reveals that Heraklion is primarily recognized for its historical heritage (Knossos, Koules), its Mediterranean vegetation (Fig, Rosemary), and the diverse age distribution of the respondents. Its gastronomy is characterized by the boumpouristoi snails and dakos. The most characteristic event related to the "Nikos Kazantzakis Festival" seems to be directly connected to the answer about the most notable personality of the city, where the overwhelming majority highlights Nikos Kazantzakis.

At the same time, with an overwhelming majority, it is emphasized that the most significant infrastructure funding project that contributed to the city was the pedestrianization of the historical center. Despite the pedestrianization and the reduction of vehicles in the city center, the question about the characteristic sound of the city reveals that the sound of vehicles prevails, proving that the goal for sustainable mobility has not yet been achieved, negatively impacting the experience and perception of the city's character.

In conjunction with the noise of vehicles, more information is provided by the answer regarding the most negative characteristic of the city, with the traffic of vehicles and the lack of parking being among the highest percentages, showing that there is a need for transport infrastructure that serves more areas (both remote and central), as well as generally infrastructure for promoting sustainable mobility.

In conclusion, combining the last answer about the most positive characteristic of the city, it seems that the attractions, the sea, and the city's vibrancy in terms of entertainment and commercial activity contribute to the appreciation of the city's character. This demonstrates that the sectors of cultural heritage (attractions) and nature (sea) contribute to the positive perception of the city, and their protection and promotion can contribute positively to the preservation of the city's character. Despite Heraklion's urbanized form and lack of infrastructure, it has all the prerequisites to become a self-sufficient city, offering society sustainable development that will support every social, economic, and environmental sector.

References

- 1. Racham, O. (2004). The creation of the Cretan landscape. Heraklion: University of Crete Press.
- 2. Karetsou, A. (2008). Heraklion: The unknown history of the ancient city. Heraklion: Nea Kriti Editions.
- Andriotis, N., & Papadaki, E. (2023). Heraklion: A city of many stories. Heraklion: Vikelia Municipal Library Editions.
- 4. Evans, A. (1921). The Palace of Minos at Knossos.
- 5. Karatolias, N. (2017). Seismic hazard and risk assessment in the region of Crete. Geophysical Journal International, 209(2), 701-719.
- Kizilaslan, R. (2011). The impact of Venetian and Ottoman architecture on the urban development of Heraklion. Mediterranean Archaeology and Archaeometry, 11(3), 51-64.
- Papadopoulos, G. A. (2011). A Seismic History of Crete: The Hellenic Arc and Trench: Earthquakes and Tsunamis: 2000 BC-2011 AD. Ocelotos publications.
- 8. Doukakis, E. (2004). Accelerated sea level rise and coastal vulnerability in the Hersonisos coastal region (Crete, Greece). Mediterranean Marine Science, 5(1), 35-42.

- 9. Tzobanaki, Ch. (2012) [1996]. Handakas: The city and the walls (2nd ed.). Heraklion: Vikelia Municipal Library of Heraklion, pp. 9-10
- 10. Xanthoudidis, S. (1981). History of Crete. Athens: Kouloura Editions. https://www.candiadoc.gr/2024/11/24.
- 11. Kalfas, D., Kalogiannidis, S., Chatzitheodoridis, F., & Toska, E. (2023). Urbanization and land use planning for achieving the sustainable development goals (SDGs): A case study of Greece. Urban Science, 7(2), 43.
- 12. Government Gazette of the Hellenic Republic. (2002). Law No. 1650, On the Protection of the Environment, Issue 160, 16 October 1986, pp. 3003-3030.
- 13. Government Gazette of the Hellenic Republic. (1986). Law No. 3028, On the Protection of Antiquities and Cultural Heritage, Issue 153, pp. 3257-3272.
- 14. Skordalaki, Th. (2011). Strategic plan for the development of the primary sector and management of its products in the region of Crete. Presentation, October 2011.
- 15. Authority, H. S. (2014). Hellenic Statistical Authority.
- 16. Greek Tourism Organization (EOT). (2003). Tourism development study of the region of Crete. October 2003.
- 17. Panagiotakis, N. (1987). The Cretan period of the life of Domenikos Theotokopoulos.

Copyright: ©2025 Michelaki Eleftheria. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.