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## **Accessible tourism: The Seatrac on the Athenian Riviera**

**Evangelia Kasimati<sup>\*</sup>, Panagiota Dionysopoulou<sup>†</sup>, Irimi Detsi<sup>‡</sup>**

### **Abstract**

Accessible tourism is about making it easy for everyone to enjoy tourism experiences and it has greatly increased over the years. In the European Union, accessible tourism generates €400 billion revenues per annum and is expected to grow annually by 1% for the coming years (European Commission, 2029). Greece, as a well-known tourist destination, has a government priority to ensure access to tourism for all. Towards this direction, a Seatrac mechanism has been developed during the last years to offer unassisted sea access to people with disabilities and mobility issues. For this purpose, the paper focuses on the Seatrac located in the Athenian Riviera. For its better examination, a qualitative and quantitative analysis was conducted, with the methodological approach to be based on questionnaires. Among our findings is that Seatrac has been characterized as an efficient tool for citizens and tourists with disability problems in many aspects of their lives, as well as in seaside activities. Since the academic literature is extremely limited on this topic, our findings are considered useful to the travelers with disabilities as well as to policy makers in the public and private sector.

**JEL classifications:** E290, L830, O100, R150

**Keywords:** Accessible tourism, Seatrac, Greece, Athenian Riviera, mobility issues

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## **1. Introduction**

Accessible tourism is a particularly growing industry worldwide and it enables all people to participate in and enjoy tourism experiences globally. According to the academic literature, accessible tourism covers physical impairments, activity limitations and restrictions to participation. Although some disabilities are visible, many are not, as they can be caused by long-term physical, mental, intellectual, or sensory impairments. In addition to people with disabilities, accessible tourism applies to all other people who may benefit from accessible infrastructures, including elderly people, those carrying heavy luggage and parents with small children. Accessible tourism is thus relevant for anyone who needs special support when travelling, including senior citizens (UNWTO, 2016). Accessibility issues can arise for people of any age. Like everyone else, people with disabilities have the right to travel anywhere in the world (Kasimati & Ioakeimides, 2019). People with health problems are the largest minority worldwide (around 65 million people) (WHO, 2022), while the people with mobility problems are considered a large proportion of it. Karagkounis (2019) mentions that one in five adults will experience a mobility problem during his lifetime, due to an operation or something else, such as an illness. Considering the aging of the population and the improvement in the quality of life, it is expected the trips to increase about 26% in 2030 (Doxiadis et al., 2021). On the other side, people have missed family vacations due to Covid-19. Therefore, it is expected to be a growth in vacations including the elderly and this will impact the accessible tourism (Zouni et al., 2021).

Greece, as a tourist destination, is doing some steps to develop accessibility, but the Greek private sector is not willing to take investment risks by making infrastructures, and for this reason the burden shifts to the public sector. Kasimati and Ioakeimidis (2019) presents that on one side, there is the academic community, which recognizes accessible tourism as an emerging market with a significant potential. On the other side, however, there are companies which are not willing to make any investment risk by building accessible facilities, even though they recognize the lack. The purpose of this paper is to examine the accessible tourism in Greece, focusing on the area of Athenian Riviera. More specifically, this research concentrates on the Athenian Riviera's Seatrac that offers unassisted sea access to people with mobility issues and disabilities. The structure of the paper is as follows: Section 2 includes the literature review on the accessible tourism and the case of Greece. Section 3 presents the methodological approach, the availability of data and the research questions. Section 4 shows the empirical results, pointing out that Seatrac is an efficient tool for citizens with mobility problems in many aspects of their lives, as well as in seaside activities. The last section includes the research's conclusions, its limitations and proposals for future research.

## **2. Literature review**

In Greece, accessibility has not been investigated sufficiently, in contrary with many European countries where there has been a discussion for a long time ago. At an international level, research has been conducted by Linderová (2015) in South Bohemia, who has studied the accessibility of the local hotels, while Poria et al. (2009) have examined the visual accessibility of museums in Israel. In addition, existing academic literature mentions that people with disability are facing several problems in many different social activities and in tourism too. For instance, a small number of disabled individuals have been employed in the tourist sector (Darcy & Daruwalla, 1999). Concerning Greece, research has been conducted by Dimou and Velissariou (2016) regarding accessibility problems on the island of Crete and by Kasimati and Ioakeimidis (2019), examining the accessible tourism in Greece. Darcy and Buhalis (2011), points out that collaboration with tourism professionals is required to achieve satisfaction of the needs of people who have mobility, hearing, vision and/or mental needs. A disabled person has the same needs and desires as any other person and often due to circumstances they are forced to sacrifice holidays. For this reason, the tourism industry seems to recognize the wishes and needs of these specific groups, but additionally because of the Human Rights, created the idea of accessible tourism (Yau et al., 2004). Accessible tourism is, therefore, governed by the values of independence, equality, and dignity and its purpose is the continuous improvement of the service experience of the tourists (Darcy & Buhalis, 2011).Facilitating access to tourists with mobility difficulties is crucial to the development of the tourism product (Loi & Kong, 2010).

There is a perception that accessibility only benefits people with disabilities. This belief, although is a quite common, it is not entirely true. Apart from the disabled people, there are other groups that are benefited from accessible tourism, like the elderly. There is an acceleration increase in the number of elderly people on the planet. Developed countries have a large increase in the elderly population, which is mainly due to the low fertility rates that have existed in these countries since 1970. Women there also tend to focus on career, as a consequence they are having too late children or not at all (Deloitte, 2015). Greece is an enchanting destination with an abundance of heavenly beaches and a great number of attractions, based on the 3S slogan "Sun-Sea-Sand". The country is full of beautiful places that, through images, go around the world, impressing even to the most demanding travelers (Prochaska & DiClemente, 1983). However, the country might not have the proper infrastructure, even though it is preferred by many tourists for its balanced climate combined with the lack of humidity. In addition, the level of disability infrastructure is not satisfactory, as the country is not fully accessible. As the year 2003 was considered a European Year of the Disabled, Greece was forced to take a more serious look at the

issue. Later, the accessible tourism was recognized, and due to the Law 4074/2012, the program "Tourism for All" and the International Declaration of Rights of Persons with Disabilities were made. Towards this direction, there is some infrastructure well built to accommodate citizens with mobility difficulties, but it is unknown to the target audience (Scottish Executive, 2000). Seatrac is one of this infrastructures offered on the Athenian Riviera. Athens Riviera is the coastal area in the southern suburbs of Athens, Greece from Piraeus to Sounio and Lavrio. It is located about 16 km, from downtown Athens stretching from the southern suburbs of Athens to the southernmost points of Attica. The mission of Seatrac is twofold: reduce the physical hassle of going to the beach for people with mobility challenges while also increasing user autonomy. It's why the ramp<sup>1</sup> is intentionally designed to be customizable and easy to operate, so users can have "independent unassisted sea access." While the effort of Greece fosters inclusivity and bring awareness for people with mobility impairments, Patterson et al. (2012) points out that what characterizes Greece is the non-acceptance to the implementation of laws by citizens, the lack of implementation of the legislation, and the lack of education on equality and the human rights relating to access.

### **3. Methodology**

The methodological approach of this research is based on the collection of questionnaires. The questionnaire is structured with the help of Darcy & Daruwalla's research (1999), Buhalis and Darcy (2011) and Poli (2019). The survey was conducted during the period between February 13<sup>th</sup> up to March 28<sup>th</sup> of 2022. Eighty-four questionnaires were answered. The respondents were mainly disabled people, including the elderly. The selection was random, and anyone could answer the questionnaire with a disability problem, even if he was not a resident of Athens. Standard statistical tools from the Microsoft office were used to proceed with the quantitative analysis of the questionnaire's results. In addition, the aim of this research is to examine the following research hypothesis:

(a) is the Seatrac in the Athenian Riviera a useful and efficient tool for disabled people?

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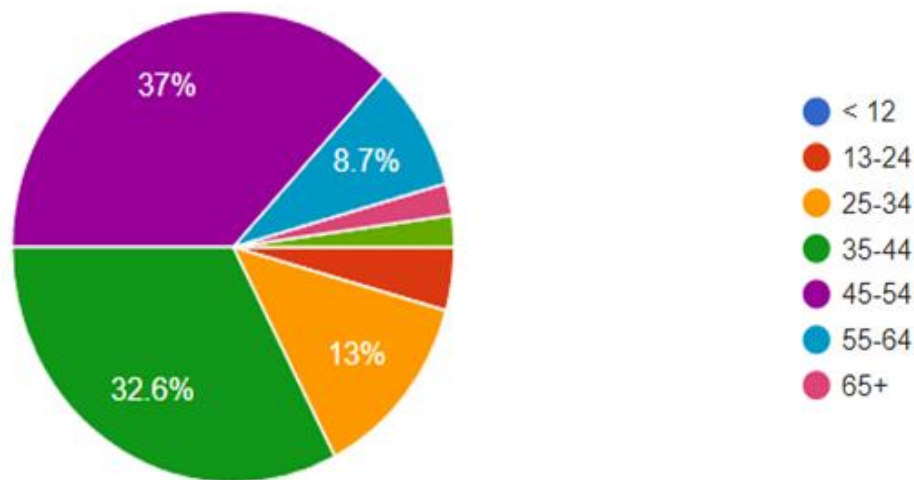
<sup>1</sup>It is noteworthy to mention that a ramp does not make any point accessible. A point is considered accessible when it meets certain conditions, and it has a set of infrastructure both at the building level and in public spaces such as squares and sidewalks (Andreasen, 1995). Adequate dimensions are required on sidewalks, elevators, and ramps. Also, there should be an interconnection of accessible points, so that the wheelchair user could move effortlessly. In Greece, there are some cities and regions that considered accessible. Anyone can consult the ESAMEA travel access guide (Poli, 2019).

For this purpose, the questionnaire was divided into two main sections. The first section included some demographic questions concerning gender, age, level of education, employment. In this section, there were also questions for the condition of the respondents, such as "If you are in a wheelchair", "Is there any other disability other than movement disability?" "Do you think swimming makes you strong?". The second section related to Seatrac mechanism, focusing on whether they have heard about this and whether they have used it. In this section, there were also some psychological questions about their satisfaction of Seatrac and what is their perception about it.

#### 4. Results

The main results of our empirical analysis are presented below. Figure 1 show the ages of respondents. The highest percentage (32.6%) seems to between 35 to 44 years old.

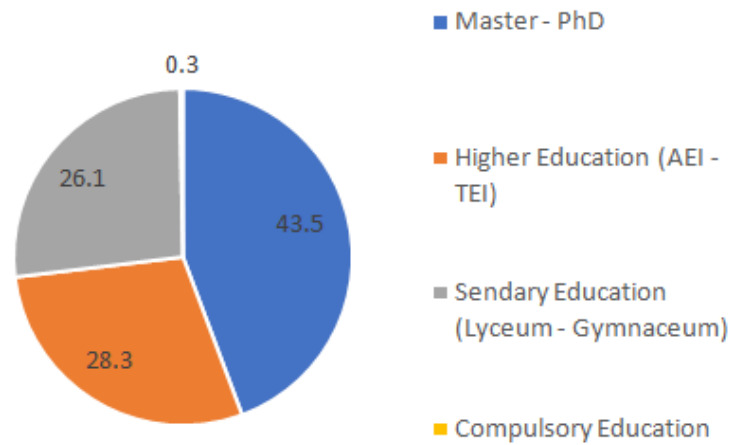
**Figure 1: Ages of respondents**



**Source:** Authors' own calculations.

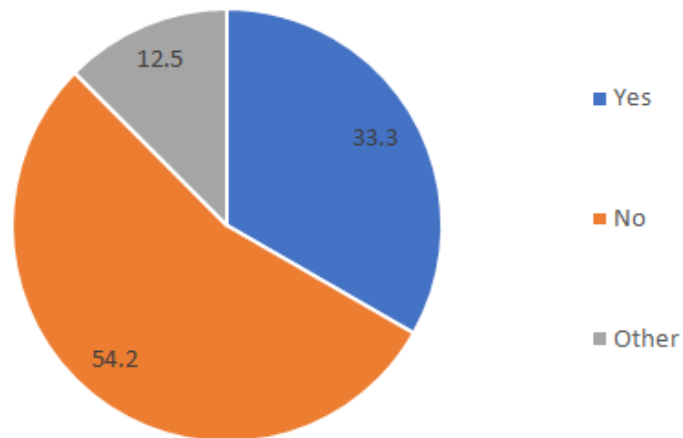
An important finding in this research is the level of education of the correspondents. Most of them had either a master or a PhD degree. One correspondent was graduate of compulsory (primary) education (Figure 2). Another question of our survey was whether the respondents were working, full time or part time. It was observed that the largest percentage answered negatively, with two only respondents to have retired. There is a rate of 12.5% which responded "other". It is assumed that they rely on the various benefits from the government and in general on their family and other various benefits (Figure 3).

**Figure 2: Level of education**



**Source:** Authors' own calculations.

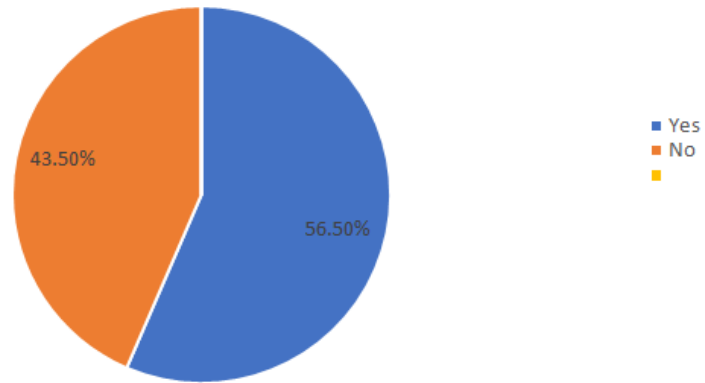
**Figure 3: Existence of work**



**Source:** Authors' own calculations.

Figure 4 shows that the respondents and users of Seatrac, are not all wheelchair users, as a 43.5 percentage answered that they do not use a wheelchair.

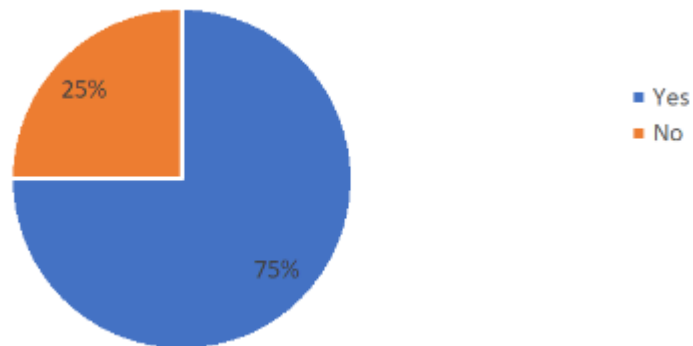
**Figure 4: Use of wheelchair**



**Source:** Authors' own calculations.

Figure 5 shows the results of the question "Is there another disability than in mobility?". One could answer positively or negatively. Since 75% answered positively, it was figured out through interviews and qualitative research that these people's other disabilities referred to various neurological diseases, visual (e.g., cataracts), diabetes mellitus, etc.

**Figure 5: Existence of other disability**

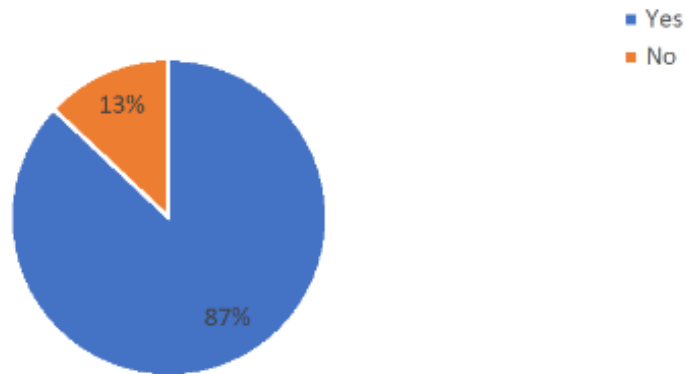


**Source:** Authors' own calculations.

The next question was whether the respondents knew about the Seatrac mechanism. Figure 6 shows that 87% (73 people) of the respondents knew the mechanism. The highest percentage could be explained by the fact the question was accompanied by a photo with the Seatrac mechanism. At the question "Do you know how to use Seatrac?", a 67.4% answered positively (56 people).



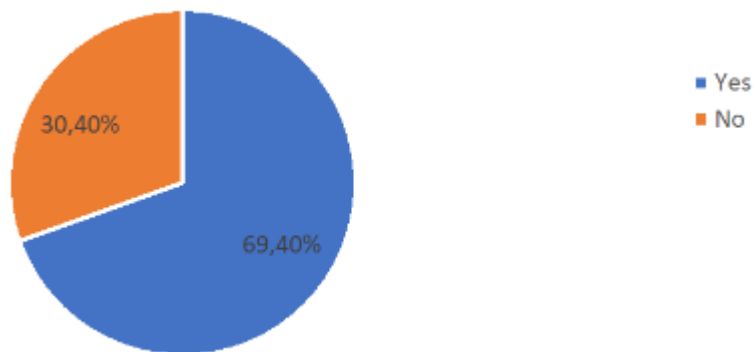
**Figure 6: Recognition of Seatrac**



**Source:** Authors' own calculations.

The next question referred to whether the respondents are aware in which municipalities of the Athenian Riviera the Seatrac is placed during the summer months. The respondents were asked to choose between "Yes" or "No". The results were mixed as a 43.5% answered that they knew in which municipalities of the Athenian Riviera Seatrac is placed during the summer months, while a 56.5% answered negatively. Concerning the question "If you know about Seatrac and find yourself on a beach where it is installed, do you prefer to use it or are you shy/afraid?", a 65.2% (55 people) answered that they were embarrassed or afraid to use the mechanism even though they knew its existence. In addition, even though a 69.4% know that the Seatrac service is free (Figure 7), the respondents do not choose it. This seems to be related to the high percentage of the respondents who feel shy to use Seatrac.

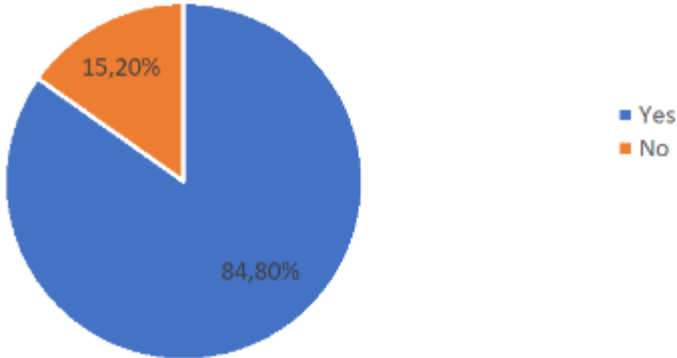
**Figure 7: Knowledge that Seatrac is free**



**Source:** Authors' own calculations.

The research proceeded with the use of Seatrac by asking a question related with its accompanied facilities, such as showers, disabled toilets, etc. The findings show that an 84.8% (71 people) knew that the municipalities provide other facilities, alongside with the Seatrac (Figure 8).

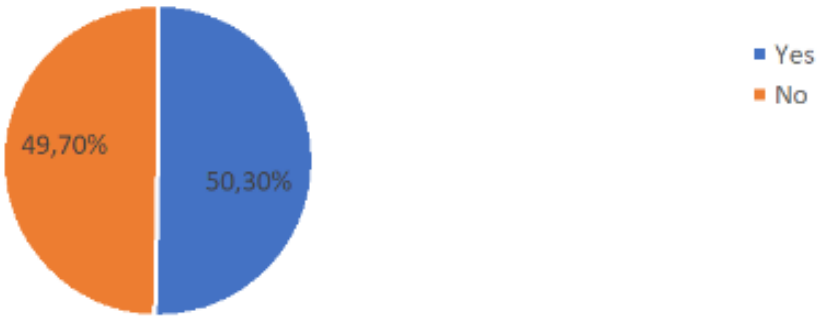
**Figure 8: Knowledge of other facilities alongside Seatrac**



**Source:** Authors' own calculations.

Figure 9 presents the results on the question: "Before organizing your summer vacation or a day trip to the sea will you look for information about the existence of the Seatrac installation in the area?", with a 50.3% answering yes.

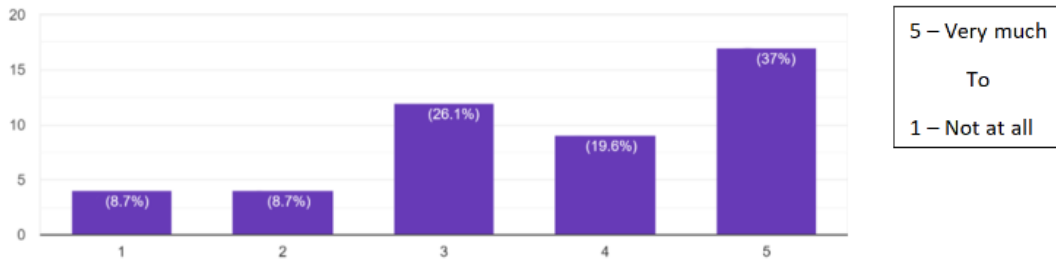
**Figure 9: Information about Seatrac before trip**



**Source:** Authors' own calculations.

Figure 10 presents some marketing findings. On the question: "How satisfied are you from using Seatrac?", the answers were mixed. Although the majority said they were fairly or very satisfied with it, a percentage of 26.1% (21 people) responded moderately. This indicates a moderate attitude towards the mechanism.

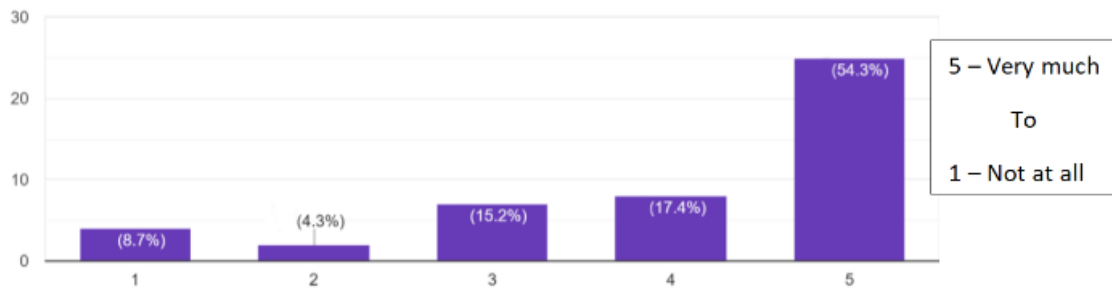
**Figure 10: Recognition of Seatrac**



**Source:** Authors' own calculations.

Figure 11 presents the results from the question "How likely are you to choose to use Seatrac in the future?", where a 54.3% (43 people) answered very much.

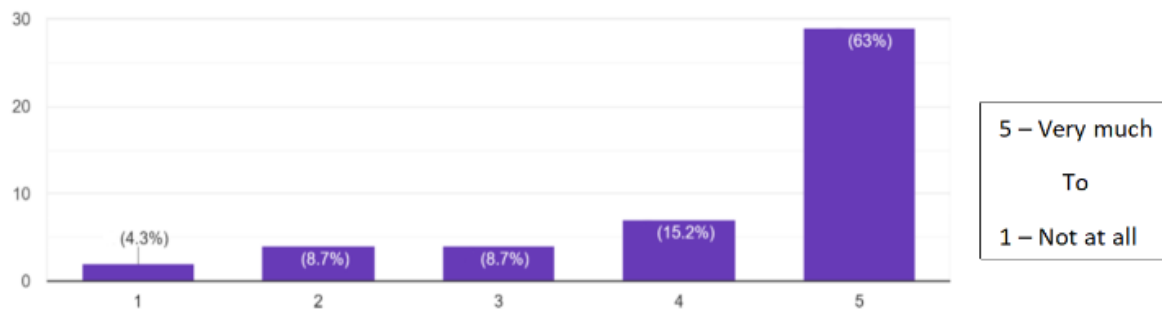
**Figure 11: Chance to use Seatrac in the future**



**Source:** Authors' own calculations.

At the question "How likely are you to recommend the Seatrac to another person with a mobility disability?", the results show that the majority of respondents answered particularly positively, in favor of Seatrac (Figure 12).

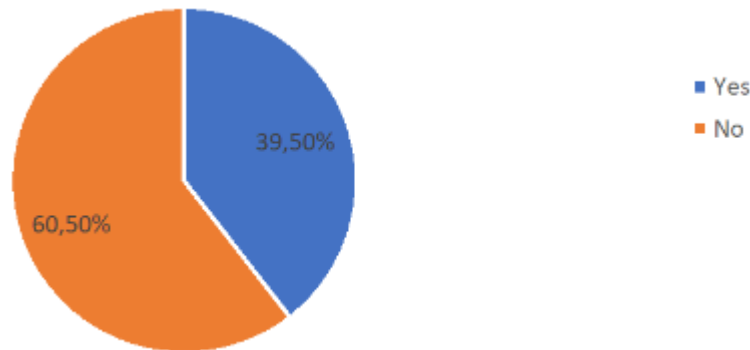
**Figure 12: Chance of recommendation to another person**



**Source:** Authors' own calculations.

At the last question "Have you used the Seatrac other than the Athenian Riviera?", only a 39.5% answered positively, meaning that they have not used the mechanism elsewhere (Figure 13).

**Figure 13: Use of Seatrac elsewhere**



**Source:** Authors' own calculations.

## 5. Conclusions

The growing population of elderly and disabled people around the world needs special support and services, while tourism products and services are generally poorly prepared to meet the needs of this group of people. Disabled people want to enjoy the beautiful Greek beaches and the sea like any other healthy person. To help to this direction, the Greek public sector has developed the Seatrac, a mechanism helping people with disabilities, which is located in the Athenian Riviera. This paper focused on the Seatrac and investigated whether it was an efficient and useful tool for the disabled people. Through the collection of questionnaires, our research showed mainly that:

- people with mobility problems are relatively satisfied from the Seatrac.
- the majority of the respondents recognize the Seatrac and they are aware of what other services are provided alongside with it.
- the majority would like to use it in the future, while they recommend it to other disabled people.

Between the limitations of the research is that the sample is extremely small, and our conclusions might not be robust. In addition, the questionnaire was mainly completed by people with disabilities and elderly people, so other groups of the population with mobility problems belonging to Seatrac users, such as pregnant women and people with temporary mobility problems are not included. Finally, the research did not include the distinction between the disabled tourists and the disabled locals, where the conclusions could be different for these two groups of disabled people. The last two could be some proposals for future research, which are expected to improve further the quality of our empirical findings. However,

this research on the Athenian Riviera's Seatrac has a value added to the existing academic literature, as no other study, to our knowledge, has been conducted before. Since the academic literature is extremely limited on this topic, our findings are considered useful to the travelers with disabilities as well as to policy makers in the public and private sector.

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## Appendix

### 1. What is Seatrac<sup>2</sup>

The Seatrac is essentially a custom wheelchair on two rails that goes into the water. It uses exclusively solar energy, and it is a solution for people with mobility problems to enter the sea independently. It is a great incentive for them to socialize and it is for free. This is good both for them and for the family members who take care of them. The picture is quite helpful to understand what it is.

**Figure A1: Seatrac**



**Source:** Seatrac.gr.

### 2. How it was created

TOBEA created Seatrac in 2012 thanks to the public sector, the prefecture (at that time) of Achaia and the University of Patras, the original idea became a reality. TOBEA executives were students then and they wanted to help a friend of them that moved with wheelchairs and loved swimming at the sea, but there were not any solutions.

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<sup>2</sup>We recommend for more information: SEATRAC | Seatrac.gr and Making Waves For Those With Mobility Issues with SEATRAC | TOBEA.



### 3. How it is used

1. The user goes next to the Seatrac seat if it is not at the starting point and he presses the button or calls the operator to call it.
2. He boards and sits in the center of the chair.
3. He places his feet in the center of the footrest and must not touch the rails.
4. Checks that the route is clear and he presses the second button on the remote control.
5. When it reaches the end of the route, he disembarks and swims.

For the return:

6. Uses the handrail to sit back to the seat.
7. Before returning to the shore, he checks that the route is clear and presses the right button if his is the person in charge.

**Figure A.2: Mainly parts of Seatrac**



**Source:** Seatrac.gr - Authors' own process.

### 4. Municipalities and benefits

The Athenian Riviera starts from Piraeus and reaches Sounio. But the mechanisms of Seatrac are installed from Piraeus to Anavyssos, so someone only can find them on 9 beaches. Along with the Seatrac, the municipalities also offer some benefits to facilitate people with mobility problems. These are:

- Parking
- Corridor
- Chemical toilet

- Changing room
- Shading
- Shower

It must be emphasized that not all municipalities have the same facilities. Additionally, Seatrac is only installed during the summer season, so not all are operational. The ones that are in demand and are in top 5, are those located on the beaches of Athenian Riviera. For example, the beach of Voula which is at number 4 but with the only facilities of the parking and the corridor offered and those of Glyfada which is at the top offering all the extra benefits.