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DEPARTMENT OF
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“New Skills for Students in Environmental
Decision Making Process”

“Νέες Δεξιότητες Μαθητών στην Λήψη
Περιβαλλοντικών Αποφάσεων”

PhD Dissertation

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New Skills for Students in Environmental Decision-Making Process

This PhD Dissertation aimed to provide a different educational approach, giving young people the necessary skills to become capable environmental stewards through an innovative educational tool. The whole process started with the study of the local society of the Greek island of Skyros. The interesting thing was that the citizens of the island already had an environmentally model port and were looking for the development of their place. Until a study on the uncontrolled installation of a wind turbine park united their voices for proper and comprehensive knowledge, active participation, and dynamic involvement in environmental decision-making.

Inspired hereby, we started to design a research quest to be able to deliver the necessary skills that active citizens of a small society need to be competent environmental decision-makers. Based on the initial harvesting of the results and the assessment of the community, the results showed the need for their active participation towards critical environmental issues. Their big bet was to gain knowledge and attitudes. At the same time, the port of Skyros, Linaria, offered the ideal field for applying environmental attitudes and behaviors, through place attachment.

In conclusion, we concluded that there is a need to create an environmental awareness campaign, with the Port of Linaria as its scope. The gathering of all the data and the presentation of the results, at each step, yielded publications in prestigious journals, volumes, and conferences. Below, three studies are presented throughout the research process. The product of this PhD Dissertation offers the opportunity through the collective work of six years to disseminate environmental awareness skills in the classrooms through an environmental education kit. The final product is an environmental education manual based on the excellent environmental image of the Port of Linaria.

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My environmental curiosity was inspired by the people with whom I have spent, since 2012, both summers and winters, assessing the potential needs for successful responsible environmental behaviour, which could be expressed by the young ones. To all of YOU being next to me I indelicate this kit. My supervisor Professor Constantina Skanavis trusted and introduced me to her inspiring world, THANK YOU! All of my Dissertation Committee members: Associate Professor K. Evangelinos, Professor G.Zalidis, Professor P.G.Dimitrakopoulos, Assistant Professor E.Papanis, Assistant Professor E.Sakellari, and Professor Th.Alexopoulos are at the top of my appreciation list. Thank you ALL for your help and support! All the Ambassadors of the SKYROS Project and the ones from the environmental education field, who participated in the assessment of the EE Kit, thank you for your contribution! This educational experience couldn't be true without my family. Thank you for your encouragement all these years!

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Abstract

Globally, the humanity faces serious issues that, ironically, all of them are created by the most intelligent inhabitants of our planet, the people. Climate change, overpopulation, pollution, environmental degradation, poverty and pandemics are some of the environmental concerns of our days. It is indispensable, to update the cultural software of our society and to cultivate an attitude of responsibility, consciousness and active environmental participation. This PhD dissertation provides an educational product and it is optimistic to be a powerful tool of environmental awareness. It is starting from a small Greek port and it builds the faith that it can travel around the world and creating environmental sensibilities for active participation in the citizens of tomorrow.

On the Island of Skyros, the port community of Linaria promotes an exemplary environmental image, through the green practices and innovations created by the port authority. This image was a point of environmental awareness of the local community and its visitors. Since 2015, a network of supporters has been established and they strongly believe that humans and nature can live in harmony. Three public sectors have established an eco-community, which hosts students and volunteers from Greece and other countries, in order to promote a new eco-lifestyle, known as "SKYROS Project". Through environmental actions, this program strengthens the environmental awareness of locals and aims to spread the message of environmental awareness. Furthermore, educates and transforms the upcoming generations into environmentally responsible decision-makers.

This PhD thesis is based on the presentation of the environmental campaign SKYROS Project and its footprint on the science of environmental communication and education. At the same time, through two key actions of Project SKYROS, the "Day Environmental Camp Port" and "SKYROS Travels", it aims to provide an educational product. These activities have been impressed by children aged 7-13, since 2015. SKYROS Project "has travelled" the Port of Linaria from America up to Japan. Environmental Educators, certificated by the Summer Academy at Skyros Island, have been educating the youth inside and outside the port of Linaria. This Doctoral Dissertation supports the need for having an environmental education kit.

This kit is known as "The Green Port promotes Active Citizens" and consists mainly of seven thematic cards, which cover importance environmental issues. Educators using this environmental education Kit present the green port of Skyros and hook on it discussions where environmental theory its being practical in real time conditions. Following this, students engage in activities base it on each thematic card. The kit includes a book of guidelines for environmental educators and a memory stick with accompanying interactive material.

The environmental educational kit was assessed by Greek Experts in the field. The data collected from the administered interviews portrayed the perception of the chosen environmental educators and the potential success of this innovative environmental education approach based on the place attachment of the port.

Keywords: SKYROS Project, Environmental Education Kit, Environmental Awareness, Environmental Responsible Behavior, Eco-Port Community.

Περίληψη

Σε παγκόσμιο επίπεδο, η ανθρωπότητα αντιμετωπίζει σοβαρά ζητήματα, τα οποία έχει δημιουργήσει η ίδια. Η κλιματική αλλαγή, ο υπερπληθυσμός, η ρύπανση, η υποβάθμιση του περιβάλλοντος, η φτώχεια και οι πανδημίες είναι μερικές από τις περιβαλλοντικές ανησυχίες των ημερών μας. Είναι αναγκαίο, να πραγματοποιήσουμε μια ενημέρωση στο πολιτιστικό λογισμικό στις κοινωνίες μας και να καλλιεργήσουμε μια στάση ευθύνης, συνείδησης και ενεργούς συμμετοχής απέναντι σε αυτά. Η παρούσα διδακτορική διατριβή προσφέρει ένα εκπαιδευτικό προϊόν και αισιοδοξεί να αποτελέσει ένα ισχυρό εργαλείο περιβαλλοντικής ευαισθητοποίησης. Με οδηγό ένα μικρό ελληνικό λιμάνι, έχει την πίστη ότι θα ταξιδέψει σε όλο τον κόσμο και θα δημιουργήσει περιβαλλοντικά ερεθίσματα προς την ενεργή συμμετοχή των πολιτών του μέλλοντος.

Στο νησί της Σκύρου, η λιμενική κοινότητα της Λιναριάς προωθεί μια υποδειγματική περιβαλλοντική εικόνα, μέσω των πράσινων πρακτικών και καινοτομιών που ακολουθούνται από την λιμενική αρχή. Αυτή η εικόνα ήταν ένα σημείο περιβαλλοντικής ευαισθητοποίησης της τοπικής κοινότητας και των επισκεπτών της. Από το 2015, έχει δημιουργηθεί ένα δίκτυο υποστηρικτών, στο οποίο πιστεύουν ακράδαντα ότι ο άνθρωπος και η φύση μπορούν να ζουν αρμονικά. Τρεις δημόσιοι φορείς έχουν δημιουργήσει μια οικολογική κοινότητα, η οποία φιλοξενεί φοιτητές και εθελοντές από την Ελλάδα και άλλες χώρες, προκειμένου να προωθήσει έναν νέο οικολογικό τρόπο ζωής, γνωστή ως «SKYROS Project». Μέσω των περιβαλλοντικών δράσεων του προγράμματος, ενισχύεται η περιβαλλοντική ευαισθητοποίηση των ντόπιων και των επισκεπτών, και στοχεύετε η διάδοση του μηνύματος της περιβαλλοντικής ευαισθητοποίησης. Επιπλέον εκπαιδεύει τις επερχόμενες γενιές σε υπεύθυνους πολίτες, ικανούς λήπτες περιβαλλοντικών αποφάσεων.

Αυτή η διδακτορική διατριβή βασίζεται στην παρουσίαση της περιβαλλοντικής καμπάνιας SKYROS Project και του αποτυπώματός της επιστήμη της περιβαλλοντική επικοινωνίας και εκπαίδευσης. Παράλληλα, μέσα από δύο βασικές δραστηριότητες του Project SKYROS, την "Ημερήσια Περιβαλλοντική Κατασκήνωση Λιμάνι" και "Το SKYROS Ταξιδεύει" επιδιώκει να δώσει ένα εκπαιδευτικό προϊόν. Αυτές οι δραστηριότητες έχουν εντυπωσιάσει παιδιά ηλικίας 7-13 ετών, από το 2015. Το SKYROS Project κατάφερε να «ταξιδέψει» το λιμάνι της Λιναριάς από την Αμερική έως την Ιαπωνία. Οι πιστοποιημένοι περιβαλλοντικοί εκπαιδευτές, από την Θερινή Ακαδημία που πραγματοποιείται στο λιμάνι της Λιναριάς, εκπαιδεύουν νέους εντός και εκτός του κόλπου του λιμένα. Ως εκ τούτου, η παρούσα διδακτορική διατριβή υποστηρίζει την ανάγκη δημιουργίας ενός εγχειριδίου περιβαλλοντικής εκπαίδευσης.

Αυτό το εγχειρίδιο φέρει τον τίτλο "Το Πράσινο Λιμάνι προωθεί Ενεργούς Πολίτες" και αποτελείται κυρίως από επτά θεματικές κάρτες, οι οποίες θίγουν σημαντικά περιβαλλοντικά ζητήματα. Οι εκπαιδευτές, που χρησιμοποιούν το εγχειρίδιο αυτό, παρουσιάζουν το πράσινο λιμάνι της Σκύρου και «μεταφέρουν» τους εκπαιδευόμενους στο λιμάνι της Λιναριάς, όπου η περιβαλλοντική θεωρία γίνεται πράξη, σε πραγματικές συνθήκες. Έπειτα, οι εκπαιδευόμενοι εκπαιδεύονται, μέσω δραστηριοτήτων που προτείνει η κάθε θεματική κάρτα. Το εγχειρίδιο περιλαμβάνει ένα βιβλίο οδηγιών για τον περιβαλλοντικό εκπαιδευτή και ένα memory stick με συνοδευτικό διαδραστικό υλικό.

Το εγχειρίδιο περιβαλλοντικής εκπαίδευσης αξιολογήθηκε από Έλληνες περιβαλλοντικούς εκπαιδευτές, έμπειρους στο πεδίο και στην δημιουργία προγραμμάτων περιβαλλοντικής εκπαίδευσης. Τα δεδομένα που συλλέχθηκαν από τις συνεντεύξεις απεικόνισαν την αντίληψη τους ως προς την επιλογή του εγχειριδίου και την πιθανή επιτυχία μιας καινοτόμου εκπαιδευτικής προσέγγισης για περιβαλλοντική εκπαίδευση, βασιζόμενη στην επαφή με το λιμάνι.

Λέξεις Κλειδιά: SKYROS Project, Πακέτο Περιβαλλοντικής Εκπαίδευσης, Περιβαλλοντική Ευαισθητοποίηση, Περιβαλλοντικά Υπεύθυνη Συμπεριφορά, Κοινότητα Οικολογικού Λιμένα.

Chapter A. Skyros Island in the Front Line of Sustainable Development Promotion

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Abstract

In Skyros Island, three public sectors have established an eco-community, which hosts students and volunteers from Greece and other countries, in order to promote a new eco-lifestyle, known as “SKYROS Ecovillage” model. Through its actions, it aims to spread the message of environmental awareness in order to educate and transform the upcoming generations into environmentally responsible decision makers. Since 2015, a network of supporters has been established and they strongly believe that humans and nature can live in harmony. It is indispensable, to update the cultural software of our society and to cultivate an attitude of responsibility, consciousness and active environmental participation. This paper provides an analysis of a paradigmatic approach of an environmentally successful innovative community, stationed at a Greek port.

Keywords

sustainable development • responsible environmental promotion • SKYROS Project • maritime tourism • eco community

1 Introduction

The issues, the world faces, are created by humans and we are in an agony trying to solve at least the ones we understand. Being complex problems, when we try to solve them, most of the times we create new ones. People need a sense of responsibility and conscience (Andersen and Björkman, 2017). Globalization, environmental degradation, overpopulation, rise of technology and the new lifestyle we endorse have altered our environmental perceptions and behavior. In search of a sustainable lifestyle, the Research Center of Environmental Communication and Education of the Department of Environment at the University of the Aegean collaborated with Skyros Port Authority. This partnership was seen as an intriguing opportunity which gave rise to the Environmental Campaign, named “SKYROS Project” through which, the aim is to spread environmental awareness and educate in a way that humans and nature can live in harmony. Since 2019, another academic institution, the University of West Attica, becomes the third public sector, which participates in SKYROS Project. The Department of Public and Community Health of the University of West Attica will play a vital role in Skyros Project by offering its knowhow on health promotion.

The island of Skyros is located in the archipelago of the Sporades. It is considered to be an island of crucial importance, as it is located in the heart of the Aegean Sea and connects many destinations together. Its port, Linaria, has been characterized as an environmentally sustainable small community that promotes responsible environmental behavior in the local community and among the visitors (Antonopoulos et al., 2015; Antonopoulos et al., 2017). Skyros Port Authority, as the qualified port management sector, has adopted sustainable agendas, where innovations are created with the goal of the completeness, the competitiveness and a strong environmental

image of the port (Antonopoulos, Skanavis and Plaka, 2017). Up until the touristic period of 2016, this practice has resulted to an increase of touristic arrivals up to 975% since 2010 (Antonopoulos et al., 2017). In the meantime, according to the gathered data of the Skyros Port Authority, in the summer of 2018, the arrivals spiked up to 1300%.

1.1 Building eco-philosophy in a port community

In Skyros Island, the strong environmental profile of Linaria Port compliments the needs of the research laboratory in order to test environmental awareness potential in real time set up, promoting in innovative ways Responsible Environmental Behavior to residents, tourists and program participants. This project began as an experiment and six years later, Skyros Project has become an environmental brand name. Participants discover their environmental identity through environmental actions based on educational protocols and research. This multi-awarded Skyros Project has enticed the attention around the world. The public sectors have managed to create an ecologically active community that hosts university students, volunteers, local community and maritime tourists in order to promote a new philosophy of an ecological lifestyle, known as the “SKYROS Eco-Community”. Participants become active decision makers, and safeguard the right to a healthy environment for all.

1.2. Marine Observatory of Skyros - Sustainable Tourism Observation Database

Skyros Project consists of 5 action pillars: Summer Academy for Environmental Educators, internships for students, participation in global educational events, environmental education actions and Sustainable Tourism Observation Database.

A Marine Observatory of Skyros has also been established since 2016 as a follow up of the Sustainable Tourism Observation Database.

The Sustainable Tourism Observatory is an effort of the World Tourism Organization (UNWTO), with the Global Observatories for Sustainable Program Tourism (GOST), to support the sustainability of tourist areas in order to be more economically, socially and environmentally sustainable (Karavitakis and Chondromatidou, 2016). The main goal was the development of tourism sustainability and boosting the perception of these areas, mainly into promoting elements of nature and the environment in general which are essentially the pillars of the tourism destinations identity, but also how they evolved over time (Karavitakis and Chondromatidou, 2016). Based on the above mentioned concept, the researchers of SKYROS Project established the 1st Sustainable Tourism Observatory of Skyros Island, in 2015.

The results of the above Observatory showed that the island of Skyros is occupied with a low level of tourism development of the infrastructure, the lack of organization by the institutions, the reduced promotion and exhibition of the cultural – natural beauty of the island etc. (Karavitakis and Chondromatidou, 2016). In contrast to the rest of the island of Skyros which shows low tourism (Karavitakis and

Chondromatidou, 2016), Linaria Port shows an increase of tourist arrival of yachts by 975% from 2010 (Antonopoulos et al., 2017). This port should be a standard for other small tourist ports of the Greek islands, whose operation is hampered by the economic crisis and its consequences (Antonopoulos et al., 2017). The results of the study led the Management Authority of Linaria Port to seek an evaluation of maritime tourism, through which they will promote the upgrade of the port while protecting marine and coastal environment. Finally, in collaboration with the University of the Aegean, the research of the First and Second Observatory of Maritime Tourism was carried out in summers of 2016 and 2017.

In this research the **3rd Marine Observatory** results will be demonstrated. In the first part, an overview will be presented, revolving around the themes of the sustainable touristic growth, marine observatories and sustainable port community of Skyros Island, based on SKYROS Project Campaign. Following that, in the second part, the methodology that was used for the 3rd Marine Observatory, the research questions and the research tools of this study will be analyzed. In the third part the results will be assessed. Finally, in the fourth part the conclusions of the research will be presented.

2 SKYROS Port Eco-Village: the successful model

Tourism is one of the largest and most dynamic sectors of the world economy noting continuous growth and diversification with the emergence of new countries – destinations on the world’s tourist map (UNTWO, 2015). According to the World Council for Sustainable Tourism, sustainable development is essential for managing touristic areas, to prevent adverse consequences as well as balancing the relationships between the local community, the environment, the expectations of visitors and tourism businesses. This balance requires the cooperation of both local and regional authorities, citizens and the private sector but also the creation of a development strategy and management of tourism’s development (Karavitakis and Chondromatidou, 2016). Sustainable tourism, based on the World Tourism Organization (UNWTO, 2015) is defined as “tourism that fully takes into account current and future economic, social and environmental impact, meeting the needs of the visitors, the industry, the environment and its host tourism communities”. Maritime tourism is one of the largest economies in the world with significant contribution to the touristic economies of those countries that have developed it (Hall, 2011).

Maritime tourism refers to the set of activities that are hosted or focused on marina environment and involve travelling away from one’s permanent residence (Orams, 1999). In Greece, maritime tourism tends to grow and is equally popular with tourists and the Greek population. The existing network that includes marinas, boat shelters even after the necessary changes for development and improvement, provides several marine tourism options, offering the visitor the pleasure of the sea route and the exploration of island and mainland areas of the country (Diakomihalis, 2017).

The port of Linaria, Skyros, is considered a small public port with marina facilities. It is a very recent phenomenon for marinas to be considered as tourist attractions which are related to the destination in which they are located (Favro and Kovacic, 2015). Arli (2012) describes marinas as tourism companies, which provide accommodation on private and commercial yachts or leisure crafts for their owners and their crew. Just like other travel destinations, marinas need to group together their customers in important departments, to match their own offered services by specific market segments (Hanlan et al., 2006). According to Heron and Juju (2012) marinas should create their own “unique sale proposal” to distinguish them from the rest.

According to the following, port of Linaria has managed to stand out as “the Blue Port with the Green Shade”, named such by the United Nations. With minimal financial resources and no permanent employees, the small port has been confirmed in recent years as a role model for small touristic ports. Every year it stands out through its facilities and services, leaving its mark as an innovation in the Greek marinas. The main categories of goods and services provided by marinas are fuel, lubricants, water, other supplies, equipment and reparations (Diakomihalis, 2007). The facilities of the Linaria port have adopted a pro – environmental behavior. Facilities such as the use of electronic scooters, photovoltaic installations, reduction of energy and water consumption, attract touristic interest and bring economic growth, but also respect the environment and community’s wellbeing.

The port emphasizes on sustainable development in tourism. All its facilities promote an innovative ecotourism. The adoption of responsible environmental behavior of all stakeholders (individuals, organizations etc.) is one of the key solutions for all modern societies and governments that support environmental protection (Andriopoulos et al 2017; Ganiaris et al. 2018). Environmentally responsible behavior of tourists limits or restricts damage to the ecological environment (Yen-Ting et al. 2014). The search for a sustainable lifestyle brought into light this Greek eco-community at Linaria Port. The idea of the Observatories’ actions was to collect data that would determine best practices. These data on tourism, report potential environmental pressure, which is of enormous value for preventing deterioration in an area of interest. Filling in comments from visitors in a guest book has proven to produce helpful information for environmental preservation and upgrading the port’s image. Therefore, the marine observatory, the tourist observatory and the individual comments from tourists create a portfolio based on which environmental protection can be practiced at all times (Skanavis et al., 2018). This paper emphasized on the last research based on the Marine Observation of summer 2019.

3 Methodology

The present paper evaluates and upgrades the touristic product of Skyros Port. So, based on the pre – existing research of previous years, the Tourism Observatory (2015 and 2018), the Marine Observatory (2016 and 2017), a new research on Maritime Tourism took place in summer of 2019.

The 1st Marine Observatory (Antonopoulos et al., 2017) was based on an existing study, by researchers of the Aegean University, Department of Shipping, which was focused on Cruise Tourism in Chios (Lekakou et al.,2011). After some necessary changes and adjustments, the first research was carried out, during the summer months of July and August 2016, in the Port of Skyros, Linaria. A questionnaire was distributed to the vessels that were docked in the Port. For a second consecutive year (2017), the 2nd Marine Observatory took place in the same methodology.

The Skyros Port Fund in collaboration with the University of West Attica carried out the research for the 3rd Marine Observatory. Also, this research was conducted by the researchers of the Laboratory of Environmental Communication and Education of the Department of Public and Community Health. The research began in the summer of 2019, at Linaria Port of Skyros Island, where questionnaires were distributed to a sample of 121 tourists that have docked during the period July – September 2019.

Even though the questionnaire that was distributed, was in the same format of the one distributed in 2016, necessary updates have been made. The respondents answered questions that were related to both services and sustainable development and innovation that take place in the port. The questionnaires turned out to draw the attention and be characterized as groundbreaking and innovative by the respondents.

The questionnaire was formulated and divided in two parts. It was guided by another standard questionnaire used elsewhere (Lekakou et al., 2011). The administered questionnaire was composed by two parts:

- The first part is about the Tourists' Profile.
- The second part is about the sojourn at the Port.

The main purpose of this research is to compare the results from the 1st and 2nd Marine Tourism Observatory with the current situation of the port as well as to evaluate or point out problems related to the benefits, services, any needed improvements and also new perspectives. Finally, the adaptation of a responsible environmental behavior was an issue of investigation.

4 Results

4.1 Tourists' Profile of Linaria Port

In the first part of the questionnaire, there were some questions about the participants' demographic data, so that the average tourist's profile could be portrayed.

As a result, the average tourist who visited the eco-community of Linaria Port was German (42%) and male (65%). The average visitor was at age of the range 56-65 years old (46%) and with higher education (80%). Also, with an annual income up to 20.001-40.000 (17%). The average tourist had an open sea skipper license (54%) and used private vessel (62%) without a skipper(60%).

The visitor went to vacation with own vessel more than once per year (66%), for more than 7 days at a time (91%) and visited 4 or more ports per holiday trip (86%). The average visitor considered sailing as a touristic activity and experience and moved between ports in archipelagoes travelling for maximum 8 hours per day (42%). The average tourist considered as very important the following services: easy and affordable mooring (41%), water supply (58%), Wi-Fi (27%), showering services (47%), WC (45%), resupplying (39%), protection from weather conditions (78%) and the environmental policy of the port.

The average tourist considered the following as important services: power supply (34%), reception base, help from the port's personnel, help from the customs' authorities, technical services, connectivity with the mainland of Greece, food services and additional touristic services. The visitor believed that the transportation services to the rest of the island and the information services were of moderate importance, and at the same time the average tourist believed that the outdoors' cinema, exercising services, creative activities for children, secretarial support and lodging are not as important. The average visitor stated that sailing satisfaction is based on the offered activities and general experience (83%).

4.2 Sojourn at Linaria Port

In the second part of the questionnaire regarding the first question "If they visited the island of Skyros for the first time" 62% responded positively, 36% answered they had visited the island before and a 2% didn't answer the question. The 81% stated that during their visit at Skyros, anchored in Linaria, 1% in Atsitsa, 1% in AgioFoka, 1% in Pefko and 1% in Lalari.

Regarding the overnight stays during their stay on the island, 46% had arranged one day, 37% for two days, 6% for three days, 3% for four days, 2% for seven days, 2% for ten days and only 1% for five days. In the end as it seemed, 22% spent the night only one day, 48% spent two days, 10% stayed on the island four days and finally 6% three days. Regarding the question "During your visit in Skyros, did you stay in a boat or accommodation" 95% replied on a boat while 5% left the answer blank.

Tourists were then asked to rate the facilities and amenities of the port. Starting with port security, 78% rated them at a high level, 20% at a satisfactory level and 2% had no answer. The water supply was considered by 95% of the tourists as high level, 3% as satisfactory while 2% did not answer. Subsequently, the sanitary facilities were rated by 77% at a high level, 17% considered them satisfactory, 3% had no answer and the remaining 3% left the answer blank. Then the tourists evaluated the rating facilities as high level by 78%, satisfactory by 14%, moderate by 3% and 5% did not answer.

Anchorage costs for 54% of the tourists were high, for 33% at a satisfactory level, for 3% were mediocre, 2% had no answer, while 8% left the answer blank. Port staff/ services were rated by 87% at a high level, 9% at a satisfactory level, 2% at a

moderate level, while the remaining 2% did not answer. Services from the customs authorities based on the 72% of the tourists were considered as high standard, 16% considered them satisfactory, 1% as moderate, 1% as bad/nonexistent while 8% of the tourists had no answer. Subsequently, the cleanliness of the port was judged by 86% to be at a high standard, 8% as moderate, 3% as satisfactory, while 1% did not answer. The bonding services were considered by 86% of the tourists as high level, 9% as satisfactory, 3% left the question blank while 2% had no answer.

Technical support services were rated by 39% of the tourists as high level, 19% did not have an answer, 17% left the question blank, 12% considered them as mediocre, 11% as satisfactory while only 2% assessed them as not satisfactory/ insufficient. Then, the connection to the port/transport services, were considered by 36% of the tourists as high level, 23% as moderate, 22% as satisfactory, 3% rated them as bad/nonexistent, 2% as unsatisfactory/insufficient, 9% did not have an answer, while 5% left the question blank. Information services were rated as high by 72% of the tourists, 23% as satisfactory, 2% as moderate while 3% left the answer blank. Regarding the environmental situation/port infrastructure, it was considered by 78% of the tourists as high level, 19% as satisfactory while only 3% rated it as moderate. Port facilities and equipment were 72% were considered 72% high, 25% satisfactory, 2% left the answer blank while 1% did not have any answer. At this point the tourists' comments about the facilities and amenities of the port should be mentioned:

“Everything was perfect”, “I did not expect such services in Linaria”, “The best port we have anchored”, “Best marina I can find in Greece”, “Excellent”, “Keep it up”, “Perfect Baths”, “Flawless”, “Well maintained port with friendly stuff”, “The number of the WC were insufficient” and “There was a bad smell like a sewage tank”

The evaluation of the facilities and the amenities of the port (Table1) was done with a rating scale of high level, satisfactory, moderate, unsatisfactory – inadequate and bad – nonexistent.

<i>Criteria</i>	<i>The Evaluation of Facilities</i>
Port Security	2%
Water and electricity supply	2%
Sanitary Facilities	3%
Anchorage cost	2%
Port/Staff Services	2%
Custom Authority services	8%
Port Cleanliness	1%
Mooring Services	2%
Technical Support Services	19%
Connection to the port/transport services	9%
Information Services	2%

Environmental situation/port infrastructure	3%
Port facilities and equipment	1%

Table 1: Facilities and amenities of the port assessment

To the question “It is known that the port is state-owned?” only 38% answered yes, the remaining 53% answered no, while 9% left the question blank. Their answers to the question “Do you know another port with similar benefits/services?” 72% had a negative answer, only 16% answered positively while 12% left the question blank. From those who answered yes, to continuation of the question “If yes, which one?” 25% mentioned Marina Sani, 13% mentioned the Dodecanese, 13% in the Cyclades, 12% in Hydra, 12% in Paros, 12% in Samos, while the remaining 13% didn’t answer the question.

Then, on the following question “Can you classify the port of Skyros, in relation to other Greek ports?” 75% judges it as excellent, 20% as very good, 2% as good while 3% left the question blank. “In relation to other European – International Ports?” 42% of the tourists rated it as excellent, the 36% as very good, 17% as good, 2% as satisfactory while 3% left the question unanswered.

In addition, tourists were asked to express their satisfaction on the products and services of Skyros. 89% of tourists described the behavior quality of the port staff as excellent, 6% as good, 3% as very good while 2% did not answer the question. The quality of services with others (shops, taverns, etc.) in the port of Linaria were rated 47% as very good, 23% as excellent, 20% as good, 5% satisfactory and 5% left the question blank. Regarding now the quality/price ratio of other services (shops, taverns, etc.) in Linaria Port, 52% rated it as very good, 20% as good, 16% as excellent, 1% as satisfactory while 11% left the question unanswered. The evaluation of services outside Linaria showed that 42% rated it as very good, 16% as excellent, 14% as good and 28% did not answer. The behavior quality of the residents and professionals in the Linaria area were rated by 42% of the tourists as very good, 33% as excellent, 16% left the answer blank, 8% rated it good while only 1% as satisfactory.

The tourists then evaluated the sights of the island and specifically 36% rated them as very good, 27% as excellent, 22% as good, 1% as satisfactory and the remaining 14% did not answer the question. Access to attractions, by 44% of the tourists was considered as very good, 30% as good, 9% as excellent, 2% as satisfactory, 1% as insufficient and the remaining 14% did not answer. They also had to evaluate the advertising information where 33% considered it very good, 17% excellent, 17% good and 33% did not answer to the question. The evaluation of the roads was estimated by 36% as very good, 16% as good, 11% as excellent, 8% as satisfactory, only 1% as insufficient while 28% left the question blank. Tourists also had to judge the beaches where 31% of them considered them excellent, 25% very good, 10% good, 3% insufficient and the remaining 31% left the answer unanswered. The cuisine

was judged by 51% of the tourists as very good, 19% as good, 14% as excellent and 16% left a blank answer. Tourists also rated the cleanliness where 47% considered it very good, 42% excellent, 2% good and 9% didn't answer the question.

The total quality of the touristic products of Skyros was evaluated by 56% as very good, 20% as excellent, 5% as good, 2% as satisfactory while 17% preferred not to answer the question.

5 Discussions and Conclusions

When a port incorporates environmentally friendly strategies and promotes a sustainable lifestyle, then tourism development rates exhibit a satisfactory increase. Linaria Port's continuous gathering of pertinent to tourism and environment data, generates useful results. Implementing, collating, interpreting and disseminating environmental information related to impacts from tourism activities, enables the wisely use of scientific information in the decision-making at all levels of port's operation. This small port community has understood and established practices through which a sustainable tourism is being promoted. Furthermore, circular economy in tourism can affect positively the planning and management of all small eco marina communities all over Greece (Fountas et al. 2018).

Every summer, the data obtained from the Marine Observatory of Skyros present an accurate base in the assessment of facilities and amenities of the Linaria port. Another point of interest is the extrapolation of information related to tourists' environmental consciousness intentions. The lifestyle that this port eco-community promotes acts as an interactive tool and promotes a new lifestyle based on environmental sustainability. The port of Linaria operates with high environmental standards, serving as an example for small touristic ports, promoting a unique ecotourism model and enforcing sustainable development.

The adoption of responsible environmental behavior of all stakeholders (society, individuals, organizations, governments, etc.) is one of the major elements if sustainability is the end goal (Andriopoulos et al. 2017; Ganiaris et al. 2018). The Port of Skyros Island is in the front line of this pro-environmental movement. SKYROS Project plays a crucial role in the promotion of a responsible environmental profile, while it gives a boost in building an eco-positive lifestyle in this port community. Creative environmental education projects delivered at the port, can promote environmentally responsible behavior for both visitors and residents (Antonopoulos et al. 2017).

The port community has an environmental identity, which attracts tourists to adapt and increase their own standards of environmental consciousness. When consumers participate in activities using simple materials and imagination, they develop unique experiences known as "creative experiences" (Richards and Wilson, 2006). This community has as a goal to environmentally empower all who meet it. It is also a way

of assisting people who might feel the urge to live ecologically and to discover their eco-ego.

The Eco-community of Skyros Port is introducing a way for a vacationing site for those interested to actively participate in the environmental protection and sustainable living during their personal time off (Ganiaris et al., 2018). At the same time, this port can be used as a learning and research environment, revealing new methods that can promote sustainable development in the tourism sector (Antonopoulos et al. 2017). In this way, Skyros Island is the unique Greek island, which promotes the Sustainable Development as a lifestyle. These practices are an environmental wake up signal for other small islands around the world. A new sustainable thinking needs to be established all over the tourist-oriented communities. The search for a sustainable lifestyle, focusing on the reduction of environmental threatening issues should be the end goal of the agenda of all governments and societies all over the world.

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Chapter B. Linaria Port: An Interactive Tool for Climate Change Awareness in Greece

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Abstract

In Greece, the port of Skyros Island, Linaria, is a small multi-awarded public port. United Nations has characterized it as the “blue port with a shade of green”, because Skyros Port Fund has adopted an environmentally sustainable agenda and has invested in innovations that make this port unique for its tourism and environmental high-end consideration. What has truly escalated the Linaria Port’s global reputation is the highly spoken cooperation of the Port Authority of Skyros with the University of the Aegean’s Department of Environment. The name of the above mentioned, academic collaboration is “SKYROS Project” and it has been in effect since 2015, mostly focusing on environmental campaigns that stimulate climate change awareness for locals and visitors. The SKYROS Project is generating data that are collected through the Tourist Observatory and Maritime Observatory that have been established at the Port. Furthermore, a Guests’ Book records the comments visitors make. As a result, a holistic picture of the environmental and tourism consequences and/or good practices is gathered on yearly basis. In an effort to interpret what should the next step be in the environmental awareness arena, the idea of an environmental camp for children came up. This study outlines how the SKYROS project has launched a national campaign teaching others how to implement climate change awareness through children’s camps in various geographic locations.

Keywords

climate change awareness • environmental communication • green port • marine • Greece

1 Introduction

Climate change science can trace its origins back to the early 19th Century although interest really took off in the 1980s, when public interest and research activity proliferated as the potential negative effects of global warming became clear (Frost et al. 2017). It has become a major focus of attention because of its potential hazards and impacts on the environment, particularly in vulnerable systems like coasts (Sánchez-Arcilla et al. 2011). Climate change communication though is no longer the largely uncharted topic of 10 years, ago (Moser 2016). Communication has become an integral part of the climate change discourse as scientists, governments and civil society organizations have recognized the crucial role of an effective communication in raising awareness about the consequences of climate change on life (Harris 2014). In Greece, Linaria Port of Skyros Island is famous for its innovative approaches of its Port Authority. A worldwide environmental campaign, under the brand name “SKYROS Project”, has launched there, presenting an innovative cooperation with the University of the Aegean and the Skyros Port Fund. Most environmental campaigns related to climate change are based on the principle that people need more information to behave pro-environmentally (Skanavis and Kounani 2017). However,

this approach in terms of “information-deficit” has been widely criticized as being inadequate to promote behavioral change (Ockwell et al. Ockwell and WhitmarshL 2009; Skanavis and Kounani 2017). To tackle such concern, the SKYROS Project, taking off in 2015, established Linaria port as interactive lab which promotes environmental issues awareness through hands on experience.

2 Ports and Climate Change

Climate change reporting in particular has been at the center of a number of controversies related to the scientific independence (Williamson 2016; Nerlich 2010) and robust. Transparent process for advice provision is therefore required that can mitigate against accusations of a lack of integrity or of bias in climate reporting (Frost et al. 2017). In coastal areas, vulnerability assessments have focused mainly on the sea level rise (SLR) and its impact on coastal communities (Nicholls et al. 2011), addressing related effects on beaches (Sánchez-Arcilla et al. 2011; Monioudi et al. 2016), coastal defense structures (Burcharth et al. 2014), coastal ecosystems (Kane et al. 2015), or the flooding of urban areas (Paudel et al. 2015). In this way, ports are highly vulnerable to climate risks in terms of both their facilities and operations (Becker et al. 2012). Given the critical role that ports play in the global economy and supply chains (Ng and Liu 2014), their inability to adapt to such risks poses a significant contemporary problem (Yang et al. 2017). Thus, it is important to find effective ways for ports to adapt to risks posed by climate change. Further, policymakers and other port stakeholders must understand the potential risks to ports in order to develop appropriate adaptation planning and strategies (Yang et al. 2017).

In view of the above ignorance, the concept of a **green port (or low-carbon port)** was officially proposed at the United Nations Climate Change Conference in 2009 (Wu and Ji 2013). Because of an organic combination of port development, utilization of resources and environmental protection, a green port refers to the one characterized by a healthy ecological environment, reasonable utilization of resources, low energy consumption and low pollution (Chen 2009).

Today, the ports operate as mainstream business infrastructures and as a result they experience the typical environmental issues (Naniopoulos et al. 2004), like climate change. Smaller ports have set as their mission to safeguard their harbour operations and “protect the maritime area against the adverse effects of human activities so as to protect human health and conserve marine ecosystems” (DEFRA 2002). These ports seek a new discourse to manage their environmental impacts and adopt proactive port sustainability approaches (Kuznetsov et al. 2015). However mere investigation of sustainability management issues in smaller ports would fill us with new knowledge, efficiency and awareness in order to proceed with the best possible practices (Dinwoodie et al. 2012). As regards the Greek ports’ sector, their operation has multiple environmental impacts on respective coastal areas, due to transportation and marine environment impacts (Antonopoulos et al. 2016). Therefore, the implementation of an integrated environmental policy in Greek ports would gradually incorporate sustainable development principles, into the entire spectrum of financial

and operational activities, taking place in the ports (Naniopoulos et al. 2004). Looking at the Aegean Sea, the island of Skyros is right in the middle. Its harbor, Linaria, is a small ordinary public port, used for various purposes, carrying out successfully the tasks, for which, it has been charged by the regulating Authority (Antonopoulos et al. 2016, 2017a). Furthermore, the Linaria port has been highly competitive for securing high sustainability enforcement standards and operates in ways that complement the environmental quality (Antonopoulos et al. 2016). Since 2010, this small port constantly develops innovative ideas and implements strict regulations that assure environmental quality and the arrivals in the port was recorded as a 957% increase (Antonopoulos et al. 2017a).

The aim of this study is to outline how the SKYROS Project has launched a national campaign luring others on how to implement climate change awareness based on establishment of a children's camp that can be offered in various geographic locations.

3 Methodology

This research project is based on a case study approach through a quality assessment process. Linaria Port serves as an interactive lab and places the ones educated in real time conditions. University students, locals and visitors become the decision makers for environmental issues taking in their hands environmental planning and management of the specific port area. This state of art educational approach has secured the brand name, SKYROS Project. The above Project is a paradigmatic cooperation of two public sectors, the Research Center of Environmental Communication and Education of the Department of Environment of University of the Aegean with the Skyros Port Fund Authority. The enthusiastic students through their daily environmental investment in the area led the way to a permanently established remote training site that invests into environmental research and education practices (Antonopoulos et al. 2017a). Worthwhile accomplishments include the establishment of the tourism observatory and marine one, both located at Linaria Port of Skyros Island. Also a free-of-charge kids' camp was established at the same port.

4 Linaria Port – An Innovative Way to Communicate and Educate

There is a great world-wide interest to the small island tourist ports. This is because small scale ports are characterized by diversity, hosting fishing interests while creating potential employment opportunities, while encouraging leisure functions (Antonopoulos et al. 2016). The question that is being addressed is pertinent to the potential outcome when a small port follows an environmental agenda. The port of Linaria is reasonably attracting high tourist interest. Antonopoulos et al. (2016) characterized Linaria as an environmentally sustainable small port community, where an environmentally responsible behavior is promoted to both visitors and residents.

Since 2010, this small port constantly develops innovative ideas, such as the construction of seadromes, the use of electric scooters, the PV panels, a gas station, and the cooperation of the Port Authority of Skyros with the University of the Aegean's Department of Environment, which resulted in attracting the interest and respect of travelers.

4.1 The Guest Book of Linaria Port

Prior research (Antonopoulos et al. 2017b), analyzed the visitors' feedback from the guest book provided at the touristic port of Linaria-Skyros. Attention was given particularly on the visitors' comments related on how the quality of environment acts as an attractive factor. The guest book is a way for visitors to freely express themselves and in this way their objective impressions are presented. The comments analyzed in the guest book of the port covered the period of July 2012 up to September 2014. The results of the analysis revealed that tourists have shown more interest on the personal touch of the ones serving the Port than the actual services provided. According to the findings, the environmental actions taking place in the port's facilities appeared to be the main reasons of tourists' positive impressions, satisfaction, their willing to extend their stay and to visit the island again in the future. The warm welcome, the immediate assistance and the friendly attitude of the staff were among the major factors that led to their satisfactory stay at the island (Antonopoulos et al. 2017b). Thereby, it is possible to analyze the behavior and determine future improvement actions and programs based on the voice of the visitor (Arabatzis and Grigoroudis 2010). This Greek small public port, with few resources, has succeeded in attracting tremendous publicity and has been recorded as the fuller and friendliest public port in Greece (Antonopoulos et al 2015). According to the results, the average stay was three days. Extended stays up to 10 days, primarily because of the ambience and the environment of Skyros were also reported. The positive influence of service quality on purchase intentions is greater when satisfaction is also greater (Taylor and Baker 1994). Researchers emphasized that this research, based on visitors' free expression, would prove to be even more useful if further research gets initiated based though on answers to specific questions.

4.2 Observatory of Sustainable Tourism

The Observatory of Sustainable Tourism is a movement of World Tourism Organization (UNWTO) with GOST Program (Global Observatories for Sustainable Tourism), to promote sustainable tourist destinations (Karavitakis and Chondromatidou 2016). In Linaria Port, based on another tedious research of "SKYROS Project", a Tourism Observatory at Skyros Island was established. The generated data were analyzed and a picture on the tourism aspect of the island was presented. An exploitation of the gathered information about the tourist product of Skyros was a valuable tool for the creation of sustainable tourist policies. The pertinent researchers created a tool of analysis and collection of useful information with the name of "Observatory of Sustainable Tourism", watching therefore the enrichment and the renewal of data on a continuous basis. According to Karavitakis

and Chondromatidou (2016), the research was conducted by questionnaires addressed to tourist establishments and other business owners as well as accommodation owners at Skyros Island. The purpose was to collect data on social, economic and environmental issues. The collected data are processed in specific databases, which would continuously monitor the tourist product of Skyros and its impacts on the entire island. It should be noted that the results and impacts depend on the specific characteristics of the destinations and are not the same for all destinations (Spilanis 2009). It should be noted that the hospitality of the locals, the natural beauty and the innovations of the Port Fund Authority constitute the strong points of the island (Karavitakis and Chondromatidou 2016). It is important that tourism is not exerting pressure on the environment due its activity. Also, not well planned construction in building facilities (Achilles, Molos) seem to have influenced the island's change of use and landscape ecology. The Observatory's operation concerns the recording of the major tourist resources and activities of the destination (tourist image creation) and the quantitative data on tourist supply, demand and return per island. In general, the results portrayed a weak tourism development. This is associated with factors such as the pertinent infrastructure, the lack of organization and the reduced visibility of the natural and cultural beauty of the island (Karavitakis and Chondromatidou 2016).

4.3 Marine Observatory

The researchers of SKYROS Project proceeded into also studying the marine tourism characteristics at Skyros Island. The Marine Observatory is based on a similar concept like the Observatory of the Sustainable Tourism. This type of observatory focuses on the economic, social and environmental development of the port, presenting specifically the tourist product of the port. Based on such data, Skyros Port Fund authority and local operators can improve their services in a sustainable way. A friendly and highly competitive tourism services' system has been enacted tailored to the needs of leisure crafts sector. The management team of the Port of Linaria, on one hand supports rapid developmental processes and on the other hand safeguards the strict standards set for the local environment and the residents' related rights (Antonopoulos et al. 2016). Linaria Port Authority adopted a green approach through innovative environmental education projects disseminating respect for the marine, coastal, and community environments while supporting the economic growth of the area. This project was launched in the summer of 2016 with an initial sample of 129 tourist vessels that berthed in the port (Antonopoulos et al. 2017a). Many of the participants in the research have strongly expressed their enthusiasm for such actions taking place in the port area of Skyros Island (Antonopoulos et al. 2017a). When a port respects the environment and promotes a sustainable lifestyle then tourism rates increase. Deliverables promote environmentally responsible behaviour for both visitors and residents. This type of port can be used as a learning and research environment that can promote sustainable development in the tourism sector (Antonopoulos et al. 2017a). In conclusion, the researchers claimed Linaria Port as an exemplary case of a small public port. Linaria Port has enjoyed increased arrivals of leisure crafts up to 975%, since 2010.

5 Environmental Kid's Camp in Linaria Port

The environmental camp for children was offered to the local community children as well as the ones visiting the island for first time in the summer of 2015 (Apostolopoulou et al. 2016). Outdoor environments can enhance mental health of participating students, contribute to students' intellectual and emotional development, support their environmental awareness and can give them opportunities to play and get involved in creative activities as well as connect directly with nature (Plaka and Skanavis 2016).

A research group of SKYROS Project, specifically handling educational approaches for the young, created a well-prepared educational program, based on North American Association for Environmental Educators' (NAAEE) Guidelines for Excellence (NAAEE 2017) and the basic principles of Environmental Education (UNESCO 1977).

Having a high-quality educational program tailored to the participants' interests and being inspired by familiar surroundings, like the port, is very important for practicing theory in real time conditions. The objectives of the summer environmental camp at Skyros Island were related to the dissemination of environmental education to children and to the promotion of their responsible environmental behavior through theory and hands on experience in an outdoors set up (Skanavis and Kounani 2017). A climate change educational program, using the port as the focal point, provides opportunities for understanding the importance of our actions towards the protection of the environment. Furthermore, it develops critical analysis skills, through the realization of the consequences due to careless use of our resources. The program was composed of three sessions, covering "Terrestrial Ecosystems", "Aquatic Ecosystems" and "Human and Environment Interaction". Children were confronted with various regional and global environmental issues, such as, climate change, greenhouse effect global warming, biodiversity concerns, forest fires, natural disasters, floods, droughts, renewable energy, non-renewable energy, endangered species, etc. (Skanavis and Kounani 2017). But the focus of the camp has been on climate change awareness because of human actions due to negligence or intention, through a port.

Participating kids were confronted with the topic of climate change, the causes and the impacts of this major global issue, and the necessary actions that should be taken to be environmentally active (Skanavis and Kounani 2017). The educational program acts in a port area. The participants age ranges from 6 to 13 years. The port served both as an environmental stimulation and an open laboratory for practicing skills related to climate change concerns. Replicating of this environmental camp in other geographic locations is desirable to spread the climate change meaning across the country. Of prime importance is the appropriate training of the educators charged with the responsibility to inspire environmental concern to the young ones.

Summer programs provide an ideal opportunity for environmental education in an interactive context (Larson 2008). Nature-based outdoor education programs are effectively improving environmental awareness and sensitivity (Okur-Berberoglu et al. 2014; Apostolopoulou et al. 2016). Most camp programs are part of a positive youth developmental movement, aiming to offer experiences that are not only safe and enjoyable but also facilitate children's progress towards adulthood (Hederson et al. 2007). The summer camps could be described as a process of participation, where individuals are empowered to follow their interests, while exploring nature and question human interaction (Bergman 2014).

On the other hand, summer environmental education programs expose children to unfamiliar environmental setups and concepts in an exciting context, which may induce interesting attitude changes (Larson 2008). Therefore, nature camps might be more effective in promoting children's emotional affinity to nature, ecological beliefs and environmental behaviors than in-class environmental education programs (Collado et al. 2013). Understanding and cultivating children environmental consciousness may be crucial to rectifying the environmental degradation and to mitigating the impacts of climate change (White 2004; Garner et al. 2015). Participating in nature-based summer camps raises familiarity with nature, increase environmental knowledge, awareness and behavior on environmental issues, such as climate change (Dresner and Gill 1994; Garner et.al. 2025).

6 Discussions

Climate change is a problem of global scope, with significant consequences for coastal communities as well. Green ports' assessment requires a complex model involving many indexes including various concerns (Chengpeng et al. 2017). These indexes should be comprehensive, quantitative or qualitative. They should also reflect the real-time changes, capable of adapting to the needs of social development, while maintaining a relative stability for the evaluation of green port uncertain periods (Ma et al. 2014).

Climate change communication is no longer the largely uncharted topic of 10 years ago (Moser 2016). Communication has become an integral part of the climate change discourse as scientists, governments and civil society organizations have recognized the crucial role of an effective communication in raising awareness about the consequences of climate change on life (Harris 2014). The focus of the environmental educational program has been on climate change awareness because of human actions due to negligence or intention. Because of the vulnerability to climate changes, education programs should prepare children for future risks (Ebi and Paulson 2007). Communication about climate change should aim to achieve meaningful engagement in all three facets: understanding, emotion, and behavior (Ockwell et al. 2009). As Bergman noticed (2014) an environmental camp can count as a success educating, empowering and even radicalizing both its participants and others in the broader environmental movement. This can be seen as transforming people from passive

bystanders to citizen activists, which some see as the key to effecting the systemic changes needed for instant emissions' reduction (Skanavis and Kounani2017). A well-structured and organized summer environmental program, such as this one at Skyros Island, which is staffed with experienced environmental educators, could be a key in communicating climate change, specifically to children. Obviously, a positive effect is observed on children's knowledge, attitudes and participation behavior on the issue of climate change, after their environmental summer camp completion. As the results of pre and post camp interviews showed, all of the children were happy doing things to help the environment (Skanavis and Kounani 2017).

The relationship with nature is not just a pleasant task, but it is also an essential component of the human wellbeing general goal (Plaka and Skanavis 2016). It is of paramount importance to understand children's perspectives, since children both now and in the future will influence and be influenced by environmental issues in many ways (Skanavis and Manolas 2015).

7 Conclusions

Linaria Port, "the blue port with a shade of green", as it has been labeled by United Nations, communicates about climate change, from an innovative environmental campaign in Greece, the Skyros Project. Through this campaign and its actions, the port has been serving as an environmental interactive tool. The SKYROS Project attempts connecting people and kids around the world based on a common vision, the protection of the environment and climate change abatement. Based on the success of the three consecutive years' operation of the children's environmental camp, the SKYROS Project has launched a national campaign teaching others how to implement climate change awareness through children's camps in various geo-graphic locations. The program educates the youth into becoming active environmentally concerned citizens while it gives the opportunity to college students to get trained as potential environmental educators.

Linaria port has taken action in the battle against climate change, by promoting environmentally responsible behavior. Collected data on tourism related pressure is of enormous value when preventing environmental consequences in an area is of interest. Filling in comments from visitors in a guest book has proven to produce helpful information when analyzing the recorded data. Therefore, the marine observatory and the tourist observatory and the individual comments from tourists create a portfolio based on which environmental protection can be practiced. The creation of a children's summer environmental camp has been complementing the above-mentioned accomplishments, taking the interpretation of the initial analysis of collected data to the next level. All environmentally innovative activities are guided and supervised by the administrative and academic force of the SKYROS Project, the environmental awareness campaign program, which was delivered at the island of Skyros in Greece in summer 2015 (Skanavis and Kounani2017).

Climate change is a problem of global scope, with significant consequences for coastal communities (Lieske and Wade 2014). The impact of climate change on the marine environment was receiving little attention at this time, but in recent years it has started to “catch up” both in terms of research activity and public and policy interest (Frost et al. 2017). Developing ways of communicating complex messages and implementing science-policy interface mechanisms are not ends in themselves. Collating, interpreting, and disseminating information on climate impacts on marine systems has as a long-term goal to wisely use scientific information in policy and decision-making to plan and manage communities accordingly.

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Chapter C. University Program Reveals New Environmental Decision- Making Skills for Students

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Abstract

Mankind faces serious environmental problems that, ironically, have been caused or most severely strained by man, the planet's most intelligent inhabitant. The climate crisis is the main threat to the survival of the planet, forcing societies to adapt to new realities. It is vital to update the cultural software of our society and to promote a sense of responsibility, awareness and active participation in the protection of the environment. This chapter presents a model eco-community. Through green practices and innovation, the Port of Linaria on the island of Skyros is promoting an exemplary environmental image. Since 2015, two Greek universities and the port's public administration entity, the Skyros Port Fund, have been hosting students and volunteers from Greece and abroad with the aim of spreading a new, more resilient and sustainable way of life, known as the "SKYROS Project". It has been an environmental education point for the local community and visitors, who adopt pro-environmental attitudes and act as community stewards with resilience in mind, to the climate crisis. It also presents the need to create an educational kit that will hopefully become a powerful tool to raise awareness of the climate crisis and the challenges it poses to the planet. This kit has been evaluated by Greek experts in the field of environmental education. These findings revealed what Greek environmental educators believed about this innovative approach to environmental education, based on the port's attachment to the place.

Keywords

climate change • environmental awareness • environmentally responsible behaviour • eco-port community • environmental education kit • sustainable lifestyle • resilient communities

1 Introduction

Human history underlines the significance of environmental protection. Never, a generation has faced such many issues. All the issues, that people face, are created by humans and we are in agony trying to solve at least the problems we comprehend. We need to try to solve complex problems, and when we try to solve them, most of the time we create new ones (Andersen and Björkman 2017). A dynamic change in thinking and in the way we fulfil our desires (Skanavis 2004). We are in need to motivate communities to endorse environmental action and change behaviour. We also need a sense of responsibility to increase our collective consciousness. Searching for environmental motivation's ultimate goal.

According to Mert (2006), in recent years, people have moved away from manual labour, they have lost contact with nature, and, also, hurt the environment by using its resources. Our societies need an update of their cultural software. And we will win this bet by properly educating the new generation. We need to instill in the citizens of

the future a sense of responsibility and conscience so that we have aware and active citizens, capable of making environmental decisions.

In a global scope, political systems develop adequate solutions, so it is crucial to update the cultural software and to empower the future generation into responsible decision-makers. Environmental Education (EE) promises to make this change, in which citizens acquire basic knowledge, become aware of environmental issues, and through experiential activities acquire skills and abilities that will enable them to solve these issues (Yurttas and Sülüna 2010). EE is an interdisciplinary process, in which people are developing skills and attitudes, to be able to understand and evaluate the complex and constantly evolving relationship between man, culture, and his ecological and biophysical environment (Giannoulis, Skanavis and Karapatsiou 2014). EE plays an important role in harmonizing the relationship between people and nature, transmits knowledge, and creates an experience to change beliefs, attitudes, and most importantly, behaviour (Frantz and Mayer 2014).

2 Greek universities play a key role in raising awareness of climate change through a Greek Green Port Community, promoting new eco-lifestyles and environmentally responsible behaviour

Higher education can play a key role in fostering awareness of climate change. In the global fight against climate change, higher education matters. Research creates knowledge and informs climate solutions. Educational programs and courses equip current and future leaders and professionals for the systemic change and transformation needed for the betterment of society (Leal Filho et al. 2023).

Greece is one of the countries where the sea surrounds almost every region. Today, ports operate as mainstreamed economic infrastructures and as a result they experience the typical environmental problems (Naniopoulos et al. 2004), including climate change. Smaller ports have a mission to secure their port operations and "protect the marine environment from the adverse effects of human activities to safeguard human health and marine ecosystems" (DEFRA 2002). These ports are seeking a new discourse to manage their environmental impacts, adopting a proactive approach to port sustainability (Kuznetsov et al. 2015). However, simply studying sustainability management in smaller ports would provide us with new knowledge, efficiency, and awareness to proceed with best practices (Dinwoodie et al. 2012; Skanavis et al. 2018a).

As far as the sector of Greek ports is concerned, their operation has multiple environmental impacts on the respective coastal areas, due to the impact of transport and the marine environment (Antonopoulos et al. 2016; Skanavis et al. 2018a). Therefore, implementing an integrated environmental policy in Greek ports would progressively integrate sustainable development principles into the full range of financial and operational activities carried out in ports (Naniopoulos et al. 2004), while strengthening the field of studying coastal resilient societies.

Around the world, universities are well positioned to use their resources more widely to drive sustainability initiatives beyond their campuses and local communities, contributing to a more sustainable society and reducing pressure on the environment and the global climate. Two Greek Universities, the University of the Aegean and the University of Western Attica, have found the Port of Skyros to be a suitable "laboratory" for studying and researching, promoting new ecological lifestyles and environmentally responsible behaviour.

2.1 Linaria Port, Skyros Island

Greece is one of the most powerful and significant nautical countries in the world. The commercial shipping industry, along with tourism, constitutes the pillars of the national economy (Hellenic Chamber of Shipping 2015). There are more than 2.500 islands of which only 227 are inhabited (European Union, 2019). In these islands, the appropriate use of ports is a key factor for busting the development of marine tourism (Antonopoulos et al. 2015). Ports are one of the most powerful investment vehicles, for the Greek tourism sector (Antonopoulos et al. 2016).

Looking at the Aegean Sea, the island of Skyros is right in the middle. Linaria is a small port but the main one for Skyros Island. It is a classic size public port, found in Greek islands, used for various purposes (passenger transportation, cargo, and fishing boats), carrying out successfully the tasks, for which, it has been charged by the regulating Authority (Antonopoulos et al. 2015). It has been characterized as a model one in the list of "marinas" and "small ports" categories (Antonopoulos et al. 2015; Antonopoulos et al. 2016).

Linaria Port has been highly competitive for its securing of high sustainability enforcement standards and mainly operates in ways that complement the environmental quality (Antonopoulos et al. 2015; Antonopoulos et al. 2016). Since 2010, this small port presents innovative, competitive, and sustainable approaches (Antonopoulos et al. 2015; Antonopoulos et al. 2016). It is also quite famous for its up-to-date investments in whatever services can make visitors enjoy to the fullest their visit (Antonopoulos et al. 2017a). The beautiful and clean landscape relates to contemporary service facilities, LED underwater lights, a lending outdoors library, a laundry facility, a gas station, and many other services that respect and serve citizens and tourists of today and make Linaria Port the most convenient, innovative and promising Greek port (Antonopoulos et al. 2015).

Antonopoulos et al. (2016) characterized Linaria as "an environmentally sustainable small port community, where environmentally responsible behaviour is promoted to both visitors and residents. Since 2010, this small port constantly develops interesting projects, such as the construction of seadromes, the use of electric scooters, PV panels, a gas station, and the cooperation of the Port Authority of Skyros with academic institutions, ex. the University of the Aegean's Department of Environment, attracting this way, travellers' praising comments (Skanavis et al. 2018a). Linaria, as a

port with multiple awards for its accomplishments, generates high visibility, thus serving as an example to be replicated elsewhere (Antonopoulos et al. 2015; Antonopoulos et al. 2016). Linaria Port has acted in the battle against climate change, by promoting environmentally responsible behaviour. In 2017, Linaria Port received the label from United Nations at the 2016 Summit for Climate Change, as “the blue port with a shade of green”. SKYROS Project communicated successfully at the Summit’s events the message for climate change through the project’s actions in Greece (Skanavis et al. 2018a).

Greece has numerous small islands, with Skyros Island leading the way to a sustainable tourism approach, through its eco-friendly services at the marina of Linaria. The circular economy is the concept behind a revolutionary change in behaviour and environmental protection (Fountas et al. 2018). Making a marina sustainable mandate that pressure on the environment is being offset. An example of marina sustainability investment is the recycling of liquid and solid wastes by collecting them in special containers. Innovative measures for energy resources friendly to the environment strongly reduce the pressure from the marina on the natural surroundings. Solar panels are a good strategy for producing the desired amount of energy, with no adverse effects. Appropriate environmental awareness will empower locals and visitors to always act environmentally responsibly (Fountas et al. 2018).

The actions of Linaria Port focus on implementation, collating, interpreting, and disseminating environmental information on tourism presenting an image visitors and residents use to enforce why environmental dicing making actions. This small port community has made a way of everyday life with several practices that promote circular tourism. Linaria Marina serves as a model marina for other Aegean Sea islands. Circular tourism can affect positively the planning and management of small eco-marina communities all over Greece (Fountas et al. 2018).

2.2 Building eco-philosophy

Response to globalization, environmental degradation, overpopulation, the rise of technology, and the new lifestyle we endorse have altered our environmental perception and behaviour. In search of a sustainable lifestyle, the Research Center of Environmental Communication and Education of the Department of Environment at the University of the Aegean, through its collaboration with Skyros Port Authority was seen as an intriguing opportunity. This collaboration gave birth to the Environmental Campaign known as the “SKYROS Project” through which, the aim is to spread environmental awareness and educate all that humans and nature should be in harmony.

In Skyros Island, the strong environmental profile of Linaria Port compliments the needs of the research laboratory to test environmental awareness potential in real-time setup, promoting in innovative ways responsible environmental behaviour to

residents, tourists, and program participants. This project began in 2015, as an experiment, and eight years later, Skyros Project has become an environmental brand name. Participants discover their environmental identity through environmental actions based on educational protocols and research. The trainees in the end adopt an eco-lifestyle and spread the message to others whom they meet in their communities and working environments. Young people devote their summer vacation to discoveries that motivate them to unite with others in protecting nature and human dignity in everyday life all over the world.

Since 2019, the University of West Attica becomes the third public sector, which participates in the SKYROS Project. Specifically, the University's Department of Public Health and Community Health played a vital role in the development of the Skyros Project on health promotion activities. This multi-awarded Skyros Project has enticed attention around the world (Plaka et al. 2021). The above public sectors have managed to create an ecologically active community that hosts university students and volunteers at Linaria Port, to promote a new philosophy of an ecological lifestyle, known as the model of "SKYROS Eco-Community" proving that when there is personal determination public organization can lead the way to excellence. Participants become active decision-makers and safeguard the right to a healthy environment for all (Plaka et al. 2021).

When a port respects the environment and promotes a sustainable lifestyle then tourism rates increase. Creative environmental education projects delivered at the port can promote environmentally responsible behaviour for all residents, visitors, the academic community, and volunteers. Furthermore, this port was used as a learning and research environment, revealing new methods that can promote sustainable development in the tourism sector (Antonopoulos et al. 2017a). The relationship with nature is not just a fun task to be involved with, but it is also an essential component of human well-being on a global skill (Plaka and Skanavis 2016). Linaria Port extended the experience of an environmentally friendly port to all stakeholders, giving them the feeling of empowerment. This way, locals started actively supporting responsible environmental behaviour in their own neighbourhoods in their daily activities. Interestingly enough, the environmentally friendly management of the Port of Linaria has become a paradigm of a non-formal environmental education process for the community and the tourists (Antonopoulos et al. 2016). This eco-friendly management based on the principles of circular tourism established Linaria Port as a model small eco-marina in Greece (Fountas et al. 2018; Ganiaris et al. 2018). In fact, stakeholders' participation in the planning and development stages is a fundamental necessity for the sustainability of the development routes seen in our days (Dyer et al. 2006).

2.3 SKYROS Eco-Village: The successful model of environmental awareness ecotourism emphasizes sustainable development in tourism and related activities

Environmentally responsible behaviour is a conservation mechanism for always protecting nature. The environmentally responsible behaviour of tourists limits or restricts damage to the ecological environment (Yen-Ting et al. 2014). The search for a sustainable lifestyle brought into light this Greek eco-community at Linaria Port. This community has as a goal to environmentally empower all who meet it.

The adoption of responsible environmental behaviour by all stakeholders is one of the key solutions for all modern societies and governments (Ganiaris et al. 2018; Andriopoulos et al. 2017). Eco-villages operate on principles and values that give an example of responsible environmental behaviour that can be easily replicated. The philosophy behind the understanding of life and society, through the dimensions (social, ecological, spiritual, economic) which happen to be the basic principles of Eco-villages, can form the fundamental core of responsible environmental behaviour. This route can serve as a vital response to environmental problems and distortions of the local communities (Andriopoulos et al. 2017). Eco-villages are environmentally active communities capable of regaining man's relationship with nature and creating citizens responsible for environmental decision-making (Karaevangelou et al. 2020).

Since 2015, over 150 students and volunteers have been involved with SKYROS Project (Skanavis et al. 2018b). This number is growing every year. In search of an area near the port to host the participants, Skyros Port Authority and the University of the Aegean set up an Ecovillage, in which all the principles of an Ecovillage adhere to the concepts of circular economy and creative tourism. In this way, the residents who happen to be the Skyros Project participants are accommodated in relaxing and up to the latest standards of comfort, tents, in a specially designed area, near Linaria Port (Ganiaris et al. 2018; Skanavis et al. 2018b). This Ecovillage Project serves as a meeting point for local families, members of scientific groups, and visitors of the island were interested in getting involved in environmental protection activities in real-time conditions (Ganiaris et al. 2018).

The Skyros Project Ecovillage is introducing a way for a vacationing site for those interested in actively participating in environmental protection and sustainable living during their personal time off (Ganiaris et al. 2018), while upgrading their skills as environmental educators (Skanavis et al. 2018b). It is also a way of assisting people who might feel the urge to live ecologically and to discover their eco-ego. This participation in the environmental commons can become a way of eco-therapy, something that we all need so badly due to the urban lifestyle we are confronted with. As Hine et al. (2008) claim “Eco-therapy is described as the practice of supporting vulnerable people (e.g., those with disabilities or mental health needs), to work with nature (both plants and wildlife), with the specific aim of the conservation or establishment of a local habitat or green space as a form of therapy”.

When consumers participate in activities using simple materials and imagination, they develop unique experiences known as “creative experiences” (Richards and Wilson 2006). This Ecovillage Project attempts to assess all activities, educational and

empirical, which will be offered to participants on SKYROS Project in Skyros Island (Ganiaris et al. 2018). In detail, the participants become active operators of the sustainable living structure and their needs are based on the concepts of environmental conservation and protection to minimize the consequences that affect irreversibly nature and human life (Skanavis et al. 2018b). Through their daily involvement in this chosen vacation format, environmental awareness is reached in a successful manner (Ganiaris et al. 2018).

To tackle such concerns, the SKYROS Project, established at Linaria Port this interactive lab, utilizes the port as a way of promoting environmental issues awareness through hands-on experience (Skanavis et al. 2018a). Significant environmental actions that are implemented every year are an Environmental Kid's Camp, Tourist Observatory, Maritime Tourism Observatory, and a Summer Academy for Environmental Educators (Plaka et al. 2017). This project has been recognized at national and international competitions as one that excels in environmental awareness (Plaka et al. 2017; Antonopoulos et al. 2017b).

The idea of the Observatories' actions was to collect data that would determine best practices. These data on tourism-related environmental pressure are of enormous value for preventing deterioration in an area of interest. Filling in, comments from visitors, in a guest book have proven to produce helpful information when analysing the collected data. Therefore, the marine observatory and the tourist observatory, and the individual comments from tourists create a portfolio based on which environmental protection can be always practised (Skanavis et al. 2018a). Also, the action of the Environmental Camp of the SKYROS Project at the Port of Skyros Island is internationally unique (Plaka et al. 2017). Young individuals experience the power, fragility, interconnectedness, and awe of nature, so they can become environmental stewards of the future (Plaka and Skanavis 2016).

2.4 Linaria Port Community promotes a new eco-lifestyle and environmentally responsible behaviour

As we consented at the beginning, societies have never been so confronted with that many environmental issues. It is undeniably necessary to change societies' daily life. Global issues, like the climate crisis, are growing problems, which concern everyone interested in a sustainable future. Communication and education happen to be the best interactive tools (Topaltsis et al. 2018). Developing ways of communicating complex messages and implementing science-policy interface mechanisms are not ends in themselves. Collating, interpreting, and disseminating information on the impacts of environmental issues have long-term goals to wisely use scientific information in policy and decision-making to plan and manage communities accordingly (Skanavis et al. 2018a; (Skanavis et al. 2018b).

The search for a sustainable lifestyle, combined with the reduction of environmental problems should be the end goal of the agenda of all governments and societies. The adoption of responsible environmental behaviour by all stakeholders (society,

individuals, organizations, governments, etc.) is one of the major elements of sustainability is our concern (Ganiaris et al. 2018; Andriopoulos et al. 2017). Linaria Port through SKYROS Project attempts to connect people and kids around the world based on a common vision, the protection of the environment and leading youth towards becoming environmentally concerned citizens (Skanavis et al. 2018a).

The local community in Linaria Port, the tourists, and the ambassadors of the SKYROS Project are the real proof of environmental success. They have spread the message in their working environments and their communities and have been accepted in extremely competitive graduate environmental programs and positions. Several studies have suggested that a sense of place can include place attachment, which is the strength of the bond between a person and place. The meaning of place is the symbolic meaning people attribute to a specific geographic location (Halpenny 2010). The Eco-community of Linaria Port fits the place attribute to all those who have experienced an internship investing in learning and working on environmental protection and sustainability. Also, SKYROS Project acts as an interactive educational and communicational tool, inspiring youth and spreading all over the world the message of responsible environmental behaviour. Becoming active citizens in environmental decision-making is the only way to safeguard life quality. Moreover, the community of Linaria Port serves as a live example of a community, where its participants invest in environmental awareness skills while they also enhance their well-being through their connection with nature.

Linaria Port is a place of motivation, increasing our collective consciousness and changing and affecting behaviour. The environmental actions of the SKYROS Project have travelled all over the world physically and through social media. On January 1st, 2019, SKYROS Project became viral on Facebook and gathered on its page almost 8,000 supporters strengthening this way our voices against environmental abuse. Environmental actions like this one encourage all stakeholders to change their behaviour and act. There are no Greek ports in the literature, where an eco-philosophy is being developed and environmental awareness is being spread, through environmental education activities. However, there are very few ports in the world that promote environmental stewardship through environmental education actions.

2.5 The need to create an environmental education kit

Active citizen participation contributes to social, environmental, and institutional resilience (Buijs et al. 2016). The various environmental actions carried out around a port manage to produce active citizens. The existence of innovative applications, actions, and environmental education programs end up promoting environmentally responsible behaviour to both visitors and residents of the port (Antonopoulos et al. 2017a; Plaka et al. 2017; Antonopoulos et al. 2017b). The "green" programs that motivate the participation of citizens of an area increase the chances of applying more sustainable practices in the daily life of citizens. Also, an environmental program

carried out on the premises of a port, which follows an environmental agenda, further reinforces this behaviour (Port of San Diego 2016).

As Plaka et al. (2022) mentioned that the Environmental Kid's Camp of Skyros Project has as a goal to educate kids and support good environmental behaviour via theory and hands-on experience in port settings. The relationship that develops between the port authorities and the local community is implemented to promote a positive image and build trust through various efforts (Saengsupavanich et al. 2009; Puig et al. 2015). Thus, a green port is considered a key factor in promoting a healthy human relationship with the environment (Plaka et al. 2017). Creating a network of active citizens, properly aware of environmental issues, capable of the right skills and abilities to claim sustainable conditions, and acting as policymakers is the goal of an EE program in a port environment.

2.6 SKYROS Project: From "Daily Environmental Port Camp" to "SKYROS on the Road"

Today, Greece is considered a country of contradictions and rare beauty. Problems of economic, migration, energy crisis, political insecurity, and social and health confusion Greeks. On one hand, youth serve as inspiration, on the other hand, their education possesses concern. Media and images portraying the places young people live, as well as the impact they receive from social media end in trouble for some dictions all over the world.

Contrary to the facts, Linaria Port of Skyros Island and its residents have been characterized as an environmentally conscious small port community, where everything works perfectly and in complete harmony. The Management Authority of the port protects and respects the environment, adopting green innovations and practices. Thus, it promotes a sustainable lifestyle for yacht visitors and the local community (Antonopoulos et al. 2016; Plaka et al. 2017). The port has stood out and established itself as a uniqueness and innovation for the country (Antonopoulos et al. 2015). In fact, in 2016 the United Nations characterized it as the "blue port with a shade of green" (Antonopoulos et al. 2017a; Skanavis et al. 2018a; Antonopoulos et al. 2017b). Apart from the environmental excellence of the port, the SKYROS Project, the innovative environmental campaign has played an important role, through its environmental actions.

Numerous environmental actions give a special dynamic to SKYROS Project and Linaria Port and much recognition. In the port of Linaria, EE has been established (Skanavis et al. 2018a). Outdoor environments can enhance the mental health of participants, contribute to students' intellectual and emotional development, support their environmental awareness, and give them opportunities to play and get involved in creative activities as well as connect directly with nature (Plaka and Skanavis 2016).

University students and volunteers of the SKYROS Project serve as environmental educators, at the "Daily Environmental Port Camp" established at Linaria Port. They train the young ones at the Camp, while they are receiving their own Certification from the "Summer Academy of Environmental Educators". Educators' task is to educate on social and environmental issues, in a marine ecosystem. The aim of the Camp is to educate the young people (7-13 years old) of the local community and the tourists' kids so that they become responsible citizens. The Environmental Camp operates for two months, every summer.

Up today, the SKYROS Project and its Camp are still strong innovative environmental education activities. Therefore, all port educational activities are based on the Guidelines for Excellence proposed by the North American Association for Environmental Education (NAAEE 2017). The basic principles of the EE (UNESCO 1978) should not be un-der-emphasized. The action of the "Daily Environmental Port Camp" is a form of non-formal EE (Plaka et al. 2017).

The goal of this educational approach is to strengthen the three main developmental areas of children, those being the cognitive, the emotional, and the value, so it promotes environmentally responsible behaviour (Plaka et al., 2017). Through its activities, prolonged exposure to the natural environment is an effective way to promote children's emotional bond with nature. In this way, their sensitivity to the natural environment increases, the children enjoy nature, and their psychological well-being increases (Colladoa et al., 2013).

Having a high-quality educational program tailored to the participants' "interests" and being inspired by familiar surroundings, like Linaria Port, is very important for practicing theory in a real-time setup. The program strengthens environmental behaviour, is interdisciplinary and promotes a healthy relationship with nature, and has learning benefits (Plaka et al., 2017). EE programs are often based on familiar environments so that students can understand and build links with their immediate environment. The awareness, knowledge, and skills required for this connection provide the transition to larger ecosystems, broader issues, and an understanding of complex concepts (NAAEE, 2017). Through real conditions, as they are confronted with the marine and terrestrial ecosystem, young people understand the meaning of the planet and how they can get to know it better. Finally, youth recognize natural threats, like climate change, and general concepts of sustainable development.

Fun time and the experiential experiences in the port area function as key factors to strengthen kids' sense of protection of natural ecosystems and acquire an environmental identity. Respecting and protecting the environment becomes a way of life for the future generations of our country. The objectives of the summer environmental camp at Skyros Island were related to the dissemination of environmental education to children and to the promotion of their responsible environmental behaviour through theory and hands-on experience in outdoor scenery (Skanavis and Kounani 2017). Young people, by all available means, must learn to

care for the planet, be familiar with nature and be a part of an environmentally active community (Plaka and Skanavis 2016).

Research has shown that the length of EE programs plays a role in environmental behaviour and that the success or failure of an EE program depends on both its content and the location where the program takes place (Colladoa et al. 2013). Throughout these years SKYROS Project has underlined the need to create a comprehensive EE Kit (Skanavis et al. 2018a; Plaka et al. 2017; Koresi et al. 2018), capable of conveying the environmental image of Linaria Port, away from Linaria Bay, and educating, through it, for a sustainable planet. The spectre of this idea was born from the analysis of the data derived from the success of the SKYROS Project. "SKYROS on the Road" was based on the need to spread the environmental message in other destinations.

2.7 Environmental Education Kit: the green port creates active citizens

According to Fortner's (2003) adage, "You do not need to have an ocean next to you to teach about the ocean" Linaria Port becomes an ideal tool for environmental education about the crucial environmental issues, through the innovations and practices that were implemented on the port. Linaria Port, based on its setup and place attachment theories, presented the perfect case study for designing an EE Kit. As Plaka et al. (2022) touched on "The practices and innovations in the port area become the way to educate about environmental issues. So, Skyros Project researchers have developed a prototype environmental education kit that educates about marine and coastal ecosystems while utilizing the Linaria Port as a live instructional tool."

This Environmental Education Kit tries to use a tiny port as an instructional instrument to spread environmental awareness and education messages, to call for action for future generations, and to make them proficient to be environmental stewards and ecologically conscious decision-makers (Plaka et al. 2022).

To this scope, Plaka et al. (2022), was actualized a pilot study. They used the kit on a research group in the Athens region to see whether knowledge and attitudes were modified following the intervention. Through experiential interference, the researchers afforded to prove the power that the kit has on the formation of environmental attitudes toward environmental issues. Moreover, the research was carried out to determine if the environmental kit had the desired impact on the participants who had never visited Linaria Port.

According to their results, Plaka et. al. (2022) proved that "the concept for this pilot project is a model that might influence public policy and the broader research framework. An innovative, convenient, and effective environmental education program has been designed to give knowledge and skills for dealing with environmental concerns".

2.8 Purpose of the Study

This study provides the opportunity, for an assessing the value of a port serving as an open environmental education laboratory and develop an environmental education kit, based on an innovative port collaboration.

- The first sector of this research is being studied through a comprehensive library search and the analysis of the SKYROS Project.
- The second sector is based on the initial findings related to the SKYROS Project, the assessment of the environmental education needs of the young ones, and the available literature on educational kits' creations.
- The third sector is based on the assessment of the EE Kit, through interviews among Greek experts on environmental education. Specifically, for the assessment of the purpose of the EE Kit, researchers were contacted (1) to evaluate the acceptability of the EE Kit among experts, (2) to evaluate the extent of EE Kit use, (3) to identify factors influencing the use of the EE Kit, and (4) to accept the port of Linaria as an innovative tool of EE.

2.9 Research Concerns

In continuation to this study's purpose, researchers attempted to address, risen by literature review, pertinent concerns by exploiting the three following questions. Furthermore, the mentioned in this study characteristics were presented in the population of Greek environmental educators in order to assess their perceptions. The questions at stake are the following:

Q1: What are the barriers that prevent environmental educators from using the EE Kit?

Q2: Is this EE Kit a notable methodology for environmental education programs?

Q3: Is Linaria Port an innovative approach as an environmental educational tool?

3 Materials and Methods

3.1 Means of Sampling

The present study uses data, through open-type and semi-structured interview techniques, because in this way can bring the best to the interview process (Sulaiman et al. 2012). In a meta-COVID-19 era, this study cannot act on student groups. Data were collected, through face-to-face interviews, with a sample of Greek experts in the environmental education field. The EE Kit was introduced to 30 experts, for about 15 minutes, and they had plenty of time to study it afterwards. The interviews were immediately followed.

Each interview was separated into two parts. In the first part, 10 questions were asked and participants had the opportunity to answer with "a lot"/"a little"/"at all" and "Yes"/"No"/"I don't know-I don't answer". In the second part, semi-structured open-ended questions were asked. These questions were asked on the above hypotheses. Also, the questions followed a qualitative-constructivist interview method, to get

close to the experts' individual perspectives, in relation to their experience of the EE Kit (Kaur and Gurnam 2009). The data were evaluated with Cluster Analysis (Willig 1964). Four clusters were created: (1) educators' perception of the methodology of EE Kit, (2) frequency of use, (3) their acceptance, and (4) factors that encourage the use of EE Kit (Sulaiman et al. 2012). Also, as a fifth cluster, they discussed whether (5) Linaria Port could be an innovative approach as an environmental educational tool. The duration of the conversation was approximately 30 minutes.

Also, the experts' profile was discussed to prove their experience in environmental education. Interviews were coded by numbers (Interviewee 1-30). After an interview session, the researchers complemented notes and the data were sorted by clusters, which were mentioned by each expert. Since preliminary clusters were formed, the researchers compared summaries, before refining them to capture all perspectives (Sulaiman et al. 2012).

3.2 Sample Statistics

3.2.1 Sample Statistics

The sample of this study consists of 30 Greek experts in the environmental education field. All of them are environmental responsibility and promote environmental awareness and attitudes of active participation.

Variable	Value	Frequency	Percentage
Gender	Male	6	20%
	Female	24	80%
Age	25-35	4	13%
	36-45	10	33%
	46-55	8	27%
	56-65	8	27%
Education	Bachelor's degrees	4	13%
	Master's degrees	20	67%
	Ph.D.	6	20%
Work Experience	Primary Education	12	40%
	University	2	7%
	Ministry	2	7%
	NGO	10	33%
	NGO and Primary Education	4	13%
	Experience in the creation of EE Programs and Design of EE-Kits	Yes	30
Experience in EE field	1-9 years	4	13%
	10-19 years	8	27%
	20-29 years	10	33%
	Over 30 years	8	27%

Table 2: Demographic Statistics: Experts' Profile (with the permission of the authors of the elaboration)

3.2.2 Demographic Statistics: Experts' Profile

The sample of participants consists of 6 men (20%) and 24 women (80%), for a total of 30 participants. The sample consists of 4 people (13%) between the ages of 25-35, 10 people (33%) between the ages of 36-45, 8 people (27%) between the ages of 46-55, and 8 people (27%) between the ages of 56-65. The participants consisted of 4 people (13%) with bachelor's degrees, 20 people (67%) with master's degrees, and 6 people (20%) with Ph.D. Regarding their work, 12 people (40%) work in Primary Education, 2 people (7%) at university, 10 people (33%) at a non-governmental organization (NGO), 2 people (7%) in Ministry, and 4 (13%) people at Primary Education and NGO. All the participants (100%) have experience in creating environmental education programs and designing kits. 4 people of the participants have experience in the environmental education field of 1-9 years (13%), 8 people 10-19 years (27%), 10 people 20-29 years (33%), and 8 people over 30 years (27%).

3.3 Description of EE Kit

The Environmental Education Kit: The Green Port creates Active Citizens, focusing on children aged 10 to 12 years. This age was chosen as the most suitable for older children in Greek primary education, as the based curriculum has covered a lot of knowledge and this helps in the faster perception of knowledge, provided by the kit. Also, in this age, the participatory process in the discussions, which the instructor motivates in the cognitive part, is achieved faster. However, all the actions included in the kit have been tested at the "Daily Environmental Port Camp" for children from primary school.

The Kit consists of:

- Guidelines Book about Environmental Educator
- 6 Activity Cards
- Memory stick with the background materials of each activity card
- 1 Activity Card as a Card Postal of Green Team
- Award "Green Team".

Its topics were based on crucial environmental issues, which directly related to marine ecosystems. These issues were marine pollution, the decline of marine biodiversity, the climate crisis, etc. The environmental profile of Linaria Port was selected, as the most appropriate educational tool for crucial issues. The practices in Linaria Port were an interesting field of discussion, between educators and students, over the world. So, the EE Kit was recommendable to be implemented in formal and non-formal education.

In a description of the educational material, all the cards start from the introductory card "The Green Port", where the educator "travels" students to Linaria Port. An interactive presentation takes participants to Linaria, through images and videos from the port. Also, it motivates students to belong to the "Green Team", who protects and loves the environment and connects all the participants with the Green Team of "Daily Environmental Port Camp". The educator, by presenting the practices and innovations of the port, motivates a discussion about critical environmental issues and attitudes that humans must have in their daily life. For example, the slides of the presentation, where the waste management of the port is presented, discuss marine pollution and present good practices that we can do in our daily lives to reduce

the problem. The other tabs cover an environmental issue, and they are self-contained, with experiential actions and field activities.

3.3.1 Description of Cards

Each activity card is oriented toward environmental educators as a guide of activities. The title of the card and the summary identify the card with the environmental issue. From the right side of the card, a frame provides basic information such as age group, keywords, and links to based curriculum courses, useful materials, location of intervention, total time, skills, and the goals of these actions. In the centre, there are two thematic units: “Theoretical Background” and “Activity”. The first section covers the basic and general knowledge on the subject that the environmental educator must know, to guide him on the issue. Respectively, the second section presents guidelines for actions. Its structure is based on the triptych «Know-Experience-Act». According to this, each “Activity” is structured in the above direction (NAMEPA and NOAA, 2014):

- **activation of students** (stimulates interest),
- **knowledge-exploration** (basic knowledge is given on the subject and a discussion takes place around it),
- **explain** (the awareness of the trainees is achieved and good practices and attitudes for everyday life are given),
- **evaluation** (action is activated).

Regarding the Activity Cards:

- **1st Card:** "The Green Port" ([Appendix I](#))
Linaria Port is presented and provides the importance of small ports to the environment, sustainability, economy and society.
- **2nd Card:** "People and the Sea" ([Appendix II](#))
The issue of marine pollution with debris is raised. There is an extensive discussion and activities about the relationship between people and the sea and the impact of this relationship.
- **3rd Card:** "Marine Hazards"
Understanding oil spills and oil spill response.
- **4th Card:** "The Impact of Climate Change"
The issue of climate change on the planet is raised. Ecological footprint.
- **5th Card:** "Marine Biodiversity"
The issue of decline of marine biodiversity. Students are able to perceive the connection of life with survival on the planet.
- **6th Card:** "Blue Flag" ([Appendix III](#))
Students are faced with good practices in coasts and marinas areas. They recognize the importance of Blue Flag.
- **7th Card:** "I am Active Member of the Green Team in Linaria Port"
Students put their experience from the activities on the postcard and post it to the Port of Linaria and “SKYROS Project”. With this action they declare that they are connected to the network of active citizens of Linaria eco-community.
- Finally, each trainee is awarded the **Green Team Award**

3.3.2 Basic Principles and Objectives of the Cards

The EE Kit applies the triptych “Know-Experience-Act”. Therefore, students must acquire the appropriate knowledge of environmental issues and be familiar with the scientific information, to become aware. This is the first objective of the kit. At the same time, it aims to develop cooperation, team effort, imagination, field experiences, and the implementation of pro-environmental attitudes and to promote active participation.

This kit has been studied and designed based on the Guidelines of Excellence as they are proposed by the North American Association for Environmental Education (NAAEE, 2017) and the basic principles of Environmental Education as set out in the Declaration of Tbilisi (UNESCO, 1978). At the same time, to be able to proceed with the based curriculum, it was adapted to the basic principles and objectives given by the Pedagogical Institute of the Greek Ministry of Education, Lifelong Learning, and Religions. More specifically:

Basic Principles

- Open Schools for communities.
- Orientation to the study of prevention or resolution of environmental issues.
- Interdisciplinary approach to the topic.
- Locally, immediate actions, which aims of a long-term result at national and global level.
- Promoting cooperation, cultivating values and creating new models, attitudes and behavior (individuals, groups and society) towards the environment.
- Equal opportunities for building knowledge, developing skills, values and attitudes that are needed to protect the Environment.
- Emphasis on the active participation of students with discussion-debate, research, criticism and creative elaboration and action.
- Focus on the sustainable development.

Objectives

- Cognitive (building concepts, understanding human-environment relationships/ interactions/ consequences, environmental problems, protection measures, etc.).
- Scientists (familiarity with scientific methodology/ research, critical and creative approach to issues, development of scientific mentality, etc.).
- Participants (teamwork, developing collaborative relationships, respect for different points of view, lifestyle, creative action, etc.)
- Social (connection school and daily routine, cultivation of responsibility, ability to make decisions and creative intervention, etc.)
- Aestheticians (creating a close relationship with nature through all the senses, etc.)
- Self-educators (use of library, press, new technologies, internet, etc.)

Thematically Stream:

Environmental Education stems from the need to protect the natural, historical and social environment by addressing critical issues locally, nationally and globally, as them set out at the United Nations Conference on Environment and Development (United Nations, 1992). The basically thematically stream proposed and based on the package are:

- Climate change - protection of the atmosphere,
- Biodiversity / species extinction,
- Litter and waste management,
- Water (pollution and depletion of surface and groundwater, etc.),
- Energy (depletion of non-renewable energy sources, overexploitation of natural resources, etc.),
- Human activities,
- Human relations

4 Materials and Methods Results

4.1 Descriptive Statistics

Among the results, there is a difference existed between the means of kit in formal education and non-formal education (SPSS 11.5 is used for descriptive statistics: formal: M=4,47, S.D.=0,52, non-formal: M=4,87, S.D.= 0,35). Also, the cognitive adequacy of each card's content was high and the concept of the triptych of methodology was notable (M=4,67, S.D.=0,48). When the sample of participants asked about their belief that a port can be a place of environmental education actions, then the participants' concern was high (M=4,80, S.D.= 0,56).

4.1.1 EE Kit's Potentiality to be Included in the Primary School Curriculum

When participants were asked about the potentiality of EE Kit to be included in the primary school curriculum and the fact that this kit would be an educational tool, 28 people (93%) answered positively and 2 people (7%) answered "I don't know/I don't answer". None of them answered negatively.

4.1.2 Potential Use of EE Kit in Other Outdoor Structures

28 people answered positively (93%) and only two answered "I don't know, or I don't answer" (7%) about the potential of the use of EE Kit in other outdoor structures, like another port or beach.

4.1.3 EE Kit as an Innovative Educational Tool

The participants had to choose one among four sentences. Two of these were negative and the other two were positive. None of them answered negatively. 10 people (33%) chose the sentence "The EE Kit is an innovative educational tool for actions of environmental educators, inside and outside the classroom" and 20 people (67%)

chose the sentence “The EE Kit is an innovation guide that can effectively ensure the active participation of children in environmental issues”. All participants responded positively to the fact that the EE Kit would reach the interest of students, according to the training method followed. Also, all of them responded positively that every thematic card presents an environmental issue and the introduction of each one corresponded to the concept of the triptych “Know-Experience-Act”. At the same time, they all believe that the EE Kit through its actions achieves raising awareness and motivates active participation of the students.

4.2 Semi-Structured Interviews

A total of 30 Greek experts in the environmental education field were successfully interviewed. This study measured the data from semi-structured interviews in terms of four clusters. More specifically, their perception of EE Kit, their acceptance, the frequency of EE Kit uses, and factors influencing the use of EE Kit. Also, they discussed the fifth cluster; namely, the potential of a port to be an environmental education tool.

The mood of all respondents was positive, and the procedure was initiated with enthusiasm. These terms were discussed, and the interview was beginning. Like the first part of the interviews, in the second part, we were noticing that the average of participants referred to common answers and confirmed them.

4.2.1 Environmental Educators’ Perception of EE Kit

This cluster concerns the environmental educators’ perception of the EE Kit. A discussion was held around their belief about the implementation of the EE Kit in the school curriculum, whether they consider it to be an interesting educational tool, and whether it motivates active participation. Generally, the findings indicated that teachers’ perceptions of the EE Kit implementation were positive. Below are some parts of the interviews.

“Environmental education activities in schools are not targeted towards the reality of environmental issues. This environmental education package is responsive to reality and stands out. I would use it”.

“It is model content and themes that a port acts as an environmental educator. There is no such approach in our educational system”.

“The EE Kit is a fresh approach, where students can operate and express themselves freely, while they can become thoroughly familiar with the terminology, they learn in the school curriculum”.

“The EE Kit can be considered a good guide for the teacher to understand the objectives set by the creators and to achieve active participation of the children, giving a boost to the connection with the lessons”.

“Original themes and content with a port for environmental education. I believe that the Kit will raise the interest of students, foster cooperation between them, and promotes experiential learning through a combination of play and education.”

“It is something different! Students gain knowledge and skills. There is a connection with the marine environment, while the kit manages to address serious environmental issues”.

“It is based on an innovative know-live-act methodology. In my view, it is an interesting approach to good practice and its extension to environmental education. It is a guide that can run alongside the school year. It could also be implemented in mountainous areas, but it needs more preparation on the part of the instructor. I would say it is a good opportunity to combine it with school trips!”.

“Its subject matter helps students significantly to take the knowledge they receive from school one step further.”

“The EE Kit promotes a wonderful message of think globally-act locally. A good method of raising awareness of the most important environmental issues is also a good method of choosing a model port”.

“This EE Kit is a model educational tool on formal and non-formal education. It encourages active participation in environmental decision-making”.

4.2.2 Environmental Educators' Acceptance of EE Kit

This cluster captures Environmental educators' acceptability of the EE Kit, on formal and non-formal education. In general, participants said that they believe that they use one more EE Kit which was extra reading material. But, after the presentation of the EE Kit, they understand that the Kit is a useful educational tool for them while teaching a subject or carrying out field activities. As reflected in the experts' suggestions above, the EE Kit can be integrated into education and combined with additional familiarity with environmental terminology and environmental issues. There are, however, some insights as to its application. Their garments are listed below.

“Time-pressed timetable as school curriculum”.

“I am not discouraged by its use, even if it involves students in a non-coastal area. My only concern is the safety issues in moving where the coast is needed for the activities and preparation on my part in an area, I am not familiar with”.

“It can be incorporated in a non-coastal area, but the experiential in the field will be lost”.

“Environmental educators in non-formal education could make more successful use of the EE Kit, but there is a difficulty of using audio-visual media outdoors”.

4.2.3 Environmental Educators' Frequency of EE Kit Use

In this cluster, the experts in the environmental education field said that generally there is nothing to discourage them to implement the EE Kit in formal and/or non-formal education. The only discouragement is found in their suggestions below.

“In non-formal education, the environmental educator has to stable a team to implement the whole actions of the Kit.”

“I must do a lot of preparation, especially in presentation viewing. We need to find a location (non-formal education)”.

“There is a possible risk of discouraging young people from solving issues if the actions are running in a big port. They face many challenges in implementation. They are not like Skyros!”

4.2.4 Factors Influencing the Use of EE Kit on Formal/Non-Formal Education.

The fourth cluster focuses on the factors that influence the use of EE Kit in formal and non-formal education. All participants were positive about its implementation. However, some raised their concerns at the same time regarding the use of EE Kit in formal and non-formal education.

More specifically, 18 out of 30 participants believe that the main problem in formal education is the pressured school schedule. Also, by implementing it in a non-coastal area, 4 stated that the experiential part suggested in the cards will be lost and another 4 stated that it will create safety and transportation problems.

Similarly, for the implementation of the EE Kit in non-formal education, the experts were more supportive of its implementation. 10 out of 30 believed that there may be safety issues in field activities and the implementation of the EE Kit in ports that have not provided designated areas for environmental education activities. Furthermore, 6 of the participants believe that preparation is needed by the environmental educator so that the field actions suggested in the cards will not be limited. Another 4 raise issues of discouraging young people from solving environmental issues if the action is run in a large port or port without environmental standards and infrastructure. Only one raised a concern about the frequency with which the environmental action group will meet and whether all trainees will follow the whole program, even though each tab is independent!

Despite the difficulties that may arise, experts are hopeful that environmental educators, who run actions indoors and/or outdoors, should be properly trained to overcome any obstacles that may arise.

4.2.5 The potential of the Port of Skyros Island to be a Tool for Environmental Education

In the first part of the interviews, all participants accepted that the EE Kit is an environmental education tool, which attracts the interest of the students and is designed with an interesting methodology that informs, as a result, it achieves raising awareness and motivates active participation of the students.

In this subsection, the validation of the EE Kit as an innovative environmental education tool will be presented. More specifically, all 30 participants accepted that the port of Linaria can be a reference point for environmental education activities inside and outside the port, with the EE Kit being the main instrument through their positive response. At the same time, they gave some tips for improving the EE Kit.

9 out of 30 participants believe that the facilities of the Linaria port can be an educational approach to other environmental issues. In addition, 4 out of 30 believe that an additional tab can be added that is linked to the history lesson or that each tab can have a historical context. Following are some individual comments about a more innovative approach to the EE Kit:

“The young people can propose an action that we have not thought of and act as designers of an active participation action. Perhaps they will create their own card.”

“For a more successful implementation of EE Kit, by any potential environmental educator, I would like an interactive tutorial (e.g., a video training), to cover any possible questions about the port of Linaria”.

“An extension: a proposal for a group meeting of all those who used the kit, to engage in a common action with the common goal of creating an active GREEN TEAM community, all over the world.”

“A better visual of cards, more artistic and visually appealing would make it more readable for the environmental educator.”

“Since we have a journey to the port of Linaria, there should be a video, where it should attract the children more. Why not introduce the port through the narration of animals of the island of Skyros (e.g., the horse of Skyros), to welcome the children to this educational project and stimulate their imagination? Also, in a short time, it will appear what goes on behind the curtain on GREEN TEAM on the port.”

“To make a connection with the sea for field activities, e.g., educational diving.”

5 Discussion

In turbulent times of global crisis due to harsh economic and the recent pandemic, Greece has shown intent environmental interest. Eight years have passed since the initiation of the Skyros Project and the results are promising. The environmental awareness approach of a project at the port of a small Greek island has connected hundreds of voices of interest to make a new start based on a friendly environmental lifestyle. Globally, a net of supporters has been created and it keeps steadily growing.

SKYROS Project and Linaria eco-community became a loud environmental signal, reminding us that environmental protection is a personal choice.

The varieties of actions, which are being held at the port, gradually transform the young into conscious citizens (Plaka et al., 2017). To achieve a satisfying deepening in EE, it is necessary to connect to all forms of education-formal, non-formal, and informal (Apostolopoulou et al., 2016) something that has been done successfully at Linaria Port (Koresi et al., 2018). The concept is to begin in early childhood, the environmental awareness. We are suiting for a more open-minded generation of adults, who by participating in this Project, would use it as a tool to connect people and kids to a common environmental vision. This is the way to promote a new sustainable lifestyle (Ganiaris et al., 2018).

In the small port of Skyros, an innovative Greek community has been established. Every summer, the “Daily Environmental Port Camp” operates and sends an environmental awareness message to other destinations through the action "SKYROS on the Road". The blue port with the shade of green has proved to serve as an interactive environmental education tool. The present study attempted to evaluate an EE Kit, which was created through the need of the port of Linaria to communicate the message of the need to change the environmental culture of citizens in Greece and the world around it. Its settings, its innovations, its actions, and its overall environmental image constitute a model port, small, in the centre of the Aegean Sea. All of these have been an inspiration to create this EE Kit. Nowhere in Greece, a port acts as an environmental education tool about crucial environmental issues.

The EE Kit was evaluated by 30 Greek experts in the environmental education field, through three levels. The acceptance of the EE Kit, the evaluation of the use of the EE Kit, and the identification of factors influencing its use. To be more particular, this study evaluated them through 5 clusters to work out results. Four of them focus on their perception of EE Kit, their acceptance, the frequency of EE Kit uses, and factors influencing the use of EE Kit. Also, a fifth cluster focuses on the potential of a port to be an environmental education tool.

More specifically, the cluster concerns the environmental educators' perception of the EE Kit, which was positive. They believe that implementing the EE Kit in the school curriculum, finding it an interesting educational tool, and motivating active participation. This cluster captures the acceptance of the EE Kit by environmental educators, both in formal and non-formal education settings. When teaching a subject or carrying out field activities, they understand that the kit is a useful educational tool. It may be integrated into education and linked to raising awareness of environmental terms and issues.

In the cluster on the frequency of use of the EE kit, the experts in the field of environmental education indicated that there is generally nothing that would discourage the use of the EE kit in formal and/or non-formal education. Also, the

factors influencing the use of the EE Kit in formal and non-formal education are the focus of the fourth cluster. They have presented some of their concerns regarding its implementation. In particular, the pressure of the school curriculum is the main problem in formal education. There may also be a safety issue in carrying out the project in a non-coastal area. Furthermore, in order not to limit the field actions suggested in the cards, they believe that preparation by the environmental educator is necessary. Other experts raise the issue that young people might be discouraged from solving environmental problems if the action is carried out in a large port or in a port without environmental standards and infrastructure. Only one expert was concerned about the frequency of meetings of the environmental action group and whether all pupils will be part of the whole program. Despite the difficulties that may arise, the experts hope that environmental educators leading indoor and/or outdoor activities should be properly trained to overcome any obstacles that may arise.

Finally, in the fifth cluster, all participants accepted that the Port of Linaria, with the EE Kit as the main instrument of their positive response, can be a reference point for environmental education activities inside and outside the port. They are also of the opinion that the structures of the port of Linaria can be an educational approach to other environmental issues. In addition, some of them believed there could be an extra card in the kit, which could have a connection with the history lesson, or that each card could have a historical context. At the same time, they gave some tips on how to improve the EE Kit.

Crucially, experts accepted the use of the EE Kit, in both formal and non-formal education, with most ranking it more appropriate in formal education. This helped to answer the second research question posed.

Also, the experts confirmed the third question. The cognitive adequacy of each card's content was high and the concept of the triptych of methodology was notable. Their belief that a port can be a place of environmental education actions, then the participants' concern was high. In the first part of the interviews, the participants accepted that the EE Kit is a tool for environmental education, with a well-structured methodology and an interesting approach to environmental issues. In the second part, they confirmed that the innovation of the tool comes from using a small port and thus confirmed our first fourth research question. The Linaria port is an innovative case study for the development of an EE kit.

5.1 Limitations and Suggestions for Improvement

One of its limitations is its exclusive use in marine areas (9 out of 30), with some believing that more preparation would be needed on the part of the environmental educator or that there are potential concerns about moving the educational team to marine areas to implement the activities. At the same time, we have noticed that the research could have offered more to the research field by evaluating it with students to measure possible changes in their attitudes and/or association with the Green Team of

Linaria Port. Finally, improvements to the content proposed by the experts can be implemented and subsequent research on the improved version of the EE Kit can be carried out.

6 Conclusions

We are in need to motivate communities to endorse environmental action and change behaviour. We also need a sense of responsibility to increase our collective consciousness. The search for environmental motivation must be a goal. Through the collective work of the SKYROS Project, the product of this study offers the opportunity to disseminate environmental awareness skills to the new generation, through an environmental education kit. A port and especially the port of Linaria could be an innovative tool in the environmental education field. This port has been established as an outdoor environmental education field with hands-on experience, for both on-sight EE and EE around the planet. What is clear is that sustainability initiatives undertaken by higher education institutions can address both the causes and the effects of climate change at both the local and global levels (Leal Filho et al. 2023).

With the growing concern for sustainable development, environmental education should aim to equip those learning with sophisticated tools. The aim is to change behaviour to raise awareness of the environment and to make future generations stewards of the environment (Sardi and Skanavis. 2023). So far, there is no data to show that a port can function as a tool in the environmental education field. The only thing we can observe is that ports provide spaces to carry out environmental education activities. This brings this research to the development of the EE Kit. According to a literature review, there are no references to developing a kit to educate on modern environmental issues using the applications available in a Greek public port. This research is trying to contribute to the global literature and make the Linaria Port an innovation case study for developing an EE Kit.

Universities must further engage, for example through partnerships with local organizations to promote dialogue and awareness on climate change and its impacts (Leal Filho et al. 2023). The University of the Aegean and the University of West Attica have made the above-mentioned commitment and, since 2015, have been making their own mark in the fight against the climate crisis. Also, universities can provide opportunities for students to engage in climate action, creating a campus culture that values sustainability and environmental stewardship (Leal Filho et al. 2023).

A scientific paper is necessary to disseminate pertinent environmental awareness information based on strong pertinent research information and solid literature background. The creation of EE Kits, like this one, and the establishment of environmental campaigns, like the SKYROS Project, are important practices for students to adopt new skills in the environmental decision-making process for several

reasons. First, keeping up with changing technology and techniques. As environmental challenges become increasingly complex, new technologies and techniques are developed to address them. Students who learn new skills are better equipped to handle these challenges and make informed decisions based on the latest data and research. At the same time, they understand the interconnectedness of environmental issues. Environmental issues are often interconnected and require an interdisciplinary approach to solve them. By learning new skills, students can gain a better understanding of how different disciplines, such as ecology and social sciences, contribute to environmental decision-making. Also, they foster innovation. New skills can help students think creatively and develop appropriate solutions to environmental challenges. By learning about new techniques, students can identify new ways to address environmental issues and develop more sustainable practices. In addition, they enhance communication and collaboration. Environmental decision-making often involves working with diverse stakeholders. By learning new skills, students can improve their communication and collaboration abilities, which are essential for successful environmental decision-making. Overall, learning new skills is important for students in the environmental decision-making process because it equips them with the knowledge and tools needed to address complex environmental challenges, foster innovation, and collaborate effectively with diverse stakeholders.

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