

# Web-based Management system for fishing tourism

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## Abstract

In this article a management system is presented for fishing tourism. The proposed management system is of a crowd-sourcing format, meaning that users can contribute to the expansion of this system. Compared to the existing solutions, the proposed management system offers several innovative aspects. Fishermen can create their own itinerary using a simple to use tool. In the itinerary tool, fishermen can create their itinerary using a friendly template. The template includes a preloaded text with marketing tips, description of the itinerary (boat type, fishing type, etc.), amenities offered, and multimedia upload (photos and videos). The system provides sophisticated management tools so that the administrator controls the expansion of this crowd-sourcing platform. The administrator can create other sub-administrators, add topics, remove members/fishermen, add useful links, monitor analytics, and operate a consulting tool.

## Introduction

Fishing tourism was originally adopted in Italy as a way to provide visitors with the opportunity to go fishing with local fishermen and share the culture, tradition and lifestyle of local fishermen. Fishing tourism was later deployed in other countries where fishing was an established tradition like Greece, Spain and other EU countries. Fishing tourism is part of the wider context of marine ecotourism and involves the embarkation of tourists on fishing boats for recreational-tourism purposes. Tourists are allowed to participate in the fishing activities with experienced fishermen. Fishing tourism provides tourists with the opportunity to go out to sea with real fishermen and to learn how to perform fishing. Activities include boat trips, observing and participating in fishing activities, introduction to the fishing methods, preparation of on board or on shore meals, whereby information is provided on the marine environment and coastal biodiversity of the local area.

Many fishermen advertise their product through individual websites [1]. This involves increased cost for them because they have to subcontract this service to information technology (IT) specialists. Additionally, they spend a lot of time to communicate the content to the IT specialists, while the chance that a tourist interested in fishing tourism will locate the fishermen's website is minimal. In the hotel market there are web-based management systems which are user-friendly to tourists wishing to book hotels [2-4]. The web-based platforms in hotels depend on the provider-client interaction. In the hotel industry the provider is the hotel and the client is the tourist. In a fishing tourism model the provider-client pair involves the fishermen and tourists.

Because the fishing tourism market is small [5] currently there are two key web-based platforms [6-7]. The first platform [6] basically is a static website with one administrator. Fishermen provide their content to the administrator who posts the content (fishing trip itinerary). The second platform [7] is more dynamic in the sense that fishermen may upload the content on their own. This platform has similar features as booking.com [2] which is considered the gold standard in the hotel industry. Both platforms use a preformatted itinerary for fishermen.

In this article we present a management system for fishing tourism that has been created in the framework of European project TOURISMED. This management system is of crowd sourcing type, i.e. its content is growing due to the user's contribution. Compared to the existing solutions, the proposed management system offers many innovations.

## Methodology

### *Programming language*

The proposed management system (PMS) was written in Hypertext Preprocessor (PHP) language. The management system was uploaded in the internet in July 2018 under the domain [www.fishingtourism.net](http://www.fishingtourism.net) [8]. The management system is designed for Windows, Android and browser-based interfaces.

### *Classes of users*

**Administrators:** There are regional (see section Demonstration) sub-administrators, but only one (super) administrator is allowed who may create/delete sub-administrators. The administrator has access to all the functions of the management system.

**Fishermen:** The system allows for professional fishermen, holding a fishing license, who wish to upload an itinerary. Their itinerary is password-protected. Fishermen may alter their itinerary at any time. Fishermen have access to an area that includes useful resources for fishermen.

**Members:** Public or tourists.

### *Itinerary design*

Fig.1 shows the main structure of the itinerary for fishing tourism. Main blocks of the itinerary includes: 1) Preloaded text, 2) Data regarding the fisherman and boat (name, boat type, boat location, facilities offered, etc.), 3) Photos from previous fishing trips, 4) Videos from previous fishing trips and 5) Map of available fishing trips.

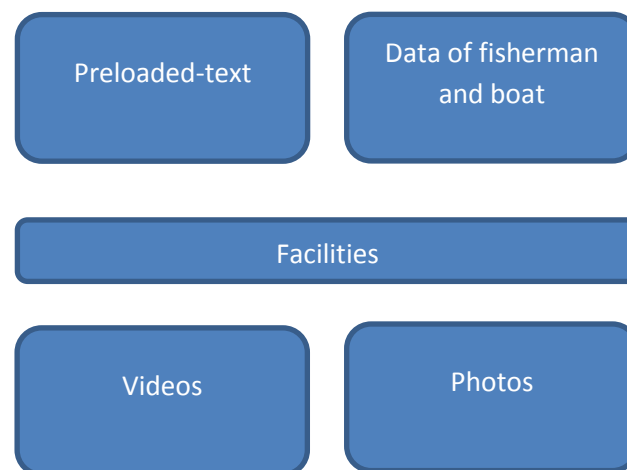


Fig.1. Main structure of the itinerary for fishing tourism in PMS.

### **Demonstration**

Fig. 2 shows the main page of PMS. The main page includes a search engine for fishing itineraries which is accessible to the public. It also includes all the itineraries displayed in a Google map. Additionally, the main page includes key fishing tourism itineraries.

Fig.3 shows the page where the fishermen may create the itinerary. The form is user-friendly, and it includes many drop down menus to speed up the creation of the itinerary. In addition, it includes preloaded marketing tips that will increase the visibility of its product. The innovative aspect of this preloaded text is that cultural properties of the region are advertised. The fisherman has the option to upload pictures and videos in the itinerary. Fig. 4 shows an itinerary created using PMS.

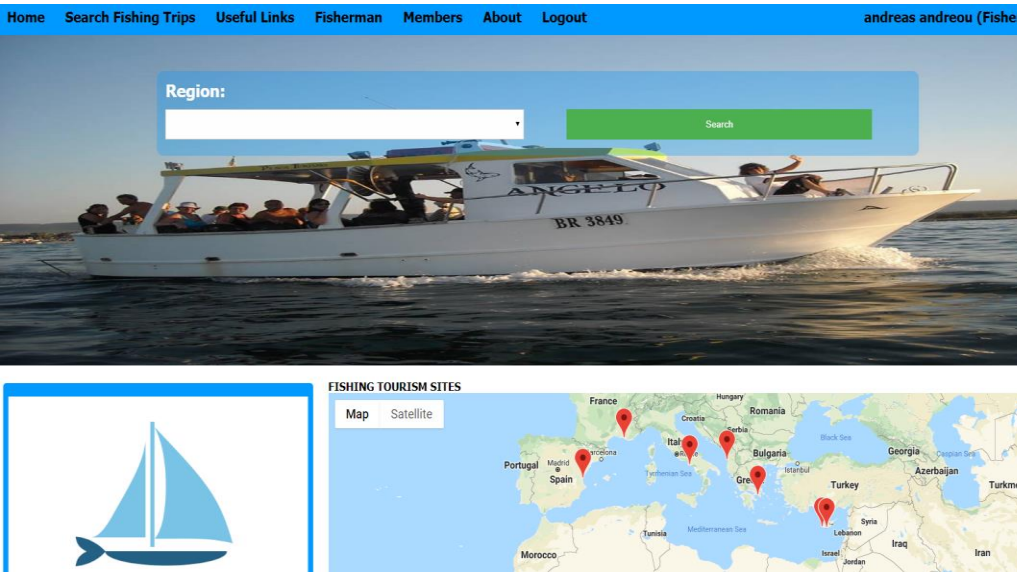


Fig. 2. Main page of PMS.

Home Search Fishing Trips Useful Links Fisherman Members About Logout andreas andreou (Fisherman)

Welcome to Fisherman Area

Update Fisherman Itinerary

Name: andreas

Surname: andreou

Name of boat: georgio

Country: Cyprus

City: paphos

Country: Cyprus

City: paphos

Boat Location: paphos

Phone: 88567878

Length Of Boat (m): 8

Fig.3. Page where the fishermen may create the itinerary.

georgiou seferi 12, paphos

Map Satellite

Tombs of the Kings  
Τάφοι των Βασιλέων

Paphos  
Πάφος

Archaeological Park  
Αρχαιολογικό Πάρκο Πάφου

Paphos Waterpark  
Υδροπαρκο Αρροδίνης

Map data ©2018 Google, Terms of Use

X is a genuine sea dog who has been sailing across the Cyprus waters for 25 years.  
With this true fisherman, who also speaks English, you can fish from red mullet to sea bass.  
The boat Y, is a comfortable 9 meter long boat, equipped with a bridge, an awning, bunk beds and a kitchen, in which X, as an excellent cook, will prepare for you a delicious rice with lobster or a fishing bullit.  
X whose parents and grandparents were also fishermen, knows all the secret gems of the Cyprus coast.  
Spend a memorable afternoon touring the unspoilt beaches along the route from Limassol to Zygi area, and explore the caves of Cavo Greco.  
If you are looking to go fishing for cuttlefish or learn the secrets of longline fishing during a 4-hour-long trip in the early morning.  
X is the best person to escort you in this adventure and to grill for you the fish from the nets on the boat.

Free Cancellation  
30 € per person

Fisherman's Name: andreas andreou  
Country/: Cyprus  
City: paphos  
Languages: greek  
Boat Name: georgia  
Length Of Boat (m): 8  
Location: paphos  
Phone: 88567878  
Email: christakis.damianou@cut.ac.cy  
Fishing Type: Netting  
Targeted Fishes: red mullet  
Boat Type: Houseboat  
Capacity: 2  
Trip Duration (Hours): 3

Fig. 4. Itinerary created using PMS.

The proposed management system for fishing tourism includes additional features such as the consulting tool and also an educational depository for establishing an enterprise for fishing tourism, a feature that does not appear in any of the existing management systems.

Home Search Fishing Trips Useful Links Fisherman Members About Administrator Area Logout						
Christakis Damianou (Admin)						
Administrator Area						
Show Topics	List of Topics					
Show Links						
Show Heavy Tips						
Add Topic						
Add Useful Link						
Administrators						
Fishermen						
Members						
Admin Registration						
Consulting Tool						
Add Heavy Tip						
Logout						

Title	Date Modified	Status	Add Media	Edit	Delete
<a href="#">Business model</a>	2018/06/29	Active			
<a href="#">Guide for trainers</a>	2018/07/01	Active			
<a href="#">Test Topic</a>	2018/09/14	Inactive			

Fig. 5 Tool developed for the administration of the system.

Finally, Fig. 5 shows the tool developed for the administration of the system. The administrator may create sub-administrators allocated in the various regions. The tools provided for the administrator includes creation of useful links, uploading educational tools and monitoring of accounts (deletion is allowed, as well as password retrieval). Additionally, the administrator is responsible for responding to questions raised through the consulting tool.

## Conclusions

Many tourism activities (for example hotels, car rental, etc.) are booked by web-based management systems. Fishing tourism is another activity which is growing and, as a result, management systems have been developed to serve this market using internet-based managements systems [6-7]. One of these systems [6] is basically a static website with one administrator. The other management system [7] is more dynamic in the sense that fishermen may upload the content on their own.

In the framework of the European project TOURISMED we have created an internet-based management system for fishing tourism ([www.fishingtourism.net](http://www.fishingtourism.net)). The proposed management system is of a crowd sourcing format, meaning that users can contribute to the expansion of this system. Fishermen can register in the system provided that their fishing license is confirmed. Fishermen can create their own itinerary using a simple to use tool. In the itinerary tool, fishermen can create their itinerary using a friendly template. The template includes a preloaded text with marketing tips, description of the itinerary (boat type, fishing type, etc.),

amenities offered, and multimedia upload (photos and videos). The one-page itinerary (in PDF format) is created in less than 2 mins.

The system provides sophisticated management tools so that the administrator controls the expansion of this crowd sourcing platform. The administrator can create other sub-administrators, add topics, remove members/fishermen, add useful links, monitor analytics, and operate a consulting tool.

Members (tourists) can search for itineraries, be informed about fishing, and add reviews of their trip. Fishermen can create itineraries, manage their booking, access and use the consulting tool, and be educated using the uploaded information about fishing tourism (business models, guide for fishing tourism training, etc.).

In the future we plan to expand the PMS so that additional functionalities are added (for example regional temperature, and information about nearby fishing restaurants and hotels).

## **Acknowledgements**

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## **REFERENCES**

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- [3] <https://el.hotels.com>
- [4] <https://www.agoda.com>
- [5] [https://webgate.ec.europa.eu/fpfis/cms/farnet/files/documents/FARNET\\_Fisheries\\_and\\_Tourism-9\\_EN.pdf](https://webgate.ec.europa.eu/fpfis/cms/farnet/files/documents/FARNET_Fisheries_and_Tourism-9_EN.pdf)
- [6] <https://www.fishingtripmajorca.co.uk/>
- [7] <https://fishingbooker.com/>
- [8] <http://www.fishingtourism.net/>