



Erasmus Intensive Programme

Education for Sustainable Development in Protected Areas

Centre of Environmental Education of Amfissa, Greece, 6-19 July 2014



Improving the conservation status of the priority habitat types *1520 and *5220 at the Rizoelia National Forest Park

LIFE12 NAT/CY/000758

Marios Andreou



Contents:

- About the project
- Project's actions

Campanula fastigiata



Project aim:

To contribute to the long term conservation of two EU priority habitat types:

- Arborescent matorral with *Ziziphus* (*5220) and
- Gypsum steppes (*Gypsophiletalia*) (*1520),

by quantifying and halting natural and anthropogenic pressures and threats that cause, in the long term, degradation of these habitat types at the Rizoelia National Forest Park (CY6000006).

Specific objectives of the project:

- Contribute to the consolidation and dissemination of a knowledge base for the protection, restoration, monitoring and evaluation of these two priority habitat types.
- Increase habitat connectivity for arborescent matorral with *Ziziphus* (*5220).
- Reduce the risk of fire affecting both targeted priority habitat types.
- Eradicate competitive vegetation for both priority habitats
- Manage leisure activities and accessibility in the park in a favourable manner to the conservation of the priority habitats.

Coordinating Beneficiary:



Department of Forests - DF

Associated Beneficiaries:



Department of Environment - DE



FREDERICK UNIVERSITY



Frederick University - FU



**ΑΝΟΙΚΤΟ
ΠΑΝΕΠΙΣΤΗΜΙΟ
ΚΥΠΡΟΥ**

www.ouc.ac.cy

Open University Cyprus - OUC

Duration: September 2013 – February 2017

Funding: Program LIFE+, European Commission



Project Budget:

- Total project budget: €766.746 (eligible budget €766.271)
- EU financial contribution: €574.703 (75%)



Arborescent matorrals with *Ziziphus* (*5220)

- Deciduous scrub of the thermo-Mediterranean bio-climate zone.
- Found usually in dry to semi-arid areas and is dominated by *Ziziphus lotus*.
- In Cyprus, the species was abundant mostly in the Mesaoria plain and central hilly zone of the island but due to strong anthropogenic pressure, the species is found in isolated clusters, usually at the boundaries of cultivated fields.



Arborescent matorrals with *Ziziphus* (*5220)



- Representative communities of habitat type *5220 are scattered and fragmented.
- Other typical species of the habitat type are *Asparagus stipularis*, *Noaea mucronata*, *Thymbra capitata* and *Phagnalon rupestre*.



Gypsum steppes (*1520)

- Open phryganic formations occupying gypsum-rich soils, in dry and semi-arid areas. The shrubby vegetation is usually very open with dense patches of annual species or with bare land of gypsum.



Gypsum steppes (*1520)

- In Cyprus the habitat type is floristically characterized by the presence of gypsophilous species such as *Gypsophila linearifolia* and *Campanula fastigiata* and the gypsovag *Herniaria hemistemon*.



Gypsophila linearifolia



Herniaria hemistemon



Campanula fastigiata

Gypsum steppes (*1520)

- Both *Gypsophila linearifolia* and *Herniaria hemistemon* are new additions to the flora of Cyprus and have been included in the *Red Data Book of the flora of Cyprus*.



Gypsophila linearifolia



Herniaria hemistemon

- *Gypsophila linearifolia* was classified as Critically Endangered
- *Herniaria hemistemon* was classified as Vulnerable

Gypsum steppes (*1520)

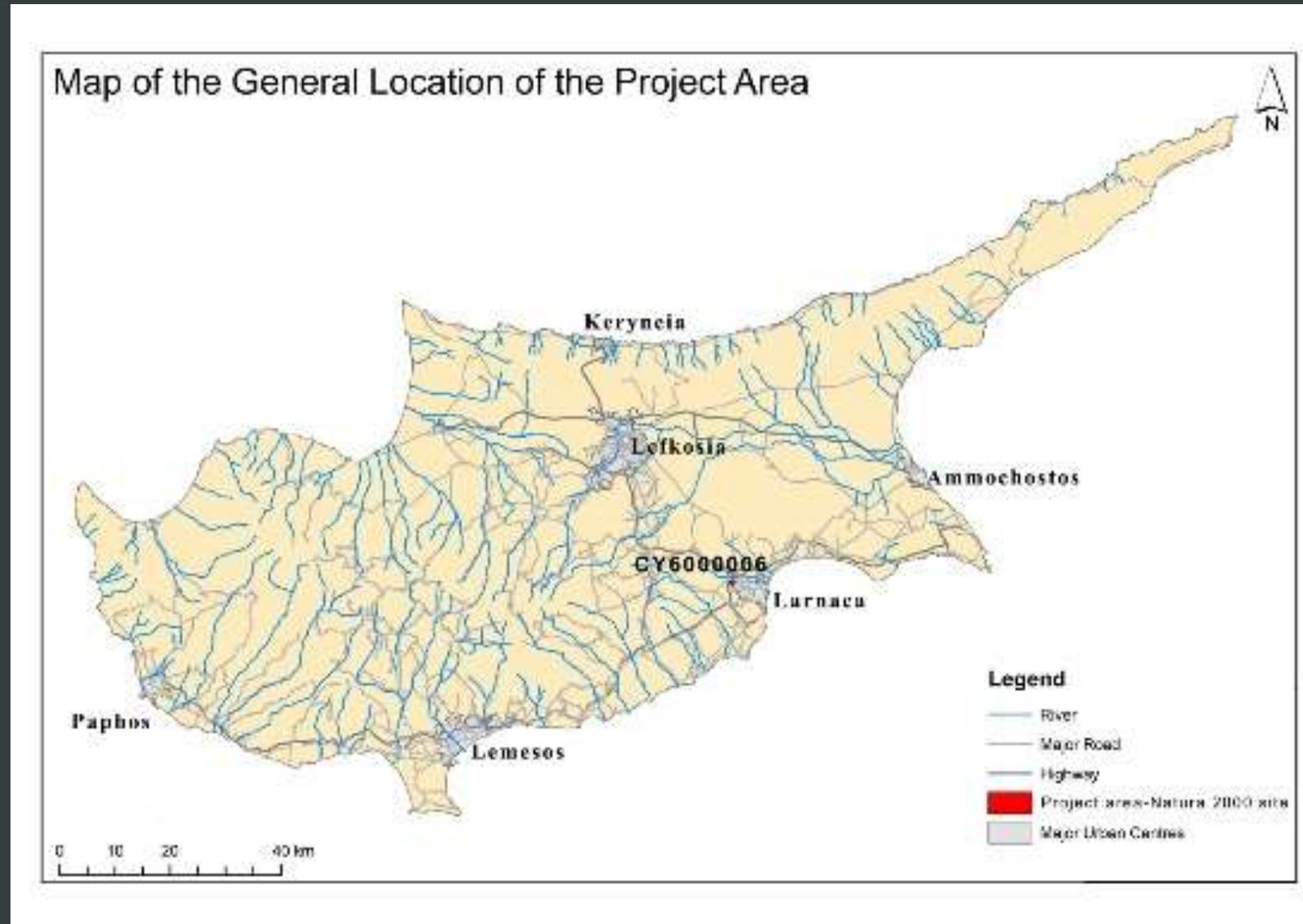
- *Campanula fastigiata* has been recently found in Cyprus (Rizoelia 2009).



Campanula fastigiata

Ethniko Dasiko Parko Rizoelias – CY600006

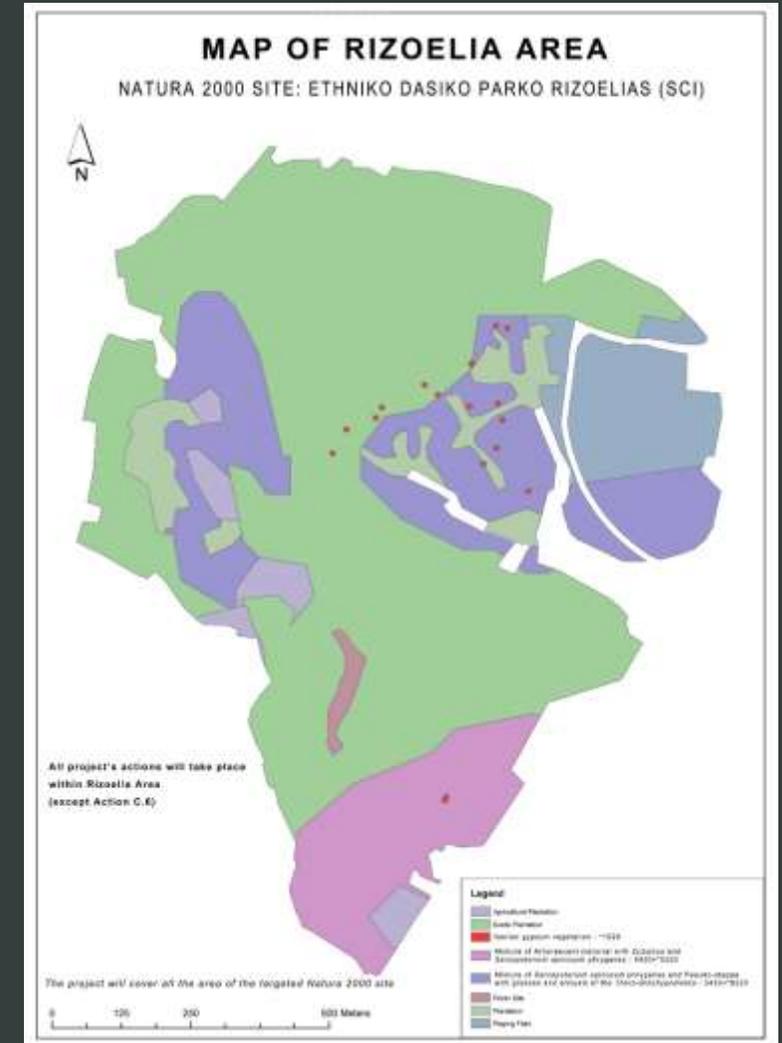
Rizoelia National Forest Park



Ethniko Dasiko Parko Rizoelias – CY600006

Rizoelia National Forest Park

- 4 habitat types of the Directive 92/43/EEC (3 priority)
- 34 bird species (33 migrated)
- 3 mammal species
- 9 reptile species
- 11% of the flora of Cyprus
- 7,9% of the endemic flora (11 endemic species)
- 6 threatened species included in the Red Data Book of the Flora of Cyprus



Ethniko Dasiko Parko Rizoelias – CY600006

Rizoelia National Forest Park

- Habitat type *5220 has the third largest area in a Natura 2000 site of Cyprus.
- Rizoelia area is the main, known, distribution area of gypsophilous vegetation (gypsophilous vegetation occurs also at Pentadaktylos, in the Turkish occupied part of Cyprus).



Project Actions

- **Preparatory Actions**
- **Concrete Conservation Actions**
- **Public awareness and dissemination of results**
- **Overall project operation and monitoring of the project progress**

Project Actions

Preparatory Actions:

- Detailed habitat mapping



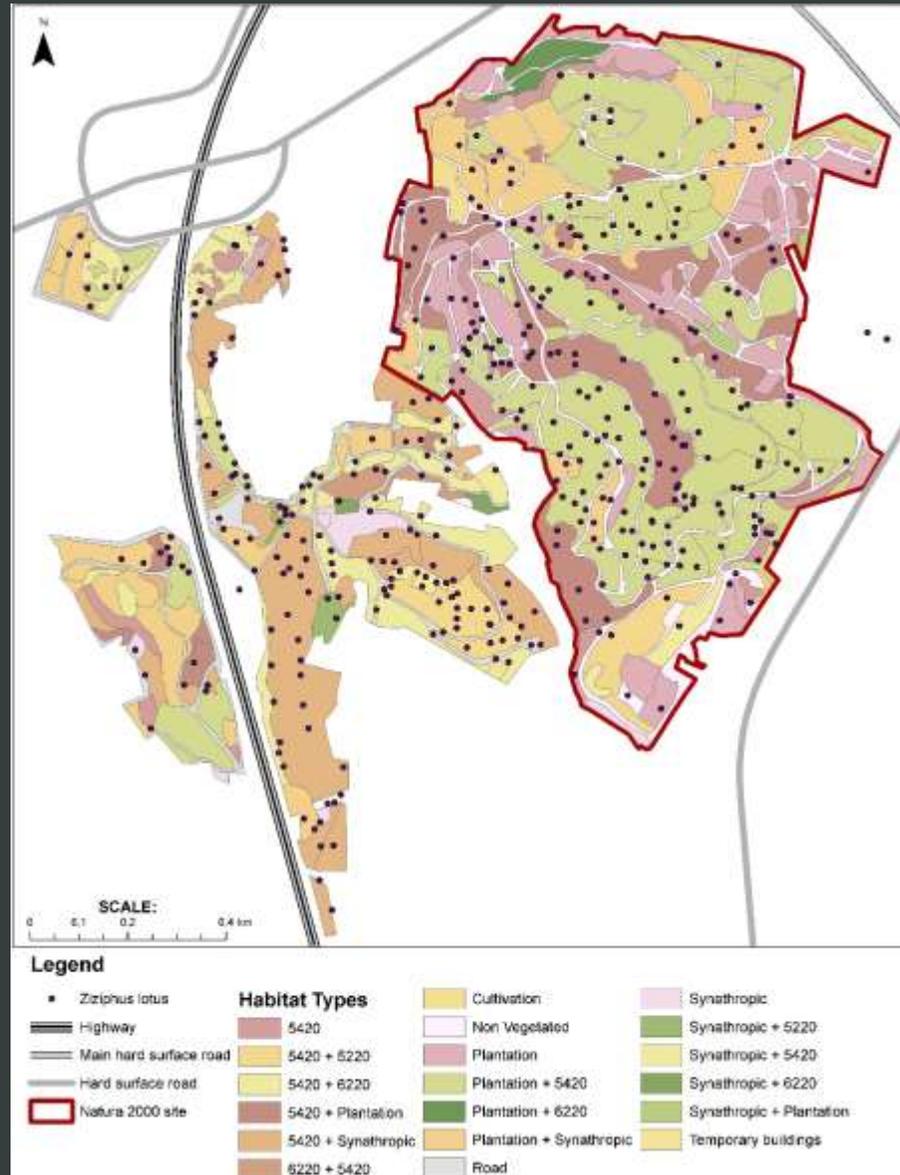
Project Actions

Preparatory Actions:

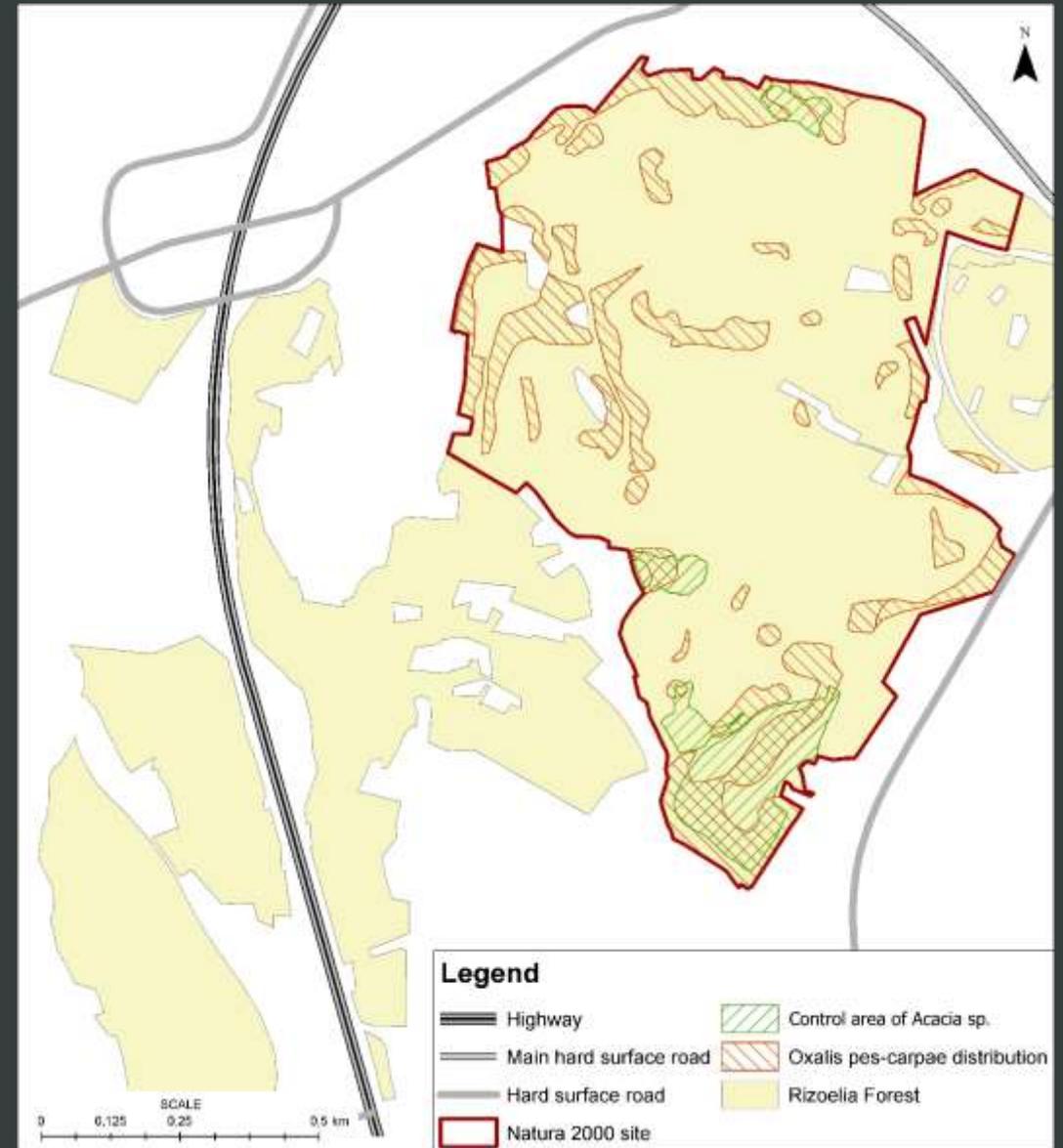
- Detailed habitat mapping



Distribution map of *Ziziphus lotus* within Rizioelia NFP



IAPS at Rizioelia NFP



Project Actions

Preparatory Actions:

- Detailed habitat mapping
- **Elaboration of Management Plans**



Project Actions

Preparatory Actions:

- Detailed habitat mapping
- Elaboration of Management Plans

Table of Contents

1. Introduction
2. Current Situation
 1. The Rizoelia National Forest Park – General Information: legal status, management, ownership, historical data
 2. Ecological characteristics (geology, soils, flora, vegetation, fauna, climate)
 3. The habitat type *1520 (or *5220): description, floristic composition, conservation status, geographical distribution
3. Current status assessment – Threats
4. Management Goal and Objectives
5. Management measures
6. Implementation (implementing body, timeframe, budget)
7. Monitoring program and monitoring indicators
8. Revision
9. Bibliography

Project Actions

Preparatory Actions:

- Detailed habitat mapping
- Elaboration of Management Plans
- **Elaboration of Monitoring Plans**



Project Actions

Preparatory Actions:

- Detailed habitat mapping
- Elaboration of Management Plans
- Elaboration of Monitoring Plans

Table of Contents

1. Introduction
2. Habitat type *1520 (or *5220)
 - a) Brief description of the habitat type
 - b) Geographical distribution in Cyprus and spatial distribution within the Rizoelia National Forest Park
 - c) Habitat (ecology, structure and composition)
 - d) Existing Pressures - Potential Threats
 - e) Protection status
 - f) Conservation status
 - g) Management
3. Monitoring Plan of the habitat type *1520 (or *5220) at the Rizoelia National Forest Park
 - a) Monitoring objectives – Justification
 - b) Monitoring protocol
4. Conservation status assessment of the habitat type *1520 (or *5220) within the Rizoelia National Forest Park
5. Bibliography

Project Actions

Preparatory Actions:

- Detailed habitat mapping
- Elaboration of Management Plans
- Elaboration of Monitoring Plans
- **Preparation of Action Plans**



Project Actions

Preparatory Actions:

- Detailed habitat mapping
- Elaboration of Management Plans
- Elaboration of Monitoring Plans
- **Preparation of Action Plans**
 - Guiding tools for the enhancement of the targeted habitat types, through restoration and habitat recreation
 - Control of Invasive Alien Plant Species

Project Actions

Concrete Conservation Actions:

- Minimizing the impact of competitive vegetation on targeted habitat types.

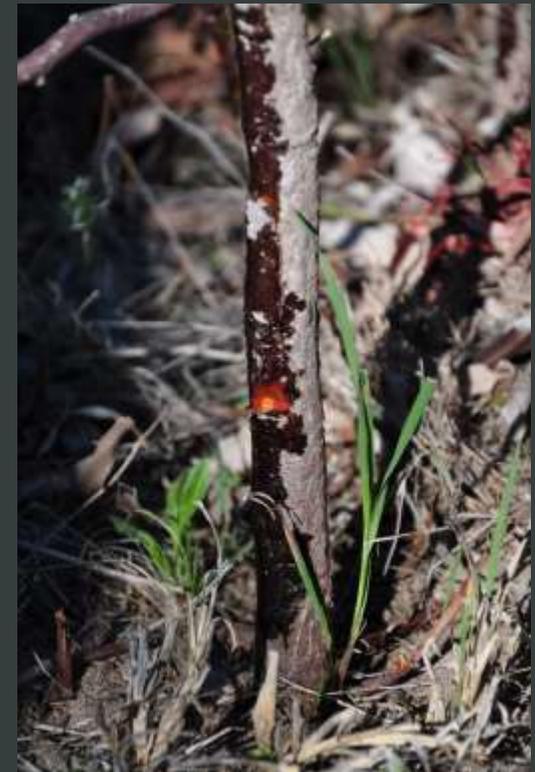


Project Actions

Concrete Conservation Actions:

Frilling

- Minimizing the impact of competitive vegetation on targeted habitat types.



Project Actions

Concrete Conservation Actions:

Cut-stump

- Minimizing the impact of competitive vegetation on targeted habitat types.



Project Actions

Concrete Conservation Actions:

Drill-fill

- Minimizing the impact of competitive vegetation on targeted habitat types.



Project Actions

Concrete Conservation Actions:

- Minimizing the impact of competitive vegetation on targeted habitat types.



Project Actions

Concrete Conservation Actions:

- Minimizing the impact of competitive vegetation on targeted habitat types.
- **Habitat restoration and habitat recreation**

1. At locations with few individuals of *Ziziphus lotus*, where the conservation status of the habitat type *5220 is very poor, several characteristic species of the targeted habitat type (e.g. *Ziziphus lotus*, *Asparagus stipularis*, *Phagnalon rupestre*, *Coridothymus capitatus* and *Noaea mucronata*) will be planted to promote its restoration (*in situ* conservation measure). The restoration will be created by establishing thickets of *Ziziphus lotus* in isolated groups among existing indigenous vegetation.

Project Actions

Concrete Conservation Actions:

- Minimizing the impact of competitive vegetation on targeted habitat types.
- **Habitat restoration and habitat recreation**

2. Seeds from the keystone species of the habitat type *1520 (e.g. *Gypsophila linearifolia*, *Campanula fastigiata* and *Herniaria hemistemon*) will be dispersed in appropriate locations, both for *in situ* and *inter situ* conservation.

3. Establishment of the priority habitat *5220 in an area where the habitat was known to have existed previously (habitat re-creation) but is currently lost (*inter situ* conservation).

Project Actions

Concrete Conservation Actions:

- Minimizing the impact of competitive vegetation on targeted habitat types.
- Habitat restoration and habitat recreation
- **Fire prevention**

1. Vegetation clearings at selected locations to reduce fuel continuity around the two priority habitats.

An agricultural tractor will cultivate/remove stubble over a belt of 10 m wide on parts of the perimeter of the site in cereal fields just after harvesting, i.e. in June.

2. Limiting vehicle and visitors' access in places which are too close to the priority habitats locations.

Project Actions

Concrete Conservation Actions:

- Minimizing the impact of competitive vegetation on targeted habitat types.
- Habitat restoration and habitat recreation
- Fire prevention
- **On site habitat demarcation and fencing**

The demarcation of the habitat type in the known location of gypsophilous vegetation within the site will be carried out by 'Soft-fencing', which will be done through placement of metallic posts that will be linked with cordons. Demarcation of selected areas is expected to direct visitors towards specific trails and discourage visitor access in the targeted habitat type, thus limiting threats and impacts like littering, trampling and fires.

Project Actions

Public awareness and dissemination of results:

- Information campaign
 - Press Releases
 - Article in newspapers / magazines
 - Leaflets
 - Local Workshops
 - Notice Boards



Project Actions

Public awareness and dissemination of results:

- Information campaign
- Conferences

Hellenic Botanical Society

13th Panhellenic Scientific Conference

HBS 2013
13th National Scientific Conference
THESSALONIKI 3-6 OCTOBER

Program and Abstracts

Organized by
Department of Botany, School of Biology, Aristotle University of Thessaloniki

Βελτίωση της κατάστασης διατήρησης των οικότοπων προτεραιότητας *1520 και *5220 στο Εθνικό Δασικό Πάρκο Ριζοελιάς

LIFE12 NAT/CY/000758

Ανδρέου Μ. (1), Κωνσταντίνος Κ. (1), Κουζύλη Η. (1), Χαλιδάκης Η. (1), Τσιαντίρης Τ. (2), Χριστοφοΐδου Χ. (1), Σωτηριάδης Μ. (1), Βασιλακοπούλου Α. (1), Καδής Κ. (1).

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ΣΥΝΟΨΗ

Το Εθνικό Δασικό Πάρκο Ριζοελιάς (ΕΔΠ) αποτελείται από δύο οικότοπους προτεραιότητας *1520 και *5220. Η κατάσταση διατήρησης των οικότοπων αυτών είναι κρίσιμη. Η παρούσα μελέτη στοχεύει στην αξιολόγηση της κατάστασης διατήρησης των οικότοπων αυτών και στην προώθηση μέτρων για την βελτίωσή τους.

Οι μετρήσεις που πραγματοποιήθηκαν στοχεύουν στην αξιολόγηση της κατάστασης διατήρησης των οικότοπων αυτών και στην προώθηση μέτρων για την βελτίωσή τους.

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ΟΙΚΟΤΟΠΟΣ *1520

Ο οικότοπος *1520 είναι ένας οικότοπος προτεραιότητας που χαρακτηρίζεται από την παρουσία ορισμένων ειδών φυτών και ζώων. Η κατάσταση διατήρησης του οικότοπου αυτού είναι κρίσιμη.

Οι μετρήσεις που πραγματοποιήθηκαν στοχεύουν στην αξιολόγηση της κατάστασης διατήρησης του οικότοπου αυτού και στην προώθηση μέτρων για την βελτίωσή του.

ΟΙΚΟΤΟΠΟΣ *5220

Ο οικότοπος *5220 είναι ένας οικότοπος προτεραιότητας που χαρακτηρίζεται από την παρουσία ορισμένων ειδών φυτών και ζώων. Η κατάσταση διατήρησης του οικότοπου αυτού είναι κρίσιμη.

Οι μετρήσεις που πραγματοποιήθηκαν στοχεύουν στην αξιολόγηση της κατάστασης διατήρησης του οικότοπου αυτού και στην προώθηση μέτρων για την βελτίωσή του.

Εθνικό Δασικό Πάρκο Ριζοελιάς

ΕΥΡΩΠΑΪΚΗ ΕΝΩΣΗ

ΕΥΡΩΠΑΪΚΟ ΚΟΙΝΩΝΙΚΟ ΤΑΜΕΙΟ

ΕΛΛΑΔΗ

ΕΠΙΧΕΙΡΗΣΙΑΚΟ ΠΡΟΓΡΑΜΜΑ «ΠΕΡΙΒΑΛΛΟΝΤΟΣ ΚΑΙ ΑΕΙΦΟΡΟΥ ΑΝΑΠΤΥΞΗΣ»

ΑΞΙΟΛΟΓΗΣΗ ΚΑΙ ΒΕΛΤΙΩΣΗ ΤΗΣ ΚΑΤΑΣΤΑΣΗΣ ΔΙΑΤΗΡΗΣΗΣ ΤΩΝ ΟΙΚΟΤΟΠΩΝ ΠΡΟΤΕΡΑΙΟΤΗΤΑΣ *1520 ΚΑΙ *5220 ΣΤΟ ΕΘΝΙΚΟ ΔΑΣΙΚΟ ΠΑΡΚΟ ΡΙΖΟΕΛΙΑΣ

Project Actions

Public awareness and dissemination of results:

- Information campaign
- **Conferences**



Assessing Ecosystem Services in a peri-urban national park: the case of Rizoelia Forest Park-Cyprus

Manolaki*, P., Sutherland, L., Vogiatzakis, I.N.

School of Pure & Applied Sciences, Open University of Cyprus

Protected areas and national parks around the world are increasingly being recognized for their potential to protect various ecosystem services and ensure their continuous flow. The Natura 2000 site “Rizoelia National Forest Park” –CY6000006 is a peri-urban Natura 2000 site located at the SE of Cyprus near the town of Larnaca. The area covers 90.7ha and includes three priority habitats at the European level.

Project Actions

Public awareness and dissemination of results:

- Information campaign
- Conferences
- Website

Contact Us Ελληνική Έκδοση

Improving the conservation status of the priority habitat types *1520 and *5220 at the
RIZOELIA NATIONAL FOREST PARK

Home Page The Project Milestones Partners Deliverables
Project Progress Dissemination Activities Photo Album Useful Links

WELCOME TO OUR WEB SITE

The project entitled 'Improving the conservation status of the priority habitat types *1520 and *5220 at the Rizoelia National Forest Park' (LIFE12 NAT/CY/000758) is implemented within the framework of LIFE+ program of the European Union (EU). The total project budget is 766,746 euro, of which 574,703 euro (75% of its total eligible budget) are co-funded by EU. The primary aim of the project is to promote and enable the long term conservation of *5220 - Arboreous matorrals with Ziziphus' and *1520 - Gypsum steppes (Gypsophiletalia)' in Cyprus, by quantifying and halting natural and anthropogenic pressure and threats that contribute to the long term degradation of these habitats.

The project started on the 1st September 2013 and will be completed on the 28th February 2017.

Latest News

Web-design and development: George A. Constantinou
Copyright © 2014 - Department of Forests

www.life-rizoelia.eu

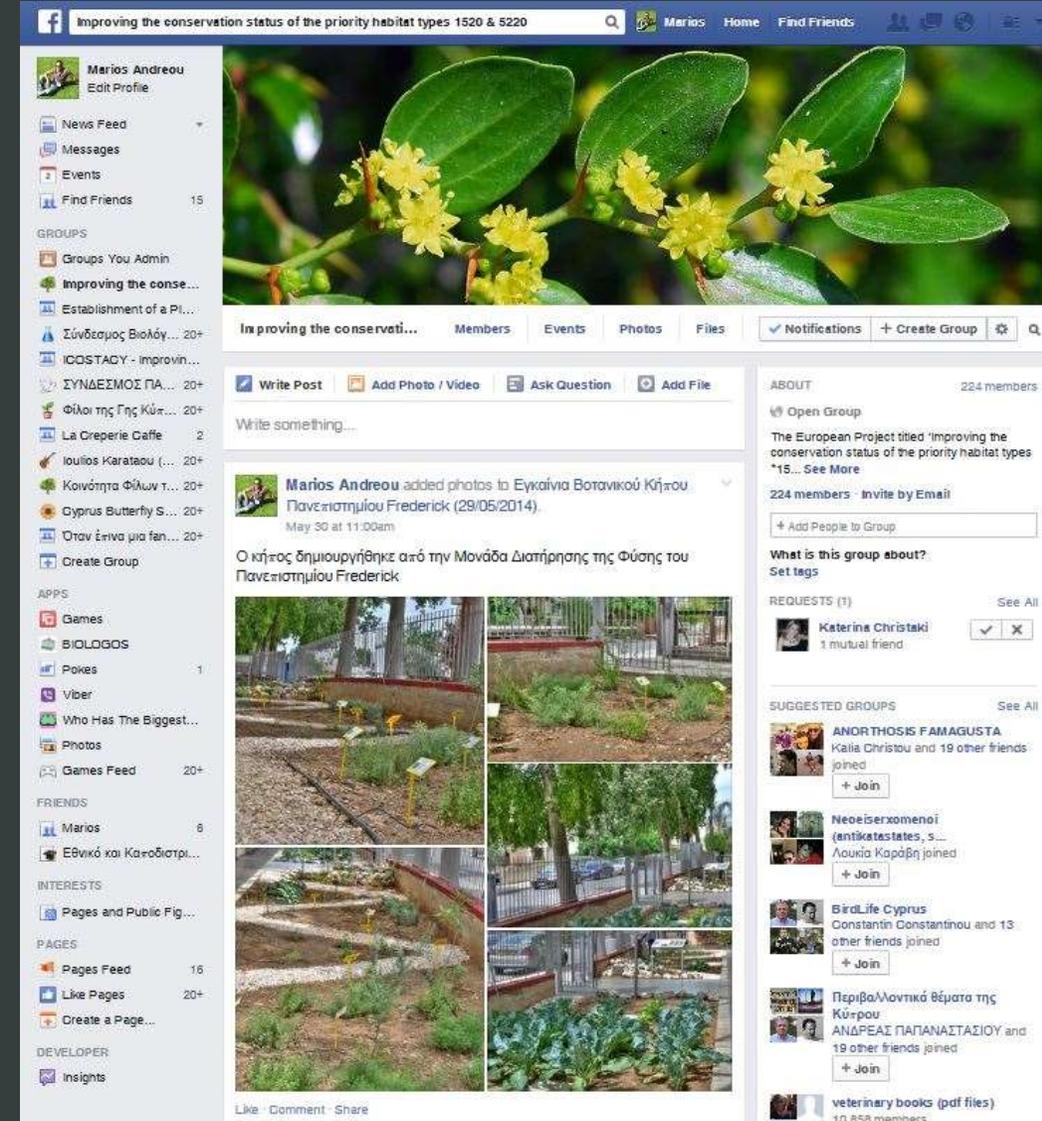
Last Updated: 22/5/2014

Project Actions

Public awareness and dissemination of results:

- Information campaign
- Conferences
- Website

<https://www.facebook.com/groups/rizoelia/>



The screenshot displays a Facebook group page. At the top, the group name is "Improving the conservation status of the priority habitat types 1520 & 5220". The profile picture shows a close-up of green leaves and small yellow flowers. The main content area features a post by Marios Andreou, dated May 30 at 11:00am, with the text "Ο κήπος δημιουργήθηκε από την Μονάδα Διατήρησης της Φύσης του Πανεπιστημίου Frederick". Below the text are several photographs of a garden area with various plants and trees. The right sidebar contains group details, including "224 members", "Open Group", and "What is this group about?". It also lists "REQUESTS (1)" with a user named Katerina Christaki and "SUGGESTED GROUPS" such as "ANORTHOSIS FAMAGUSTA" and "BirdLife Cyprus".

Project Actions

Overall project operation and monitoring of the project progress:

- **Project Monitoring and Management**

Project Actions

Overall project operation and monitoring of the project progress:

- Project Monitoring and Management.
- **Scientific Committee.**



Project Actions

Overall project operation and monitoring of the project progress:

- Project Monitoring and Management.
- Scientific Committee.
- Stakeholder Committee.



Project Actions

Overall project operation and monitoring of the project progress:

- Project Monitoring and Management.
 - Scientific Committee.
 - Stakeholder Committee.
 - **Networking with other projects.**
1. A two-day experts' workshop will be organised with focus: on the impact of climatic change to the priority habitat types' viability and the legislative framework of the competent authorities for nature conservation and on the best practices were followed for restoration of priority habitat types.
 2. Two visits at projects abroad will be organised in Spain. Representatives of each project partner will participate at these visits.