

**ACTIONS
FOR THE CONSERVATION
OF COASTAL DUNES WITH
JUNIPERUS spp. IN CRETE
AND THE SOUTH AEGEAN
(GREECE)**

LIFE07NAT/GR/000296



CIHEAM
MAI CHANIA

International Centre for Advanced
Mediterranean Agronomic Studies
Mediterranean Agronomic
Institute of Chania



National and Kapodistrian
University of Athens (NKUA)
Department of Botany,
Faculty of Biology



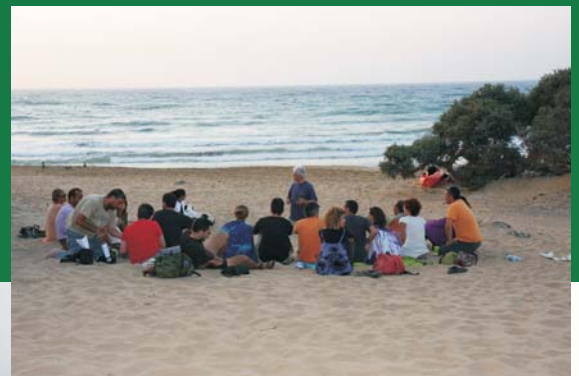
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**Action A.6
Deliverable A.6.1.2**

**STAKEHOLDER CONSULTATION
&
COMMUNITY SURVEY
FOR
GAVDOS ISLAND**

Prepared by MAICH:

Dr. Kalliope Pediaditi
Mr. George Kazakis
Mr. Dany Ghosn
Ms. Hlektra Remoundou



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**"Actions for the conservation of coastal dunes with
Juniperus spp. in Crete and the South Aegean (Greece)"
- JUNICOAST -**

Action A.6: Stakeholder Consultation

Deliverable A.6.1.2: Stakeholder consultation and community survey for
Gavdos Island

Responsible beneficiary: Mediterranean Agronomic Institute of Chania
(MAICh)

Prepared by: Dr Kalliope Padiaditi
Mr George Kazakis
Mr Dany Gohsn
Ms Hlektra Remoundou

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Executive summary (in Greek)

ΠΕΡΙΛΗΨΗ

Η νήσος Γαύδος βρίσκεται 20 ναυτικά μίλια νότια της Κρήτης, διοικητικά αποτελεί ανεξάρτητη Κοινότητα και ανήκει στη Νομαρχιακή Αυτοδιοίκηση Χανίων. Ο πληθυσμός του νησιού είναι μόλις 98 κάτοικοι (Απογραφή 2001). Μαζί με τη νήσο Γαυδοπούλα αποτελεί περιοχή του δικτύου ΦΥΣΗ 2000 με κωδικό GR4340013 "Νήσος Γαύδος και Γαυδοπούλα", ενώ το βόρειο και νοτιοδυτικό τμήμα του νησιού έχει χαρακτηριστεί ως Ζώνη Ειδικής Προστασίας με κωδικό GR4340023. Ο οικοτόπος προτεραιότητας 2250* συναντάται σε τρεις περιοχές: στο Σαρακήνικο, στον Άγιο Ιωάννη και στον Λαυρακά. Η κάθε περιοχή παρουσιάζει ιδιαίτερα χαρακτηριστικά όσον αφορά τον τρόπο πρόσβασης και την επισκεψιμότητα. Το Σαρακήνικο είναι η μόνη προσβάσιμη περιοχή με αυτοκίνητο, ο Άγιος Ιωάννης δέχεται το μεγαλύτερο φορτίο επισκεπτών-κατασκηνωτών, ενώ ο Λαυρακάς είναι η πλέον απομακρυσμένη περιοχή. Η Γαύδος συνδέεται ακτοπλοϊκά με την Παλαιόχωρα και τη Χώρα Σφακίων. Η κίνηση των επισκεπτών σύμφωνα με στοιχεία της ακτοπλοϊκής εταιρείας ANENΔΥΚ, ανήλθε στους 14.000 επισκέπτες για το 2008, που κατά κύριο λόγο λαμβάνει χώρα τους μήνες Ιούλιο και Αύγουστο.

Η επιτυχία διαφόρων μέτρων προστασίας και διατήρησης ειδών ή οικοτόπων σε περιοχές του δικτύου Natura 2000, όλο και περισσότερο αναγνωρίζεται, ότι απαιτεί πρώτιστα την ενεργό συμμετοχή των ανθρώπων που κατοικούν μέσα ή γύρω από τις περιοχές αυτές ή εξαρτώνται από αυτές.

Για την επιτυχία των δράσεων του προγράμματος "Junicoast" και την μακροχρόνια προστασία και διατήρηση του οικοτόπου 2250*, στα πλαίσια της δράσης Α6, υιοθετήθηκε και εφαρμόστηκε μια στρατηγική διαβουλεύσεων με τους εμπλεκόμενους φορείς και την τοπική κοινωνία, τα αποτελέσματα της οποίας παρουσιάζονται στη παρούσα αναφορά.

Με την έναρξη του προγράμματος, παράλληλα με τις προσωπικές επαφές και τις τηλεφωνικές συνεντεύξεις με τους αρμόδιους φορείς, διοργανώθηκε στο ΜΑΙΧ ημερίδα, με όλους τους εμπλεκόμενους φορείς, ενώ για την διερεύνηση του επιπέδου των γνώσεων της τοπικής κοινωνίας σχετικά με το αντικείμενο του προγράμματος αλλά και των απόψεών της, χρησιμοποιήθηκε η μέθοδος των ερωτηματολογίων.

Για τη Γαύδο ως κυριότερες αξίες αναγνωρίστηκαν η φυσική ομορφιά, η πολιτιστική κληρονομιά και η αρχαιολογική αξία. Ο οικότοπος των αμμοθινών με κέδρα είναι έμμεσης οικονομικής σημασίας για το νησί, καθώς αποτελεί βασικό στοιχείο προσέλκυσης επισκεπτών. Επισημάνθηκε η ανάγκη διαχείρισής του οικοτόπου, με πρωταρχικό σκοπό την διατήρηση και την αποτελεσματική προστασία του. Οι φορείς επισήμαναν ότι η φυσική ομορφιά και η έλλειψη υποδομών μαζικού τουρισμού αποτελούν το συγκριτικό πλεονέκτημα της Γαύδου και θα πρέπει να ληφθούν υπόψη στις δράσεις προστασίας του προγράμματος. Τα αποτελέσματα της έρευνας της τοπικής κοινωνίας συμφωνούν με τις απόψεις που εκφράστηκαν από τους φορείς του νησιού. Οι κάτοικοι αισθάνονται ότι έχουν δυνατή σχέση και εξάρτηση με τον οικότοπο, καθώς θεωρούν ότι τα κεδροδάση του νησιού δεν έχουν μόνο αισθητική αξία αλλά και έμμεση ή άμεση οικονομική αξία γι' αυτούς.

Για την παρούσα κατάσταση του οικοτόπου 2250* και τις τυχόν αλλαγές που συνέβησαν τα τελευταία 5 χρόνια, η πλειονότητα των εκπροσώπων των φορέων διατύπωσε την άποψη ότι ο οικότοπος βρίσκεται σε καλή ή σχεδόν καλή κατάσταση και δεν υπάρχουν σημαντικές αλλαγές την τελευταία 5ετία.

Η τοπική κοινωνία θεωρεί ότι ο οικότοπος στο Σαρακήνικο βρίσκεται σε χειρότερη κατάσταση και επισημάνθηκε η ξήρανση πολλών κέδρων που συνέβη τα τελευταία χρόνια. Στον Άγιο Ιωάννη και στο Λαυρακά ο οικότοπος βρίσκεται σε κακή κατάσταση λόγω της επέκτασης της τραχείας πεύκης και του ανταγωνισμού με τα κέδρα. Το "πρόβλημα" αυτό επισημάνθηκε στην ημερίδα με τους φορείς, καθώς και στην συνάντηση με τους κατοίκους.

Κατά τη διάρκεια της ημερίδας με τους εμπλεκόμενους φορείς, αλλά και από την έρευνα της τοπικής κοινωνίας, ως κυριότερες απειλές για τον οικότοπο 2250* αναφέρθηκαν: η ανεξέλεγκτη δόμηση στο Σαρακήνικο, ο κίνδυνος πυρκαγιάς, η έλλειψη φορέα διαχείρισης στα πλαίσια του δικτύου ΦΥΣΗ 2000, η επέκταση της τραχείας πεύκης στις παρυφές του οικοτόπου, το κόψιμο κλαδιών των κέδρων, η υπερβόσκηση που εμποδίζει τη φυσική αναγέννηση των κέδρων κυρίως στο Σαρακήνικο και η συμπίεση ή διάβρωση του εδάφους εξαιτίας της κατασκήνωσης.

Παρά το γεγονός ότι ο οικότοπος δέχεται σημαντική πίεση λόγω της κατασκήνωσης, πολύ λίγοι από τους κατοίκους και τους ενδιαφερόμενους φορείς θεωρούν ότι αυτό αποτελεί κίνδυνο. Τονίστηκε επίσης η υψηλή περιβαλλοντική ευαισθησία της πλειοψηφίας των επισκεπτών. Στα πλαίσια της αξιολόγησης των επιπτώσεων των επισκεπτών στον οικότοπο, και λαμβάνοντας υπόψη την απομόνωση του νησιού,

την έλλειψη υποδομών και την έλλειψη άλλων φυσικών και οικονομικών πόρων, θα πρέπει να εξετασθεί η δυνατότητα αποτελεσματικής διαχείρισης των επισκεπτών και αύξησης της περιβαλλοντικής ευαισθητοποίησής τους, παρά η εφαρμογή απαγορεύσεων με αμφιλεγόμενα νομοθετικά μέτρα.

Σχετικά με το εάν η μέχρι τώρα διαχείριση του οικοτόπου 2250* στη Γαύδο είναι αποτελεσματική για την προστασία της, η τοπική κοινωνία και οι φορείς απάντησαν αρνητικά. Οι δημόσιοι φορείς ερωτήθηκαν για την υφιστάμενη δυνατότητά τους να εκπληρώνουν τα καθήκοντά τους σε σχέση με το νησί. Εθνικές και περιφερειακές αρχές ανέφεραν ότι αντιμετωπίζουν δυσκολίες, αναφέροντας ως εμπόδια την έλλειψη ενημέρωσης, τη δυσκολία πρόσβασης κλπ. Ορισμένες τοπικές αρχές θεωρούν ότι είναι σε θέση να εκπληρώσουν τα καθήκοντά τους, χωρίς ωστόσο να αναφέρονται σε διαχειριστικές αρμοδιότητες σχετικά με το δίκτυο NATURA 2000. Άλλες τοπικές αρχές ανέφεραν ότι αντιμετωπίζουν δυσκολίες, οι οποίες επικεντρώνονται σε θέματα διοίκησης, όπως ασαφής διοίκηση και διαχείριση, έλλειψη γνώσης σχετικά με το δίκτυο NATURA 2000 και τις διαδικασίες για τη διαχείριση μιας προστατευόμενης περιοχής, καθώς και διαδικαστικά εμπόδια σχετικά με την έλλειψη προσωπικού και την ανεπάρκεια πόρων. Η πλειονότητα της τοπικής κοινωνίας (78%) θεωρεί ότι οι τοπικές αρχές, σε μεγάλο βαθμό, δεν εκπληρώνουν τις υποχρεώσεις τους όσον αφορά την προστασία του φυσικού περιβάλλοντος στη Γαύδο.

Σχεδόν όλοι οι εμπλεκόμενοι φορείς (81%) συμφωνούν ότι, η μέχρι τώρα διαβούλευση και συνεργασία μεταξύ τους, δεν είναι επαρκής για την διαχείριση και την αποτελεσματική προστασία του φυσικού περιβάλλοντος της Γαύδου. Σχετικά με την εμπλοκή της τοπικής κοινωνίας στη λήψη αποφάσεων για τη διαχείριση του περιβάλλοντος, μόνο τρεις φορείς θεωρούν ότι είναι αποτελεσματική, ενώ οι υπόλοιποι επισήμαναν την έλλειψη εμπειρίας στη συνεργασία ή την έλλειψη πόρων. Το πρόβλημα αυτό επιβεβαιώθηκε και από την έρευνα της τοπικής κοινωνίας, κατά την οποία το 82% των ερωτηθέντων δήλωσε ότι ποτέ δεν έχει ενημερωθεί ή ερωτηθεί σχετικά με την προστασία του περιβάλλοντος. Το γεγονός αυτό έγινε επίσης εμφανές κατά τη διάρκεια της συνάντησης με τους κατοίκους του νησιού, όπου τέθηκαν ερωτήματα σχετικά με τον χαρακτηρισμό του νησιού ως περιοχή NATURA 2000, τι επιτρέπεται ή απαγορεύεται μέσα στις περιοχές αυτές κλπ.

Σχετικά με τη γνώση που υπάρχει για το ισχύον καθεστώς προστασίας της Γαύδου, από τις συνεντεύξεις με τους εμπλεκόμενους φορείς, προέκυψε ότι ο κάθε φορέας

γνωρίζει τον χαρακτηρισμό που υπάρχει ανάλογα με το αντικείμενό του, π.χ. η Αρχαιολογική Υπηρεσία γνωρίζει ποια περιοχή έχει χαρακτηριστεί ως αρχαιολογικός χώρος κλπ. Οι 13 από τους 16 φορείς που ερωτήθηκαν γνωρίζουν ότι η περιοχή έχει χαρακτηριστεί ως περιοχή NATURA 2000, ωστόσο πολλοί εξ' αυτών εξέφρασαν άγνοια σχετικά με το τι πραγματικά σημαίνει αυτό και τι νομικές συνέπειες έχει. Επίσης μόνο ένας φορέας γνώριζε σχετικά με τον οικοτόπο προτεραιότητας 2250*. Η πλειοψηφία των κατοίκων γνωρίζει ότι η Γαύδος έχει χαρακτηριστεί ως περιοχή NATURA 2000, αλλά δεν γνωρίζει την πρακτική σημασία του χαρακτηρισμού αυτού. Όσον αφορά τις δραστηριότητες που επιτρέπονται ή απαγορεύονται, οι απόψεις των φορέων είναι αποσπασματικές, δηλαδή ο κάθε φορέας γνωρίζει την αντίστοιχη νομοθεσία ανάλογα με το αντικείμενό του. Η τοπική κοινωνία έχει επίσης εσφαλμένη άποψη, καθώς πιστεύει ότι κάποιες δραστηριότητες απαγορεύονται χωρίς να υπάρχει σχετική απαγόρευση ή το αντίθετο.

Στην ημερίδα με τους εμπλεκόμενους φορείς, στις συνεντεύξεις, στις προσωπικές επαφές και στην έρευνα της τοπικής κοινωνίας διατυπώθηκαν αρκετές προτάσεις για την προστασία και διαχείριση του οικοτόπου 2250* στη Γαύδο. Πρωταρχικής σημασίας, όπως υπογράμμισαν οι εμπλεκόμενοι φορείς, είναι η επίλυση γενικότερων διοικητικών προβλημάτων, όπως: η εκπόνηση χωροταξικού σχεδίου, ο καθορισμός των χρήσεων γης και η οριοθέτηση των οικοτόπων προτεραιότητας. Οι επόμενες προτάσεις είναι ειδικού χαρακτήρα και αφορούν συγκεκριμένες ενέργειες-δράσεις που θα πρέπει να γίνουν για την αποτελεσματικότερη προστασία και διατήρηση του οικοτόπου:

- Οριοθέτηση του οικοτόπου
- Εκπαίδευση και αύξηση της ευαισθητοποίησης σχετικά με την αειφόρο διαχείριση και προστασία των οικοτόπων
- Επιστημονική αναγνώριση και επικύρωση των κατάλληλων διαχειριστικών μέτρων σχετικά με την επέκταση της τραχείας πεύκης
- Ενημέρωση και διαβούλευση με την τοπική κοινωνία και τις τοπικές αρχές πριν από την εκτέλεση των δράσεων
- Ευαισθητοποίηση του κοινού και παροχή πληροφοριών στους επισκέπτες
- Καθορισμός και εφαρμογή ζωνών προστασίας, χρήσεων γης και σχεδίου διαχείρισης στα πλαίσια του δικτύου NATURA 2000
- Εφαρμογή ανακύκλωσης των απορριμμάτων
- Αύξηση των δαπανών για την προστασία του περιβάλλοντος
- Δημιουργία συλλογικού ταμείου προσφορών ή δωρεών για την επίλυση απλών προβλημάτων στο νησί

- Πρόσληψη δασοφυλάκων κατά τους θερινούς μήνες
- Πρόσκληση των επισκεπτών για συμμετοχή σε εθελοντικές δράσεις προστασίας

Από όλους τονίστηκε η ανάγκη πληροφόρησης των επισκεπτών μέσω φυλλαδίων, ενημερωτικών πινακίδων κλπ, σχετικά με την αξία του οικοτόπου και την ανάγκη προστασίας του, καθώς και η ανάγκη ενημέρωσής τους πριν από την άφιξη στο νησί. Η θέσπιση κώδικα συμπεριφοράς των επισκεπτών και κυρίως των κατασκηνωτών θα συμβάλλει σημαντικά στη ελαχιστοποίηση των αρνητικών επιπτώσεων στον οικοτόπο. Σημαντική είναι επίσης η προθυμία των κατοίκων για τη δημιουργία ομάδων εθελοντών.

Βάσει των αποτελεσμάτων της διαβούλευσης με τους εμπλεκόμενους φορείς και την τοπική κοινωνία:

- Η συσχέτιση των κατοίκων με τον οικοτόπο είναι υψηλή, υποδεικνύοντας την ανάγκη ευρείας συμμετοχής και ενημέρωσής τους σχετικά με τις δράσεις του προγράμματος.
- Γίνεται αντιληπτό ότι η υπερβόσκηση, ο κίνδυνος πυρκαγιάς και η κοπή των κλαδιών των κέδρων θέτουν σε κίνδυνο τον οικοτόπο.
- Η κατασκήνωση δεν γίνεται αντιληπτή ως απειλή και δεν θεωρείται ως παράνομη από τον τοπικό πληθυσμό. Αντίθετα θεωρούνται απειλές συγκεκριμένες συμπεριφορές των επισκεπτών, όπως το κόψιμο κλαδιών, το άναμα φωτιάς και η απόρριψη απορριμμάτων.
- Η περιβαλλοντική ευαισθησία των επισκεπτών χαρακτηρίζεται υψηλή.
- Είναι ανάγκη να προσδιορισθούν οι επιπτώσεις των επισκεπτών στον οικοτόπο και να εφαρμοσθούν κατάλληλες δράσεις διαχείρισης του οικοτόπου και των επισκεπτών.
- Τόσο η τοπική κοινωνία, όσο και οι φορείς θεωρούν ότι η μέχρι τώρα διαχείριση του φυσικού περιβάλλοντος της Γαύδου είναι ανεπαρκής ή αναποτελεσματική.
- Η εκπόνηση και εφαρμογή του χωροταξικού σχεδίου, της ειδικής περιβαλλοντικής μελέτης και του διαχειριστικού σχεδίου θεωρούνται πρωταρχικής σημασίας.
- Υπάρχει πεδίο για καλύτερη συνεργασία μεταξύ των εμπλεκόμενων φορέων και τη συμμετοχή της τοπικής κοινωνίας.
- Εθνικές ή περιφερειακές αρχές που λαμβάνουν αποφάσεις θα πρέπει να έχουν άμεση αντίληψη των ιδιαιτεροτήτων του νησιού.

- Συστηματική παρακολούθηση καθώς και δεδομένα σχετικά με τον οικότοπο προς το παρόν είναι περιορισμένα ή δεν υπάρχουν.
- Υπάρχει περιθώριο για τη δημιουργία ομάδων εθελοντών με εμπλοκή τους στις δράσεις για τη διατήρηση του οικοτόπου και την υπαγωγή τους στο “Μετά LIFE” σχέδιο διατήρησης.
- Δράσεις διαχείρισης των επισκεπτών πρέπει να συζητηθούν από κοινού με τους ενδιαφερόμενους φορείς, να εξασφαλιστεί η σκοπιμότητά τους και η μακροχρόνια εφαρμογή τους.
- Η ενημέρωση των επισκεπτών είναι ζωτικής σημασίας για την προστασία του οικοτόπου.
- Η διαχείριση των απορριμμάτων είναι αναγκαία και υπάρχουν περιθώρια να διερευνηθεί η δυνατότητα καθιέρωσης συστημάτων ανακύκλωσης στο νησί.

1. Introduction

It is increasingly recognized that successful implementation of conservation measures on the areas designated as Natura 2000 primarily necessitates active involvement of people inhabiting these areas or depending on them (Paavola, 2004). Participation is purported through the Habitats Directive, Aarhus Convention and Public Participation Directive 2003/35/EC. Participation here within is defined as, "*forms of exchange that are organized for the purpose of facilitating communication between stakeholders regarding a specific decision*" (Webler and Renn 1995), thus including both decision making stakeholders as well as the public living within or around the 2250* habitats of this project. Borrini- Feyberabend (1996) demonstrates how the underestimation of the needs, aspirations and perceptions of local populations is one of the main causes of failure in the effective management of protected areas. In fact, according to Harrison *et al*, (1998) and Eben (2006) should the needs of the local population not be considered during the institution/ designation, of a protected area, or during the implementation of measures for biodiversity conservation, these policies and measures will have little chance to achieve their objectives.

Thus with the aim of ensuring the long term sustainability and success of JUNICOAST'S actions for the conservation of priority habitat 2250*, a consultation strategy was adopted and implemented, the results of which are presented in this report. The purpose of this action was to establish stakeholders' level of awareness, perceived values, threats and recommendations for conservation of the habitat in their localities. Secondary, indirect aims of this action were to raise awareness and support regarding the project and its actions, as well as obtain feedback with regard to the feasibility and long term sustainability of proposed concrete conservation actions.

This approach was based on the presumption, that decision making stakeholders, have an experiential understanding of the issues and practical difficulties within their localities as well as knowledge of procedural, and administrative mechanisms and barriers for the long term maintenance of proposed concrete conservation actions. The rationale for contacting the lay local communities was two-fold. Firstly, to establish their relationship to the specific areas, which in turn affects their attitudes towards protection initiatives (Bonaiuto et al 2002). Secondly, to establish levels of

environmental awareness which in turn would help design, a targeted, and effective communication strategy and education campaign.

Based on the above, within this report the results of Action 6, consultation with stakeholders of Gavdos are presented. In Section 2, a brief overview of Gavdos is presented, which helped formulate the research design, methodology and stakeholder analysis presented in Section 3. In Sections 4 to 10, the results of the consultations are summarised with regard to stakeholder and community perceptions of Gavdos:

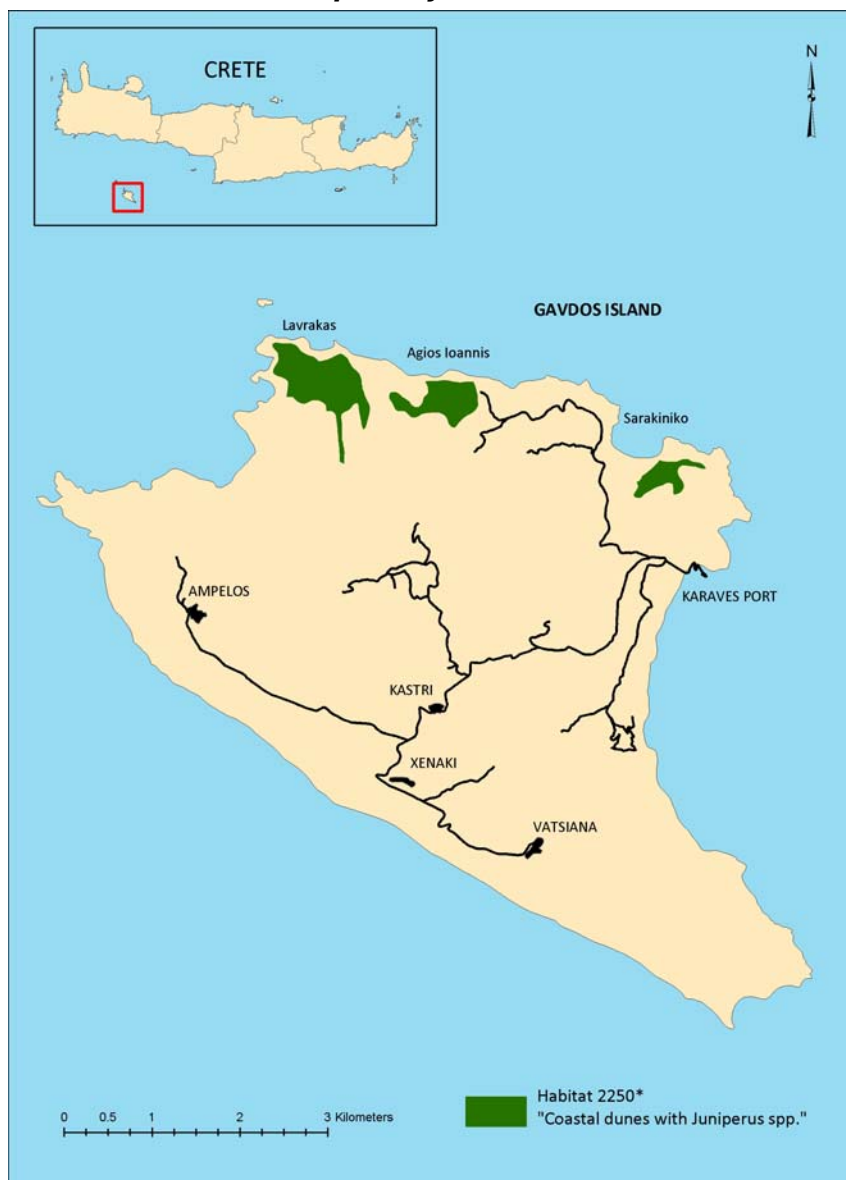
- values and relationship to protected area (Section 4)
- environmental status and trends (Section 5)
- threats (Section 6)
- existing management and protection effectiveness (Section 7)
- Participation and engagement opportunity adequacy (Section 8)
- Existing protection designations, reasons for them and implications regarding prohibited activities. (Section 9)
- Necessary environmental protection measures (Section 10)

This report concludes with a discussion and recommendations for improvement of proposed JUNICOAST actions, both concrete and dissemination, in light of obtained results, to be taken into consideration when developing specifications for concrete conservation actions (A.8) as well as communication strategy (D.1).

2. Priority Habitat 2250* Sites in Gavdos- contextual background.

Gavdos island, located 20 n.miles South West of Crete, is home to three 2250* priority habitats, namely, Lavrakas, Agios Ioannis, and Sarakiniko (Figure 2.1). Gavdos although small and sparsely populated, is administratively independent with its own community, and belongs to the prefecture of Chania.

Figure 2.1 Gavdos island and priority habitats 2250*



Gavdos is a designated Natura2000 site code GR4340013 (name: Nisoi Gavdos kai Gavdopoula) covering an area of 6290.59ha. Part of Gavdos is also classified as a

special protection area for birds SPA GR4340023. It is also subject to numerous national legal designations, aimed at the protection of its natural and cultural features. Indicatively, the forested areas have been mapped, although there are no land use or town plans¹: Archaeological zones have also been designated (ΦΕΚ 1345/B/6-11-2000 & ΦΕΚ 81/B/30-1-2002). At the time this study was being carried out, the islands land use plan and protected area environmental study were being finalized.

Based on National Census 2001, Gavdos has a population of 80 residents 50 of which live permanently on the island, consisting of 24 households (Oikos, 2008). The main income generators are tourism and agriculture. Access to the island is via a ferry, which is receiving a growing number of visitors, and as of 2007 allows the transit of vehicles. Tourism in 2007 was 8000 people during the summer months (Oikos, 2008) whereas in 2008 it rose to 14000 (ANENDYK personal communication).

The location and approximate size of each of the three 2250* priority habitats in Gavdos is indicated in Figure 2.1. However, it should be noted that each habitat has its particularities, different threats and status, which have implications regarding feasible and appropriate conservation measures (C. Actions). Both Agios Ioannis and Lavrakas are not accessible by car, and can be considered remote, and used for tourism (camping) and grazing. Sarakiniko on the other hand, is accessible by road, and is located next to a popular beach and area undergoing tourism development, as well as, being used for grazing.

¹ A full analysis of the legal framework is presented in Action 9 report.

3. Research Design & Methodology

In this section, the research design and methodology followed is described, including the results of the stakeholder analysis conducted. To begin with a literature review, regarding the state of the art in participation methods for protected area management was conducted.

Participation has different purposes which in turn affect the methods used, stakeholders involved, and intensity of involvement. It is therefore important, to define the purpose of the participation and subsequent relevant methods which should be used to achieve that purpose.

A number of different hierarchies illustrating the different levels of participation can be found in the literature (Arnstein, 1969; Dorcey *et al*, 1994; Wilcox, 1994; Pretty and Shah, 1994; UNDP, 1997). Arnstein (1969) describes the different levels of participation using the metaphor of the ‘ladder of participation’. The ladder essentially depicts a hierarchy ranging from non-participation and degrees of tokenism, where participants essentially do not have the power to influence a decision, through to the top level of the ladder of citizen power where participants have total control over the decision making process.

One problem with such hierarchies is that they imply that more participation is necessarily better. However, the appropriate level and methods used should reflect the purpose of the participation (see Figure 3.1) (IEMA, 2002). Sanoff (2000, pg 11) describes the different purposes which participation can serve, as:

- *“to generate ideas;*
- *to identify attitudes;*
- *to disseminate information;*
- *to resolve some identified conflict;*
- *to measure opinion;*
- *to review a proposal;*
- *merely to serve as a safety valve for pent – up emotions.”*

One purpose does not necessarily exclude another, and indeed participation can fulfill more than one role. However, according to the defined purpose of the participation

process the methods used will vary, and it is therefore important to recognize the limitations of any one process. With regard to Action 6 and plurality of purposes (see Section 1) it is evident that there was a need to develop a mixed methods participatory approach. As is apparent from Figure 3.1, extended participant involvement requires high interaction methods which are initiated early within the participation programme and which limit the number of participants who can realistically be involved. Therefore, a stakeholder workshop undertaken at the onset of the project was carried out (Figure 3.2) in parallel with individual personal and telephone semi-structured interviews. Moreover, following Gavdos stakeholder workshop participants requests, a second local community workshop was carried out in Gavdos, enabling the participation, to all interested residents of the island.

Extended participant involvement can have implications with regard to the extent to which the lay public can be involved. In deciding on the participatory strategy the following points were considered based on IEMA, (2002, p. 30):

- *'The purpose and objectives of the participation exercise;*
- *The degree of interaction required between participants and the extent to which participants are able to influence decisions;*
- *The timing of use, ie the stage in the decision making process and the time available for participation;*
- *Resource availability-time, costs;*
- *The number of participants involved; and*
- *The complexity, controversy and level of interest in issues under consideration*

Tonn *et al* (2000 pg164) state '*public participation should not be seen as an either or proposition*' but rather propose the consideration of the decision making questions and implications when deciding on the extent and methods of public participation. Considering the purpose of public participation was of investigative nature, rather than active engagement in decision making, it was decided to conduct a community survey, using questionnaires (Figure 3.1). However, it was later supplemented by the local community workshop (See section 3.2 & Figure 3.3)

Figure 3.1. Levels of participation, techniques and factors influencing the selection of techniques (Adapted from IEMA, 2002)

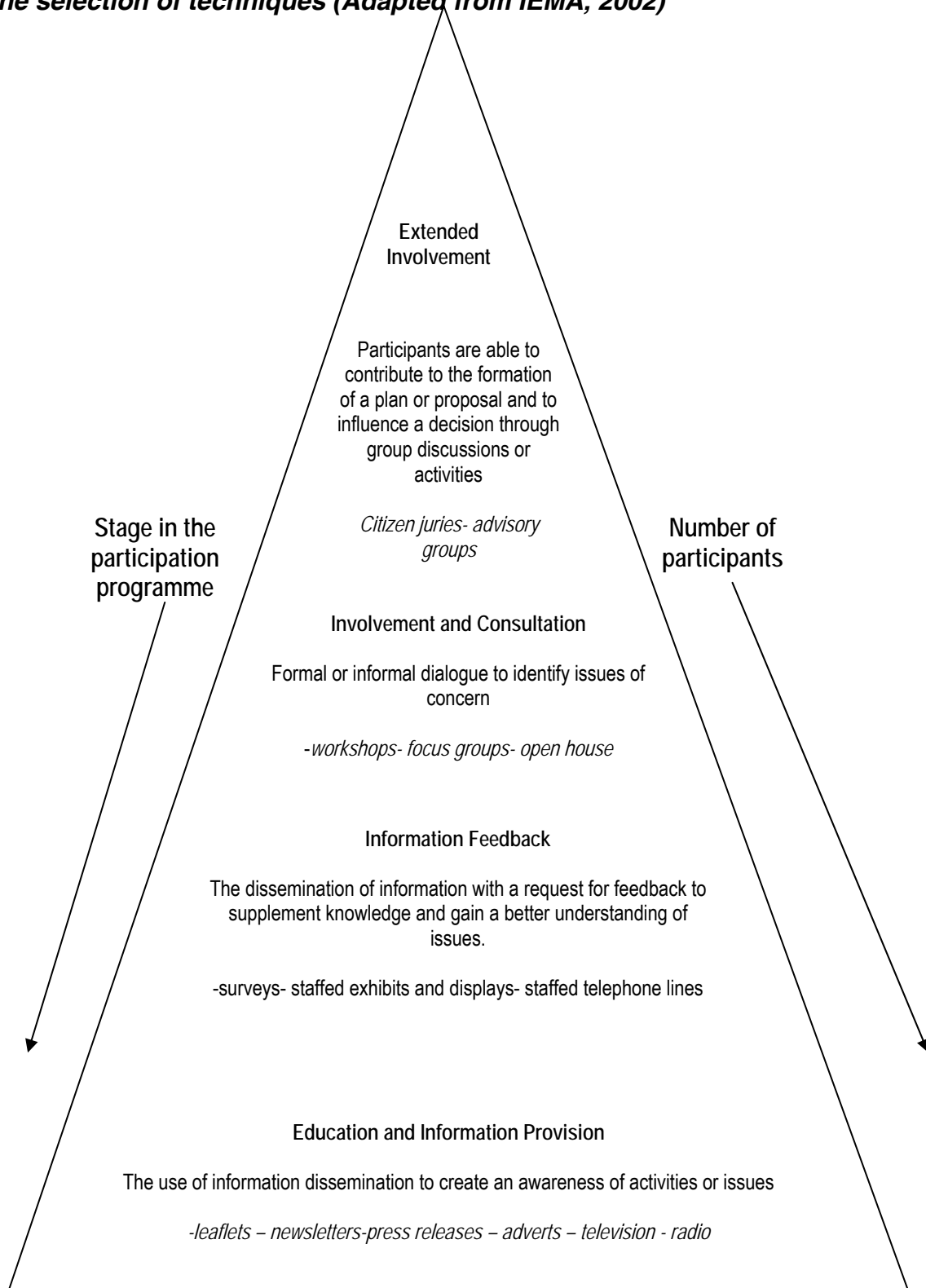


Figure 3.2. Stakeholder workshop at MAICH



Figure 3.3. Local community workshop in Gavdos



3.1 Stakeholder Analysis

The definition of stakeholders given by WWF (2005, pg, 1) is: Any individual, group, or institution who has a vested interest in the natural resources of the project area and/or who potentially will be effected by project area activities and have something to gain or lose if the conditions change or stay. When selecting stakeholders to involve in each stage of the participatory process, their legitimacy will have to be considered. If participants are not content with the composition of the group they may doubt the fairness of the process, and the whole participation process could be disrupted (Sanoff, 2000; Seargent and Steele, 1998). Therefore, the Environment Councils (2002, pg6) guidelines were utilized prior to the selection of stakeholders to assess their legitimacy:

- *Who is directly responsible for the decisions on the issues?*
- *Who holds positions of responsibility in stakeholding organizations?*
- *Who is influential in the area, community, organization?*
- *Who will be affected by any decisions around the issue?*
- *Who will promote a decision-provided they will be involved?*
- *Who will obstruct a decision- if they are not involved?*
- *Who has been involved in the issue in the past?*
- *Who has not been involved up to now -but should have been?*

Borrini-Feyerabend, (1996), regarding protected area management propose the consideration of inclusion in participatory processes stakeholder categories outlined in Box 3.1.

Box 3.1: List of potential Protected Area Stakeholders (modified from Borrini Feyerabend, 1996).

- | |
|---|
| <ul style="list-style-type: none"> • Influential individuals • Land owners • Community representatives • Other representatives (e.g., tourism or farmers representative) • Local Associations • Elected representatives • Relevant PA NGOs • Agency (with legal jurisdiction or function in PA) • Business and commercial enterprise individuals or representatives • University or research organizations working in protected area. • Staff working in PA management or projects • Funding organization representatives • PA user representatives (e.g. hunters or hikers group representatives) • Religious or cultural heritage local representative • PA managers • PA and local community decision makers |
|---|

Based on the above, and through a process of co-nomination a list of 75 potential stakeholders relevant to the project and specific habitat localities were identified and contacted (Appendix A). The participants which attended the stakeholder workshop are also listed in (appendix A) where as in Table 3.1 are listed stakeholder capacity involved through this action- methods of involvement, specifically for Gavdos island.

Table 3.1 Stakeholders relevant to Gavdos contacted and consulted for A.6

Stakeholder capacity	Code	Workshop group attendance	Personal interview	Personal communication
Ministry of environment & public works	PS			
Ministry of Agricultural Development	PS	X	X	X
Region of Crete- Forest Directorate	PS	X	X	X
Region of Crete- Environment Division	PS	X	X	X
Chania Prefecture Antiquities Directorate	PSL		X	X
Paleohora Port Authority	PSL	X	X	X
Chania Prefecture Political Protection (emergency planning authority)	PSL		X	X
Mayor of Gavdos Municipality	PSL	X	X	X
Chania Prefecture Firebrigade Authority	PSL	X		X
Gavdos Cooperative representative	NGO- L	X		X
Chania Ecological Association	NGO-L		X	X
Chania Environmental Education Representative	PSL	X		X
Regional Forest Directorate Inspectorate	PS	X	X	X
Forest Directorate of Chania	PSL	X	X	X
National Greek Tourism Organisation	PSL	X		X
Prefecture of Chania- Environment Division	PSL	X	X	X
Cadastre Authority of Chania	PSL			X
Natural History Museum	PSL	X	X	X
ΑΡΧΕΛΩΝ- Society for the protection of the carretta carreta turtle	NGO-N		X	X
Ελλάδα καθαρή	NGO-N		X	X
WWF	NGO-N		X	X
Police officer of Gavdos	PSL		X	X
Local Community workshop participants	22 residents of Gavdos (including mayor)			

3.2 Methodology

Below an outline of the methods utilised to conduct preparatory action 6 are presented in turn: workshop methodology (3.2.1) stakeholder interviews (3.2.2), personal communications (3.2.3) and community survey (3.2.4) and Community workshop (3.2.5). Due to data collection triangulation, and exhaustiveness of stakeholders samples engaged, the robustness of results is strengthened.

3.2.1 Workshop methodology

In order to maximize stakeholder engagement and potential for input, the workshop utilized different participatory methods, taking into consideration Environment Council (2002) facilitation method guidelines: For a detailed analysis of the workshop methods participant and results refer to Appendix A. Indicatively the workshop procedure is outlined below.

Workshop participants were divided into groups according to capacity and site relevance. Stakeholders participating in Gavdos working group are presented in Table 3.1. Following a brief presentation of the JUNICOAST project aims and objectives as well as the priority habitat and sites which the project will carry out actions in, stakeholders in their groups were instructed to carry out exercise 1. All participants were handed out a workshop manual in Greek (included in appendix A) which included a brief summary of the project, the agenda as well as a description of all the actions, and exercise instructions. Additional material included a draft educational programme (included in appendix A) for them to review, the draft local community survey (included in appendix A) as well as a workshop feedback form (included in Appendix A) which was completed following the end of the workshop. Facilitators were provided with additional review sheets where stakeholder comments were recorded.

Exercise 1

This exercise utilized a combined carousel metaplan method, whereby participants in their groups were asked to discuss and write on post it's

- the main values (environmental , social, and economic) of the specific sites
- the main threats to the sites
- the recommendations in order to ensure the preservation of these values and minimizations of the threats
- their expectations and views regarding what they would like to see achieved from the JUNICOAST project

Each group had a facilitator assigned by MAICH which took notes of the conversation as well as stuck the post it notes on the relevant posters. Aerial pictures as well as maps of the habitat were provided to participants where they were asked to draw on them, important features or problem areas.

Exercise 2- Review of proposed Actions

Following a brief presentation of each action (preparatory A, concrete C, dissemination D and E actions) participants were asked to consult the manual where the detailed description of each action was presented and with the input of the facilitator, detail feedback on each action was obtained.

For each action the following questions were addressed and conclusions noted by facilitators:

- Relevance / importance of proposed action
- Existence of data
- Potential for collaboration and input/ action

3.2.2. Stakeholder Interviews

Following a stakeholder analysis, (16) stakeholders (Table 3.1) were contacted and interviewed. Snowball purposeful sampling was also utilized and data collection stopped only when no new stakeholders were being proposed by interviewees. Only with one of the stakeholders (Ministry of Environment and public works), an interview was not possible, signifying a very robust sample.

Semi-structured interviews including qualitative and quantitative questions were undertaken. In Appendix B questions asked (interview template) is presented.

Interviews were recorded and transcribed and content analysis performed for qualitative responses (Sarantakos, 1993), whereas descriptive statistics using excel were performed for quantitative data (De Vaus, 2007). The analysis and discussion of results is presented jointly with workshop and community results in Sections 4 to 10.

3.2.3 Personal Communication- Informal interviews

In many cases formal interviews were not appropriate or essential. However, in order to obtain the views of stakeholders relevant to a particular component of the project (e.g. tourism) and to establish their collaboration and involvement in the project, personal communication in the form of meetings or telephone conversations was carried out (See Table 3.1).

3.2.4 Community survey

In order to obtain information regarding the local populations' perceptions of values threats and required activities for the site as well as levels of environmental awareness, and relationship to the site, a household community survey was conducted.

Exhaustive sampling was used, and self completion questionnaires were delivered and collected using door to door survey by MAICh researchers. A total of 19 questionnaires out of the 24 households were obtained (See Appendix C for questionnaire templates).

Data was analysed using excel, results of which are presented in the following sections. Content analysis was conducted on open ended questions using codes.

3.2.5. Local Community workshop

From the first visit to Gavdos, it was realised that local community consultation approaches needed to be tailored to the specific context. Although a first approach of consultation was carried out using the survey method, it was understood that the complexities and sensitivities specific to Gavdos could not be captured through the questionnaire, and that two-way communication methods of consultation were necessary. The local population of the island feels isolated, is dependent on tourism

from camping, and as such, greeted the project with suspicion in fear of it imposing restrictions and bans. It was thus considered appropriate, following the request of stakeholders during the first workshop as well, an opportunity, to involve the local community (considering its small size) by organising a local community workshop, where information regarding the project objectives, proposed activities could be explained thoroughly, and open dialogue with the locals and exchange of ideas obtained. It needs to be pointed out that this period, coincided with the proposal of a protected area management plan for Gavdos, which does indeed stipulate restrictions and bans which the local community feel opposed to, and thus the need for clarification of JUNICOAST aims and scope needed to be made clear to avoid opposition to the project. The local community workshop was attended by 22 local individuals (See Appendix D for minutes and participant list) where various issues were discussed, results of which are presented in subsequent sections.

4. Stakeholder and Community perceptions of Gavdos 2250* habitat values.

During the stakeholder workshop and interviews (Section 3) stakeholders were asked to determine the main values of Gavdos. Inherent values such as biodiversity, scientific value, and microclimate were identified. Other values such as socio-cultural and archaeological significance were also mentioned. There was recognition of the indirect economic value of the habitats as the reason for which tourists visit the island. As stated by the mayor, people come to Gavdos to camp under the juniper trees. Therefore, there is a need to manage them and ensure their protection. The naturalness of the island as a whole, pristine natural landscapes and limited evidence of mass tourism development was recognized as its strength, and a feature which should be taken into account when proposing concrete actions. From interview responses, only generic reference was made to the Juniper trees and the landscape beauty of the site.

However, from the community survey it was established that there is a strong relationship and dependency of the local population to the specific habitats. Locals perceive both a direct and indirect economic value from the habitat (Table 4.1), where as the main perceived value being the inherit natural heritage, followed by the natural resources they provide. The community survey results reflect the views presented by stakeholders at the workshop, which indicates the need to carefully consider the needs of the local community when proposing and implementing conservation measures for these.

Table 4.1 Local community perceived values and relationship to Gavdos

Number of respondents (n=19)	Agios Ioannis	Lavrakas	Sarakiniko
I or a family member works on the site	2	1	6
We benefit indirectly from tourism which visits the island	1	0	3
We own land on the island	4	3	7
It has cultural heritage value for us	6	6	6
It has natural heritage value for us	11	10	13
It has educational value for us	1	1	2
We benefit from the natural resources of the island	9	8	9
It has recreational value for us	4	4	2

Visitation frequency of the local population to all sites was established as high (table 4.2)

Table 4.2 Local population visitation frequency of 2250* sites in Gavdos

Have you ever visited :	Agios Ioannis	Lavrakas	Sarakiniko
Never	1	1	0
Once	2	3	2
Over 10 times	2	1	2
Every year	2	1	1
Many times a year	12	11	11

The different activities the local population engages whilst visiting the different sites are presented in Table 4.3. As can be viewed locals conduct different activities and are closely linked to the sites.

Table 4.3 Activities proclaimed to have been carried out by respondents when visiting sites

What activities have you undertaken whilst visiting the sites?	Agios Ioannis	Lavrakas	Sarakiniko
Camping	5	4	5
Swimming	9	9	7
Pic-nic	3	4	3
Fishing	3	4	2
Camp-fire	2	3	2
Shell collection	2	3	2
Trekking	11	8	10
Educational trip	3	1	1
We live there	0	1	2

5. Habitat Perceived Status and Trends

Stakeholders, during the workshops and in particular through the interviews were asked to state their perceptions of the habitat status using a likert scale (Table 5.1) and whether there has been a change over the last 5 years (Table 5.2). The same questions were raised with informal personal communications (see Section 3.2.3) and through community surveys.

Worthy of attention, is the lack of knowledge of the sites by decision making stakeholders interviewed. Out of the 16 stakeholders interviewed, only 3 had ever visited Lavrakas site, 6 Agios Ioannis and 5 Sarakiniko. This poses a significant barrier to long term management of the sites. Those stakeholders who had visited the sites, perceived them to be in average or good condition, and that no significant change to the status of the habitats had taken place over the last 5 years. They justified their opinions by stating that no actions had been carried out, and therefore no change had taken place.

The responses obtained from the community survey to the same questions are summarized in Figure 5.1 and illustrate the differences between sites. Sarakiniko site was considered to be in the worst condition, due to the unexplained drying out of many juniper trees (Figure 5.2). When questioned regarding change to the habitat status, 11 respondents stated that condition had worsened and 7 perceived no change. Declining condition in Lavrakas and Agios Ioannis were attributed to pine encroachment and competition with junipers (Figure 5.3), point also raised during the local community workshop which require further scientific investigation and input from other A actions, as to date there is no scientific evidence that this is an actual threat in the area.

Figure 5.1 Local community perceptions of condition / status of the habitats in Gavdos

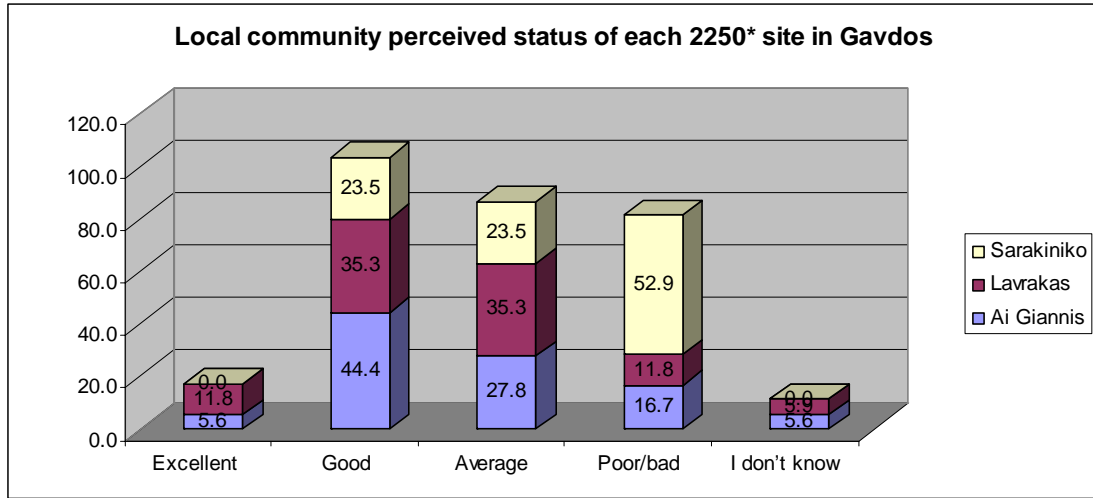
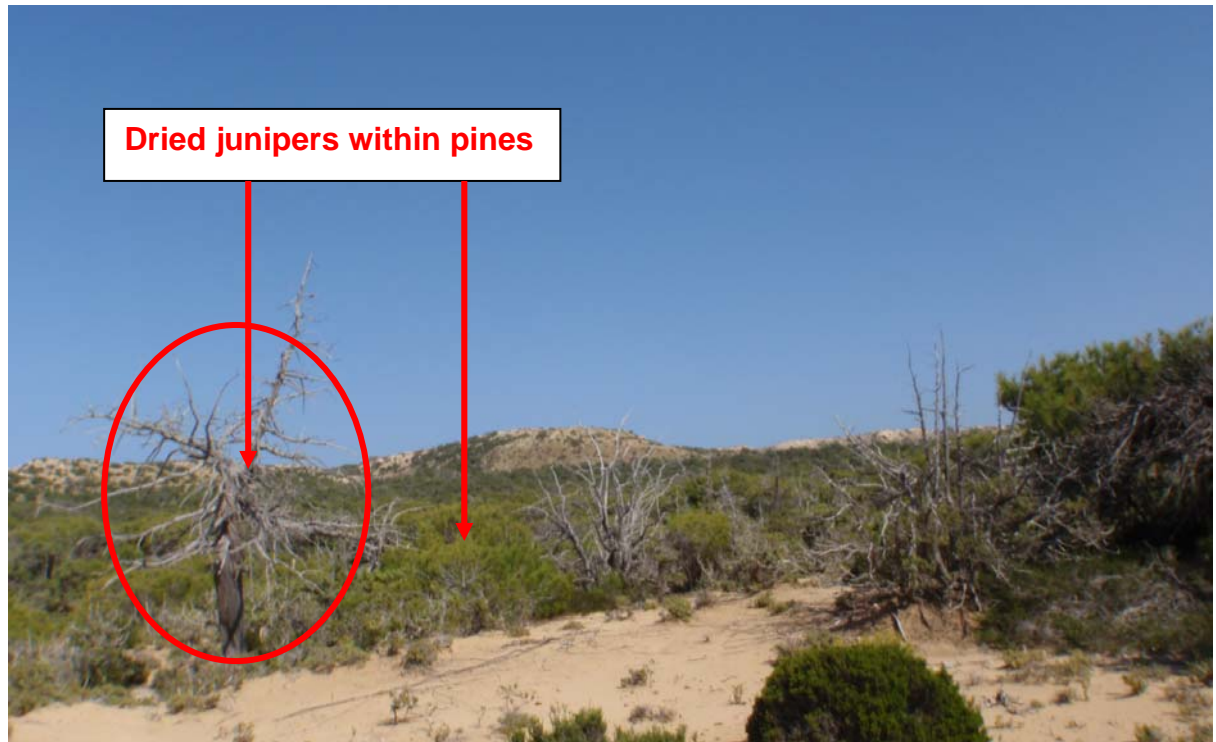


Figure 5.2 Dried juniper stands in Sarakiniko, of concern to locals



Figure 5.3. Phenomenon of pine encroachment perceived as a threat to habitat by locals.



6. Stakeholder and local community views regarding main threats to Gavdos Sites.

In this Section the results from the workshop, stakeholder interviews and community survey regarding the perceived threat to the 2250* habitats in Gavdos are presented in Tables 6.1 & 6.2.

Table 6.1 Stakeholder and Gavdos community perceived threats to habitat

Stakeholder workshop identified threats	Local community workshop identified threats
<ul style="list-style-type: none"> • Uncontrolled development and construction particularly in Sarakiniko where there is illegal construction- lack of local development plans • The lack of infrastructure and a plan for sustainable development and programming of development projects • Fire risk- and the presence of pines encroaching within the habitat and the perception that this increases fire risk- coupled with the remoteness of the island and capacity of the fire service to act quickly in case of an event. • The lack of a protected area management authority despite the fact that the entire island is designated as NATURA2000 site • The invasion of the pines in Lavrakas site, causing junipers to dry out • Uncontrolled woodcutting • Overgrazing inhibiting natural regeneration • Pressures from camping – eg trampling erosion – but not littering as visitors appear to be sensitive and collect their rubbish • Uncontrolled hunting 	<ul style="list-style-type: none"> • Competition of Pines with Juniper trees • Property development in NATURA2000 area • Dying/ drying out of Junipers in Sarakiniko • Overgrazing in Sarakiniko but also to a lesser extent in Lavrakas & Agios Ioannis • Cutting of Juniper branches to make souvenirs. Cut juniper wood transfer in cars to Crete, making regulation difficult. • Visitors braking dry branches (for fire, accidental etc) • Fire risk due to lack of prevention and management measures • Lack of guarding and monitoring • Lack of public awareness • Governance issues and lack of political willingness towards actions for environmental protection and management

Table 6.2. Survey results of local community perceived threats to habitat

Number of households which perceived the following as threats to the habitat	Agios Ioannis	Lavrakas	Sarakiniko
Reduced Natural Regeneration	3	2	3
One day Visitors	2	2	2
Campers	2	2	1
Lack of public awareness	9	8	10
Rubbish	10	9	10
Fire risk	16	15	14
Cutting of Juniper branches and roots	12	11	13
Overgrazing	8	6	13
Pines	3	3	0

Of importance is to note, the fact that despite Gavdos and the specific habitats being prime camping areas, very few of the locals and stakeholders perceived them to be compromising the status of the habitat, despite the numerous years that such activities have been carried out. An understanding of the actual impact of visitors was underlined as the braking of branches – the risk from lighting camp fires. However, the high environmental sensitivity of the majority of visitors to these areas was highlighted.

This indicates the need for preparatory action A.5 “visitor impact assessment” to examine whether camping activity can be carried out responsibly without causing damage to the habitat, rather than being branded as a de facto threat. This is an important consideration, taking into account, the dependency of this isolated population on income from tourism and their parallel lack of infrastructure & resources (water, electricity) which prohibits mass/ or mainstream tourism development. Moreover, should results of A.5 and ecological investigation studies indicate that the status of the habitats even though camped are in good condition, this will indicate the potential feasibility and effectiveness of visitor management and awareness raising methods, in other habitats (e.g. Chrysi island) rather than legislative controversial banning measures.

7. Perceived management and conservation effectiveness

Both the local community and decision making stakeholders were questioned with regard to whether they perceived that present management was effective in ensuring the environmental conservation and protection of 2250* habitats in Gavdos.

Responses from both the community and stakeholders were negative. Only one community respondent and one decision making stakeholder perceived present management operations as effective is of concern, and reasons behind this require further investigation (Action A.9).

Public authority stakeholders (PS and PSL Table 3. 1) were questioned with regard to the existing capacity of their authority to fulfill its duties in relation to the island. National and regional level authorities openly stated not to be able to fulfill their duties, stating barriers such as lack of information, never having visited the areas and lack of ability to do so. Local public authority stakeholder opinion on the matter was divided, some tending to be in agreement with regard to being able to fulfill their duties, however, not referring to NATURA2000 management responsibilities. Others were in disagreement stating that they were understaffed or isolated due to location of the island, Stakeholders regarding NATURA2000 site management barriers in general. Mentioned issues related to governance, such as unclear governance and management structures, lack of knowledge on NATURA200 and procedures for protected area management, as well as procedural barriers relating to understaffing and inadequate resources. The majority of issues being subsequently attributed to the lack of political willingness for change and commitment to environmental protection.

The majority of local community respondents (78%) perceived local authorities not to be fulfilling all their duties with regard to Gavdos island environmental protection, which was also evident from recommendations during local community workshop, whereby requests for political interest in these matters was mentioned.

This signifies the importance of Action 9 investigation of governance as well as the need for simultaneous stakeholder and community engagement during the dissemination and education campaign (D actions)

8. Present stakeholder and local community engagement effectiveness

As mentioned earlier a participatory approach to protected area management is purported through the Habitats Directive, and subsequently a key component of the JUNICOAST project. However, there is no information on existing NATURA2000 participatory processes and their effectiveness, and neither for this site.

Thus, stakeholders and the local community were questioned to establish whether stakeholder and community consultation was being carried with regard to protected area management decisions, and the extent to which they felt they were effective or adequate. 81% of stakeholders interviewed claimed that present consultation and collaboration between stakeholders was inadequate for the effective environmental management and protection of Gavdos. This result is of concern, considering that at the time of this research, the consultation period for the adoption of the protected area management plan for Gavdos was in progress.

With regard to local community consultation for Gavdos environmental management decision making all only 3 stakeholders interviewed perceived it to be effective, or to that point sufficient. The remaining interviewees commented on the lack of community consultation practice, and provision of training or the resources to do so. This problem was confirmed through the community survey whereby an overwhelming 82% stated *Never* to have been informed and consulted. This fact was also made apparent during the local community workshop, where participant, made a number of questions regarding the implications of NATURA2000 designation of their land, and requests of clarification of what is, and what is not prohibited.

The above results indicate the importance of providing opportunities through JUNICOAST to increase information provision, as well as, the development of a holistic communication strategy and after life communication plan. These results should also be given consideration by authorities who are responsible for the consultation component regarding NATURA2000, and encourage them to increase involvement and information provision activities.

9. Levels of awareness and information provision

One of the main objectives of this action was to establish current levels of stakeholder and local community awareness regarding priority habitat 2250* and localities in Crete. Therefore, during interviews stakeholders were asked by which designations was Gavdos characterized and the reasons for designation (i.e. why is it being protected and as a result what activities are prohibited- what is protected).

What was established from the interviews was that stakeholders know designations according to capacity, meaning archeologists knew archeological designations, port authorities knew restrictions according to their domains legislation etc. All excluding three of the 16 stakeholders interviewed knew Gavdos has been established as NATURA2000 site. However, many of them stated confusion or lack of understanding what this meant in practice and what legal implications such a designation had.

Interestingly regarding environmental protection only one stakeholder interviewed knew what priority habitat 2250* was. Others had not heard of this classification before.

Local community awareness regarding the environmental protection status and designations of Gavdos results, are in line with those of stakeholders, meaning that the majority knew that the island was designated as NATURA2000 but that they did not understand its implications in practice. Regarding reasons for designation and protection, the majority perceived it to be the presence of juniper trees, and to a lesser extent the habitat concept of sand dunes with *Juniperus*.

The above results indicate the need for an integrated communication strategy to both decision making stakeholders, as well as, the local community regarding priority habitat 2250*, NATURA2000, and its implications for the environmental management and protection of the site.

Stakeholders and local community were asked to specify which activities were prohibited on the island. Awareness amongst interviewed stakeholders was in many cases fragmented and responses reflecting stakeholder professional background. In the case of the local communities perceptions with regard to what is prohibited or not, (Table 9.1) it is evident that more work is required regarding clarification of allowed and forbidden activities. What can be observed is that the majority of respondents perceive incorrectly many actions as illegal or prohibited even though they are not by law. Interestingly, even though camping is banned by law, only 1 of respondents recognized this. This can be explained by the fact that they may not be aware of the law, yet respond on experiential knowledge, i.e. that they know that camping is an established activity on the island and a tourism income generator for them.

Table 9.1 Local community perceptions of prohibited activities in Agios Ioannis, Lavrakas & Sarakiniko.

What activities are forbidden in the following areas? N=19	Agios Ioannis	Lavrakas	Sarakiniko
Grazing	6	5	6
Cultivation	2	1	2
Camping	1	1	1
Construction	11	10	8
Fishing	0	0	0
Fire	6	6	6
Cutting juniper branches	11	11	11
Shell collection	2	1	2

Based on the Habitats Directive, NATURA2000 sites management and status should be subject to regular monitoring. However, based on interview results it was established that apart from the absence of a formal management and action plan (currently in the process of being established), there is no monitoring strategy for Gavdos. Moreover, stakeholders all expressed inability under current conditions to conduct regular monitoring. Of concern, is the fact that National and Regional Authorities claimed never to have even visited the site as well as not to obtain any information on it.

Stakeholders, presented the remoteness of the site as a significant barrier to structured monitoring, and commented that monitoring for any protected area is an issue to the lack of specifications, allocated budgets to do so as well as serious staff and funds shortages. This finding has considerable implications regarding Action A.8

specification of monitoring protocols, which although originally intended to develop state of the art indicators to monitor the status and threats to priority habitat 2250* it is now clear from results, that if monitoring is to have any chance of continuing following the end of this project, simplicity and feasibility issues need to be considered seriously.

10. Proposed actions for the environmental protection of Gavdos.

In this section the results of stakeholder workshop, interviews, personal communications and community survey, regarding their views on what actions should be carried out to protect the 2250* habitats in Gavdos are presented collectively and juxtaposed – where relevant to proposed JUNICOAST actions. Information in this point was obtained using open ended questions to which content analysis using coding was conducted.

Table 10.1 Recommendations obtained through different stakeholder and community consultation initiatives.

Recommendations from stakeholder workshop	Recommendations from stakeholder interviews and personal communications	Recommendations from Local community survey & workshop
<ul style="list-style-type: none"> • Demarcation of the area and habitat • Raising awareness and education regarding the sustainable management and protection of the habitat • A scientific identification and validation of the appropriate measures which should be carried out (specific reference was made to the Pine encroachment) • Informing and consulting the local community and authorities before carrying out measures and actions • Rigorous regulation of the area. 	<ul style="list-style-type: none"> • Greater public awareness & information provision to visitors (signs leaflets, announcements on boat etc) • Determination and implementation of zoning, land use policies and environmental management plan. • Guarding and regulation • Implement recycling in Gavdos 	<ul style="list-style-type: none"> • Provision of more government funds for environmental protection. • Creation of information signs from natural materials (eg wooden) • Develop leaflets which are distributed on the boat and in taverns on the island. • Creation of a collective fund, whose donations and incomes will go towards the solving of simple problems on the island. • Hiring of 2 forest guards during the summer months • Invite visitors to participate in voluntary protection measures whilst staying on the island (eg habitat litter removal etc)

In more detail, stakeholders emphasized the need to solve a number of governance issues, such as the clarification of land uses, determination of zones and allowed activities, demarcation of priority habitat boundaries.

Other recommendations focused around the need for fire prevention activities, and scientific information regarding the Pine encroachment, i.e. whether this is actually a

threat to the juniper population, whether and what actions should be carried out to deal with them.

Rubbish in terms of littering by visitors was not considered as an issue, as the high environmental awareness of visitors was recognized. However, the large amount of waste generated during the summer months, and lack of recycling on the island was presented as a limitation. Waste collection point improvement, and recruitment of someone to collect it, was also seen as necessary, for example in Lavrakas. The need to minimize overgrazing was pointed out- particularly in Sarakiniko. However, means to do so were not proposed.

Education and information provision recommendations

Stakeholders and local community respondents emphasized the need for improved information provision and awareness raising using different methods for different audiences. Regarding visitors, the need to install signs at all ports, to inform them prior to the arrival on the island was proposed, as well as signs with information on appropriate codes of conduct and value of the habitat at entrance points to the three habitats, and one on the boat.

The opportunity of disseminating leaflets with information on designations, protection, habitat value, and responsible visitor code of conduct on the boat and at taverns was mentioned. The local cooperative proposed of putting this information on the back of the map of Gavdos, thus ensuring maximum dissemination of such information. The opportunity of playing prerecorded announcements on the boat, with information on the nature conservation value and responsible code of conduct was also presented.

The scope for education of younger generations, through educational and volunteering activities was also welcomed. However, Gavdos unfortunately does not have many children (number of students at school = 5) and thus a wider campaign including children of Paleochora should be attempted. The willingness to volunteer of the local population was established as considerable, as all but one of the local community survey respondents stated interest in volunteering, indicating the potential scope for community involvement.

11. Recommendations and conclusions

Based on the outcomes of Action A.6 “Stakeholder consultation”, a number of issues have been identified and recommendations proposed.

- The local populations’ relationship to the habitat is high, indicating the need for extensive community involvement and information provision regarding proposed project activities.
- A number of threats mainly related to overgrazing, fire risk, pine encroachment and cutting of juniper branches are perceived to be compromising the status of the habitats, which overall are still considered by the majority to be in good condition, apart from Sarakiniko whereby locals feel that it is in poor condition.
- Camping, despite being widespread, is not perceived as a threat per se nor is it recognized as illegal, by the local population. Specific visitor behaviors, regardless of whether they are campers or not such as braking of branches, fire lighting and littering are considered a threat.
- Visitor environmental sensitivity is perceived to be high, yet no studies confirming this have been established, in particular following 2008 increase in visitor numbers.
- There is a need to establish the nature and impact of visitors on the habitat scientifically and based on those results propose and implement appropriate yet feasible visitor management and conservation actions.
- Existing management of Gavdos environmental assets is considered as insufficient or ineffective presently by both the community and stakeholders.
- Governance issues are proving barrier to the effective management of the sites. The need for the finalization and implementation of the protected area management plan and spatial land use plan is considered as an essential first step forward by stakeholders.
- There is scope for greater engagement and collaboration between stakeholders and with involvement of the local community.
- Decision making stakeholders need to visit the sites, in particular those in national and regional authorities, as very few have, limiting their capacity to

make informed decisions. Considering that according to Greek legislation and governance decision making protocols, planning approvals require authorization from regional and national authorities in NATURA2000 areas, information provision to this target group becomes of paramount importance.

- Systematic monitoring and information collection regarding the habitat—is currently non-existent
- There is scope for forming volunteer groups and engaging also visitors in awareness raising and conservation actions for the habitat, in particular their inclusion in the After Life conservation plans
- Visitor management actions need to be discussed collectively with stakeholders to ensure their feasibility, maintenance and long term feasibility given current absence of management authority and maintenance funds.
- Provision of visitor information opportunities and necessity of such actions vital for the environmental protection of the habitat by all consulted.
- Waste management actions following collection, are necessary and there is scope to investigate the potential of introducing recycling schemes on the island.
 - Ideas proposed include provision of composting bins, battery recycling collectors
 - Creation of waste collection shelter in Lavrakas, and provision of funds for regular collection during the summer months.

12. References

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Appendices

Appendix A: Report on stakeholder workshop (25/2/2009) and Evaluation of stakeholder engagement methods with the following annexes:

Annex A: List of all potential stakeholders contacted for involvement

Annex B: Greek Summary of Project

Annex C: Agenda of Stakeholder meeting and invitation letter

Annex D: Participant Booklet provided at workshop

Annex E: Draft educational programme for review provided at workshop to stakeholders

Annex F: Example of Draft community survey questionnaire provided to participants

Annex G: Participant Workshop Evaluation Feedback questionnaire

Appendix B: Stakeholder interview template for Gavdos Island

Appendix C: Community survey questionnaire