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

LIFE07NAT/GR/000296









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



Region of Crete, Regional Development Fund Forest Directorate of Chania Forest Directorate of Lasithi

# Action A.6 Deliverable A.6.1.3

# STAKEHOLDER CONSULTATION & COMMUNITY SURVEY FOR KEDRODASOS

# Prepared by MAICh:

Dr. Kalliope Pediaditi

Mr. George Kazakis

Mr. Dany Ghosn

Ms. Hlektra Remoundou





**CHANIA - SEPTEMBER 2009** 

#### LIFE07NAT/GR/000296

"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.6.1.3:** Stakeholder consultation and community survey for Kedrodasos

**Responsible beneficiary:** Mediterranean Agronomic Institute of Chania (MAICh)

Prepared by: Dr Kalliope Pediaditi

Mr George Kazakis Mr Dany Gohsn

Ms Hlektra Remoundou

Chania September 2009

## Contents

EX	ECUTIVE SUMMARY (IN GREEK)	5
1.	INTRODUCTION	10
2.	KEDRODASOS - CONTEXTUAL BACKGROUND.	12
3.	RESEARCH DESIGN & METHODOLOGY	14
3	3.1 Stakeholder Analysis	18
3	3.2 Methodology	20
	3.2.1 Workshop methodology	20
	3.2.2. Stakeholder Interviews	
	3.2.3 Personal Communication- Informal interviews	
	3.2.4 Community survey	22
4.	STAKEHOLDER AND COMMUNITY PERCEPTIONS OF KEDRODASOS VALUE	S. 23
5.	HABITAT PERCEIVED STATUS AND TRENDS	26
6. TO	STAKEHOLDER AND LOCAL COMMUNITY VIEWS REGARDING MAIN THRE KEDRODASOS ENVIRONMENT	
7.	PERCEIVED MANAGEMENT AND CONSERVATION EFFECTIVENESS	31
8. EFI	PRESENT STAKEHOLDER AND LOCAL COMMUNITY ENGAGEMENT FECTIVENESS	34
9.	LEVELS OF AWARENESS AND INFORMATION PROVISION	36
10. KE	PROPOSED ACTIONS FOR THE ENVIRONMENTAL PROTECTION OF DRODASOS.	39
11.	RECOMMENDATIONS AND CONCLUSIONS	42
12.	REFERENCES	44
<b>Δ P</b> 1	PENDICES	46

## **List of Tables**

Box 3.1: List of potential Protected Area Stakeholders (modified from Borrini Feyerabend,	
1996).	19
Table 3.1 Stakeholders relevant to Kedrodasos contacted and consulted for A.6	19
Table 5.1 Current Status of kedrodasos- perceived by interviewees	26
Table 5.2 Status Change of Kedrodasos- perceived by interviewees	26
Table 6.1 Interviewees perceived threats to Kedrodasos	29
Table 8.1 Stakeholders perceptions of existing stakeholder consultation effectiveness	34
Table 10.1 Actions proposed from the local community	40

List of Figures	
Figure 2.1 Kedrodasos site and priority habitat	12
Figure 2.2 Access to Kedrodasos site and priority habitat	13
Figure 3.1. Levels of participation, techniques and factors influencing the selection of technique	ıes
(Adapted from IEMA, 2002)	16
Figure 4.1 Local community perceived values and relationship to kedrodasos	23
Figure 4.2 Local population visitation frequency of kedrodasos	24
Figure 4.3 Activities proclaimed to have been carried out by respondents when visiting	
kedrodasos	24
Figure 5.1 Local community perceptions of condition / status of the natural environment in	
Kedrodasos	27
Figure 5.2 Local community perceptions of environmental status change over the last five year	rs.
	27
Figure 6.1. Evidence of lack of effective waste collection (abandoned rubbish in February)	28
Figure 6.2 Local community perceived threats to Kedrodasos natural environment	30
Figure 6.3. Evidence of juniper stems and branches being cut to light fires	30
Figure 7.1 Stakeholder perceptions of existing management effectiveness.	31
Figure 7.2 Local community perceptions of existing management effectiveness	31
Figure 7.3 Local community perception regarding Kedrodasos environmental protection	
adequacy	32
Figure 7.4. Local communities perceptions of public authorities capacity to fulfil duties with	
regard to Kedrodasos.	33
Figure 8.1 Extent of community consultation	35
Figure 8.2 Local community satisfaction with existing information provision and consultation	
opportunities.	35
Figure 9.1 Local community awareness regarding environmental designations of Kedrodasos.	
Figure 9.2 Local community awareness regarding reasons of designation.	37
Figure 9.3 Local community perceptions of prohibited activities in Kedrodasos	38

# **Executive summary (in Greek)**

#### ΠΕΡΙΛΗΨΗ

Το Κεδρόδασος βρίσκεται στη νοτιοδυτική Κρήτη, 5 χιλιόμετρα νοτιοανατολικά του Ελαφονησίου. Διοικητικά υπάγεται στο Δήμο Πελεκάνου με έδρα την Παλαιόχωρα και στη Νομαρχιακή Αυτοδιοίκηση Χανίων. Ανήκει στην περιοχή ΦΥΣΗ 2000 GR4340015 "Παραλία απο Χρυσοσκαλίτισσα μέχρι ακρωτήριο Κριός", χαρακτηρισμένο ώς οικότοπος προτεραιότητας 2250\* (παράκτιες αμμοθίνες με είδη Juniperus) και καλύπτει έκταση 110 στρεμμάτων. Αν και ανήκει στο Δήμο Πελεκάνου, η κυριότερη πρόσβαση των επισκεπτών στον οικότοπο γίνεται μέσω του Δήμου Ιναχωρίου (Ελος, Χρυσοσκαλίτισσα). Για το λόγο αυτό στην παρούσα έρευνα συμπεριλαμβάνονται και οι δύο Δήμοι. Επίσης το Κεδρόδασος είναι προσβάσιμο μέσω του μονοπατιού Ε4 δυτικά από το Ελαφονήσι και ανατολικά από την Παλαιόχωρα. Η μοναδική χρήση του οικοτόπου είναι η αναψυχή αλλά ο αριθμός των επισκεπτών είναι άγνωστος.

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 εξατρώνται 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.

Από την ημερίδα και τις συνεντεύξεις με τους αρμόδιους φορείς, ως κυριότερη αξία αναγνωρίστηκε η αισθητική αξία των κέδρων και του τοπίου της περιοχής. Η

άμμεση οικονομική αξία του οικοτόπου δεν θεωρήθηκε σημαντική, καθώς μέσα ή κοντά στο Κεδρόδασος δεν υπάρχουν τουριστικές ή άλλες δραστηριότητες. Για την τοπική κοινωνία η οικονομική αξία της περιοχής είναι σημαντική για ένα μικρό μέρος του πληθυσμού. Ως κυριότερη αξία από τους κατοίκους αναγνωρίσθηκε η αξία αναψυχής και η φυσική κληρονομιά, αν και 22% των ερωτηθέντων δήλωσαν οτι δεν έχουν πάει ποτέ ενώ 31% έχει επισκεφθεί την περιοχή μόνο μία φορά. Οι κυριότερες δραστηριότητες που κάνουν οι κάτοικοι κατά την επίσκεψή τους είναι το κολύμπι (54.3%), περίπατος (46.5%) και ελέυθερη κατασκήνωση (16.3%).

Για την παρούσα κατάσταση του οικοτόπου 2250\* στο Κεδρόδασος και τις τυχόν αλλαγές που συνέβησαν τα τελευταία 5 χρόνια, 50% των φορέων διατύπωσε την άποψη οτι ο οικότοπος βρίσκεται σε καλή ή σχεδόν καλή κατάσταση, ενώ οι υπόλοιποι δήλωσαν οτι δεν γνωρίζουν ή δεν διαθέτουν τα απαραίτητα στοιχεία. Αναφορικά με τις αλλαγές στα τελευταία 5 χρόνια, οι ερωτώμενοι απάντησαν οτι, είτε δεν υπάρχουν αλλαγές, είτε υπάρχει κάποια υποβάθμιση, η οποία δικαιολογείται από το γεγονός οτι στο διάστημα αυτό δεν έχουν γίνει κάποιες απαραίτητες δράσεις, ενώ γίνεται και αναφορά στην αύξηση του αριθμού των επισκεπτών. Η εντύπωση της τοπικής κοινωνίας είναι, οτι ο οικότοπος βρίσκεται σε καλή (27%) ή σχεδόν καλή (46%) κατάσταση, ενώ 17% θεωρούν οτι βρίσκεται σε κακή κατάσταση. Αναφορικά με τις αλλαγές που συνέβησαν τα τελευταία 5 χρόνια, 33% των ερωτηθέντων απάντησαν οτι δεν υπάρχουν αλλαγές, 21% οτι η κατάσταση έχει βελτιωθεί, ενώ 31% θεωρούν οτι η κατάσταση έχει χειροτερέψει κυρίως λόγω της αύξησης του αριθμού των επισκεπτών, η οποία συνεπάγεται αύξηση όλων των δυσμενών επιπτώσεων ή κινδύνων (απορρίμματα, σπασμένα κλαδιά, άναμα φωτιάς κλπ).

Οι κυριώτερες απειλές για το κεδρόδασος που αναφέρθηκαν και συζητήθηκαν κατα τη διάρκεια της ημερίδας με τους εμπλεκόμενους φορείς είναι: η υπερβόσκηση, η οποία εμποδίζει τη φυσική αναγέννηση των κέδρων και τα απορρίμματα μέσα στον οικότοπο καθώς και στη βόρεια πλευρά. Κατά τη διάρκεια της συνέντευξης, ο Δήμος Πελεκάνου ζήτησε να αναλάβει τη συλλογή των απορριμμάτων. Επίσης επισημάνθηκε η μή οριοθέτηση του αιγιαλού, η έλλειψη φύλαξης του οικοτόπου, η έλλειψη ενημέρωσης – ευαισθητοποίησης τόσο των κατοίκων όσο και των τουριστών, καθώς και ο κίνδυνος εισροής στον οικότοπο, λόγω έκπλυσης, των αγροχημικών που χρησιμοποιούνται στα παρακείμενα θερμοκήπια. Στην έρευνα της τοπικής κοινωνίας επισημάνθηκαν ως κίνδυνοι: το κόψιμο των κλαδιών και των ριζών των κέδρων, το άναμα φωτιάς και τα απορρίμματα.

Σχετικά με το εάν η μέχρι τώρα διαχείριση του Κεδρόδασους είναι αποτελεσματική για την προστασία του, η τοπική κοινωνία και οι φορείς απάντησαν αρνητικά.

Οι δημόσιοι φορείς ερωτήθηκαν, εάν το υπάρχον δυναμικό τους επαρκεί για να εκπληρώσουν τα καθήκοντά τους σε σχέση με τον οικότοπο. Η πλειοψηφία των ερωτηθέντων θεωρεί ότι έχει δυσκολίες. Εθνικές και περιφερειακές αρχές ανέφεραν ως δυσκολίες, την έλλειψη στοιχείων ή δεδομένων. Οι τοπικές αρχές επισήμαναν ότι τα καθήκοντά τους όσον αφορά τη διαχείριση των περιοχών Natura2000 είναι απροσδιόριστα. Οι κυριώτερες δυσκολίες σχετίζονται με θέματα διοίκησης, όπως ασαφή 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. Επίσης επισημάνθηκε η έλλειψη πολιτικής βούλησης και δέσμευσης για την προστασία του περιβάλλοντος. Η τοπική κοινωνία (54%) θεωρεί οτι οι τοπικές αρχές δεν εκπληρώνουν τις υποχρεώσεις του αναφορικά με το Κεδρόδασος.

Ολοι οι εμπλεκομένοι φορείς, συμφωνούν οτι, η μέχρι τώρα διαβούλευση και συνεργασία μεταξύ τους, δεν είναι επαρκής για την διαχείριση και την αποτελεσματική προστασία του Κεδροδάσους. Σχετικά με την εμπλοκή της τοπικής κοινωνίας στη λήψη των αποφάσεων για τη διαχείριση του Κεδροδάσους , η πλειοψηφία των φορέων επισήμανε την έλλειψη οποιασδήποτε διαβούλευσης. Στην έρευνα της τοπικής κοινωνίας 85% των ερωτηθέντων απάντησαν οτι δεν έχουν ρωτηθεί ποτέ σχετικά με την προστασία του Κεδροδάσους, ούτε είναι ικανοποιημένοι από την μέχρι τώρα εμπλοκή τους ή ενημέρωσή τους για το θέμα αυτό.

Σχετικά με τη γνώση που υπάρχει για το καθεστώς προστασίας του Κεδρόδασους, από τις συνεντεύξεις με τους εμπλεκόμενους φορείς, προέκυψε οτι ο κάθε φορέας γνωρίζει τον χαρακτηρισμό που υπάρχει ανάλογα με το αντικείμενό του, π.χ. η Αρχαιολογική Υπηρεσία γνωρίζει ποιά περιοχή έχει χαρακτηρισθεί ως αρχαιολογικός χώρος κλπ. Παρόλο που το Κεδρόδασος έχει ενταχθεί στο δίκτυο ΝΑΤURA2000 εδώ και πολλά χρόνια, το 50% των ερωτηθέντων φορέων δεν γνώριζαν το καθεστώς αυτό, ή δήλωσαν σύγχυση ή έλλειψη κατανόησης για το τι σημαίνει αυτό στην πράξη, και τι νομικές συνέπειες έχει. Η γνώση της τοπικής κοινωνίας σχετικά με το καθεστώς προστασίας του Κεδροδάσους είναι επίσης ελειπής καθώς 90,6% των ερωτηθέντων απάντησαν οτι το Κεδρόδασος δεν προστατεύεται ή δεν γνώριζαν αν προστατεύεται. Οσον 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 καθως πιστεύει οτι κάποιες δραστηριότητες απαγορεύονται αν και δεν υπαρχει 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 Κεδροδάσους. Από τους φορείς επισημάνθηκε η ανάγκη οριοθέτησης του αιγιαλού, καθώς και αποσαφήνιση των χρήσεων γής στην ευρύτερη περιοχή. Επίσης, από όλους τους φορείς και από πολλούς κατοίκους προτάθηκε η πρόσληψη φυλάκων κατα τους καλοκαιρινούς μήνες. Απαραίτητη κρίθηκε επίσης η οριοθέτηση του οικοτόπου, η τοποθέτηση πινακίδων ενημέρωσης καθώς και η λήψη μέτρων αντιπυρικής προστασίας. Κοινή σύσταση όλων ήταν η δημιουργία και εφαρμογή ενός σχεδίου διαχείρισης του οικοτόπου, στο οποίο θα περιγράφονται τα κατάλληλα μέτρα προστασίας, καθώς η ανάλυψη δράσεων ενημέρωσης και ευαισθητοποίησης των επισκεπτών.

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

- οι απειλές που σχετίζονται κυρίως με τον τουρισμό γίνεται αντιληπτό οτι θέτουν σε κίνδυνο τον οικότοπο, αν και η πλειοψηφία θεωρεί οτι ο οικότοπος βρίσκεται σε καλή κατάσταση.
- οι επιπτώσεις των επισκεπτών στον οικότοπο πρέπει να διερευνηθούν και να προταθούν τα κατάλληλα διαχειριστικά μέτρα.
- η υφιστάμενη διαχείριση του Κεδροδάσους θεωρείται ως ανεπαρκής ή αναποτελεσματική.
- διοικητικά προβλήματα αποδεικνύονται εμπόδιο για την αποτελεσματική διαχείριση της περιοχής.
- υπάρχει πεδίο για καλύτερη συνεργασία μεταξύ των εμπλεκομένων φορέων και τη συμμετοχή της τοπικής κοινωνίας.
- είναι ανάγκη να αυξηθεί η ευαισθητοποίηση των φορέων και της τοπικής κοινωνίας όσον αφορά τις αξίες, τις απειλές και το καθεστώς προστασίας.
- συστηματική παρακολούθηση καθώς και δεδομένα σχετικά με τον οικότοπο προς το παρόν είναι περιορισμένα ή δεν υπάρχουν.
- υπάρχει περιθώριο για τη δημιουργία ομάδων εθελοντών και τη συμμετοχή των παιδιών με σκοπό την αύξηση της ευαισθητοποίησης για τη διατήρηση του οικοτόπου.

- δράσεις διαχείρισης των επισκεπτών θα πρέπει να συζητηθούν από κοινού με τους ενδιαφερόμενους φορείς για να διασφαλιστεί η σκοπιμότητά τους, η μακροχρόνια συντήρηση των υποδομών και η εξεύρεση των απαραίτητων οικονομικών πόρων.
- η πληροφόρηση των επισκεπτών θεωρείται πρωταρχικής σημασίας .
- είναι αναγκαίες δράσεις για τη διαχείριση των απορριμμάτων και υπάρχουν περιθώρια ενίσχυσης της συνεργασίας μεταξύ των δύο Δήμων για την αποτελεσματικότερη αντιμετώπιση του προβλήματος.

#### 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, Aahrus 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 administrational mechanisms and barriers for the long term maintenance of proposed concrete conservation actions. The rational for contacting the lay local communities was two-fold. Firstly, to establish what their relationship to the specific area is, which in turn affects their attitudes

towards protection initiatives (Bonaiuto et al 2002). Secondly, to establish their 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 Kedrodasos Elafonisiou are presented. In Section 2, a brief overview of Kedrodasos 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 Kedrodasos:

- 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. Kedrodasos - contextual background.

Kedrodasos, is located southwest of Crete (Figure 2.1), and 1.5 km east of Elafonisos area. Administratively it belongs to the municipality of Pelekanou, and Prefecture of Chania.

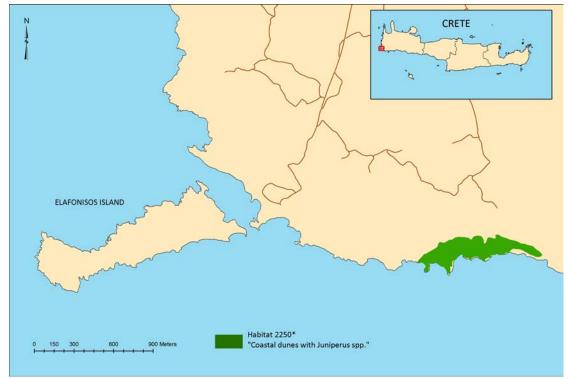


Figure 2.1 Kedrodasos site and priority habitat

Kedrodasos is a designated Natura2000 site code GR4340015, covering an area of 2202.49 ha. It is also subject to numerous national legal designations, aimed at the protection of its natural and cultural features. Indicatively, the NATURA2000 site has been declared as<sup>1</sup>:

- Special Natural Beauty Landscape (articles 50, 52 of law 5351/32 and art. 1, 5 of law1469/50, ministerial resolution 31/36852/2942/12.10.73, Government gazette 1242/B/16.10.73)
- Archeological historical monument (Ministerial resolution 31/36852/2942/1.10.73, Government Gazette 1242/B/16.10.73)
- Game refuge (48%)

The habitat is only accessible on foot, and visitors arrive via a dirt track (which is not indicated) leaving their car on the top of the hill and walking down to the beach where

<sup>&</sup>lt;sup>1</sup> A full analysis of the legal framework is presented in Action 9 report.

the habitat is located (Figure 2.2). Three main paths to the site exist. The E4 footpath which traverses the entire site and is poorly indicated, as well as two footpaths starting from the top of the hills down towards the habitat. The main present use of the site consists of recreation, with an unknown number of visitors using the site for swimming and camping. However, the extent of use and relationship of the local population of the area, with the site, to date has not been established, and thus is examined through this action (Section 4). Paleohora capital of Pelekanou municipality has a population of 3481 consisting of 1328 households (2001, National Census). However, it needs to be pointed out that there are administrational complexities regarding this site. Although Kedrodasos administratively belongs to the municipality of Pelekanou, it is more close (access wise) to that of Inahoriou, and most likely used or closer relationships established with citizens of the latter. Thus, it was considered appropriate to engage both municipalities and local communities in this study.



Figure 2.2 Access to Kedrodasos site and priority habitat

## 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:

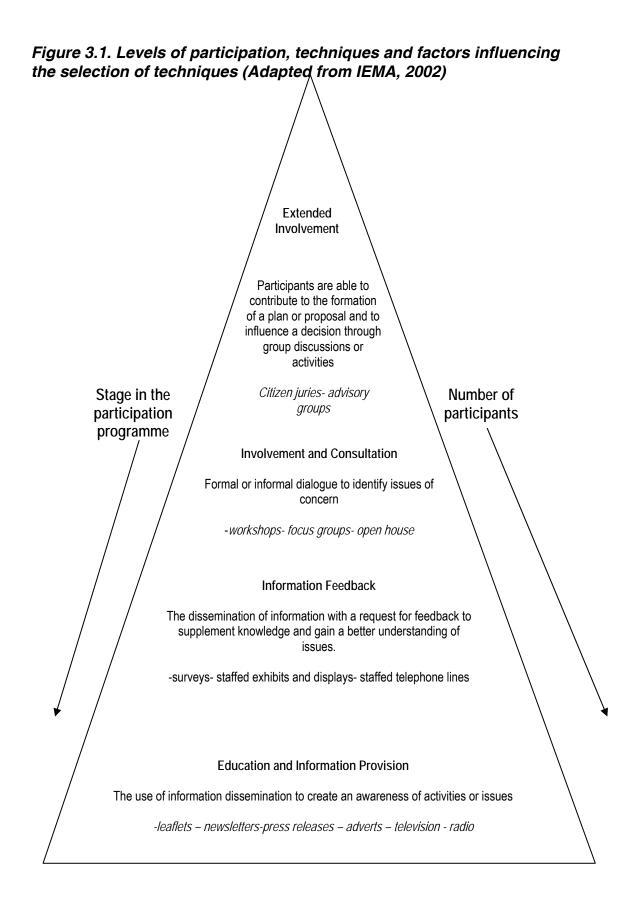
- "to generate ideas;
- **■**to identify attitudes;
- to disseminate information;
- ■to resolve some identified conflict;
- **■**to measure opinion;
- ■to review a proposal;
- merely to serve as a safety valve for pent up emotions."

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.

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).



Figure, 3.2. Stakeholder workshop at MAICh



## 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 Council (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).

- Influential individuals
- Land owners
- Community representatives
- Other representatives (e.g., tourism of 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 Kedrodasos.

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

Stakeholder capacity	Code	Workshop	Personal	Personal
		group	interview	communication
Ministry of environment & public works	PS	attendance		
Ministry of Agricultural Development	PS	Х	Х	X
Region of Crete- Forest Directorate	PS	Х	Х	X
Region of Crete- Environment Division	PS	Х	Х	X
Chania Prefecture Antiquities Directorate	PSL		Х	X
Paleohora Port Authority	PSL	Х	Х	X
Chania Prefecture Political Protection (emergency planning authority)	PSL		Х	X
Mayor of Pelekanou Municipality	PSL		Х	
Chania Prefecture Firebrigade Authority	PSL	Х		X
Mayor of Inahoriou Municipality	PSL	Х		X
Chania Ecological Association	NGO-L		Х	X
Chania Environmental Education Representative	PSL	Х		Х
Regional Forest Directorate Inspectorate	PS	Х	Х	Х
Forest Directorate of Chania	PSL	Х	Х	Х

National Greek Tourism Organisation	PSL	Х		X
All Primary School Headmasters from Pelekanou and Inahoriou municipalities	PSL			Х
Prefecture of Chania- Environment Division	PSL	Х	Χ	X
Cadastre Authority of Chania	PSL			X
Natural History Museum	PSL	Х	Х	X
APXEΛΩN- Society for the protection of the carretta carreta turtle	NGO-N		Х	X
Ελλάδα καθαρή	NGO-N		Х	X
WWF	NGO-N		Х	X

## 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). 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 kedrodasos 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), where as 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, or education) 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).

Headmasters of primary schools were visited in order to determine specifications and practical issues regarding the education campaign, as well as, level of interest and possibility for school engagement.

#### 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 kedrodasos, a household community survey was conducted. Random sampling was used, and self completion questionnaires (Appendix C) were delivered and collected through schools in Pelekanou and Inahoriou municipality enabling an even geographical coverage. A total of 129 completed household questionnaires were obtained, from both Pelekanou and Inahoriou Municipality. Data was analysed using excel and SPSS, results of which are presented in the following sections. Content analysis was conducted for open ended questions using codes.

# 4. Stakeholder and Community perceptions of Kedrodasos values.

During the stakeholder workshop and interviews (Section 3) stakeholders were asked to determine the main values of kedrodasos. From interview responses generic reference was made to the Juniper trees and the landscape beauty of the site.

Economic value of the site was not considered important, as the site is remote and absent of any tourism exploitation visitor infrastructure (e.g. beach chairs, canteen etc). No information regarding the value of the site for the local population was available or mentioned by stakeholders. Visitor numbers and types are unknown although the presence of grazing was mentioned.

From the community survey it was established that economic value direct or indirect from tourism is important to only as small % of the population (Figure 4.1), whereas the main perceived values were stated to be the recreation value (47.3%) and the inherit natural heritage value of the site at (58.9%). Considering the remoteness of the site and the lack of visitor services these results are not surprising.

Percieved local community relationship & value of kedrodasos It has recreational value for us We benefit from the natural resources of the site 14.0 77.0 It has educational value for us 158.9 It has natural heritage value for us It has cultural heritage value for us 14.0 8.5 We own land on the site We benefit indirectly from tourism which visits the site 13.2 **7**6.2 I or a family member works on the site 0.0 10.0 20.0 30.0 40.0 50.0 60.0 70.0 % of respondants

Figure 4.1 Local community perceived values and relationship to kedrodasos

Visitation frequency of the local population was established through the community survey. It is interesting to note that the majority of respondents (31%) have visited

kedrodasos only once and 22% never, yet the recreational and inherit existence value of the site is high (Figure 4.2).

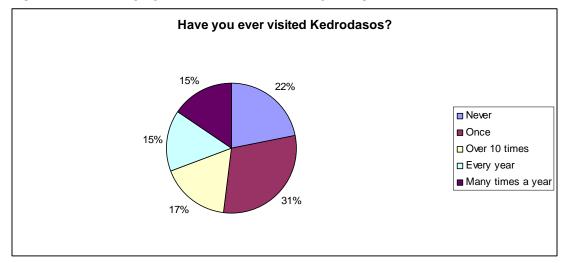


Figure 4.2 Local population visitation frequency of kedrodasos

The different activities the local population engages in whilst at Kedrodasos, are swimming (54.3%) and trekking (46.5%) and 16.3% claimed to have camped (Figure 4.3).

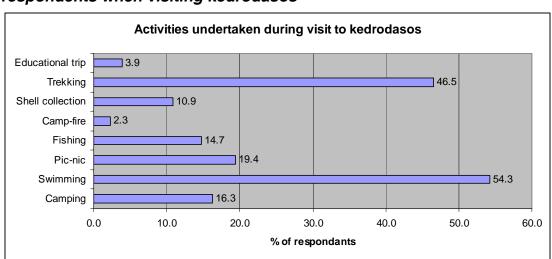


Figure 4.3 Activities proclaimed to have been carried out by respondents when visiting kedrodasos

This information indicates the need for detailed study of tourism and camping impact (Action 5) on the habitat, and the potential to raise environmental awareness and volunteering activities to local users of the site.

#### 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 they perceived this had changed over the last 5 years (Table 5.2). The same questions were raised through informal personal communications (see Section 3.2.3) and through community surveys.

During the workshop mixed views regarding the status were presented. The results of the semi- structure interviews indicate that 50% of interviewees perceived that the status was average or in good condition. However, of concern is the fact that 50% of stakeholders stated not to know what the status was, justifying themselves as either having never been to the site or not to having adequate information with regard to it. The remaining interviewees proclaimed either no change or a turn for the worse regarding the environmental status of the site over the last for years (Table 5.2). Reasoning was justified, with responses that no actions had been carried out, or for cases where trend was perceived as worsening it was justified to increased visitation.

Table 5.1 Current Status of kedrodasos- perceived by interviewees

N=16	Excellent	Good	Average	Poor/bad	l don't know
Public Service (National &					
Regional level)	0	0	1	0	2
Public Service (Local level)	1	3	2	0	2
NGO-(National & Regional					
level)	0	0	1	0	3
NGO- (Local)	0	0	0	0	1
Total	1	3	4	0	8

Table 5.2 Status Change of Kedrodasos- perceived by interviewees

		No		I don't
N=16	Improved	Change	Worse	know
Public Service (National &				
Regional level)	0	2	0	1
Public Service (Local level)	0	3	0	5
NGO-(National & Regional				
level)	0	0	1	3
NGO- (Local)	0	0	0	1
Total	0	5	1	10

The responses obtained from the community survey to the same questions are summarized in Figures 5.1 and 5.2. Responses regarding present status differed, however, of interest is the significant percentage 31% of respondents who perceived

the situation to have worsened. Justifications provided for this view mainly made reference to the increased number of visitors to the site, and subsequent increase in rubbish and braking of branches and lighting fires. The 21% which perceived the status to have improved justified their opinion, on the perception that camping had been forbidden or other recreational reasons, such as the improvement of the road to access the site- rather than environmental reasons.

Figure 5.1 Local community perceptions of condition / status of the natural environment in Kedrodasos

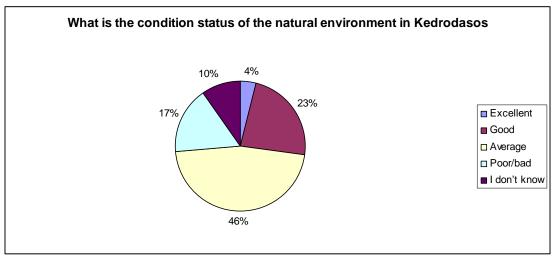
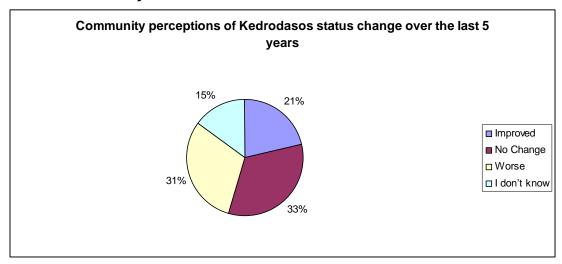


Figure 5.2 Local community perceptions of environmental status change over the last five years.



Both from stakeholder interviews and community survey it is evidence that there is a lack of information and knowledge regarding the site.- Indicative being that the majority of stakeholders had never visited the site, which is an issue which should be addressed through the education campaign.

# 6. Stakeholder and local community views regarding main threats to Kedrodasos environment.

In this Section the results from the workshop, stakeholder interviews and community survey regarding the perceived threats to the natural environment of Kedrodasos are presented.

During the workshop extensive dialogue between participants regarding the main threats to the natural environment were carried out and summarized on post it notes. All participants mentioned how overgrazing was considered as a threat to natural regeneration. Fly-tipping and the absence of any waste management services in the area was mentioned as an issue. Rubbish inside the well in site was identified in need of urgent removal due to potential contamination of the water table. Rubbish at the higher boundaries of the habitat, generated from greenhouses and visitors in the vicinity were considered as impacting negatively on the landscape and natural environment. This was also confirmed during site visits conducted for A.5 (Figure



6.1)



A number of governance threats were identified and presented in need of immediate attention. There is a lack of demarcation and clarification of the beach zone which is protected in Greece by law, thus leaving the habitat exposed to dangers of change of land use. During the interview however, the municipality of Pelekanou claimed to undertake waste removal, something which requires examination during site visits in order to determine the appropriate waste management infrastructure needed for the site C6 actions. Other threats mentioned during the meetings were the lack of guarding and patrols on the site as well as the lack of environmental awareness both of the local population and visitors to the area. Regarding visitors over night camping and the lighting of fires was considered as a significant threat. Finally, the threat of encroachment from greenhouses in the vicinity of the habitat was proposed by some participants.

Interestingly different responses were obtained from interviews and community survey. Stakeholder interviewees perceived camping to be causing the greatest impact where as the local community perceived more specific threats, such as the braking of juniper branches and roots, fire risk and rubbish. Also although overgrazing was mentioned as a serious threat during the workshop and the community survey, it was not mentioned during the interviews, indicating the value of participatory exercises and community engagement processes.

Table 6.1 Interviewees perceived threats to Kedrodasos

N=16	Public Service (National & Regional level)	Public Service (Local level)	NGO- (National & Regional level)	NGO- (Local)	Total
Don't know	1	2	3	0	6
Reduced Natural Regeneration	0	0	0	0	0
One day Visitors	0	1	0	1	2
Campers	1	4	1	1	7
Lack of public awareness	0	0	1	0	1
Rubbish	0	1	1	0	2
Fire risk	0	3	0	0	3
Cutting of Juniper branches &					
roots	0	0	1	0	1
Infrastructure development (opening of road & greenhouses expansion)	0	2	0	0	2

Figure 6.2 Local community perceived threats to Kedrodasos natural environment

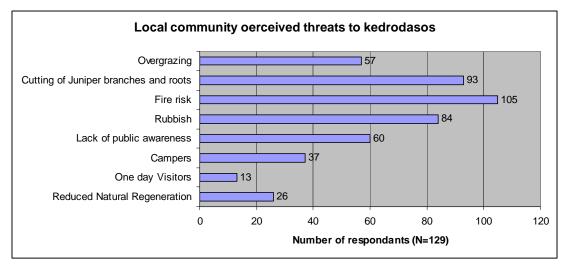
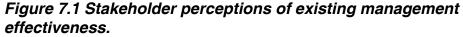


Figure 6.3. Evidence of juniper stems and branches being cut to light fires



# 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 Kedrodasos. Responses from both the community and stakeholders were negative (Figures 7.1, 7.2, 7.3, 7.4). The fact that not a single stakeholder perceived present management operations as effective is of concern, and reasons behind this require further investigation (Action A.9).



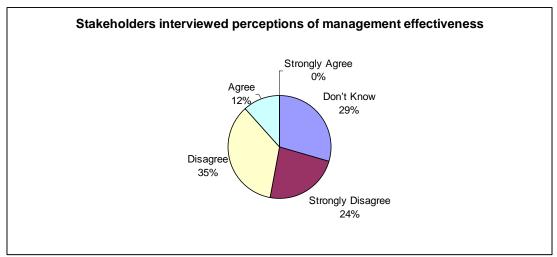
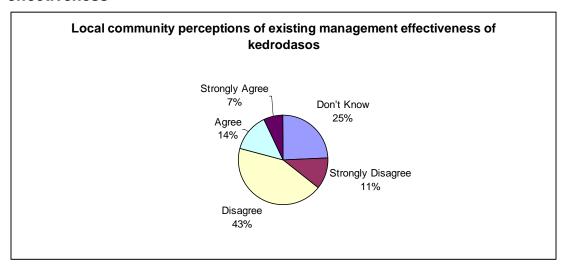


Figure 7.2 Local community perceptions of existing management effectiveness



Local communities level of agreement to statement "Kedrodasos is already adequately protected "

Strongly Agree Don't Know 17%

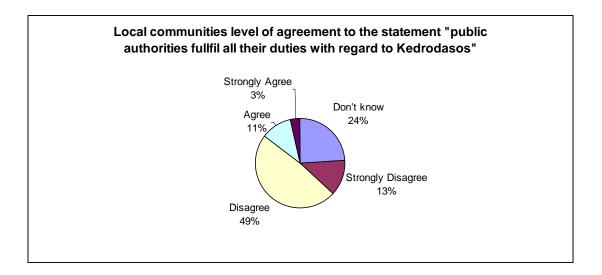
Agree 20%

Disagree 7%

Figure 7.3 Local community perception regarding Kedrodasos environmental protection adequacy

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 site. 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 authorities, tended to be in agreement with regard to being able to fulfill their duties, however, it was pointed out that their duties with regard to Natura2000 site management were undefined. Mentioned barriers, related to governance issues 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 are subsequently attributed to the lack of political willingness for change and commitment to environmental protection. The majority of local community respondents (54%) perceived local authorities not to be fulfilling all their duties with regard to Kedrodasos.

Figure 7.4. Local communities perceptions of public authorities capacity to fulfil duties with regard to Kedrodasos.



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. All interviewed stakeholders apart from one National Authority stakeholder claimed that present consultation and collaboration between stakeholders was inadequate for the effective environmental management and protection of Kedrodasos.

With regard to local community consultation effectiveness for Kedrodasos environmental management decision making all (5) NGOs and 7 out of the 12 Public Service interviewees commented on the lack of any community consultation practice. This problem was confirmed through the community survey whereby an overwhelming 85% stated *Never* to have been consulted or informed and *9% Rarely* (See Figures 8.1 & 8.2). Moreover 75% of respondents claimed to be dissatisfied by this phenomenon.

Table 8.1 Stakeholders perceptions of existing stakeholder consultation effectiveness

"Local community consultation regarding environmental management of Kedrodasos is	Public Service (National &	Public Service (Local	NGO- (National & Regional	NGO-	
being carried out effectively"	Regional level)	level)	level)	(Local)	Total
Dont know	0	1	0	1	2
Strongly Disagree	0	1	2	1	4
Disagree	1	6	1	1	9
Agree	2	1	0	1	4
Strongly Agree	0	0	0	0	0

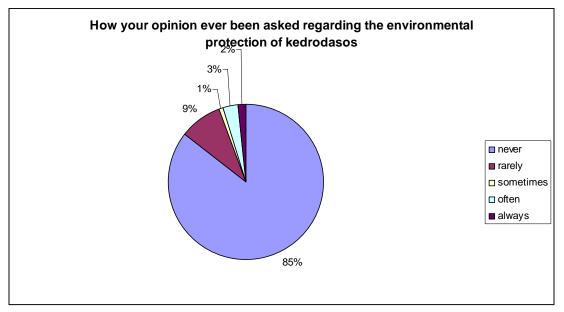
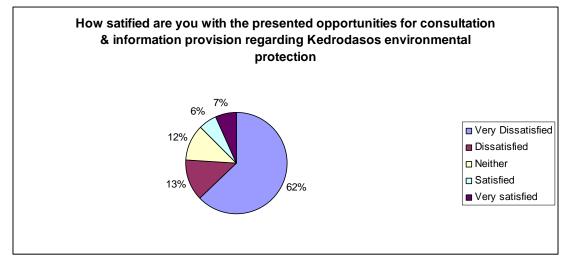


Figure 8.1 Extent of community consultation

Figure 8.2 Local community satisfaction with existing information provision and consultation opportunities.



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.

## 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 kedrodasos 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. Despite the numerous years which kedrodasos has been established as NATURA2000 area 50% of interviewees did not know of the designation status of the site, and like in other cases, stated confusion or, lack of understanding, of what this meant in practice, and what legal implications such a designation, had.

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

Awareness regarding the environmental protection status and designations of kedrodasos amongst the community also proved to be problematic (Figure 9.1). Indicatively for statement *kedrodasos is not protected* 90.6% believed that this was the case or were unsure. Awareness regarding the NATURA2000 status of the site was greater with 61.7%. However, this indicates the lack of awareness of what the designation means, when juxtaposed to previous question.

Confusion, regarding reasons for designation and protection was also noted from local community survey (See Figure 9.2)

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.

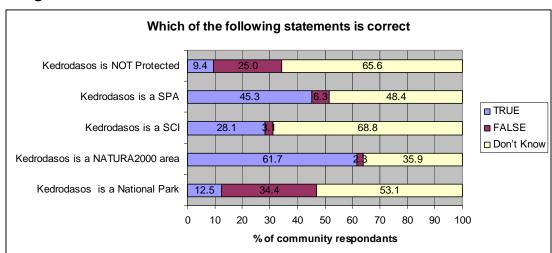
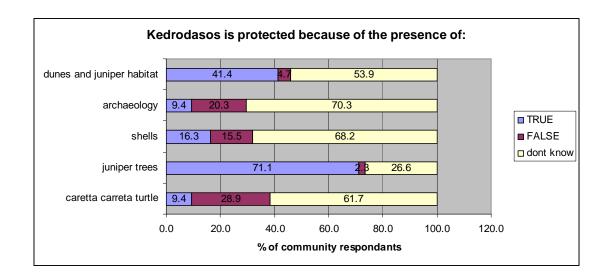


Figure 9.1 Local community awareness regarding environmental designations of Kedrodasos.

Figure 9.2 Local community awareness regarding reasons of designation.



Stakeholders and local community were asked to specify which activities were prohibited on the site. 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 in kedrodasos (Figure, 9.3) 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 perceives incorrectly many actions as illegal or prohibited even though they are not by law. On the other hand, even though camping is prohibited by law, only 32.8% of respondents recognized this.

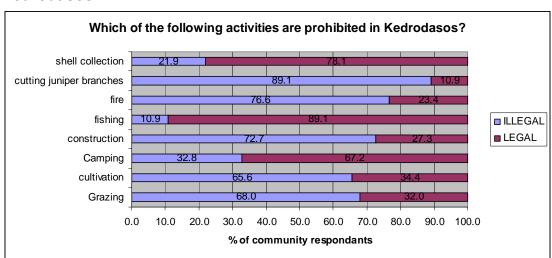


Figure 9.3 Local community perceptions of prohibited activities in Kedrodasos

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, there is no monitoring strategy or such activities being carried out for kedrodasos. 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 to not 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 Kedrodasos.

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 Kedrodasos are presented collectively and juxtaposed – were relevant to proposed JUNICOAST actions. Information regarding recommended actions was obtained using open ended questions to which content analysis using coding was conducted.

From the responses obtained, different types of recommendations occur all of which are presented. However, emphasis and detail is placed with regard to recommendations which inform JUNICOAST concrete conservation actions as well as D awareness raising actions.

During the workshop participants recommended a number of generic governance related actions. Specifically the need to demarcate and officially designate the beach zone was underlined as pressing, a job the cadastre is authorized to do, and which is not in the scope of the JUNICOAST project. However, the need for implementation of the wider area management plan and the clarification and official designation of appropriate land uses in the area was emphasized.

Due to the physical distance of the municipality of Pelekanou, the mayor of the nearby municipality of Inahoriou proposed that they are involved in the management of the area. So for example, regarding rubbish collection that the waste management company hired by Innahoriou municipality following the financial arrangement with Pelekanou municipality, is allocated the responsibility for waste collection in the area of the habitat.

The instatement of guards during the summer months of the site was proposed by all stakeholders and a significant portion of community respondents.

The priority habitats demarcation was stated as necessary together with the installation of information signs. The need for on site fire prevention measures was

noted due to the sites remoteness and difficult access, however, illegibility of expenditure of LIFE+ project funds on such actions excludes this possibility.

During the interviews, the common recommendation of all interviewees was the need for clarification of what is allowed and what is not on the site, through the creation and implementation of a management plan and action plan. The need for scientific advice provision, regarding appropriate protection measures, to involved stakeholders was emphasized, as well as the need for awareness raising actions to both visitors and local community.

Table 10.1 Actions proposed from the local community

Proposed Actions	Frequency
Awareness raising (e.g. signs)	3
Ban camping	3
Fire prevention measures	3
Guarding	11
Waste management	10
Ban grazing	3
Access improvement	3
Tree protection – prohibit branch and root cutting	10

#### **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.

JUNICOAST proposed awareness raising actions were presented during the workshop and feedback and further ideas proposed. The need for visitor signs at the parking entrances and the E4 path were proposed. However, lack of information regarding the types of visitors which go to the site and how they obtain information regarding the site in order to disseminate correctly information was identified as an issue. Thus, the importance of the visitor survey (Action A.5) in finding this information out and designing appropriately the dissemination strategy is underlined.

The scope for education of younger generations, through educational and volunteering activities was also welcomed. Willingness to volunteer was established as considerable over (50%) from the local community survey, indicating the potential scope for such an approach.

#### 11. Recommendations and conclusions

Based on the outcomes of Action A.6 Stakeholder consultation, a number of issues and recommendations have been identified for further consideration.

- A number of threats mainly related to overgrazing and tourism are perceived to be compromising the status of the habitat, which overall however is still considered by the majority to be in good condition.
- 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 kedrodasos is considered as insufficient or ineffective presently
- Governance issues are proving a barrier to the effective management of the site.
- There is a need for the Cadastre to delineate the shoreline.
- There is scope for greater engagement and collaboration between stakeholders and with involvement of the local community.
- There is a need to raise awareness of stakeholders and the local community regarding the values, threats, designations and appropriate code of conduct on the site- awareness levels were low
- Systematic monitoring and information collection regarding the habitat-is currently non existent
- JUNICOAST monitoring protocols (A.7) will have to seriously consider indicator feasibility and implementation issues
- There is scope for forming volunteer groups and engaging children in awareness raising and conservation actions for the habitat
- 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.
- Visitor information opportunities and necessity of such actions is considered
  of paramount importance, yet the identification of visitor information sources
  is a priority.

• Waste management actions are necessary and there is scope to pursue collaboration between two municipalities for more effective waste collection.

#### 12. References

- Arnstein, S., 1969, A ladder of citizen participation. AIP Journal, July, pp216-224.
- Bonaiuto M, Carrus, G, Martorella H & Bonnes, M., 2002, Local identity processes and environmental attitudes in land use changes: The case of natural protected areas, *Journal of Economic Psychology*, 23 pp631-653
- Borrini- Feyrabend, G, 1996, *Collaborative management of protected areas:* tailoring the approach to the context. IUCN Social Policy Group, Switzerland
- Borrini-Feyerabend, G., Kothari A., and Oviedo, G., 2004, Indigenous and Local Communities and Protected Areas: Towards equity and enhanced conservation. IUCN, Switzerland and Cambridge, UK
- De Vaus, D., 2007, Surveys in Social research, 5th edition, Routledge, London
- Dorcey, A.H.J., Doney, L. and Rueggeberg, H., 1994, Public involvement in government decision making. Choosing the right model, Victoria, B.C: The Round Table on the Economy and Environment, cited in Jackson L., 2001, Contemporary Public Involvement: towards a strategic approach. *Local Environment*, 6 (2), pp 135-147.
- Eben M., 2006. Public participation during the sites selection for the Natura 2000 in Germany: The Bavarian case. In Stoll-Kleemann, S., Welp M., eds. *Stakeholder Dialogues in Natural Resources Management: Theory and Practice.*, Springer- Verlag, Berlin, 261-278.
- Environment Council, 2002, *Dialogue for sustainability: Facilitation skills and principles*, Environmental council C1/V1, London.
- Harrison C.M., Burgess J., Clark J., 1998, Discounted knowledge: farmers and residents understanding of nature conservation and policies, *Journal of Environmental Management*, 54, 4. 305-320
- IEMA Institute of Environmental Management and Assessment, 2002, Perspectives, Guidelines on participation in environmental decision making, IEMA, Lincoln.
- Paavola, J., 2003/2004, Protected areas governance and justice: theory and the European Unions Habitats Directive. *Environmental Sciences* 1, 59-77

- Pretty, J. and Shah, P., 1994, Soil and water conservation in the twentieth Century: a History of Coercion and Control, University of Reading Rural History Centre Research Series 1. *Tomorrow*, 1999, 3 (IX), May-June.
- Sanoff, H., 2000, *Community participation Methods in Design and Planning*, John Wiley and Sons, USA.
- Sarantakos S., 1993, Social Research, McMillan Education, Australia, PTY, LTY
- Seargent J. and Steele, J., 1998, *Consulting the Public. Guidelines and Good Practice*, PSI, London.
- Tonn, B., English, M. and Travis, C., 2000, A framework for understanding and improving environmental decision making, *Journal of Environmental Planning and Management*, 43 (2), pp 163-183.
- UNDP, 1997, Empowering people: a guide to participation, <a href="http://www.undp.org/csopp/CSO/">http://www.undp.org/csopp/CSO/</a>
- Webler, T. and Renn, O., "A brief primer on participation: Philosophy and Practice" In Renn, Webler, T. and Wiedemann (eds), 1995, Fairness and competence in Citizen Participation. Evaluating New Models for environmental Discourse, Kluwer: Boston, pp 17-34.
- Wilcox, D., 1994, The guide to effective participation partnership, Brighton
- WWF, (eds) 2005, Crosscutting tool stakeholders Analysis, Foundations of success, USA.

# **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 Kedrodasos

**Appendix C**: Community survey questionnaire