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CROSS-BORDER COOPERATION IN THE MEDITERRANEAN

Ecological use of native plants for environmental restoration and sustainable development in the Mediterranean region

Project presentation

Tunis, 06 May 2015

www.ecoplantmed.eu

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project context

ENPI CBC Mediterranean Sea Basin Programme 2007/2013 :

A multilateral cross-border cooperation programme financed by the European Union under the **European Neighbouhood and Partnership Instrument (ENPI)**

Project Ref. No : II-B/2.1/0671

Total project budget 1.050.364 € and it is financed for an amount of 945.328 € (90%) by the EU

Implementation period (24 months) : 01/01/2014 – 31/12/2015

ECOPLANTMED partnership (1/2)

Benificiary-coordinator: CIHEAM - Mediterranean Agronomic Institute of Chania - Mediterranean Plant Conservation Unit (CIHEAM – MAICh), Crete, Greece

Partner 1: University of Cagliari, Centre for Conservation of Biodiversity (UNICA CCB),Sardinia, Italy

Partner 2: Saint Joseph University, Laboratory for Seed Germination and Conservation (USJ) Lebanon

Partner 3: Regional Ministry of Infrastructures, Territory and Environment, Centre for Forest Applied Research (CIEF) Valencia, Spain

Partner 4: National Research Institute for Rural Engineering, Water and Forestry, Laboratory of Management and Valorisation of Forest Resources (INRGREF) Ariana, Tunisia

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Activities → 6 Work packages

WP1 : Management and coordination

WP2 : Communication

WP3 : Capitalisation of the results

WP4 : Conservation and Propagation of target Mediterranean plants

WP5 : Exchange of experience on restoration Mediterranean habitats

WP6 : Ecological restoration pilot actions

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WP1 : Management and coordination

WP1 Activities

- *Activity 1.1* Overall local management and coordination,
- *Activity 1.2* Reporting and internal monitoring,
- *Activity 1.3* Monitoring and control of the incurred expenditures.

WP1 Output

- Coordination and management decisions,
- Overall and annual actions plans,
- Project's reports (two 6 months reports, interim and final reports),
- Financial Management, accounting and audit reports.

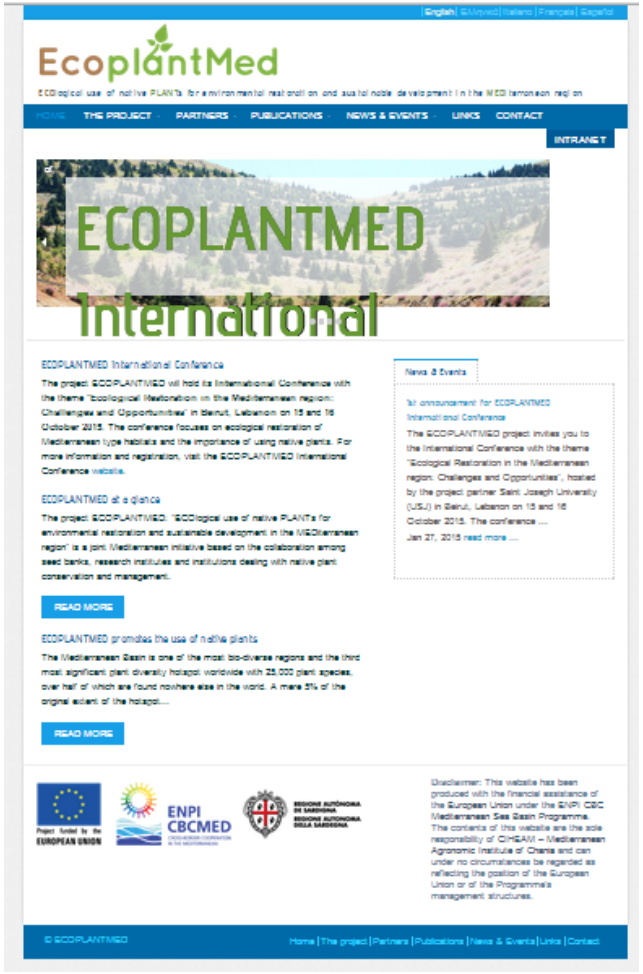
WP2 : Communication

WP1 Activities and outputs

- *Activity 2.1* Development of the Communication Plan, (1 CP)
- *Activity 2.2* Creation and management of a project Web Site, (1WS)
- *Activity 2.3* Creation of Project Logo and Leaflet, (1 Logo ; 5000 Leaflet)
- *Activity 2.4* Organisation of Local Workshops & Dissemination Events, (10 LDE , 10 LW)
- *Activity 2.5 Participation in External Events, (10 P.Ex.Ev.)*
- *Activity 2.6 Translation and dissemination of the project's Guide of Good Practices on ecological restoration, (1 GGP ; 1000 copies GGP)*
- *Activity 2.7 Translation and dissemination of the Propagation Manual of target native plants species, (1 PM ; 1000 copies PM)*
- *Activity 2.8 Communication for the pilot actions (2 display panel)*
- *Activity 2.9 Organisation of closing International Conference, (1 Int. Conf.)*

WP2 : Communication

Adresse : www.ecoplantmed.eu



Project Logo

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WP2 : Communication

Project Leaflet

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WP3 : Capitalisation

- 1 Capitalisation plan
- 5 local capitalisation plans
- 50 relevant actors contacted
- 20 agreements signed with target groups (public authorities, networks, NGOs, nurseries, etc.)

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WP4 : Conservation and Propagation of target Mediterranean plants

- **Output :**
- Elaboration of common criteria for selecting target species to be used for ecological restoration and common methodology for working on conservation and propagation of the selected Mediterranean native plants
- Elaboration of a common list with 50-75 target plant species for habitat restoration activities in the Mediterranen area (10- 15 species per partner)
- At least 100 accessions for ex situ conservation and duplication
- 100-150 experiments of different protociols for the propagation of target plants
- 50-75 new germination protocols of native Mediterranean plants will be published
- 1 manual with practical protocols for the propagation of target native plant species
- 1 seed bank for long term conservation in Tunisia

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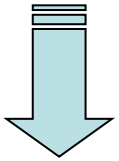
WP4 : Conservation and Propagation of target Mediterranean plants

Selection of native species in tunisia



- **Criterion 1:** work with **woody species**
- **Criterion 2: species of selected habitats**
- **Criterion 3: select species of structural and functional importance for the habitat**
- **Criterion 4: select species for which we can collect large quantities of seeds, that are easy to work with during cleaning and testing, suitable for reproduction in nurseries**
- **Criterion 5: prioritize species on the basis of their importance for *ex situ* conservation**

- **Criterion 6: select some species of common interest among partners**

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Among 221 taxa, we have selected 35 native species with four exceptions of herbaceous species.

Scientifique Name	Family	Habitat type	Interest
Alnus glutinosa •(L.) Gaertn.	Betulaceae	Alnus glutinosa woods	Rare, to be protected and important for some habitats.
Anthyllis barba jovis L.	Fabaceae	Vegetated sea cliffs and rocky shores	rare, to be protected and important for some habitats (ex. Tabarka)
Capparis spinosa L.	Capparaceae	Mediterranean xeric grasslands	Important for habitat
Celtis australis L.	Ulmaceae	Nettle-tree (Celtis australis) woods	Rare, to be protected and important for some habitats.
Ceratonia siliqua L.	Fabaceae	Olive-carob forests	Important for habitat, multi-uses
Crataegus azarolus L.	Rosaceae	Mediterranean xeric grasslands	Important for habitat
Cytisus triflorus Lam.	Fabaceae	Mediterranean xeric grasslands	Important for habitat, rare
Foeniculum vulgare Mill.	Apiaceae	Mediterranean xeric grasslands	Important for habitat, used as medicinal plant
Fraxinus angustifolia Vahl.	Oleaceae	Mediterranean poplar-elm-ash forests	rare, to be protected
•*Genista cinerea* (Vill.) DC.	Fabaceae	Arborescent matorral	Important for the habitat, rare species
Hedysarum coronarium L.	Fabaceae	Wet heaths	exceptionnaly this herbaceous species is suggested
Ilex aquifolium L.	Aquifoliaceae	Arborescent matorral	rare, to be protected and important for some habitats
Juniperus oxycedrus L.	Cupressaceae	Arborescent matorral	important for the habitat
Juniperus phoenicea L.	Cupressaceae	Arborescent matorral	important for the habitat

Laurus nobilis L.	Lauraceae	Continental laurel (Laurus nobilis)-oak woodland	very rare, to be protected
Lavandula dentata L.	Lamiaceae	Mediterranean xeric grasslands	Important for habitat
Magydaris pastinacea (Lam.) Paol. & Bég.	Apiaceae	Mediterraneo-montane grasslands	rare, endangered, to be protected, used as medicinal species
Medicago arborea L.	Fabaceae	Thermo-Mediterranean shrub formations	naturalized
Myrtus communis L.	Myrtaceae	Meso-Mediterranean silicicolous maquis	Important for the habitat
Olea europaea L.	Oleaceae	Thermo-Mediterranean shrub formations	Important for the habitat
Periploca angustifolia (Labill.) Markgr.	Asclepiadaceae	Mediterraneo-montane grasslands	Important for habitat, needs to be protected
Phillyrea angustifolia L.	Oleaceae	Meso-Mediterranean silicicolous maquis	Important for the habitat
Pinus pinaster Aiton	Pinaceae	Mediterranean pine woods	ssp. Endemic
Pistacia atlantica Desf.	Anacardiaceae	Mediterraneo-montane grasslands	Important for habitat, needs to be protected
Pistacia lentiscus L.	Anacardiaceae	Arborescent matorral	Important for the habitat
Pistacia terebinthus L.	Anacardiaceae	Arborescent matorral	rare, to be protected and important for some habitats
Quercus coccifera L.	Fagaceae	Western meso Mediterranean	Important for the habitat
Retama sphaerocarpa (L.) Lam.	Fabaceae	Thermo-Mediterranean shrub formations	Important for the habitat
Rhus pentaphylla (Jacq.) Desf.	Anacardiaceae	Mediterranean xeric grasslands	Important for habitat, needs to be protected
Rosa canina L.	Rosaceae	Thermo-Mediterranean shrub formations	Important for habitat, needs to be protected

Scientifique Name	Family	Habitat type	Interest
Ruta chalepensis L.	Rutaceae	Mediterranean xeric grasslands	Important for habitat
Salix pedicellata Desf.	Salicaceae	Riparian willow (Salix) formations	rare, to be protected
Thymus numidicus Poir.	Lamiaceae	Thermo-Mediterranean shrub formations	Important for the habitat
Ulmus campestris (Moench) Wahlenb.	Ulmaceae	Mediterranean poplar-elm-ash forests	rare, to be protected
Vitex agnus castus L.	Lamiaceae	Southern riparian galleries and thickets	rare, to be protected

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STEP 1: Identification of the seed provenances

Geographical distribution of target species to be used for the restoration of the pilot area in Nefza was determined according to literature especially "Flore de la Tunisie" (Pottier-Alapetite, 1979, 1981) and with the help of colleagues in local forest service. Several field visits are done by researchers on selected sites to evaluate the harvest calendar of species as well as their availability.

Name species	Distribution	Harvest period
Alnus glutinosa (L.) Gaertn.	K	autumn
Anthyllis barba jovis L.	K, M, CB	June
Capparis spinosa L.	TS, NE, K, VM, CB,DT, TC	March-June
Celtis australis L.	K, DT	September-October
Ceratonia siliqua L.	Common in all Tunisia	July
Crataegus azarolus L.	K, M, DT, CB, TC	July
Cytisus triflorus Lam.	K, CB, DT	September-October
Foeniculum vulgare Mill.	K, NE, CB, TC, TS	October
Fraxinus angustifolia Vahl.	K, M, VM, DT	July-August
•*Genista cinerea* (Vill.) DC.	DT, CB, TC	October
Hedysarum coronarium L.	K, VM, NE, CB, DT, TC	Autumn
Ilex aquifolium L.	K	September-October
Juniperus oxycedrus L.	K	July-August
Juniperus phoenicea L.	K	July-August
Laurus nobilis L.	K	August-September
Lavandula dentata L.	-	August-September
•*Magydaris pastinacea* •(Lam.) Paol. & Bég.	K, VM, O, CB, DT	July
Medicago arborea L.	-	Autumn
Myrtus communis L.	K, M, DT, CB	Autumn
Olea europaea L.	TS	winter
•*Periploca angustifolia* (Labill.)	NE, VM, DT, CB, TC, TS	May-June

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STEP 2: Collecting Seeds of target species

- Implementation of the collecting of genetic material from target plant species: harvesting of high quality seeds constitutes the basis on which the next activities will be done.

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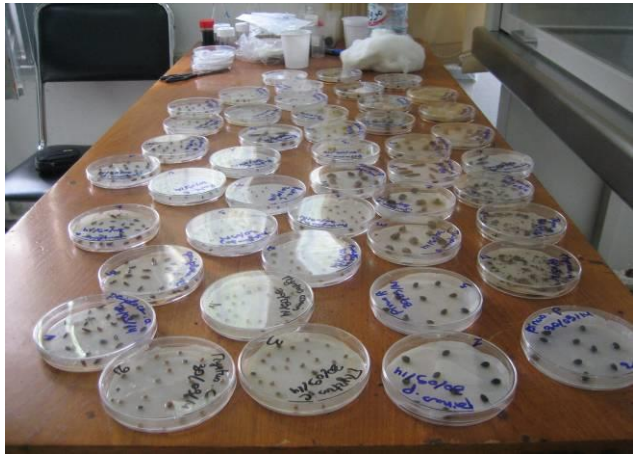
STEP 3: Seed curation and storage

Cleaning, weighting, drying, packaging: Seed processing involves cleaning the seed samples, drying, testing their germination and packaging in appropriate containers for conservation and distribution.

Ex situ conservation in local seed banks, including duplicate accessions in other seed banks.

Methods prescribed by the International Seed Testing Association (ISTA) are used for determining the seed viability.



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STEP 4: Research experiments on propagation protocols

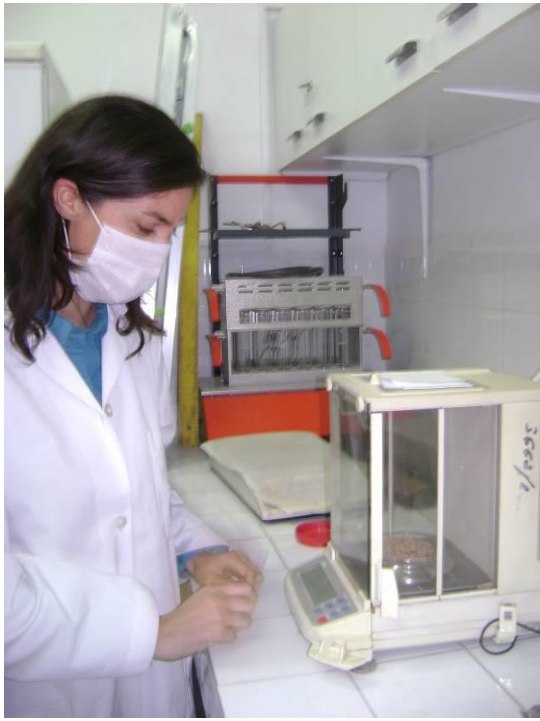
Preliminary seed testing was carried out to study germination requirements of the targeted plant species.

Later tests will be used to examine:

seed dormancy type,

seed dormancy release treatments,

effect of white light and temperature on germination.



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- **Installation of a seed bank for long term conservation**

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•Installation of Green house

WP 5 : Exchange of experience on restoration of mediterranean habitats

Objectif :

Identification of best practices on restoration of mediterranean habitas / and definition of common methodologies for techniques on habitats restoration

Outputs

1. A review of bibliographic search
2. 30 good practices identified and analysed
3. 15 selected best practices
4. Guide of best restoration practices in mediterranean habitas

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WP 6 : ecological restoration pilot actions

Expected results :

- Exchange of experience and know-haw among partners on methodology development for similar restoration activities of Mediterranean habitats
- Improvemeent of the environmental management capacity and governance at local level; increased involvement of local actors
- Improvement of the technical capacity for native plant propagation in MPC partner institutions
- Increased public awerness and sensitization on the importance and feasibility of use of native plants in restoration activities

Outputs

1. Two pilot management plan for the restoration of Mediterranean habitats
2. Two reports for the two pilot actions
3. 6 ha public land in Mount-Lebanon initiating to be restored
4. 7 ha public land in the Nefza region in Tunisia initiating to be restored

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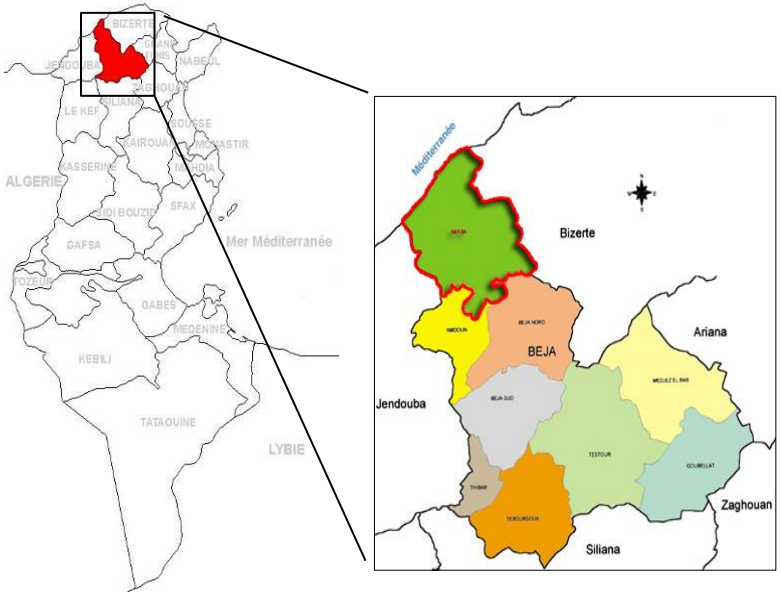
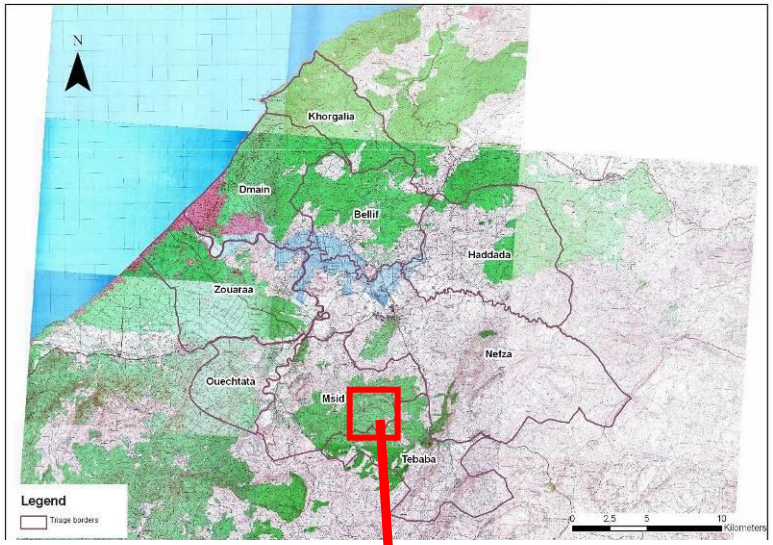
WP 6 : ecological restoration pilot actions

Activities realized :

- 1. Selection of the Pilot site : Nefza / Msid





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WP 6 : ecological restoration pilot actions

Activities realized :

- **2. Selection of the species to be planted**

Species to be planted in the pilot site are as follows: 13 species

Anthyllis barba jovis (L.) Gaertn., *Capparis spinosa* L., *Celtis australis* L., *Ceratonia siliqua* L., *Crataegus azarolus* L., *Cytisus triflorus* Lam., *Genista cinerea* (Vill.) DC., *Laurus nobilis* L., *Medicago arborea* L., *Pinus pinaster* Aiton, *Quercus coccifera* L., *Rhus pentaphylla* (Jacq.) Desf. and *Ruta chalepensis* L.

WP 6 : ecological restoration pilot actions

Activities realized :

- **3. Elaboration of a pilot management plan for the restoration of Mediterranean habitats**

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Management Plan
Work Package 6

Ecological restoration pilot actions in Tunisia
2014-2017

July 2014

Contents

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WP 6 : ecological restoration pilot actions

Activities realized :

- **3. Elaboration of a pilot management plan for the restoration of Mediterranean habitats**

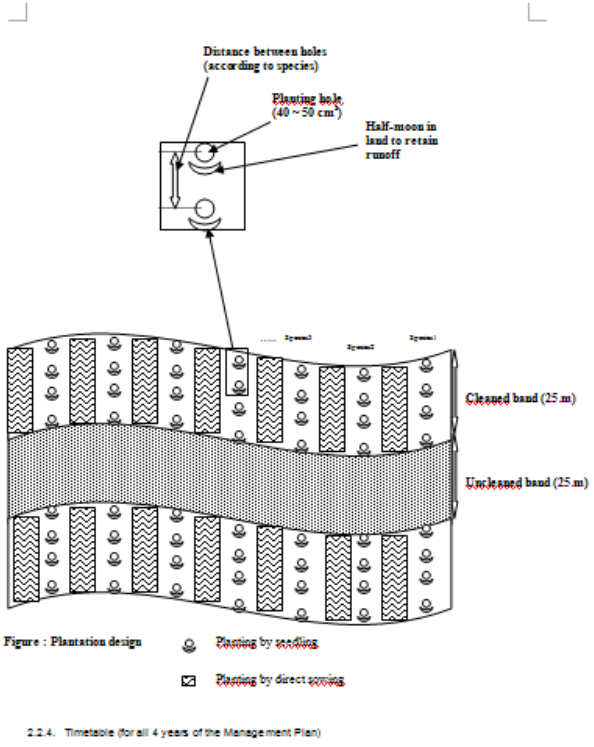
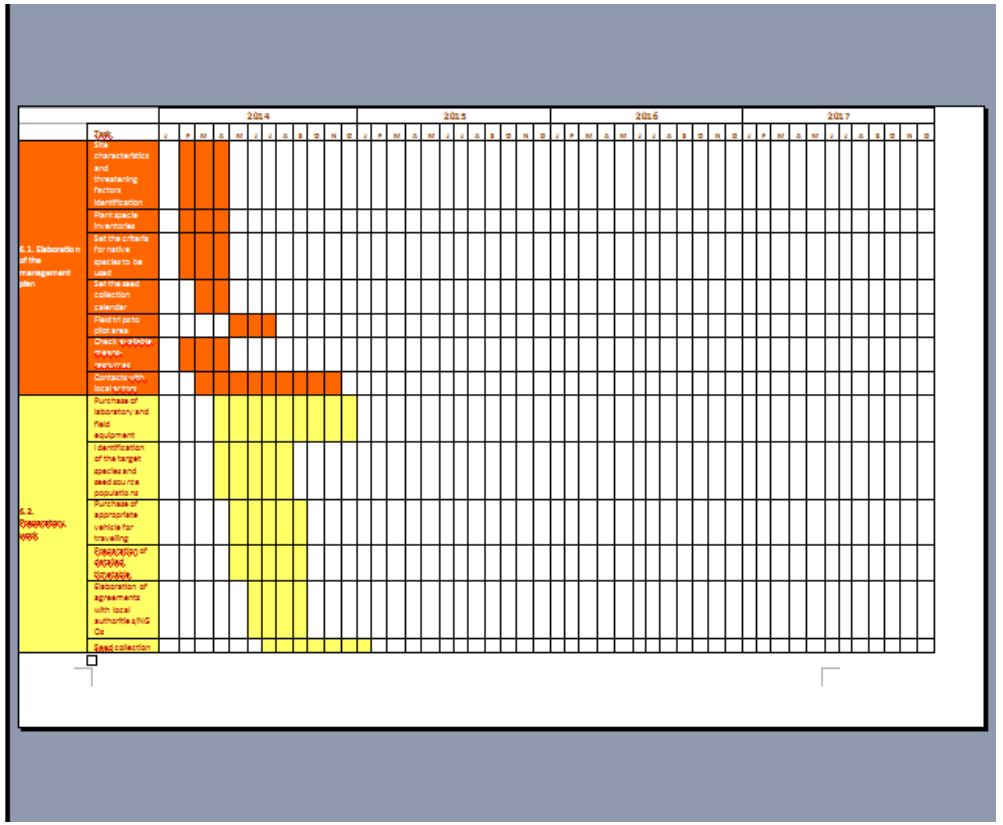


Figure : Plantation design

2.2.4. Timetable (for all 4 years of the Management Plan)



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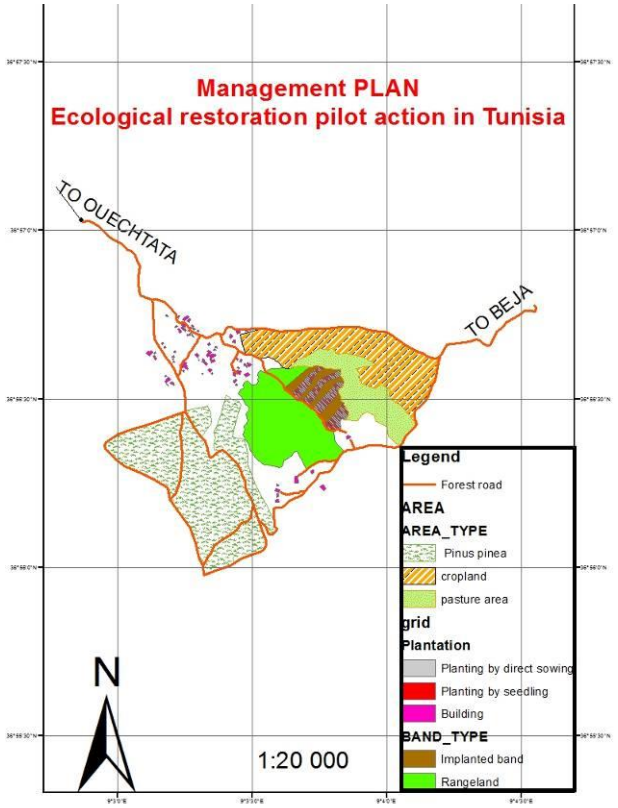
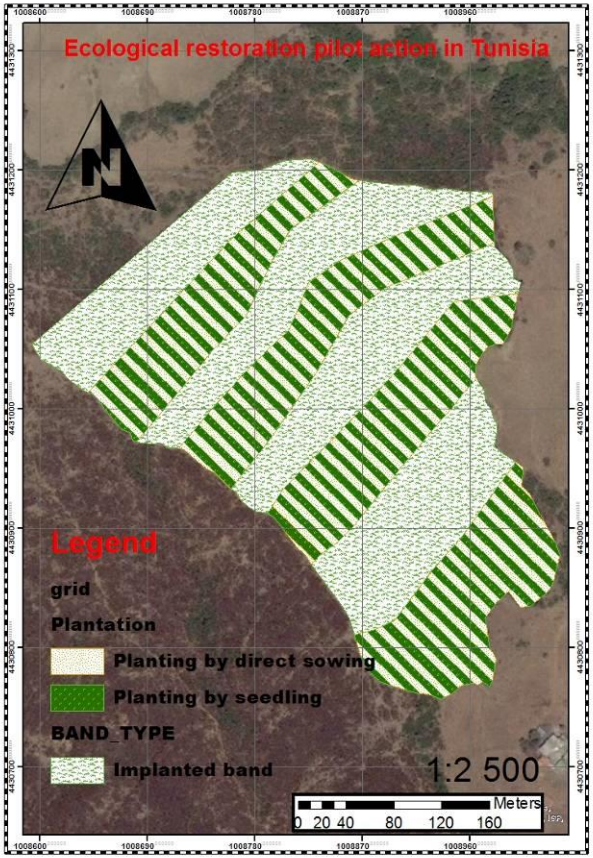
WP 6 : ecological restoration pilot actions

Activities realized :

- 3. Elaboration of a pilot management plan for the restoration of Mediterranean habitats

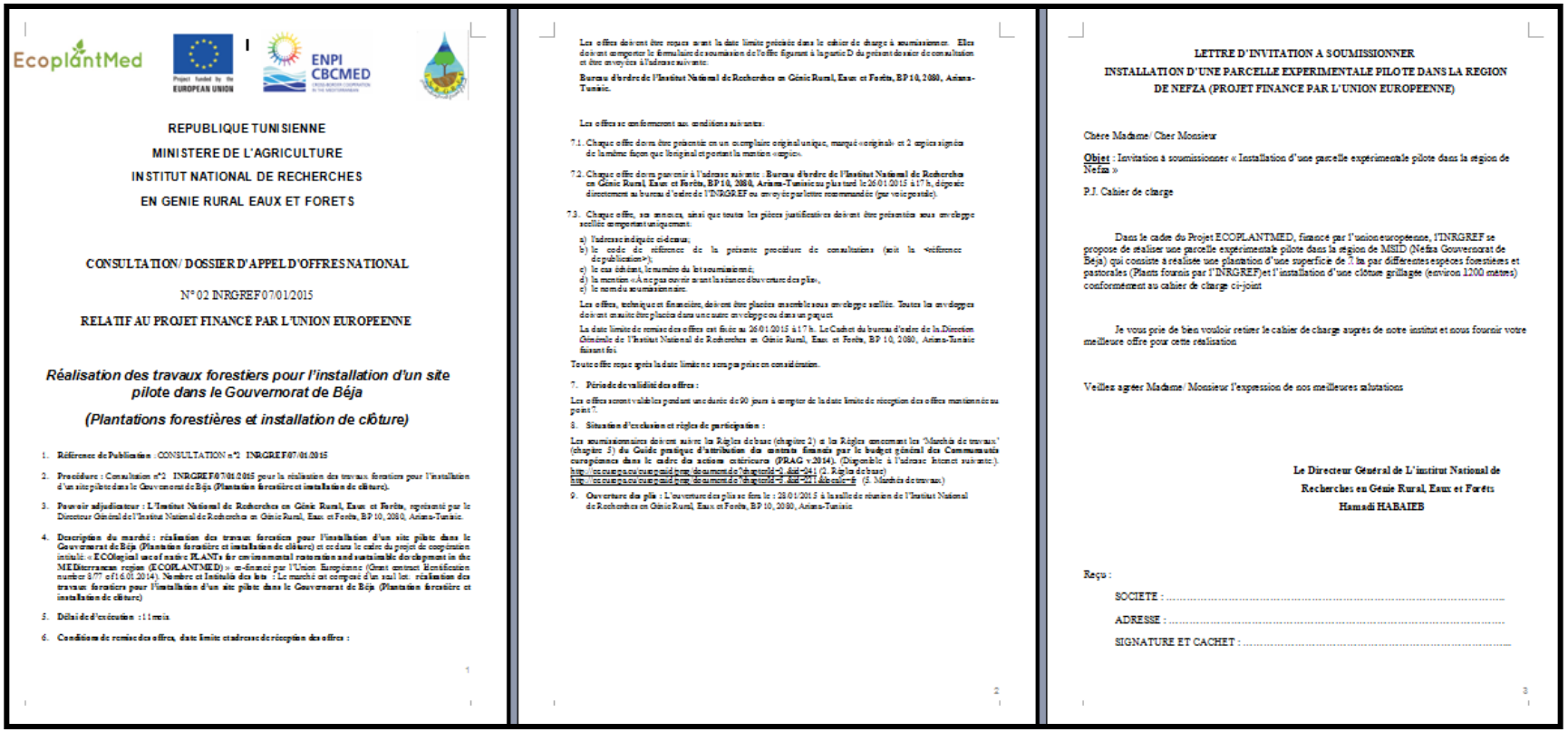




WP 6 : ecological restoration pilot actions

Activities realized :

➢4. Opening a tender for the realization of the planting work and the realization of the fence and selection of the private company



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REPUBLIQUE TUNISIENNE
MINISTERE DE L'AGRICULTURE
INSTITUT NATIONAL DE RECHERCHES
EN GENIE RURAL EAUX ET FORETS

CONSULTATION/ DOSSIER D'APPEL D'OFFRES NATIONAL

N° 02 INRGREF 07/01/2015

RELATIF AU PROJET FINANCE PAR L'UNION EUROPEENNE

Réalisation des travaux forestiers pour l'installation d'un site pilote dans le Gouvernorat de Béja

(Plantations forestières et installation de clôture)

1. Référence de Publication : CONSULTATION n°2 INRGREF07/01/2015
2. Procédure : Consultation n°2 INRGREF07/01/2015 pour la réalisation des travaux forestiers pour l'installation d'un site pilote dans le Gouvernorat de Béja (Plantation forestière et installation de clôture).
3. Pouvoir adjudicateur : L'Institut National de Recherches en Génie Rural, Eaux et Forêts, représenté par le Directeur Général de l'Institut National de Recherches en Génie Rural, Eaux et Forêts, BP 10, 2080, Ariana-Tunisie.
4. Description du marché : réalisation des travaux forestiers pour l'installation d'un site pilote dans le Gouvernorat de Béja (Plantation forestière et installation de clôture) et cadrant le cadre du projet de coopération intitulé « ECOlogical useful native PLANTs for environmental restoration and sustainable development in the MEDiterranean region (ECOPLANTMED) » co-financé par l'Union Européenne (Grant contract Konkretion number 8/77 of 16.01.2014). Nombre et Intitulé des lots : Le marché est composé d'un seul lot. réalisation des travaux forestiers pour l'installation d'un site pilote dans le Gouvernorat de Béja (Plantation forestière et installation de clôture)
5. Délai de l'exécution : 11 mois
6. Conditions de remise des offres, date limite et adresse de réception des offres :

1

Les offres doivent être reçues avant la date limite précisée dans le cahier de charge à soumissionner. Elles doivent comporter le formulaire de soumission de l'offre figurant à la partie D du présent dossier de consultation et être envoyées à l'adresse suivante:

Bureau d'ordre de l'Institut National de Recherches en Génie Rural, Eaux et Forêts, BP 10, 2080, Ariana-Tunisie.

Les offres se conformeront aux conditions suivantes:

7.1. Chaque offre doivent être présentée en un exemplaire original unique, marqué «original» et 2 copies signées de la même façon que l'original et portant la mention «copie».

7.2. Chaque offre doivent parvenir à l'adresse suivante : **Bureau d'ordre de l'Institut National de Recherches en Génie Rural, Eaux et Forêts, BP 10, 2080, Ariana-Tunisie** au plus tard le 26/01/2015 à 17 h, déposée directement au bureau d'ordre de l'INRGREF ou envoyée par lettre recommandée (par voie postale).

7.3. Chaque offre, ses annexes, ainsi que toutes les pièces justificatives doivent être présentées sous enveloppe scellée comportant uniquement:

a) l'adresse indiquée ci-dessus;
b) la copie de référence de la présente procédure de consultations (soit la «référence de publication»);
c) le cas échéant, le numéro du lot soumissionné;
d) la mention «Ne pas ouvrir avant la séance d'ouverture des plis»,
e) le nom du soumissionnaire.

Les offres, technique et financière, doivent être placées ensemble sous enveloppe scellée. Toutes les enveloppes doivent ensuite être placées dans une autre enveloppe ou dans un paquet.

La date limite de remise des offres est fixée au 26/01/2015 à 17 h. Le Cachet du bureau d'ordre de la Direction Générale de l'Institut National de Recherches en Génie Rural, Eaux et Forêts, BP 10, 2080, Ariana-Tunisie faisant foi.

Toute offre reçue après la date limite ne sera pas prise en considération.

7. **Période de validité des offres :**

Les offres seront valables pendant une durée de 90 jours à compter de la date limite de réception des offres mentionnée au point 7.

8. **Situation d'exclusion et règles de participation :**

Les soumissionnaires doivent suivre les Règles de base (chapitre 2) et les Règles concernant les "Marchés de travaux" (chapitre 5) du Guide pratique d'attribution des contrats financés par le budget général des Communautés européennes dans le cadre des actions extérieures (PRAG v-2014). (Disponible à l'adresse Internet suivante:). http://ec.europa.eu/europeaid/prag/document.do?chapterId=2_doi=241 (2. Règles de base) http://ec.europa.eu/europeaid/prag/document.do?chapterId=5_doi=251&ole=fr (5. Marchés de travaux)

9. **Ouverture des plis :** L'ouverture des plis se fera le : 28/01/2015 à la salle de réunion de l'Institut National de Recherches en Génie Rural, Eaux et Forêts, BP 10, 2080, Ariana-Tunisie

2

LETTRE D'INVITATION A SOUMISSIONNER
INSTALLATION D'UNE PARCELLE EXPERIMENTALE PILOTE DANS LA REGION DE NEFZA (PROJET FINANCE PAR L'UNION EUROPEENNE)

Chère Madame/ Cher Monsieur

Objet : Invitation à soumissionner « Installation d'une parcelle expérimentale pilote dans la region de Nefza »

P.J. Cahier de charge

Dans le cadre du Projet ECOPLANTMED, financé par l'union européenne, l'INRGREF se propose de réaliser une parcelle expérimentale pilote dans la région de MSID (Nefza Gouvernorat de Béja) qui consiste à réaliser une plantation d'une superficie de 7 ha par différentes espèces forestières et pastorales (Plants fournis par l'INRGREF)et l'installation d'une clôture grillagée (environ 1200 mètres) conformément au cahier de charge ci-joint

Je vous prie de bien vouloir retirer le cahier de charge auprès de notre institut et nous fournir votre meilleure offre pour cette réalisation

Veuillez agréer Madame/ Monsieur l'expression de nos meilleures salutations

Le Directeur Général de L'institut National de Recherches en Génie Rural, Eaux et Forêts
Hamadi HABAIEB

Reçu :

SOCIETE : .....

ADRESSE : .....

SIGNATURE ET CACHET : .....

3

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Thank you for your attention