



SECTION C :

Objective, actions and expected results Project planning and structure

- ◆ **Only complete the forms appropriate for your project.**
- ◆ **All forms in this section may be lengthened, so as to include all essential information.**
- ◆ **Each action described should have a clear indication of its physical target (e.g., action 1 will take place in area "X" or target species "Y") and should be identified on a detailed map.**
- ◆ **Any sub-contracted action should be just as clearly described as the actions that will be directly carried out by the beneficiary or its partners.**



DESCRIPTION OF THE PROJECT

PROJECT OBJECTIVE:

The overall or development objective is to restore and maintain a favourable conservation status of priority dry grassland habitat types present in Denmark and thus contributing to maintain and restore a favourable conservation status for species of community importance having dry grasslands as their habitats. The main project objective is to increase the area of the grassland habitats *6120, *6210, 6210 and *6230 from 715 ha. to 983 ha., with a potential to further expansion after the end of project. Part of the biotope restoration and management will be done outside areas with the targeted FFH habitats (i.e. *6120, *6210, 6210 and *6230) but still inside the pSCIs and with having the long-term perspective to extend the area of the habitats concerned.

This will contribute significantly to the achievement of a favourable conservation status for the three priority dry grassland habitat types present in Denmark as the project covers 11 pSCIs holding large proportions of the national areas as shown in the table below.

Main results to be achieved:

- Conversion of 65 ha of plantations on former dry grassland habitat types, this contributing significantly to counteract the fragmentation of dry grasslands.
- Restoration of dry grassland habitat types on 178 ha of land either from Conversion of plantations, arable land or other areas
- Clearing of 269 ha of dry grasslands with dense overgrowth. Overgrowth degree IV-III.
- Clearing of 60 ha of dry grasslands with overgrowth. Overgrowth degree II.
- Removal of tree encroachment on 735 ha. Overgrowth degree I and scattered bushes and trees.
- Establishment or securing of appropriate grazing regimes on 1.780 ha., including the introduction of grazing on 599 ha. This involves establishment or renewal of 171 km. of fences.
- Raising the public awareness of the values of NATURA 2000 and in particular dry grasslands for biodiversity conservation by establishment of 25 information boards, production of information leaflets, 64 guided tours
- Dissemination of the results of the project and knowledge gained on best management methods and practices to all professional staff responsible for management of dry grasslands of Denmark.

Land acquisition is not part of the project proposal and no actions in the proposal depend on the purchase of land. However should the project be selected for co-funding the Danish Forest and Nature Agency will give high priority to a number of key land purchases to further support the restoration of wide and coherent priority dry grassland habitats.



Threat n°/name (ref. Form 11 or 13)	Actions (A1, B1,...)	Expected results (quantified if possible)
Threat 1 Lack of grazing or inappropriate grazing regimes.	A.1, C.2, C.3, C.4, C.5, C7, C.10, C.11, E.7	1.780 ha of dry grassland habitats today without a sufficient grazing pressure will be under a suitable management regime contributing significantly to maintain or achieve a favourable conservation status of the dry grassland habitat types.
Threat 2 Encroachment with woody species (shrubs and trees) Overgrowth degree IV and III	A.1, C.2, C.3, C.4, C.5, C.7, C.12 D.2	269 ha of dry grassland habitats restored by removal of dense overgrowth of trees and bushes (overgrowth degree IV+III) thus improving the conservation status.
Threat 2 Encroachment with woody species (shrubs and trees) Overgrowth degree II	A.1, C.4, C.7, C12	60 ha of dry grassland habitats restored by removal of dense overgrowth of trees and bushes (overgrowth degree II) thus improving the conservation status.
Threat 2 Encroachment with woody species (shrubs and trees) Overgrowth degree I	A.1, C.6, C.7, C.10, D.1, D.2, D.3,	735 ha of dry grassland habitats restored by removal of dense overgrowth of trees and bushes (Overgrowth degree I and scattered bushes and trees.) thus improving the conservation status.
Threat 3 Invasion of non-native woody species into grassland vegetation	A.1, C.1	Elimination of the impact from a total of 65 ha (action C1) of plantations of primarily coniferous non-native species situated close to existing dry grassland habitats by their removal.
Threat 4 Fragmentation of dry grasslands	A.1, C.1., C.11	Extension of the area of former dry grassland Habitat types by 178 ha expected to regenerate into the priority habitat types 6120*, 6210*, 6210 and 6230* over, time by removal of plantations on former dry grassland and restoration of arable and other land. This objective is achieved by the following: Removal of existing plantations (Action C1): 65,1 ha. Already removed plantations (Site 65): 11,2 ha. Restoration of arable land at Enehøje: 47,2 ha. Etab. grazing on arable land at Røsnæs: 54,2 ha.
Threat 5 Low or no support for the conservation of dry grassland among landowners and the public	A.1, E.2, E.3, E.4, E.5, E.6, E.7	Promotion of the project by visitor management through the combined effect of 25 information boards distribution of 10.000 leaflets and conduction of 64 guided tours. A WEB site promoting the values of dry grasslands and describing the project and its results with links to other dry grassland projects and other material and a layman's report



<p>Threat 6 Insufficient management capacity</p>	<p>A.1, A.2, E.5, E.7, E.8</p>	<p>11 action plans approved by the competent authorities and implemented through the project.</p> <p>Training of 40 professional staff involved in the project in management techniques for obtaining favourable conservation status dry grassland habitat types</p> <p>Dissemination of the results of the project and knowledge gained on best management methods and practices to all professional staff responsible for management of dry grasslands of Denmark through a workshop report and a website</p>
<p>Threat 7 Adverse impacts from visitors</p>	<p>A.1, E.1, E.2, E.3, E.4</p>	<p>Elimination or reduction of visitor impacts on all sites of the project by visitor management through the combined effect of 25 information boards distribution of 10.000 leaflets and conduction of 64 guided tours.</p> <p>Establishment or restoration of 19,6 km of public footpaths to avoid conflicts between nature conservation interests and visitors</p>
<p>Threat 8 Habitat quality for the population of <i>Maculinea arion</i> at site Klinteskov</p>	<p>A.1, C.8</p>	<p>Restoration and maintenance of a favourable conservation status at two habitats of <i>Maculinea arion</i> at site Klinteskov</p>
<p>Threat 9 Isolation of the population of <i>Maculinea arion</i> at subsite Høvblege in pSCI Klinteskov (H150)</p>	<p>A.1, C.9</p>	<p>Establishment of a new viable population of <i>Maculinea arion</i> at its former habitat Jydelejet in pSCI Klinteskov (H150)</p>
<p>Threat 10 Dominance of non-native subspecies of <i>Festuca rubra</i></p>	<p>A.1, C.11,</p>	<p>Restoration of 47 ha of former dry grassland on Enehøje Island</p>
<p>Threat 1-10</p>	<p>F.1, F.2</p>	<p>Successful operation and implementation of the project Annual progress reports, interim report, final report</p>

Table FFH representation, ownership and grazing”

Site	6120*		6210*		6210		6230*		Ownership		Grazing			Proportion of project area re-stored		
	ffh at start	ffh exp. At end	ffh at start	ffh exp. At end	ffh at start	ffh exp. At end	ffh at start	ffh exp. At end	Private	Public	Needed	AI-ready being done	At Project end		Introduced through project	
30	0	0	0	0	0	0	71	100	855	0	0	250	29	100	71	8%
35	0	0	0	0	0	0	17	60	371	268	0	300	170	289	119	19%
47	5	10	0	0	47	60	0	0	74	129	0	150	106	142	36	18%
65	0	0	0	0	0	0	33	50	220	358	0	250	198	220	22	4%
150	0	0	22	50	0	0	0	0	0	80	0	35	28	34	6	8%
158	0	0	0	0	0	0	<1	10	0	72	0	72	0	71	71	99%
182	24	30	0	0	135	150	2	5	396	232	0	500	283	371	88	14%
186	0	0	0	0	0	0	325	400	337	625	0	500	243	347	104	11%
195	<1	2	0	0	9	20	0	0	0	174	0	130	70	130	60	34%
240	0	0	0	0	0	0	18	25	15	110	0	100	54	62	8	6%
241	0	0	<1	1	0	0	7	10	41	0	0	40	0	14	14	34%
Total	29	42	22	51	191	230	473	660	2309	2048	0	2327	1181	1780	599	14%



DETAILS OF PROPOSED ACTIONS

A. Preparatory actions, elaboration of management plans and/or of action plans

ACTION A.1:

Name of action:

Site specific action plans

Description (what, how and where):

On the basis of a set of general criteria for favourable conservation status for the dry grassland habitat types 6120*, 6210*, 6210 and 6230* developed by National Environmental Research Institute (NERI) the site managers will develop site specific conservation objectives for the management of the individual occurrence of the dry grassland habitat types. A further basis for the development of site specific conservation objectives is existing baseline information on the conservation status of the sites and the results of monitoring.

On the basis of the conservation objectives, an action plan will be elaborated including but not limited to the actions detailed in this project proposal. The actions will be detailed especially as regards the involvement of local landowners and tenants and communities in the day-to-day management of the sites

The action plan will be developed in a dialogue with relevant stakeholders i.e. other authorities, NERI, NGO's, landowners, tenants and local communities. (see action E.7) The complexity of the action plan depends on the size of the site and more specifically the size of the project areas and the number of lots of the project area within the site. The action plans will be approved by the competent authority, i.e. the county and DFNA.

no.	Site manager (institution)	Hours for preparing action plan
30	Viborg County	100
35	Viborg County	100
35	Danish Forest and Nature Agency	25
47	Aarhus County	70
65	Danish Forest and Nature Agency	25
150	Danish Forest and Nature Agency	100
158	Danish Forest and Nature Agency	25
182	Aarhus County	140
182	Danish Forest and Nature Agency	75
186	Aarhus County	210
186	Danish Forest and Nature Agency	25
195	Danish Forest and Nature Agency	75
240	Fyns County	25
240	Danish Forest and Nature Agency	25
241	Fyns County	25



Reasons why it is necessary (ref. to threat being addressed):

Threat 5/ Low or no support for the conservation of dry grassland among landowners and the public + all other threats identified in form 11 for the site

The process of the development of an action plan in a dialogue with relevant stakeholders is a good mechanism to ensure ownership and commitment. A detailed plan is necessary in order to ensure that the actions - especially the clearing activities and the grazing regimes - are implemented with sufficient accuracy and under due consideration of local circumstances. Otherwise these actions may not be sufficiently adapted to the life cycle of plant and animal species of the specific site.

The action plan will provide a prerequisite for maintaining or restoring a favourable conservation status at site level

Responsible for implementing it:

Danish Forest and Nature Agency; Counties of Viborg, Aarhus and Fyn

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible)

The action will result in 11 action plan for the dry grassland habitat types detailing present conservation status, conservation objectives, management actions to be taken, their timing and division of responsibilities. The plans will ensure a focused execution of the project thus contributing to restore or maintain a favourable conservation status of the dry grasslands in the project areas. By way of dissemination the action plans will provide inspiration and know-how for the future management of all pSCI's with dry grassland habitat in Denmark.

Estimated cost of the action: **45.242** EURO (rate 7.43)

ACTION A.2:

Name of action:

Kick-off seminar

Description (what, how and where):

Managers and support staff responsible for implementing the project at the 11 Natura2000 sites will attend the seminar. Issues dealt with will be: an introduction to the goals of the project: restoration of dry grasslands through short lectures by national specialists and demonstrations in the field of typical actions, to be taken as part of the project. A part of the seminar will be training by specialists in: setting site specific conservation objectives for dry grassland habitat types, monitoring and the use of monitoring results in the management of the sites.

Reasons why it is necessary (ref. to threat being addressed):

Threat 6/ Insufficient management capacity

The objective of the kick-off seminar is to create a better understanding and motivation among the staff of the participants in the project

Responsible for implementing it:

Danish Forest and Nature Agency



Action will be sub-contracted: Yes No Partially

Expected results (quantitative information needed):

40 site managers of dry grasslands and support staff trained in adequate management techniques, in developing management plans and in monitoring of dry grasslands. Motivation and information to the participants to increase quality of restoration work and methods. 40 participants expected.

Estimated cost of the action: **10.902** EURO (rate 7.43)

PROVISIONAL BUDGET OF PART "A"

Action	1. Personnel	2. Travel	3. External assistance	4. Durable goods	5. Land purchase/ lease	6. Consumable material	7. Other costs	8. Overheads	TOTAL
A1	37.975	3.048						4.219	45.242
A2	6.178	2.019	2.019					686	10.902
A3									
A4									
A5									
A6									
Total costs, EURO	44.153	5.067	2.019					4.905	56.144



B. Purchase/lease of land and/or rights

For each action or set of actions specify the following:

LAND ACQUISITION IS NOT PART OF THE PROJECT PROPOSAL AND NO ACTIONS IN THE PROPOSAL DEPEND ON THE PURCHASE OF LAND. HOWEVER SHOULD THE PROJECT BE SELECTED FOR CO-FUNDING THE DANISH FOREST AND NATURE AGENCY WILL GIVE HIGH PRIORITY TO A NUMBER OF KEY LAND PURCHASES TO FURTHER SUPPORT THE RESTORATION OF WIDE AND COHERENT PRIORITY DRY GRASSLAND HABITATS.

The overall purpose of land purchase is establishment of coherence from a biological and landscape perspective between priority dry grassland habitats. Acquisition of land will be the first step in a range of actions to convert other land-use (forestry, intensive agriculture) to dry grassland habitats.

The Danish Forest and Nature Agency will give high priority to supplement the efforts of the LIFE-nature project Restoration of dry grasslands in Denmark through key land purchase financed fully by national funds within the Danish nature restoration programme. The focal point of this effort will be Mols Bjerge (site 186) and Nordby Bakker (site 182) (respectively first and second priority).

Mols Bjerge (site 186)

The importance of this site is underscored by the fact that it among other areas has been chosen as (part of) a pilot project area for the development of national nature parks in Denmark. The main reason for this is that the project area constitutes the largest Danish area with dry grassland habitats. The project area has a large potential to enhance the value and conservation status of these habitats.

The forest plantation "Aarhus plantage" (approx. 94 ha) is centrally located in the dry grassland complex of Mols Bjerge (see map page 17-3 on the following side).

The forestry company(private) that owns the forest plantation has advertised the property for sale (since 2001). Negotiations on the buy of "Aarhus plantage" will be initiated and highly prioritized should the LIFE proposal be accepted. The purpose would be to convert approx. 80% of the plantation area to open dry grassland leaving only old stands of broad-leaf's and Scotch pine.

The proposal to buy the plantation originates from a group of local stakeholders involved in the pilot project on a national nature park. It should be noted that a land purchase of this size will pre-empt a substantial part of the available national funds in the nature restoration programme and this can only be justified if the actions in the LIFE nature proposal is co-funded.

Nordby Bakker (site 182)

The site consists of a hilly moraine terrain with sea cliffs and erosion valleys on the west and north side of the island of Samsø. It constitutes one of the largest areas of commons or dry grasslands in Denmark and holds almost half of the Danish FFH resource of habitat type 6120 * Xeric sand calcareous grasslands and large areas of 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites). A large part of the site has never been cultivated. The site holds a significant part of rare and threatened plant species.





Table 18 b) **Sub-actions pr. site** – Summary of **cost** per site

Action Nr	30	35	47	65	150	158	182	186	195	240	241	Total
C.1.1		3695			22630		11908	37459		9855		85547
C.1.2		93582			4651							98233
C.2.1	15749	33960	6123				42197	51066		16727	14202	180024
C.2.2	12688	218090			39677							270455
C.3.1	46911	22152	30678				34896	82911				217548
C.3.2	30616	48828			16051				20064			115559
C.4.1	17840	2981						34482	5521	8092		68916
C.4.2	13311	2871			19118							35300
C.5				13645								13645
C.6	3944	604										4548
C.7.1			27926	40949	6017	1992	34455	66128	17009		5581	200057
C.7.2.1	87971	63051		14226			5035			29481		199764
C.7.2.2	51392	137076							12400			200868
C.7.3			19307					41791				61098
C.7.4				639	1279				1918			3836
C.7.5			3093	10825				4639	1546			20103
C.7.6				4052								4052
C.8					3426							3426
C.9					7335							7335
C.10						8143						8143
C.11						14661						14661
C.12	298011	860784										1158795
C – Total	578433	1487674	87127	84336	120184	24796	128491	318476	58458	64155	19783	2971913

ACTION C.1.:

Name of action:

Removal of smaller plantations on former dry grasslands

Description (what, how and where):

Trees will be felled by machine or motor-manually depending on the circumstances. The costs of these activities are included in the budget. Hereafter, the timber and brushwood will typically be chipped on field and transported to roadside by terrain-going machines, from where it is transported to a storage depot. Haulage to local heating plants or other potential customers will then happen as and when markets develop.

Only plantations adjacent or close to existing areas of priority dry grassland habitat types and known formerly to have been covered with these habitat types has been selected for nature restoration. Due to this selection the areas cleared for plantations will be able to regenerate to a dry grassland habitat type by invasion of typical species of flora and fauna from neighbouring areas and from reactivation of the seed pool. Proper management of common grazing will facilitate a dispersal of plant species from neighbouring areas. As the cost of the action depends on the type of terrain, it is divided in two sub-actions for budget reasons.



C.1.1. Relatively flat terrain.

C.1.2. Steep and difficult terrain

Site	Organisation	C.1.1. (ha)	C.1.2. (ha)
35	Danish Forest and Nature Agency	1,6	26,4
150	Danish Forest and Nature Agency	9,9	1,3
182	Danish Forest and Nature Agency	5,2	0
186	Danish Forest and Nature Agency	16,4	0
240	Danish Forest and Nature Agency	4,3	0
Total			65,1

Reasons why it is necessary (ref. to threat being addressed):

Threat 4 / Fragmentation of dry grasslands

Threat 3/ Invasion of non-native tree species from plantations adjacent to areas of dry grassland

Threat 2/ Overgrowth with scrubs and trees (Overgrowth degree I-IV)

The establishment during the last 50-100 years of small plantations (mostly of *Picea abies*, but also of *Pinus sp.*) on former grassland has made a major contribution to the fragmentation of the grassland in Denmark. One of the means to achieve favourable conservation status of the priority grassland habitats is to extend the area with these habitat types, i.e. clear some of the areas with plantations. Removal of plantation will in addition stop or reduce the influx of non-native tree species and reduce the threat of overgrowth of neighbouring areas.

The action contributes to the implementation of an overall strategy to gradually extend the area with dry grassland priority habitat types.

Responsible for implementing it:

Danish Forest and Nature Agency.

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible):

Nature restoration of former dry grassland Habitat types of 65,2 ha. expected to regenerate into the priority habitat types 6120* Xeric sand calcareous grasslands, 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites), 6230 * Species-rich *Nardus* grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe) over time as grazing will be established under action C7.

Estimated cost of the action:

183.780 EURO (rate 7.43)

Net income from action C.1 are expected to amount to **70.202** EURO (rate 7.43)

The net income from selling timber is subject to elements of uncertainty. The density of the plantations and thus the volume of the timber vary from site to site. It is quite difficult to anticipate the actual volume present at the tree stands without measurements. But there is a correlation between the gross cost of the action and the volume of timber. This means that if the volume of timber is low the gross cost of the action is proportionally low. The net cost pr. ha. of the action is like this almost constant.



Breakdown of estimated cost to sub-action:

Action	Personel	Travel	Extern Ass.	Durable good	Land purchase	Consumable	Other cost	Over-head	TOTAL
C.1.1	18136	0	20717	0	0	43450	0	3086	85389
C.1.2	19341	0	24131	0	0	51999	0	2920	98391
C.1 - Total	37477	0	44848	0	0	95449	0	6006	183780

ACTION C.2

Name of action:

Clearing of dense overgrowth. ((Overgrowth degree IV: >75 % cover of scrubs and trees).

Description (what, how and where):

Areas of dry grassland habitat types where an overgrowth has been allowed to develop during a longer period of years due to neglect will be cleared for bushes and trees. Some native tree and bush species belonging to the characteristic vegetation of such habitat types (i.e *Crataegus laevigata*, *Juniperus communis*, *Sorbus aucuparia*) may be left to cover less than 5% of the specific area.

Clearing will be made by machine and/or manually with motor chainsaw depending on the terrain. Depending on the volume of wood produced this action will be supplemented with action C.12.

As the cost of the action depends on the type of terrain, it is divided in two sub-actions for budget reasons.

C.2.1.: Relatively flat terrain.

C.2.2.: Steep and difficult terrain.

Site	Organisation	C.2.1. (ha)	C.2.2.(ha)
30	Viborg County	5,0	3,4
35	Viborg County	5,5	58,1
35	Danish Forest and Nature Agency	5,3	0
47	Aarhus County	1,9	0
150	Danish Forest and Nature Agency	10,6	0
182	Aarhus County	12,2	0
182	Danish Forest and Nature Agency	1,2	0
186	Aarhus County	16,2	0
240	Fyns County	5,3	0
241	Fyns County	4,5	0
Total			129,2

Reasons why it is necessary (ref. to threat being addressed):

Threat 2 Overgrowth with scrubs and trees (Overgrowth degree IV)

The most serious threat against grassland is invasion of trees and brushes. The overgrowth has changed the microclimate resulting in a partial loss of the characteristic vegetation and the associated fauna of the dry grassland habitat types. The expansion of the



overgrowth will over time for most areas (excluded some areas of habitat type 6120) lead to these habitat types by natural succession turns into woodland.

Responsible for implementing it:

Danish Forest and Nature Agency; Counties of Viborg, Aarhus, Fyn

Action will be sub-contracted: Yes No Partially

Expected results (quantitative information when possible):

129,1 ha of grassland habitats today threatened by overgrowth by trees and brushes achieving a favourable conservation condition.

Estimated cost of the action: **450.479** EURO (rate 7.43)

Breakdown of estimated cost to sub-action:

Action	Personel	Travel	Extern Ass.	Durable good	Land purchase	Consumable	Other cost	Overhead	TOTAL
C.2.1	100473	0	42607	0	0	27349	0	9596	180025
C.2.2	150111	0	64583	0	0	41456	0	14304	270454
C.2 – Total	250584	0	107190	0	0	68805	0	23900	450479

ACTION C.3

Name of action:

Removal of tree encroachment. ((Overgrowth degree III: 50-75% cover of scrubs and trees

Description (what, how and where):

Areas of dry grasslands habitat types where an overgrowth has been allowed to develop during a longer period of years due to neglect will be cleared for bushes and trees. Some native tree and bush species belonging to the characteristic vegetation of such habitat types (i.e *Crataegus laevigata*, *Juniperus communis*, *Sorbus aucuparia*) may be left to cover less than 5% of the specific area.

Clearing will be made by machine and/or manually with motor chainsaw depending on the terrain. Depending on the volume of wood produced this action will be supplemented with action C.12.

As the cost of the action depends on the type of terrain, it is divided in two sub-actions for budget reasons.

C.3.1.: Relatively flat terrain.

C.3.2.: Steep and difficult terrain



Site	Organisation	C.3.1. (ha)	C.3.2. (ha)
30	Viborg County	21,2	10,9
35	Viborg County	10,0	17,4
47	Aarhus County	13,9	0
150	Danish Forest and Nature Agency	0	5,7
182	Aarhus County	15,8	0
186	Aarhus County	37,6	0
195	Danish Forest and Nature Agency	0	7,2
Total			139,7

Reasons why it is necessary (ref. to threat being addressed):

Threat 2 Overgrowth with scrubs and trees (Overgrowth degree I-IV)

The most serious threat against grassland is invasion of trees and brushes. The overgrowth has changed the microclimate resulting in a partial loss of the characteristic vegetation and the associated fauna of the dry grassland habitat types. The expansion of the overgrowth will over time for most areas (excluded some areas of habitat type 6120) lead to these habitat types by natural succession turns into woodland.

If dealt with on an early stage loss of dry grassland can be avoided. From a management point of view restoration efforts at this stage prevents facing an even larger and much more expensive task in the future.

Responsible for implementing it:

Danish Forest and Nature Agency; Counties of Viborg, Aarhus

Action will be sub-contracted: Yes No Partially

Expected results (quantitative information when possible):

139,7 ha of grassland habitats today threatened by overgrowth by trees and brushes achieving a favourable conservation condition.

Estimated cost of the action: **333.107** EURO (rate 7.43)

Breakdown of estimated cost to sub-action:

Action	Personel	Travel	Extern Ass.	Durable good	Land purchase	Consumable	Other cost	Over-head	TOTAL
C.3.1	115436	0	51073	0	0	37783	0	13258	217550
C.3.2	61520	0	27504	0	0	19744	0	6789	115557
C.3 – Total	176956	0	78577	0	0	57527	0	20047	333107



ACTION C.4

Name of action:

Removal of tree encroachment. ((Overgrowth degree II: 25- 50% cover of scrubs and trees

Description (what, how and where):

Areas of dry grassland habitat types where an overgrowth has been allowed to develop during a longer period of years due to neglect will be cleared for bushes and trees. Some native tree and bush species belonging to the characteristic vegetation of such habitat types (i.e *Crataegus laevigata*, *Juniperus communis*, *Sorbus aucuparia*) may be left to cover less than 5% of the specific area.

Clearing will be made with motor chainsaw depending on the terrain. Depending on the volume of wood produced this action will be supplemented with action C.12.

As the cost of the action depends intensely on the terrain, it is divided in two sub-actions for budget reasons.

C.4.1.: Relatively flat terrain.

C.4.2.: Steep and difficult terrain

Site	Organisation	C.4.1. (ha)	C.4.2. (ha)
30	Viborg County	11,3	6,1
35	Viborg County	1,9	1,3
150	Danish Forest and Nature Agency	8,8	0
186	Aarhus County	2,2	0
186	Danish Forest and Nature Agency	19,7	0
195	Danish Forest and Nature Agency	3,5	0
240	Fyn County	5,1	0
Total			59,9

Reasons why it is necessary (ref. to threat being addressed):

Threat 2 Overgrowth with scrubs and trees (Overgrowth degree II)

The most serious threat against grassland is invasion of trees and brushes. The overgrowth has changed the microclimate resulting in a partial loss of the characteristic vegetation and the associated fauna of the dry grassland habitat types. The expansion of the overgrowth will over time for most areas (excluded some areas of habitat type 6120) lead to these habitat types by natural succession turns into woodland.

If dealt with on an early stage loss of dry grassland can be avoided. From a management point of view restoration efforts at this stage prevents facing an even larger and much more expensive task in the future.

Responsible for implementing it:

Danish Forest and Nature Agency; Counties of Viborg, Aarhus, Fyn

Action will be sub-contracted:

Yes

No

Partially



Expected results (quantitative information when possible):

59,9 ha of grassland habitats today threatened by overgrowth by trees and brushes achieving a favourable conservation condition.

Estimated cost of the action: **104.216** EURO (rate 7.43)

Breakdown of estimated cost to sub-action:

Action	Personel	Travel	Extern Ass.	Durable good	Land purchase	Consumable	Other cost	Over-head	TOTAL
C.4.1	35811	0	16126	0	0	12569	0	4410	68916
C.4.2	18529	0	8416	0	0	6225	0	2130	35300
C.4 – Total	54340	0	24542	0	0	18794	0	6540	104216

ACTION C.5

Name of action:

Mulching of stubs after conversion of plantations or clearing of dense overgrowth.

Description (what, how and where):

The action is initiated at site 65 on areas where the plantation already has been removed. New spontaneous tree and scrub vegetation has already partly invaded the area. The mulching removes the stubs as well as the regeneration. The mulching process also levels the area in general obliterating the grades left from the time of the plantation. The mulching makes the area feasible for grazing by sheep or cattle.

Site	Organisation	C.5. (ha)
65	Danish Forest and Nature Agency	11,2

Reasons why it is necessary (ref. to threat being addressed):

Threat 4 / Fragmentation of dry grasslands/ Plantations

Threat 2 Overgrowth with scrubs and trees (Overgrowth degree II-IV)

The mulching of stubs makes the area more feasible for grazing by sheep or cattle.

Responsible for implementing it:

Danish Forest and Nature Agency

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible):

On 11,2 ha of grassland habitats cleared for overgrowth or on areas where plantations has been removed, it will be possible to establish grazing afterwards. This will assist in the establishment of a favourable conservation status of the cleared areas.

This methods effectiveness in respect of the re-colonisation of dry grasslands species is to be evaluated as part of action F2.

Estimated cost of the action: **13.645** EURO (rate 7.43)



ACTION C.6:

Name of action:

Mulching of scrubs and bushes

Description (what, how and where):

Scrubs and bushes are removed by use of a mulcher mounted on a tractor. The material will be left on the ground. This action is to some degree a substitution to actions D2: Removal of tree encroachment. (Overgrowth degree I: 5- 25% cover of scrubs and trees). This action will be used together with actions C2, C3 and C4 as appropriate when nature restoration is needed for an area suffering from serious neglect of proper management for a longer period of time.

The action is initiated at site 30 and 35 on a few suitable areas. This action is a "light-weight" version of action C5 as it does not involve mulching of stubs from larger trees. Mulching of scrubs and bushes can to some extent substitute action D2 (Action C6 is more costs efficient) depending on the vegetation and the terrain. As mentioned above the terrain must be relatively flat for this action to be executed.

Site	Organisation	C.6. (ha)
30	Viborg County	6,1
35	Viborg County	1,0
Total		7,1

Reasons why it is necessary (ref. to threat being addressed):

Threat 2 Overgrowth with scrubs and trees (Overgrowth degree I)

As a natural process, invasion of species of bushes and trees will take place on all three habitat types of dry grassland (excluded some areas of habitat type 6120) the speed of invasion and hence overgrowth being a function of the slope of the area, its exposure to the sun and the hydrology.

In a traditional Danish management of dry grasslands farmers and others would fell trees and bushes with regular intervals for use as firewood and material for fences. This action will substitute the traditional management.

Responsible for implementing it:

Viborg County

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible):

7,1 ha of grassland habitats today threatened by overgrowth by trees and brushes maintaining a favourable conservation condition.

This methods effectiveness in respect of the re-colonisation of dry grasslands species is to be evaluated as part of action F2.

Estimated cost of the action:

4.548 EURO (rate 7.43)



ACTION C.7

Name of action:

Establishment of grazing

Description (what, how and where):

The project will establish the basis for grazing, that is fence (either new or replacement of old ones) and as needed water supply for the livestock and corrals. To establish common grazing of different adjacent parcels of grassland it will in some instances be necessary to establish gratings.

Grazing will be extensive with a grazing pressure adjusted to the conservation interest at the specific area. Different domestic animals will be used, i.e. sheep, cattle and perhaps horses. At site Nordby Bakker and Røsnæs goats might be used in an initial face of two years for reduction of thickets of bushes i.e. *Prunus Spinosa*.

The grazing will be operated on a no-profit scheme as far as government owned land concerns. The grazing value of the areas is believed to be so low that no profits will be gained.

As the cost of establishment of fences depends on the terrain and the type of animals, it is divided in sub-actions for budget reasons.

C.7.1: Cattle fence, relatively flat terrain.

C.7.2.1: Sheep fence, relatively flat terrain.

C.7.2.2: Sheep fence, steep and difficult terrain

C.7.3: Renovation of old fences

Site	Organisation	C.7.1 (me- ters)	C.7.2.1 (meters)	C.7.2.2 (me- ters)	C.7.3. (meters)
30	Viborg County	0	17.645	8.677	0
35	Viborg County	0	8.085	23.587	0
35	Danish Forest and Nature Agency	0	4.474	0	0
47	Aarhus County	9.222	0	0	0
47	Danish Forest and Nature Agency	0	0	0	9.532
65	Danish Forest and Nature Agency	13.522	2.904	0	0
150	Danish Forest and Nature Agency	1.987	0	0	0
158	Danish Forest and Nature Agency	658	0	0	0
182	Aarhus County	11.378	0	0	0
182	Danish Forest and Nature Agency	0	1028	0	0
186	Aarhus County	15.597	0	0	0
186	Danish Forest and Nature Agency	6.240	0		20.631
195	Danish Forest and Nature Agency	5.617	0	2.158	0
240	Danish Forest and Nature Agency	0	6.017	0	0
241	Fyn County	1.843	0	0	0
Total		66.064	40.153	34.422	30.163

Additional works necessary to establish a grazing regime:

C.7.4: Drinking installations (automatic drink dispenser)

C.7.5: Facilities to handle the animals during transport

C.7.6: Facility necessary to allow livestock to migrate between different parcels and across public roads.



Site	Organisation	C.7.4 (pieces)	C.7.5 (pieces)	C.7.6 (pieces)
47	Danish Forest and Nature Agency	0	2	0
65	Danish Forest and Nature Agency	1	7	2
150	Danish Forest and Nature Agency	2	0	0
186	Danish Forest and Nature Agency	0	3	0
195	Danish Forest and Nature Agency	3	1	0
Total		6	13	2

Reasons why it is necessary (ref. to threat being addressed):

Threat 1/ Lack of grazing or insufficient grazing pressure.

Grazing will maintain the succession of the vegetation at a desirable level so preventing overgrowth with scrubs and trees.

In order to provide a at least partly economic feasible basis for motivating farmers to enter into agreements on grazing of government owned land or to use their own privately owned land for grazing it is necessary to provide the basic infrastructure to allow grazing to take place. The clearing of various degrees of overgrowth will support this rationale.

Responsible for implementing it:

Danish Forest and Nature Agency; Counties of Viborg, Aarhus , Fyn

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible):

At the beginning of the project 1.181 ha. of the project area will be grazed and at project end this area will be raised to 1.780 ha. Within the 1.181 ha grazed from start, the proportion of the action C7 that deals with renovation of fences, resizing of enclosures (avoid fragmentation, better grazing regimes), etc. will take place. Within this area different other management actions will be carried out. Some actions will be carried out on areas which hasn't been grazed recently for example C11 which will be performed only on site H 158. The project will introduce grazing on 599 ha.

Estimated cost of the action: **689.778** EURO (rate 7.43)

Breakdown of estimated cost to sub-action:

Action	Personel	Travel	Extern Ass.	Durable good	Land purchase	Consumable	Other cost	Over-head	TOTAL
C.7.1	90026	0	44457	0	0	58350	0	7224	200057
C.7.2.1	88765	0	45801	0	0	54718	0	7431	196715
C.7.2.2	97983	0	46559	0	0	46907	0	6370	197819
C.7.3	23749	0	14006	0	0	20552	0	2791	61098
C.7.4.1	545	0	808	0	0	2423	0	61	3837
C.7.4.2	366	0	1422	0	0	4267	0	41	6096
C.7.5	9632	0	4808	0	0	5282	0	383	20105
C.7.6	486	0	979	0	0	2528	0	58	4051
C.7 – Total	311552	0	158840	0	0	195027	0	24359	689778



ACTION C.8:

Name of action:

Management of grazing of habitats of *Maculinea arion* at site Klinteskoven

Description (what, how and where):

To secure the most optimal habitat for *Maculinea arion* it is necessary to establish two specific management enclosures for the species. The management enclosures will be fences not only for cattle but also for deer. The management enclosures will be established within areas of dry grassland already under a grazing regime. One enclosure will be established at Flaghøj in Mandemarke Bakker (Høvblege) which is the only existing habitat for *Maculinea arion*. The other enclosure will be established at Jydelejet, a dry grassland which had a population of *Maculinea arion* until 1986.

Reasons why it is necessary (ref. to threat being addressed):

Threat 8 Habitat quality for the population of *Maculinea arion* at site Klinteskoven
The management enclosures will enable the adjustment of the grazing pressure to the optimal timing and level. The grazing pressure has to be kept at a low level excluding grazing of its habitat in the summer in order to create optimal conditions for *Thymus pulegioides*, *Origanum vulgare* and *Myrmica sabuleti*.

Responsible for implementing it:

Danish Forest and Nature Agency

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible):

Optimal habitats for *Maculinea arion* by maintaining or restore a favourable conservation status at this site and contribution to the overall restoration of a favourable conservation status for the species in Denmark

Estimated cost of the action:

3.426 EURO (rate 7.43)

ACTION C.9:

Name of action:

Reintroduction of *Maculinea arion* at site Klinteskoven from subsite Høvblege to subsite Jydelejet

Description (what, how and where):

The population and the habitat of *Maculinea arion* is well studied and documented and the causes of its decline and disappearance from the subsite Jydelejet has been identified as a combination of overgrowth of its habitat with bushes and trees and an inappropriate grazing regime. The previous management effort of the site will together with the actions of non-recurring and recurring management of this project establish a suitable habitat for the species and eliminated the threats to its habitat. As a part of this reintroduction action a feasibility and preparatory investigation will be conducted to verify the existence of a suitable habitat, the optimal timing for the reintroduction, the population size at the existing habitat Høvblege and the maximum number of specimens to be caught at Høvblege an reintroduced at Jydelejet.



It is preliminary estimated that a number of 5 female reproductive specimens will be caught at Høvblege and reintroduced at Jydelejet in July. This number and timing will be evaluated by the feasibility study.

As the Høvblege population of *Maculinea arion* is the only population left in Denmark and Høvblege is situated only a few kilometres south of the site Jydelejet the Høvblege population is considered to be the closest possible in respect of genetics and aut-ecology to the original Jydelejet population of *Maculinea arion*.

After the reintroduction at Jydelejet the new population and its habitat will be monitored in order to adjust the management of the site as appropriate.

Both the site of the existing population at Høvblege and the site of reintroduction is owned and managed by the Danish Government through Danish Forest and Nature Agency acting through its de-central branch Falster State Forest District. The Danish Forest and Nature Agency acting as the competent authority in respect of the provision of the Nature Protection Act concerning capture and reintroduction of species covered by Annex IV of the Habitats Directive supports this proposal for re-introduction.

Reasons why it is necessary (ref. to threat being addressed):

Threat 9: Isolation of the population of *Maculinea arion* at subsite Høvblege in site Klin-teskoven.

Maculinea arion has a very restricted home range and is not able to migrate over longer distances. This characteristic of its biology makes the species extremely vulnerable to fragmentation of its habitats. Hence the need for a reintroduction.

Responsible for implementing it:

Danish Forest and Nature Agency

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible):

Establishment of a new population of *Maculinea arion* thus doubling the number of viable populations of Denmark, this will reduce the risk of extinction significantly and contribute to the restoration of a favorable conservation status for this species at this site and on a national level.

Estimated cost of the action:

7.335 EURO (rate 7.43)

ACTION C10:

Name of action:

Acquisition of cattle (Galloway Stock)

Description (what, how and where):

For use at the areas owned by the County of Fyn at Site 240 (Svanninge Bakker) 8 specimens of the cattle race Galloway will be bought by the County of Fyn. The County will retain the ownership of the cattle, also after the project. The cattle will be used exclusively at this site and has been chosen as its grazing pattern are expected to be particular favourable to the vegetation of this site and because it is very difficult to get agreements about grazing with farmers in this region. There will be no profit from the cattle as income from the meat will balance the expenses for wardening and shelter etc.



Reasons why it is necessary (ref. to threat being addressed):

Threat 1/ Lack of grazing or insufficient grazing pressure.

Grazing will maintain the succession of the vegetation at a desirable level so preventing overgrowth with scrubs and trees. This particular breed of cattle is a very robust and hardy animal, but has not been used very much for grazing of dry grassland

Responsible for implementing it:

County of Fyn

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible):

20 ha of grassland habitats today without a sufficient grazing pressure will be under a suitable management regime contributing significantly to maintain or achieve a favourable conservation status.

The use of these animals for grazing will yield valuable information concerning the cost effectiveness of the use of this breed of cattle in the management of dry grasslands.

Estimated cost of the action:

8.143 EURO (rate 7.43)

ACTION C.11:

Name of action:

Management at Enehøje

Description (what, how and where):

The vegetation of *Festuca rubra ssp. Longata*. will initially be burned in a mosaic. After the burning one part of the area will be harrowed and another part will be ploughed, to further reduce the dominance of the *Festuca*. After these actions the area will be left to be grazed by fallow deer. 5 fallow deer will be introduced to the island.

Reasons why it is necessary (ref. to threat being addressed):

Threat 1/ Lack of grazing or insufficient grazing pressure.

Grazing will maintain the succession of the vegetation at a desirable level so preventing overgrowth with scrubs and trees. The fallow deer is ideal on this island as they do not require any care, can remain all year and is the closest you can get to a natural grazing regime

Threat 10/ Dominance of non-native subspecies of *Festuca rubra*.

The action will reduce the dominance of *Festuca rubra ssp. Longata* and assist in establishment of a natural dry grassland vegetation.

Responsible for implementing it:

Danish Forest and Nature Agency.

Action will be sub-contracted:

Yes

No

Partially



Expected results (quantitative information when possible):

47,2 ha of former dry grassland regenerating towards a natural vegetation. The area will be under a suitable grazing regime thus contributing to restoration of dry grassland habitat type 6230*

Mosaic burning	4.509 EURO (rate 7.43)
Harrowing	1.434 EURO (rate 7.43)
Ploughing	2.526 EURO (rate 7.43)
Grazing by fallow deer	6.192 EURO (rate 7.43)

Estimated cost of the action: **14.661 EURO** (rate 7.43)

ACTION C.12

Name of action:

Chipping and removal (transport) of brushwood

Description (what, how and where):

Action C.12 "Chipping and removal of brushwood" is initiated in areas where large volumes of wood are left in the field after carrying out action C.2, C.3 and C.4. Removal of the remnants is vital to the development of the dry grassland. First it makes the area assessable for sheep or cattle for grazing, second it removes fraction of the nutrients most notably nitrogen. Chipping of brushwood is relevant in areas infested with mountain pine (*Pinus mugo*) and other pines. It is likewise important that marketing conditions – haulage, contract with heating plants etc. – for selling chipwood are favourable. These conditions are met at site 30 and 35.

In some situations you can get rid of the remnants in more cost-efficient methods. One way is to have private persons buying the logs for firewood. Once the trees are felled the buyer comes into the area and does the work with the wood and removes the material. The price for this kind of firewood is usually quite low – and in those situations where this method is used the administration cost is estimated to be equal to the profit from selling the wood.

At site 150, 182 and 186 the local State Forest District unit will try to dispose the debris without any cost for the project. Selling some of it for use as firewood is one of the methods they will be using. If this is possible at site 30 & site 35 this method of getting rid of the remnants will be used here also.

Site	Organisation	C.12. (ha)
30	Viborg County	72,6
35	Viborg County	95,5
35	Danish Forest and Nature Agency	114,2
Total		282,3

Action C.12 is initiated on 282 ha. Below is listed which actions at what size of area that will be supplemented by action C12.



	DFNA	Viborg County	
Action	Site 35	Site 30	Site 35
C.1	28	0	0
C.2	5,3	8,4	63,6
C.3	0	32,1	27,4
C.4	0	17,4	3,2
D.2	*81,0	14,6	1,3
	114,3	72,5	95,5
	282,3		

*The Danish Forest and Nature Agency (DFNA) initiates action D.2 on 145,9 ha. at site 35. Of these an estimate of 81 ha. is suitable for afterwards chipping and removal of brushwood. The density of the debris on the rest of the area is expected to be so low that it is not considered necessary to carry out action C.12.

Reasons why it is necessary (ref. to threat being addressed):

Threat 2 Overgrowth with scrubs and trees (Overgrowth degree II-IV)

Threat 1/ Lack of grazing or insufficient grazing pressure.

The chipping and removal of brushwood and twigs makes the area more feasible for grazing by sheep or cattle and removes a fraction of the nutrients most notably N artificially supplied to the area by deposition of atmospheric ammonia or by additional fodder previously supplied to livestock held at the area.

Responsible for implementing it:

Danish Forest and Nature Agency, Viborg County

Action will be sub-contracted:

Yes

No

Partially

Estimated cost of the action:

1.158.795 EURO (rate 7.43)

Net income from action C.12 are expected to amount to **588.896** EURO (rate 7.43)

The net income from selling chips is subject to elements of uncertainty. The density of the overgrowth and thus the volume of the brushwood and twigs vary from site to site. It is quite difficult to anticipate the actual volume present at each site without measurements. But there is a correlation between the gross cost of the action and the volume of wood present. This means that if the volume of wood is low the gross cost of the action is proportionally low. The net cost pr. ha. of the action is like that almost constant.

Breakdown of estimated cost to sub-action:

Action	Personel	Travel	Extern Ass.	Durable good	Land purchase	Consumable	Other cost	Over-head	TOTAL
C.12	624.039	0	282.575	0	0	195.903	0	56.278	1.158.795

This action requires an intensive use of heavy machinery. That is the primary reason why the proportion of consumables is so high. After the trees or scrubs are felled the wood will typically be chipped in-field and extracted to roadside by terrain-going vehicles, from where the chips is transported to a storage depot. All mechanical forest operations are



planned and carried out under a strict environmental policy and all machines are required to conform to the Danish Forest and Nature Agency's environmental machine standards. The chips are sold to heating plants or other local customers if possible.

Action C.12 is based on an economical model, please refer to the table below which describes the details of the model.

	Supervi- sor	Work- men	Machin- ery	Supervi- sor	Work- men	Machin- ery	Ex- penses	Income
	Hours pr. ha	Hours pr. ha	Hours pr. ha	Euro pr. hour	Euro pr. hour	Euro pr. hour	in total pr. ha.	pr. ha
Transport of brushwood		75			28,26		2119,78	
Chipping of brushwood		25	25		28,26	47,11	1884,25	
Supervising	3			33,65			100,94	2086,14
Total	3	100	25		2826,38	925,30	4104,98	2086,14

The cost model has been prepared on the basis of data from experienced site managers and e.g. management plans. Key figures are number of man-hours and machine-hours per hectare and quantities of chips per hectare. The cost of a machine-hour can be broken down into consumables and overhead (depreciation cost).

Expected results (quantitative information when possible):

On 282 ha of grassland habitats cleared for overgrowth, it will be possible to establish grazing afterwards. This will assist in the establishment of a favourable conservation status of the cleared areas.



PROVISIONAL BUDGET OF PART "C"

Action	1. Personnel	2. Travel	3. External assistance	4. Durable goods	5. Land pur- chases/leases	6. Consumable material	7. Other costs	8. Overheads	TOTAL
C1	37.477	0	44.848	0	0	95.449	0	6.006	183.780
C2	250.584	0	107.190	0	0	68.805	0	23.900	450.479
C3	176.956	0	78.577	0	0	57.527	0	20.047	333.107
C4	54.340	0	24.542	0	0	18.794	0	6.540	104.216
C5	3.540	0	3.222	0	0	5.786	0	1.097	13.645
C6	1.627	0	1.018	0	0	1.427	0	476	4.548
C7	311.552	0	158.840	0	0	195.027	0	24.359	689.778
C8	1.625	0	788	0	0	862	0	151	3.426
C9	364	202	6.729	0	0	0	0	40	7.335
C10	364	202	0	0	0	0	7.537	40	8.143
C11	6.141	269	974			1.380	5384	513	14.661
C12	624.039	0	282.575	0	0	195.903	0	56.278	1.158.795
Total costs, EURO	1.468.609	673	709.303	0	0	640.960	12.921	139.447	2.971.913



D. Recurring management

Management activities planned to be done in the project do not qualify for agri-environmental support with reference to the current Danish rural development program, but if possibilities should arise during the project period other Community instruments will be used and a proposal for alternative use of the saving to be prepared.

Tables 19a) and 19b) below summarises the expected site-wise results and estimated costs for D-actions –recurring management.

Table 19 a) **Sub-actions pr. site** – Summary of *units* (ha./meters/pieces) per site

Action Nr	30	35	47	65	150	158	182	186	195	240	241	Total
D.1					3,1							3,1
D.2.1	9,6	147,2	16,9	12,0	1,3		211,1	82,5		22,4	7,1	510,1
D.2.2	5,0											5,0
D.3				59,8			64,5	86,0				210,3
D.4						28,0						28,0

Table 19 b) **Sub-actions pr. site** – Summary of *cost* per site

Action Nr	30	35	47	65	150	158	182	186	195	240	241	Total
D.1					25859							25859
D.2.1	8357	127909	14638	10382	1095		183425	71657		19391	6134	442988
D.2.2	6300											6300
D.3				17462			18835	25108				61405
D.4						2128						2128
D - Total	14657	127909	14638	27844	26954	2128	202260	96765	0	19391	6134	538680

ACTION D.1:

Name of action

Mowing of vegetation and removal of material.

Description (what, how and where):

This action will be used on a specific area in site H 150 Klinteskoven. This area, a former dry grassland used to be utilised as a common. For a period until 1986 it was covered with a plantation of *Pica alba*. After the removal of the trees in 1986 the area has been under a grazing regime with cattle. Unfortunately a dense vegetation of *Pteridium aquilium* has developed and is covering 3.1 ha. The cattle will not eat the vegetation of this species. So the only possibility is to cut the vegetation of *Pteridium aquilium* motor-manually, remove the litter manually and transport the litter by use of a tractor and wagon. The terrain is very steep and larger machines can not be used.

In order to secure a more permanent removal of the vegetation of *Pteridium aquilium* and to reduce the nutrient poll in the highly calcareous soil it will be necessary to mow the vegetation every year during the project. It is the experience of trained nature management staff from this and other areas in Denmark that several years of cutting of a vegetation of *Pteridium aquilium* is necessary.

The area in question is located in the locality 'Jydelejet' close to areas of high quality examples of priority * 6210 habitat types. The conditions for the development of a vegetation of habitat type 6210 is present i.e. the soil characteristics, and the long time management



knowledge of the local State Forest District managing the area. Furthermore the proximity to nearby areas of * 6210 with a very diverse vegetation of both common and rare orchids gives a very high probability for the area to develop into *6210 over the years to come.

Site	Organisation	D.1 (ha)
150	Danish Forest and Nature Agency	3,1

Reasons why it is necessary (ref. to threat being addressed):

Threat 1 Lack of grazing or insufficient grazing pressure.

Threat 2 I: Overgrowth with scrubs and trees (Overgrowth degree I: 5-25% cover of scrubs and trees)

This action will be used as necessary either to supplement grazing where grazing is not efficient because of the animals rejection of certain plant species i.e. *Pteridium aquilinum* or to be used in areas where grazing is not the best method to use.

Responsible for implementing it:

Danish Forest and Nature Agency.

Action will be sub-contracted: Yes No Partially

Expected results (quantitative information when possible):

3,1 ha of grassland habitats today without a sufficient grazing pressure will be mowed to substitute grazing, contributing significantly to maintain or achieve a favourable conservation status especially favouring the conditions for the orchids.

Estimated cost of the action: **25.859** EURO (rate 7.43)

This action is to be done every year within the project period. The annual expenses amount to 6.465 EURO.

The reason for the high cost of this action D1 compared to action D4 involving mowing, is the fact that the latter is to be performed on flat terrain using a tractor mounted with a harvester making it possible to treat a large area in a short time. Action D1 will involve the use of 45 man-hours/ha and 8 machine-hours/ha, and as mentioned above, has to be done every year within the project period.

ACTION D.2

Name of action:

Removal of tree encroachment. (Overgrowth degree I: 5- 25% cover of scrubs and trees)

Description (what, how and where):

Clearing will be made manually with motor chainsaw. The felled material will typically be left on the ground or transported outside to be burned.

Some native tree and bush species belonging to the characteristic vegetation of such habitat types (i.e *Crataegus laevigata*, *Juniperus communis*, *Sorbus aucuparia*) may be left to cover less than 5% of the specific area.



As the cost of the action depends intensely on the terrain, it is divided in two sub-actions for budget reasons.

D.2.1.: Relatively flat terrain.

D.2.2.: Steep and difficult terrain

Site	Organisation	D.2.1 (ha)	D.2.2 (ha)
30	Viborg County	9,6	5,0
35	Viborg County	1,3	0
35	Danish Forest and Nature Agency	145,9	0
47	Aarhus County	16,9	0
65	Danish Forest and Nature Agency	12,0	0
150	Danish Forest and Nature Agency	1,3	0
182	Aarhus County	38,9	0
182	Danish Forest and Nature Agency	172,2	0
186	Aarhus County	3,4	0
186	Danish Forest and Nature Agency	79,1	0
240	Fyn County	12,1	0
240	Danish Forest and Nature Agency	10,3	0
241	Fyn County	7,1	0
Total			515,1

Reasons why it is necessary (ref. to threat being addressed):

Threat 2 Overgrowth with scrubs and trees (Overgrowth degree I)

As a natural process, invasion of species of bushes and trees will take place on all three priority habitat types of dry grassland (excluded some areas of habitat type 6120) the speed of invasion and hence overgrowth being a function of the slope of the area, its exposure to the sun and the hydrology.

In a traditional Danish management of dry grasslands farmers and others would fell trees and bushes with regular intervals for use as firewood and material for fences. This action will substitute the traditional management.

Responsible for implementing it:

Danish Forest and Nature Agency; Counties of Viborg, Aarhus, Fyn

Action will be sub-contracted: Yes No Partially

Expected results (quantitative information when possible):

514,9 ha of grassland habitats today threatened by overgrowth by trees and brushes maintaining a favourable conservation condition.

Estimated cost of the action: **449.288** EURO (rate 7.43)



Breakdown of estimated cost to sub-action:

Action	Personel	Travel	Extern Ass.	Durable good	Land purchase	Consumable	Other cost	Over-head	TOTAL
D.2.1	240881	0	102169	0	0	73345	0	26593	442988
D.2.2	3516	0	1491	0	0	957	0	336	6300
D.2 - Total	244397	0	103660	0	0	74302	0	26929	449288

ACTION D.3:

Name of action:

Clearing of scattered bushes and trees

Description (what, how and where):

This action is less intensive than Action D.1. and used mainly on invasive species in order to control their dispersal. It consist of clearings made manually with motor chainsaw. The felled material will typically be left on the ground or transported outside to be burned. Some native tree and bush species belonging to the characteristic vegetation of such habitat types (i.e *Crataegus laevigata*, *Juniperus communis*, *Sorbus aucuparia*) may be left to cover less that 5% of the specific area.

Reasons why it is necessary (ref. to threat being addressed):

Threat 2 Overgrowth with scrubs and trees (Overgrowth degree I)

As a natural process, invasion of species of bushes and trees will take place on all three habitat types of dry grassland (excluded some areas of habitat type 6120) the speed of invasion and hence overgrowth being a function of the slope of the area, its exposure to the sun and the hydrology.

In a traditional Danish management of dry grasslands farmers and others would fell trees and bushes with regular intervals for use as firewood and material for fences. This action will substitute the traditional management.

Site	Organisation	D.3 (ha)
65	Danish Forest and Nature Agency	59,8
182	Danish Forest and Nature Agency	64,5
186	Danish Forest and Nature Agency	86,0
Total		210,3

Responsible for implementing it:

Danish Forest and Nature Agency

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible):

210,3 ha of grassland habitats today threatened by overgrowth by trees and brushes maintaining a favourable conservation condition.

Estimated cost of the action:

61.405 EURO (rate 7.43)



ACTION D.4:

Name of action:

Machine mowing of vegetation and removal of material

Description (what, how and where):

Mowing of the vegetation is done with a harvester or other suitable machine mounted on a tractor. This action will only be used on flat terrain and where grazing is not an option either because animals are not available and/or the vegetation is not suitable for grazing. The hay is removed for soil exhaustion

Site	Organisation	D.4 (ha)
35	Danish Forest and Nature Agency	28,0

Reasons why it is necessary (ref. to threat being addressed):

Threat 1 Lack of grazing or insufficient grazing pressure.

Threat 2 I: Overgrowth with scrubs and trees (Overgrowth degree I: 5-25% cover of scrubs and trees)

On some areas where fertilizers have been used in the past it will be necessary to reduce the nutrient content in the soil by soil exhaustion. The action will temporary be used as a substitute for grazing

.Responsible for implementing it:

Danish Forest and Nature Agency.

Action will be sub-contracted: Yes No Partially

Expected results (quantitative information when possible):

28,0 ha of grassland habitats today without a sufficient grazing pressure will be mowed to reduce the nutrient load in soil or to substitute grazing, contributing significantly to maintaining or achieving a favourable conservation status.

Estimated cost of the action: **2.128** EURO (rate 7.43)



PROVISIONAL BUDGET OF PART "D"

Action	1. Personnel	2. Travel	3. External assistance	4. Durable	5. Land purchase/lease	6. Consumable material	7. Other costs	8. Overheads	TOTAL
D1	16.194	0	6.255	0	0	2.570	0	840	25.859
D2	244.397	0	103.660	0	0	74.302	0	26.929	449.288
D3	40.748	0	13.583	0	0	4.775	0	2.299	61.405
D4	679	0	508	0	0	720	0	221	2.128
Total costs, EURO	302.018	0	124.006	0	0	82.367	0	30.289	538.680



E. Public awareness and dissemination of results

The Natura 2000 network and its role in conserving Europe's important habitat types and species will be clearly described and emphasised in all category E activities. Additionally, LIFE and Natura 2000 logo will be used in all public awareness material as stipulated in art. 16 of the standard Administrative Provisions.

ACTION E.1:

Name of action:

Public footpaths

Description (what, how and where):

Public footpaths will be established or restored if already existing by erection of signposts/markers and passages and as needed boardwalks. The surface of path might be reinforced with gravel and or wood chips. Paths will be located in non sensitive areas and are not to affect the conservation status of dry grassland habitat types or other nature conservation interest of the site. If possible the footpaths will be connected to neighbouring systems of footpaths.

To subactions are planned

E.1.1: Establishment of new path

E.1.2: Restoration of old path

Site	Organisation	E.1.1 Km	E.1.2 Km
182	Danish Forest and Nature Agency		16,4
240	Danish Forest and Nature Agency	3,2	

Reasons why it is necessary (ref. to threat being addressed):

Threat 5 Low or no support for the conservation of dry grassland among landowners and the public

Threat 7 Adverse impacts from visitors (tourists)

The purpose of footpaths are to provide the public an easy access to experience the dry grasslands, given the right of way is established. This will promote the values of the NATURA 2000 site thus gaining support for the objectives of the Habitats directive. Secondly footpaths have the function of guiding the visitors away from sensitive areas and reduce the wear and tear on the site from the visitors.

Responsible for implementing it:

Danish Forest and Nature Agency

Action will be sub-contracted:

Yes

No

Partially



Expected results (quantitative information when possible)

3,2 km of footpaths established and 16,4 km of footpaths restored thus facilitating the promotion of the values of dry grasslands and reducing the impact from visitors on the site. This will contribute to public support for the objectives of NATURA 2000 and to maintain a favourable conservation status of dry grasslands on the projects sites.

Estimated cost of the action: **33.561** EURO (rate 7.43)

ACTION E.2:

Name of action:

Mounting of map tables / notice boards

Description (what, how and where):

On 25 key localities at the 11 pSCI map tables / information boards will be placed in areas of special interest to the restoration project. Key localities are along paths, at viewpoints or near to existing / future parking lots. The information boards will be placed outdoors. All published material will contain reference to and acknowledgement of LIFE Nature and the LIFE and NATURA 2000 logos will appear distinctly.

The action comprises graphic work and drawing for the 11 sites, printing of 40 tables, buying 30 table standards, translation work, text writing, and mounting map tables.

Site	Organisation	No. of tables
30	Viborg County	2
35	Viborg County	1
35	Danish Forest and Nature Agency	2
47	Aarhus County	1
47	Danish Forest and Nature Agency	1
65	Danish Forest and Nature Agency	2
150	Danish Forest and Nature Agency	3
158	Danish Forest and Nature Agency	1
182	Aarhus County	2
182	Danish Forest and Nature Agency	2
186	Danish Forest and Nature Agency	3
186	Aarhus County	1
195	Danish Forest and Nature Agency	2
240	Danish Forest and Nature Agency	1
241	Fyn County	1
Total		25

Reasons why it is necessary (ref. to threat being addressed):

Threat 5 Low or no support for the conservation of dry grassland among landowners and the public

Threat 7 Adverse impacts from visitors (tourists)

The information boards shall provide the visitors with knowledge and understanding of the nature values of the pSCIs.



Responsible for implementing it:

The Danish Forest and Nature Agency, Counties of Viborg, Aarhus and Fyn

Action will be sub-contracted: Yes No Partially

Expected results (quantitative information when possible)

The dissemination will contribute to provide the visitor with a better understanding of the nature restoration project and to increase public awareness on nature management in general. The presentation of natural values will encourage outdoor recreation in the project areas and thereby increase tourism in the local communities.

Estimated cost of the action: **35.363** EURO (rate 7.43)

ACTION E.3:

Name of action:

Productions of project folder

Description (what, how and where):

A folder describing the restoration project will be produced and distributed mainly from folder boxes at the map tables (see action E.2). The folder will be published in Danish and English and distributed in 10.000 copies. The target groups of the folder are local visitors as well as tourists.

The action comprises graphic work, printing and text writing. All published material will contain reference to and acknowledgement of LIFE Nature and the LIFE and NATURA 2000 logos will appear distinctly.

Reasons why it is necessary (ref. to threat being addressed):

Threat 5: Low or no support for the conservation of dry grassland among landowners and the public

Threat 7: Adverse impacts from visitors (tourists)

The information folders shall provide the visitors with knowledge and understanding of the nature values of the pSCI.

Responsible for implementing it:

Danish Forest and Nature Agency, Counties of Aarhus, Viborg and Fyn

Action will be sub-contracted: Yes No Partially

Expected results (quantitative information when possible)

The dissemination will contribute to provide the visitor with a better understanding of the nature restoration project and to increase public awareness on nature management in general. The presentation of natural values will encourage outdoor recreation in the project areas and thereby increase tourism in the local communities.

Estimated cost of the action: **6.999** EURO (rate 7.43)



ACTION E.4:

Name of action:

Guided visits and events

Description (what, how and where):

At least 1 guided visit each year (64 in total) in the 11 pSCIs will be launched continuously during the project period. All published material will contain reference to and acknowledgement of LIFE Nature.

Reasons why it is necessary (ref. to threat being addressed):

Threat 5: Low or no support for the conservation of dry grassland among landowners and the public

Threat 7: Adverse impacts from visitors (tourists)

The guided visits shall provide the visitors with knowledge and understanding of the nature values of the pSCI.

Responsible for implementing it:

Danish Forest and Nature Agency, and Counties of Viborg, Aarhus and Fyn.

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible)

The dissemination will contribute to provide the visitor with a better understanding of the nature restoration project and to increase public awareness on nature management in general. The presentation of natural values will encourage outdoor recreation in the project areas and thereby increase tourism in the local communities.

Estimated cost of the action: **14.213** EURO (rate 7.43)

ACTION E.5:

Name of action:

Production and maintenance of project WEB site

Description (what, how and where):

A WEB site describing the project and facilitating downloads of activity reports and other material will be launched 2004. All published material will contain reference to and acknowledgement of LIFE Nature and the LIFE and NATURA 2000 logos will appear distinctly.

Reasons why it is necessary (ref. to threat being addressed):

Threat 5: Low or no support for the conservation of dry grassland among landowners and the public

Threat 6: Insufficient management capacity

Threat 7: Adverse impacts from visitors (tourists)

The WEB site shall provide managers of dry grasslands, landowners, tenants and the visitors with easy and quick access to information on the restoration project.



Responsible for implementing it:
Danish Forest and Nature Agency

Action will be sub-contracted: Yes No Partially

Expected results (quantitative information when possible)

The dissemination will contribute to provide the visitor with a better understanding of the nature restoration project and to increase public awareness on nature management in general. The presentation of natural values will encourage outdoor recreation in the project areas and thereby increase tourism in the local communities.

Estimated cost of the action: **6.460** EURO (rate 7.43)

ACTION E.6:

Name of action:

Production of a layman's report

Description (what, how and where):

A report presented both in Danish and English will be produced at the end of the project. All published material will contain reference to and acknowledgement of LIFE Nature and the LIFE and NATURA 2000 logos will appear distinctly.

Reasons why it is necessary (ref. to threat being addressed):

Compulsory

Threat 5: Low or no support for the conservation of dry grassland among landowners and the public

Threat 6: Insufficient management capacity

Threat 7: Adverse impacts from visitors (tourists)

Responsible for implementing it:

Danish Forest and Nature Agency

Action will be sub-contracted: Yes No Partially

Expected results (quantitative information when possible)

The dissemination will contribute to provide the visitor with a better understanding of the nature restoration project and to increase public awareness on nature management in general. The presentation of natural values will encourage outdoor recreation in the project areas and thereby increase tourism in the local communities.

Estimated cost of the action: **8.075** EURO (rate 7.43)



ACTION E.7:

Name of action:

Co-operation with landowners and the local communities

Description (what, how and where):

In the initial phases of the project meetings will be held with landowners and local communities and as appropriate also NGO's to inform about the project and gain support for its implementation on the basis of a draft of the developed action plan (Action A.1). One of the objectives will be to establish co-operation with and among local farmers to encourage co-management of the grazing of the dry grasslands. In addition for the project sites with privately owned land information will be given concerning possibility of obtaining subsidies, and land-owners will be encouraged to sign agri-environmental agreements after the termination of the project from the agri-environment scheme under the rural development programme. The action comprises preparation of the meetings, production of material for the meetings i.e. maps and handouts meeting facilities and project staff transport. At the end of the project an additional meeting will be held to inform about the results of the project and the continuation of the management activities. Numbers of meetings at the individual site will depend on its size and ownership of the project areas –typically there will be 2 meetings per site.

no.	Site manager (institution)	Co-operation effort (hours)
30	Viborg County	100
35	Viborg County	100
35	Danish Forest and Nature Agency	25
47	Aarhus County	210
182	Aarhus County	210
182	Danish Forest and Nature Agency	100
186	Aarhus County	210
186	Danish Forest and Nature Agency	100
195	Danish Forest and Nature Agency	50
Total		1105

Reasons why it is necessary (ref. to threat being addressed):

Threat 5: Low or no support for the conservation of dry grassland among landowners and the public.

The action will mobilise local support for the project and facilitate co-operation with local farmers interested in providing animal for grazing of neglected areas. Furthermore the action will be necessary to ensure a smooth continuation of the grazing management after the end of the projects. This action will in general facilitate the implementation of the action plan for a site resulting from action A.1.

A large-scale restoration project should not be launched without great efforts to inform local communities, providing the local citizens with knowledge and understanding of the nature values of the pSCI and thereby the background for the restoration project. Thus the action should ensure local acceptance and understanding of the project.



Responsible for implementing it:

Danish Forest and Nature Agency, Counties of Viborg, Aarhus,

Action will be sub-contracted: Yes No Partially

Expected results (quantitative information when possible)

Local acceptance and understanding of the project. Good working relations with local farmers resulting in establishment of agreements about grazing as needed.

Estimated cost of the action: **47.510** EURO (rate 7.43)

A considerable proportion of the grasslands in the project areas are currently managed with subsidies from the agri-environment scheme. It is worth noting that the subsidies are not given to actions that form a part of this project. The subsidies given up till now or to be granted in the future will this not form a part of the budget of this project.

The table below shows areas within project areas receiving subsidies for grazing from the agri-environmental scheme

Site ID	Site name	Areas subsidised Agri env (ha)
H 30	Lovns Bredning ...	29,3
H 35	Hald Ege, Stanghede og Dollerup bakker	15,3
H 47	Helgenæs	9
H 65	Tinnet krat	?
H 150	Klinteskov	All grassland in subsite Jydelejet,
H 158	Nakskov Fjord, Enehøje	Presently not in agricultural use
H 182	Nordby Bakker,	63?
H 186	Mols Bjerger	26
H 195	Røsnæs	?
H 240	Svaninge Bakker	Grazing on private land managed by the county, not eligible
H 241	Rødme Svinehaver	Application for 7,2 ha submitted by the land-owner

*Please note that the information given in the table above is subject to a element of uncertainty. For some sites the information is not available.



ACTION E.8:

Name of action:

Workshop/Seminar on Management of dry grasslands 2006

Description (what, how and where):

A seminar with all management staff from Danish counties, State forest districts, scientific specialist, NGO and farmers organisation representatives where the methods and preliminary results of the Danish LIFE Nature project on restoration of dry grassland will presented and discussed. The workshop is planned to be organized in cooperation with the ALMA (Professional organization for the academic staff of the Nature and Landscape Conservation Departments of the counties). The Directorate for Food, Fisheries and Agro Business will be encouraged to participate in the seminar.

Participation of approx. 100 professionals and specialists including 1-2 lectures from other countries. In addition 3-5 site managers from projects with similar objectives and habitats will be invited to participate, e.g. Swedish grassland projects.

Reasons why it is necessary (ref. to threat being addressed):

Threat 6 Insufficient management capacity

To compare the situation, results and experiences in Denmark and other European countries.

The workshop in the late summer of 2006 will play a key role in the exchange of knowledge on management methods following a.o. the intentions of the LIFE Nature CO-OP initiative.

The workshop will also focus on how to promote the application of the agri-environmental scheme in Denmark to be better adjusted for the long-term management of Nature 2000 sites with special emphasis on grassland.

Responsible for implementing it:

Danish Forest and Nature Agency

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible)

Exchange of experiences in management of between Danish scientific institutions and site managers and presentation of the preliminary results to a national forum.

The results from the workshop will be gathered in a report with viewpoints and evaluation of the project.

Estimated cost of the action: **22.880** EURO (rate 7.43)



PROVISIONAL BUDGET OF PART "E"

Action	1. Personnel	2. Travel	3. External assistance	4. Durable goods	5. Land purchase/ lease	6. Consumable material	7. Other costs	8. Overheads	TOTAL
E.1	10.375	0	7.707	0	0	13.849	0	1.630	33.561
E.2	10.841	0	23.553	0	0	0	0	969	35.363
E.3	1.817	0	4.980	0	0	0	0	202	6.999
E.4	9.303	3.876	0	0	0	0	0	1.034	14.213
E.5	3.633	0	2.019	0	0	0	404	404	6.460
E.6	1.816	0	6.057	0	0	0	0	202	8.075
E.7	40.154	2.894	0	0	0	0	0	4.462	47.510
E.8	5.450	673	16.151	0	0	0	0	606	22.880
Total costs, EURO	83.389	7.443	60.467	0	0	13.849	404	9.509	175.061



F. Overall project operation and monitoring

ACTION F1:

Name of action:

Project management and co-ordination

Description (what, how and where):

The Danish Forest and Nature Agency have the overall responsibility for the project. This includes the overall project administration, co-ordination and implementation of activities in all phases of the project. Reports on progress of the project will be made annually as part of the project management.

The project comprises actions at 11 Sites of Community Interest in Denmark and it involves 3 partners besides the Danish Forest and Nature Agency.

The local State Forest Districts and the County Administrations will take care of the daily operation in the project areas.

A project manager employed by the Danish Forest and Nature Agency is located at Fussingø State Forest District. A Project Steering Committee consisting of the project manager, responsible staff members from the participating State Forest Districts and Counties and specialists from the Department of Sea and Habitats within the Danish Forest and Nature Agency has been formed in order to secure co-ordination and project progress.

For each of the sites a working group will be formed consisting of staff from the relevant State Forest District and County Administration.

Danish Forest and Nature Agency	Project Management	
	Danish Forest and Nature Agency	
	Project manager: Søren Rasmussen	
	Project working group	
	Organisation	Name
	Fussingø State Forest District	Kim F. Egefjord
	Silkeborg State Forest District	Ole Juul Andersen
	Palsgaard State Forest District	Jes Otto Buus
	Fyn State Forest District	Anni Borup
	Odsherred State Forest District	Hans Henrik Erhardi
	Falster State Forest District	Troels Pedersen
	Div of Sea and Habitat	Peter Simonsen
	Div. of Economics	Søren Korsholm
Counties	Viborg County	Jesper Stenild
	Aarhus County	Jonna Mosgaard
	Fyn County	Erik Vinther

Scientific advise
NATIONAL ENVIRONMENTAL RESEARCH INSTITUTE
 Researcher: Rasmus Ejrnæs

Operational level forest districts and counties

A the start of the project the project manager will elaborate a project implementation plan detailing for each site the actions to be performed. The project implementation plan will also detail the general non-site-specific activities. Procedures for reporting on the progress at the site level to the project management level will be elaborated.

The work of reporting and accounting of the site specific activities are also included in this action. Preparation of the final report is included in this action.



An audit carried out by the Auditor General in accordance with article 27 in the Standard Administrative Provisions is included as regards government institutions (Danish Forest and Nature Agency, and National Environmental Research Institute), Also included is an audit by independent auditors as regards the counties.

Reasons why it is necessary (ref. to threat being addressed):

The project management is essential for the control, administration and implementation of all other activities in the project.

Responsible for implementing it:

Danish Forest and Nature Agency in co-operation with project partners.

Action will be sub-contracted: Yes No Partially

Expected results (quantitative information when possible):

Successful operation and implementation of the project. Progress Reports, Final report.

Estimated cost of the action: **462.450** EURO (rate 7.43)

Action F1 includes an expense earmarked for the auditor report. The amount is listed under "Other costs" 12.113 Euro. The Forest and Nature Agency can use the National Audit Office at "no cost", that is no cost are charged to the project.

The project includes sites and activities, which are scattered throughout the country, involving 6 forest districts and 3 counties. Each unit has their own administration, supervisors and workmen. From a practical point of view it is not possible to have one smaller group of people that carry out the different actions on the different project sites. Besides some of the actions are more or less seasonal depended involving several people in a shorter period of time.

Staff in different job position is involved in different activities and actions. The biologists, graduate technician and forest graduates are primarily concerned with the overall project management and planning. They will also do some follow-up on the actions while these are performed.

The forest and landscape engineers (rangers) will also be involved in the project management and planning, but their main effort will be as supervisors for the workmen, when the actions are implemented and carried out. This category is responsible for the day to day business with actions.

The workmen will be doing the actual work in the field. The number of workmen involved in the project is an approximate. Depending on the exact planning of the activities, more or less workmen might be occupied with the project actions

The secretaries will be keeping the accounts for the project. For each action initiated at each site a account will be kept, making it possible to monitor financial progress of the project. Each unit – each forest district and each county – will have a secretary involved in the project.



Action F.2.

Name of action:

Project monitoring.

Description (what, how and where):

The purpose of this action is to provide for a thorough documentation of the results of the project and the methods used in order to ensure a proper monitoring of the project outputs.

A set of simple indicators for project progress will be developed and these indicators will be monitored throughout the project period. Examples of indicators are: Degree of encroachment, which will be monitored by taken photos from fixed points and angels at project areas; Indicator for establishment of grazing regimes will be numbers and duration of agreements on grazing.

Results of the monitoring will be compiled and presented in progress reports and the final report.

Reasons why it is necessary (ref. to threat being addressed):

The project monitoring is vital for the control and reporting all other activities in the project.

Responsible for implementing it:

Danish Forest and Nature Agency.

Action will be sub-contracted:

Yes

No

Partially

Expected results (quantitative information when possible):

Successful operation and implementation of the project. Progress Reports, Final report.

Estimated cost of the action: **40.377** EURO (rate 7.43)

The Ministry of Environment has through its subordinate institution the National Environment Research Institute (NERI) and Danish Forest and Nature Agency in a co-operation with the counties, designed and planned a thorough monitoring program 'NOVANA' to follow the conservation status of habitat types and species covered by the Habitats and Bird Directive. The program will comprise monitoring of the area, structure and function as well as the characteristic species of habitat types as defined in the Interpretation Manual. All three dry grassland habitat types present in Denmark will be monitored.

NOVANA monitoring of habitat types will comprise of two parts. An intensive monitoring will take place starting year 2004 on a limited number of monitoring stations - already determined in 2003 - within Natura 2000 sites every year. An extensive monitoring will take place on a larger number of stations every six years starting successively after year 2005, The stations to be monitored in the extensive program will be determined during the years 2004-2005. At every station a number of abiotic and biotic parameters will be monitored including the vegetation cover and the characteristic species of the habitat types. The counties will be responsible for the monitoring activities and will have to report the results every year to NERI, which shall compile a yearly report on the results. The purpose of the intensive program is among other things to reveal causalities in a stress-response under-



standing of the conservation status of the habitat types. The results of the intensive program will be used to interpret the monitoring data from the extensive stations to provide information on the development of the conservation status on a national level. In year 2007 a thematic report concerning nutrients in all media and their effects is planned.

The monitoring of dry grassland habitat types according to the NOVANA program will not be a part of this project and not be financed from the project budget.

Planned intensive monitoring stations in the NOVANA program within project areas of the Restoration of Dry Grassland Project

Site ID	Site name	Locality,	Habitat type	Type of Station
H 47	Helgenæs	Klægbjerg	6230	**
H 150	Klinteskov	Høvblege	6120	**
H 150	Klinteskov	Jydelejet	6120	***
H 182	Nordby Bakker	Mårup Klint	6120	**
H 182	Nordby Bakker	Møgelskår	6210	***
H 186	Mols Bjerger	Bisgyde/Loddenbjerg	6230	***
H 195	Røsnæs	Vindekilde, Hellesklint mv.	6120	*
H 241	Rødme Svinehaver	Rødme Svinehaver	6230	**

Legend:

*) Small stations (15-20 sampling sites)

***) Normal stations (30-40 sampling sites)

****) Large stations (40-60 sampling sites)

The project will seek to utilise the result of the NOVANA monitoring of both intensive and extensively monitoring stations. In the selection of sites for extensive stations it will be considered to include sites in project areas not covered by intensive stations. It has already been decided that an extensive station will be placed in H 240 Svanninge Bakker. The annual reporting from the NOVANA monitoring activities will be evaluated and utilised in Action F2 'Project monitoring' with a view to reveal the effects of actions C and D on the conservation status of the project areas.

As for the monitoring of the effects of action C9 'Reintroduction of *Maculinea arion* at site Klinteskov from subsite Høvblege to subsite Jydelejet' monitoring activities are planned to be performed partly outside the framework and budget of this project.

To supplement the information given in the application concerning this site in form 12, Socio-economic context it is planned by the local State Forest District managing the site to form an advisory group for the management and monitoring of *Maculinea arion*. The advisory group will consist of experienced nature managers and entomologists, which participate in the group on a voluntary and unpaid basis.

The group will plan and perform monitoring of the populations of *Maculinea arion* including monitoring of the metamorphosis and the development of the population size. Costs for reporting of this monitoring activity are included under action F2.



PROVISIONAL BUDGET OF PART "F"

Action	1. Personnel	2. Travel	3. External assistance	4. Durable goods	5. Land purchase/lease	6. Consumable material	7. Other costs	8. Overheads	TOTAL
F1	342.396	37.685	40.377	0	0	0	12.113	29.879	462.450
F2	14.535	2.019	16.824	0	0	5.384	0	1.615	40.377
F3									
F4									
F5									
F6									
Total costs, EURO	356.931	39.704	57.201	0	0	5.384	12.113	31.494	502.827



TIME PLANNING

List all actions ordered by number and using their numbers or names. Tick as appropriate

Action Number /name	Calendar Year 1				Calendar Year 2				Calendar Year 3				Calendar Year 4				Calendar Year 5			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
A. Preparatory actions, elaboration of management plans and/or action plans :																				
A.1				X	X	X														
A.2			X																	
B. Purchase/lease of land and/or rights :																				
C. Non-recurring biotope management :																				
C.1 *				X	X	X	X	X	X	X	X	X	X	X	X					
C.2 *				X	X	X	X	X	X	X	X	X	X	X	X	X	X			
C.3 *				X	X	X	X	X	X	X	X	X	X	X	X	X	X			
C.4 *				X	X	X	X	X	X	X	X	X	X	X	X	X	X			
C.5 *				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C.6 *					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C.7 *				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C.8						X				X										
C.9							X				X									
C.10							X													
C.11					X		X		X				X				X			
C.12 *					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
D. Recurring biotope management :																				
D.1			X				X				X				X					
D.2 *			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
D.3 *			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
D.4						X				X				X				X		
E. Public awareness and dissemination of results :																				
E.1							X	X												
E.2				X	X	X														
E.3									X	X										
E.4*						X	X			X	X			X	X			X	X	
E.5				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
E.6																			X	
E.7				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
E.8											X									
F. Overall project operation and monitoring:																				
F.1 *			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
F.2 *			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

* actions ongoing during the whole project period.

**SUMMARY OF DELIVERABLE PRODUCTS**

Product	Name or n° of reference action	Deadline
11 action plans	A.1	01.07.2005
Report of the Kick-off Seminar	A.2	01.10.2004
Feasability report on the reintroduction of Maculinia arion at Jydelejet	C.9	01.06.2005
Project folder	E.3	01.06.2006
Laymans report	E.6	01.10.2008
Report of Seminar on Management of Dry Grasslands of Denmark	E.8	01.12.2006

ACTIVITY REPORTS FORESEEN

(Progress Report, Interim Report, Final Report)

Progress Report 1	15.01.2005
Interim Report	15.01.2006
Progress Report 2	15.01.2007
Progress Report 3	15.01.2008
Final Report	31.12.2008



SUMMARY OF PROJECT MILESTONES

Milestone	Name or n° of reference action	Deadline
All smaller plantations removed	C.1	01.07.2008
All clearings completed	C.2, C.3, C.4	01.07.2008
Management enclosures for <i>Maculinia arion</i> established	C.8	01.07.2006
Reintroduction of <i>Maculinia arion</i> completed	C.9	01.09.2006
Cattle of the breed Galloway purchased and turned out at site Svanninge Bakker	C.10	31.12.2004
Restoration of 40 ha of former Grassland on Enehøje Island completed	C.11,	01.04.2008
Fencing and other additional works necessary for the continuation or establishment of grazing at project sites completed	C.7	31.12.2008
Establishment or restoration of public footpaths completed	E.1	31.12.2005
Finalized mounting of information boards	E.2	01.07.2005
Project folder distributed	E.3	01.07.2006
44 guided tours in the 11 pSCIs conducted	E.4	01.10.2008
Project Web site operational	E.5	01.01.2005
Seminar on Management of Dry Grasslands of Denmark held	E.8	01.10.2006
The following actions are continuously ongoing through the project period:	C.1, C.2, C.3, C.4, C.5, C.6, C.7, C.12, D2, D3 E.5, E.7, F.1, F.2	



EXPECTED CONSTRAINTS

Constraints, their expected influence and how to overcome them

Socio-economical factors in areas owned by private landowners.

Some of the actions that are proposed are located on privately owned land protected by a Conservation Order. The counties normally have, by a provision in the Conservation Order, a right to perform nature management in these areas. It has been evaluated that none of the Conservation Orders covering private (and public) land within the project areas of this project will need to be renegotiated.

The owner of the area has, at the time when the protection was proclaimed, received a financial compensation for the loss in value due to restrictions imposed on the owner in the use of the area, and the rights granted to the public in the area. The restrictions and rights differ from site to site. Even if a county has a right to perform nature management, the Conservation Order gives the owner the possibility to have this right tried at an independent Nature Conservation Board at the time when the county decides to exercise this right. The question concerning private owners appealing to the Nature Conservation Board is not possible to answer on a site-specific level. In general it is assumed that a land owners tendency to appeal depends on the owners socio-economic situation and the owners attitude towards nature protection, public authorities and maybe in this case the attitude towards the European Union. There is no indication that landowners en bloc in particular sites are expected to appeal to the Nature Conservation Board.

The owner can do this, even if there is an agreement between him and the county to do nature management. If the Board rules against the owner, he has the opportunity to bring the case to the 'Nature Protection Board of Appeal', the decision of the Board of Appeal is final.

The purpose of Action E7 'Co-operation with landowners and the local communities' is among other things to explain the purpose and content of the project to landowners, thus facilitating their support. This will minimise the risk of landowners complaining to the Nature Conservation Boards or appealing their decisions to the Nature Protection Board of Appeal.

In the light of the situation described above the counties will not make any pre-agreement with the owners, until there is a high possibility that the proposed actions will be implemented (If financing is granted from LIFE - Nature). It is the experience of the county administrations that when an agreement is made with an owner, the agreed action must follow shortly after. It boosts the credibility of the authority and it prevents situations where land is sold to a new owner, in which case the county will have to negotiate a new agreement with the new owner. The counties negotiates, and makes agreements with private owners as a routine, almost on a daily basis, and has a high rate of success in coming to an understanding with the owners about nature management without the use of the Nature Preservation Board.

As soon it is clear that the project will be granted financing, the counties will take contact to the first owners to make agreements. The timing of actions in the project takes in consideration that some of the owners may wish to have their case tried at the Nature Conservation Board. The procedure for such a case (including an appeal) will normally take 1 – 1½ year, and with a project period of 4½ years, there will be enough time for the counties to implement the proposed actions anyhow.

It is expected that only a minority of the owners will appeal to the Nature Conservation Board. In any case there is a very high probability that the counties will be able to implement the actions defined, affecting privately owned land.



If the Nature Protection Board of Appeal should deny some of the proposed actions, those areas will be relatively small compared with the total area of the project, and the impact on the project, as a whole will be rather insignificant.

The Government has proposed to the Parliament new provisions to be introduced into the Nature Conservation Act. These provisions provide for a system where the Counties will be obliged in the first instance to try to establish voluntary agreements with landowners in Natura 2000 sites on the management necessary to maintain or restore a favourable conservation status. In the case agreement can not be reached, the County shall impose on the owner the restrictions necessary. These amendments to the law are expected to enter into force October 2004.

Availability of livestock for grazing

The establishment of appropriate grazing regimes depends on the availability of animals in the regions of the sites. There is a tendency in some regions to a decline in the availability of livestock for grazing. The long-term success of the project depends on the continuity of appropriate grazing regimes.

If grazing is not secured the alternative of mowing will be considered. Through the dedicated effort to establish good working relations with and motivation among local farmers described in action E.7 and a careful planning effort (action A.1.) these obstacles – if emerging – shall be overcome.

Actions conflicting with conservation orders

In some of the project areas covered by a conservation order actions are planned that will require a dispensation from the provisions of the Conservation Order. As an example Conservation Orders where the primary objective is landscape protection, some of the clearings of plantations might require a dispensation. The dispensation has to be granted by the independent Nature Conservation Board, and their decisions might be appealed to the Nature Protection Board of Appeal. This might imply that the action will have to be postponed or in some cases not executed. However as the actions – as planned – will be in line with the general purpose of conserving biodiversity of the Nature Protection Act dispensations are very likely to be granted.



Specific information for sites with private land in the project areas

Conservation Orders for privately owned land in project areas

Site ID	Site name	C.O covers 1)	C.O. ok 2)	Right exercised 3)	Dispensation/ acceptance needed
H 30	Lovns Bredning ...	Y	Y	Y	N
H 35	Hald Ege, Stanghede	Y	Y	Y	N
H 47	Helgenæs	Y	N	N	Y
H 65	Tinnet krat				
H 150	Klinteskov				
H 158	Enehøje				
H 182	Nordby Bakker, North	Y	Y *	Y (form 12)	N
H 182	Nordby Bakker, South	Y	N	N	Y
H 186	Mols Bjerger	Y	Y *	Y (form 12)	N
H 195	Røsnæs				
H 240	Svanninge Bakker	Y	Y	Y	N
H 241	Rødme Svinehaver	Y	Y	Y	N

1) Conservation Order cover areas of private owned land within the project area

2) The conservation order for the site is sufficient at present to allow the County to perform the activities foreseen in the project

3) The County has already exercised its right to carry out nature management works

*) The conservation order gives access for the County to manage the dry grasslands by grazing or mowing, but it is not possible to impose a grazing regime as a management method if the landowner rejects it. Instead mowing will be used.



CONTINUATION

Continuation after LIFE-Nature project ends.

- ***What still needs to be done (which actions will have to be continued or maintained)***

In all project areas it will be necessary to:

- Clear emerging overgrowth with bushes and trees including non-native invasive species as *Rosa rugosa*
- Perform maintenance of fences and other installation for keeping of livestock
- Renew agreement with farmers/ tenants concerning grazing
- Perform maintenance of public footpaths, information boards and other installations for visitors
- Arrange guided tours for visitors/tourists

- ***How will this be achieved, which resources will be necessary to continue the actions?***

The Danish Forest and Nature Agency and the counties involved will continue the recurring management and execute activities necessary to maintain the conservation status of the areas of dry grasslands targeted within this project. Experience, results and best practice collected in the project is retained through implementation in the management plans for the project sites. The workshop on management of dry grassland (action E8) will take up experiences and potentials of the agri-environmental schema as a main issue.

On privately owned land the owners of the areas will have to sign an agreement that oblige them to keep the area grazed for a period of normally 10 years.

If not already designated the project sites will be designated as SSA-areas (Special Sensitive Agricultural), in this way the farmers will be able to participate in the Agri-environmental Scheme, and joining the measures of permanent grazing in an environmentally responsible way. Most of the sites are already today SSA- areas. At least at the end of the project all private land within the project sites are expected to be designated as SSA-areas. The SSA-areas are designated by the regional authorities (the counties) in accordance with guidelines given by the Directorate for Food, Fisheries and Agro Business. The latest guidelines recommend that all non-forest Natura 2000 sites are designated as SSA-areas. Some counties has already entered into the process of revising the designation of SSA areas following these guidelines.

Under the present regime of agri-environmental scheme it can not be guaranteed that all private areas will be under such agreements as it is a voluntary scheme. Some landowners finds that their administrative burden is too large compared to the economic benefit.

The project will - as stated previously -promote the uptake of agri-environment agreements through the activities described in Action E7 "Co-operation with landowners and local communities'.



Depending on the general development of the provisions of the agri-environmental scheme in EU and Denmark and its implementation in the counties concerned, emphasis will be on the possibility to subsidise farmers for providing grazing of the dry grasslands habitats and for clearing of minor encroachments with bushes and trees.

Management agreements will be established as an individual agreement between the landowner and the County and/or a tenants agreement in the case of public owned land. By nature these agreements are individual so standard formulaes are not expected to be used. The agreement will be concluded during the project and preferably as soon as possible.

The Danish Parliament has recently adopted the Act on Environmental Objectives for Water and International Nature Protection Areas, no. 1150 of 2003/12/17. The Act requires that legally binding Natura 2000 management plans must be developed and adopted, at the latest by 2009.

The conservation objectives of the Natura 2000 management plans must be set with a view to maintain or restore a favourable conservation status. According to the Act on Environmental Objectives public authorities are committed to the Natura 2000 plans. The experience on management of dry grasslands gathered in this project will be of great importance meeting the fundamental ecological needs of the areas involved, and will influence the development of management plans of dry grasslands not only within the project area but also in other sites. The Danish Act on Environmental Objectives constitutes the general guarantee that project areas will be appropriately managed after the project is completed.

Furthermore the newly introduced bill on a revised Nature Protection Act imply an obligation for the authorities to realise the priority measures of the Natura 2000 management plan, leaving new possibilities to ultimately enforce necessary management in Natura 2000 areas (through injunctions to the landowner or management performed by the public authorities).

The potential capacity amongst farmers for extensive grazing varies from site to site. On a whole sufficient capacity is expected to be present. A mix of different management techniques is however expected to be applied in order to secure the best and sufficient management¹. If it in the future should not be possible to get sufficient capacity from local farmers the competent authorities will have to take on board the responsibility for maintaining the conservation status of the area.

Detailed planning for establishment or renewal of grazing agreements, including compilation of data on availability of animals for grazing, will be done as a part of action A1 'Site Specific Action plans'

¹ The local site managers (typically with long field experience) all estimate that there will be sufficient farmers interested in extensive grazing. This is of course a *ceteris paribus* evaluation. Some uncertainty do exist regarding the effects of the 2003 CAP reform and even bigger uncertainty exists on the prospects of the coming Community budget negotiations.



- **Complementary of other EU funds**

The only complementary EU fund is the agri-environmental scheme as implemented in Denmark under the Rural Development regulation. The project areas do not receive support from any other EU-Funds for the actions of this project. Support from the agri-environment scheme is prioritised in the areas designated as SSA areas (Special Sensitive Agricultural areas).

Elements of the agri-environmental scheme give some private livestock owners an incentive to participate in grazing projects as a subsidy for the areas grazed. None of the actions specified in this project are receiving funding from the agri-environmental scheme. This LIFE project will provide the basis for using grazing as a management method in the pSCI (fencing material, shelter, water, power) and in some special cases the agri-environmental scheme will increase the number of stock owners interested in participating by providing animals for grazing

- **Legal protection under national/local law**

It is expected that the three priority dry grassland habitat types will be protected in conformity with the provision of the Habitats Directive article 6 in relation to the upcoming proposal for amendment of the Nature Protection Act. These amendments are expected to be adopted in the current Parliamentary Session (2003-4).

- **How will the equipment acquired be used?**

No durable goods are acquired in this project.

- **Which personnel will continue to work on the project?**

Staff from respective State forest districts and counties.

- **Other issues**

No

**COMPETENT AUTHORITY SUPPORTING THE PROPOSAL**

Name and legal status: Danish Forest and Nature Agency (public authority).

Full address: Haraldsgade 53, DK-2100 Copenhagen Ø, Denmark

Tel : +45 3947 2200

Fax : +45 3927 9899

E-mail : sns@sns.dk

Contact person: Søren Korsholm

Comments (please avoid generic statements and specify clearly why and how you will support this project):

The Danish Forest and Nature Agency (DFNA) has responsibility for the national administration of nature management in accordance with the Danish Nature Protection Act.

The agency is managing the national state funding for nature restoration and also most state owned areas including a large proportion of some of the most important sites of the three priority dry grassland habitat types present in Denmark.

The three priority dry grasslands habitat types are all considered to be in an unfavourable conservation status on a national level. The area of dry grassland in Denmark is fragmented and consists of a lot of mainly very small sites scattered around the country. All the 11 project sites are placed within pSCIs, and includes three sites with some of the largest localities of dry grassland and additional sites covering most of the geographic range of the habitat types. The 11 sites hold all together major or significant proportions of the national areas of the priority habitat types of dry grassland.

The project will involve reintroduction of the Annex IV species *Maculinia arion* under conditions and using methods which are in accordance with the conditions for granting a dispensation according to the relevant provisions of the Habitats Directive, and according to the Danish legislation in this area.

The project will improve the conservation status of some of the most valuable dry grassland habitats in Denmark. The project will be realised through cooperation between both national and regional authorities. It is thus an important element in order to restore a favourable conservation status for priority dry grassland habitats included in the Danish part of the NATURA 2000 network.

Before the end of project, corrections of habitats at the sites will be made and updated NATURA 2000 data forms communicated with the Commission.

Besides the positive effect for biodiversity interests the project will also raise the quality of the landscapes in the project areas which all are situated in recreational areas of regional and national importance. This will mean better experiences for visitors in the areas and support the non-consumptive utilisation of nature and promote the NATURA 2000 network.

Seal of the Authority and signature:

Anton Beck
Head of Division
Sea and Habitats Division