SUMMARY OF THE PROJECT (ENGLISH VERSION) Max. 1 page

Project title (precise translation of original title): Regional Actions to Improve Nature in River Odense and Odense Fjord - REGAIN.

Objective: This LIFE application targets River Odense and Odense Fjord in Denmark including the associated riparian areas as well as the bird populations of the fjord. River Odense is designated as pSCI and Odense Fjord as pSCI and SPA. River Odense harbours the only known Danish population of *Unio crassus.* The species has been considered to be extinct in Denmark, but in the summer 2003 it was found in River Odense. The riparian areas of River Odense contain *Alluvial forests (91E0) and *Petrifying springs (7720) which are *priority habitats according to the Habitats Directive. The Odense Fjord area offers an environment for Annex 1 bird species of international importance as well as the Atlantic sea meadow (1330) habitat type.

The overall objectives of this LIFE application are to contribute to obtain a favourable conservation status of the shallow inlet Odense Fjord and to improve the ecological conditions in River Odense to be able to obtain/maintain a good conservation status of Habitats Directive Annex II species; *Unio crassus*, *Vertiego moulinsiana*, *Lampetra planeri* and, *Cobitis taenia*. In relation to the Habitats Directive Annex I the overall objective is also to contribute to obtain a good conservation status of sea meadows along the shores of Odense Fjord and of various fresh water wetlands on River Odense riparian areas. In Odense Fjord bird species of the Birds Directive Annex 1 will benefit from the project.

The river-fjord ecosystem with its habitat types and bird species is vulnerable to deterioration due to a number of threats: (1) Poor physical variation in River Odense, (2) Heavy nutrient load of Odense Fjord and, (3) wetland degradation. This application seeks to address a selection of these key features as they are highly related to the pSCI/SPA status of the River Odense and Odense Fjord system. It is presented by the regional environmental authority "Fyn County" in Denmark. The project is presented in co-operation with a German LIFE project (LIFE02NAT/D/008458) also working with the conservation of *Unio crassus*. The project will affect 12.2 km of a regulated reach of River Odense together with 396 ha of riparian areas. In addition, the project addresses the environmental state of Odense Fjord and its coastal meadows.

Actions and means involved: The specific threats to the project area will be addressed by obtaining more natural hydrological conditions and more varied physical conditions, by decreasing the availability of nutrients, by increasing the biotope area and by good management of the restored areas. The specific actions and means are as follows: (1) reduce the diffuse load of nutrients to Odense Fjord, (2) restore a 12.2 km reach of River Odense including 396 ha of riparian areas thereby increasing the retention capacity, (3) restore Habitat Directive Annex I nature types such as Alluvial forest and petrifying springs by improving the hydrological interplay between River Odense and its riparian areas, (4) obtain better physical conditions in River Odense to benefit *Unio crassus* and other species designated in the Habitat Directive Annex II, (5) obtain proper management of 155 ha sea meadows along Odense Fjord shores, (6) compensation of farmers (and others) participating with land in the project (7) exchange experience with the German LIFE project on the conservation of *Unio crassus.* To access the short- and long term effects of the project a monitoring programme is part of the project.

Expected results: The taken measures are expected to result in the following: (1) a more favourable conservation status of River Odense and Odense Fjord, (2) reduced availability of nutrients in Odense Fjord, (3) a better coverage of rooted submerged flora (seagrasses and *Zostera marina*) and a more diverse bentic fauna in Odense Fjord, (4) better forage opportunities for Annex 1 bird species and larger populations of these species (e.g. *Circus aeroginosus, Cygnus cygnus, C. olar, Recurvirostra avosetta* and *Sterna paradisaea)* in Odense fjord, (5) improved management of 155 ha sea meadows along shores of Odense Fjord to increase diversity of flora and fauna, (6) new meanders and elevated river bed of 12.2 km of River Odense creating large physical variation, (7) increased hydrological interplay between the river and its riparian areas, (8) restoration of agricultural areas to wetlands of the Habitat Directive (Alluvial forest, perifying springs, alkaline fens) along River Odense, (9) a better conservation status of habitat types occurring in River Odense, (10) increased retention capacity in the River Odense system, (10) a better conservation status of *Unia crassus, Cobitis taenia, Lampetra planeri* and *Vertiego moulinsiana* in/along River Odense due to improved physical conditions in the river, (11) high quality management of *U. crassus* due to exchange of experience, (12) a better round-off for farmers along River Odense.

Restoration of River Odense is a key measure of this LIFE application with respect to improving the conservation status of Odense Fjord through increased retention capacity of the catchment. Further, EU LIFE-Nature funding of this proposal will secure that the parties involved in this project can begin immediate actions to conserve *U. crassus* in River Odense and to counteract the poor conservation status of Odense Fjord and its associated bird life. Overall, this will contribute to secure the NATURA 2000 network in the region.